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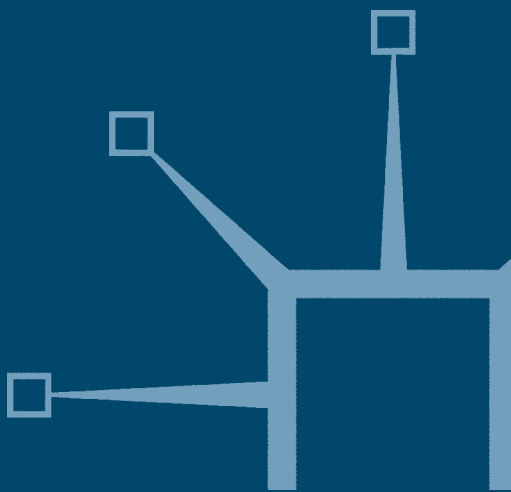
The World Economy Towards Global Disequilibrium

American-Asian Indifference and European Fears

Mario Baldassarri and Pasquale Capretta



The World Economy Towards Global Disequilibrium

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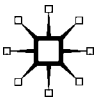

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Contents

List of Figures

List of Maps

List of Tables

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Introduction and Main Conclusions

The American Grasshopper, the Chinese Ant, the Russian Eagle and the European Sleeping Beauty: how to confront the acceleration of the eras and offer a solution to a world economy which is quickly approaching global disequilibrium

In the first five years of this new century a new era is being ushered in the world economy. During the course of this new era Asia (led by China and India) will become the leader in world growth and the globalization process.

An impressive shortening of the length and an acceleration in the passing of eras seem, therefore, to characterize this new scenario.

For almost 2000 years man has experienced eras lasting about 500 years each. In the last century two different eras can be distinguished, each one of them lasting around 50 years. At the end of the first five years of this new millennium, however, a completely new era seems ready to appear.

This kind of acceleration implies that, while in the previous eras, twenty and then at least two generations were involved in the change over, under these new conditions we seem to be facing a case of overlapping generations because the behavioural adjustment cannot be spread over several generations and over a long period of time, but it must be faced at the same time by sons, fathers, grandfathers and maybe even by great-grandfathers. This is what we aim to stress as a premise.

In Chapters 1 and 2, we focus on the last era we lived through during the second half of the twentieth century and we try to single out the major foundations of the world economy within this period which do not exist any longer.

During the present era 2000–2005, China's average growth rate has been approximately 8 to 9% per year, while US growth has been 3 to 4% and the Eurozone rate of growth has been around 1%.

If we project these rates in the long run and we consider Purchasing Power Parity GDP, as we do in Chapter 3 then, after 2020, the new G8 will consist of China as its leader, followed by United States, India, Russia, Japan, Brazil and Korea.

The major European countries will disappear from the world's leading economic group.

A new world axis will be established in the world economy passing through the Pacific between North America and Asia and, for the first time in history, Europe, the Atlantic Axis and the Mediterranean areas will be marginalized, becoming residual areas on the world's economic map.

A temptation could lead the USA to forget about Europe, unable to achieve higher growth rates, and to tighten their relationships with China and the rest of the Asian continent.

However, this temptation contains a great risk for them and for the rest of the world. Indeed, US growth could continue only with the condition that the huge US Foreign Deficit (over 6% of GDP and over 700 billions of dollars a year) will be financed by Chinese savings. In this case, China will hold an ever-increasing share of the US Foreign Debt which began as the 5% held in the year 2000 and continued with the slightly below 20% already reached in 2005. Consequently, this 20% will become 30, 40, 50%!

Therefore, the world economy (see Chapter 4) appears to have, in the East, an Ant (China), in the West a Grasshopper (the USA) and, in the middle, Europe as a declining Sleeping Beauty.

On the one hand, the problem in Europe is how to awaken the European economy, that is which macro economic policy and structural reforms can produce higher growth and provide better chances to remain a leading economic area of the world (see Chapter 5).

On the other hand, the problem in the world economy is how to find a solution to the US Deficit without depressing the US and the rest of the world's economies. To this aim, the book tries to run several econometric exercises to find some good clues as to how to solve the problem that the world is facing these years. This is the content of Chapter 6.

First, a measure of how far a dollar devaluation has to go to bring the US Foreign Deficit below a sustainable 3% of GDP a year is provided. The answer is a dollar/euro rate of 1.90, a yuan/dollar rate of 5 and a yen/dollar rate of 61! . . . with the rest of the world starving, due to very low or even negative rates of growth. And in this case US growth will be pushed downwards, as well.

Then, an appropriate internal economic policy mix to push European growth up, at given international conditions of world demand and current exchange rates, is proposed and verified.

The exercises prove that higher and sustainable European growth rates are possible, but this event alone cannot solve the world's imbalances.

Therefore, since we face a new era in which long run perspectives do not imply real and financial equilibria, given the actual exchange rate system and the actual world governance in terms of international institutions, the analysis proposed in this book puts the problem the other way around: which exchange rate system and which new world governance plan can give the

world economy equilibrium in the long run with sustained growth across the continents? Or, does a positive sum game for each area (and obviously for the overall world economy) exist?

The final answer is a yuan appreciation of 40% with respect to the dollar and 60% with respect to the euro, implying a dollar-euro parity, in perspective. China's growth rate could be negatively affected but it can be proved that an internal push leading to higher domestic consumption, i.e. a higher standard of living for the Chinese population, can be obtained at even higher rates of growth, producing, in the long run, real and financial equilibrium in the world economy.

In terms of World Governance, this implies that market rules must be applied and respected in the goods and services markets as well as in guiding exchange rates. Globalization implies a new WTO and a new IMF. Entering the first should at least imply a road-map which leads to the second.

However, each single continent could be attracted by a purely egoistic and myopic approach. In fact, on the one hand, its own performance and perspective could appear even better than those implied in the global equilibrium scenario, even if they proved to only be an illusory achievement within a framework of world disequilibrium. On the other hand, each single continent or country may believe it would be better off not to take economic policy decisions within a framework of world coordination and common responsibility in this new world governance and/or by not taking the risks that certain decisions could produce in its own domestic political and social environment.

Therefore, in Chapter 7 we try to focus on each single continent's egoistic interest. Although we previously compared the different alternatives with respect to a global equilibrium target, there we compare the different alternatives with specific reference to the economic, political, social and geographical framework of each continent or country, whether or not compatible and coherent with the long-run equilibrium of world economy.

The result is that the solution of a general exchange rate realignment and both China and Europe's domestic demand push is not only a solution to give real and financial equilibrium to the world economy from a global point of view, but also represents the *best solution* for each single continent or country from their egoistic point of view without any respect to an aim of world general equilibrium.

Finally, in Part III, Chapters 8 to 11, we use Italy as a case study to show how a single country's agenda has to be coherent and may be coordinated with a single continent's agenda, i.e. how a member of the European Union and, better, a member of the Eurozone needs to coordinate its economic policy within the Union's economic policy. But then, we wish to stress the need for a single continent's agenda to be coherent and coordinated within a world's agenda, i.e. how to awake Europe to maintain its role in the world economy and contribute in making globalization a positive outcome for everyone.

Part I

What Does Globalization Really Mean?: World, Europe, Italy

Premise: the Speeding up of the Eras, 500–50–5

> Day after day the world is becoming smaller and smaller and societies which had been ignoring each other for millenniums are suddenly coming into contact – or into conflict with one another. A new view point about the way we behave both in politics and economics as well as in our health organizations and military strategies is needed.
>
> In the past, man had to abandon his city or regional view point and move on to a national one.
>
> Now we have to convert our way of thinking to a "global" point of view.
>
> We are making an attempt to describe, from a global point of view, human evolution in terms of increasing population and the progress made in improving living conditions.
>
> From the same global point of view, an effort is being made to touch some of the most alarming problems humanity is facing today, such as the demographic explosion, the increasing need for energy resources, the diffusion of technical knowledge and the role of education in an industrial society.

This is what a great economist and historian, Carlo Maria Cipolla[1] wrote in a slim book almost 50 years ago. His great foresight and his almost prophetic vision was to show the interaction between man's mind producing ideas and technological innovations and the succession of historical, economic, political and social eras: from man as a hunter to man as a farmer and from the first industrial revolution in manufacturing to the

[1] See Carlo Maria Cipolla, *The Economic History of World Population*, Penguin, Berkeley, California, 1962.

revolution in immaterial productions. Briefly, his keen intuition consisted of appraising how ideas and technological innovations could be represented by strong leaps upward and great discontinuities in the relationship between energy used to produce and energy obtained from production. There is no doubt, in fact, that as long as man hunted after animals and wandered for miles and miles in search of provisions in order to satisfy his own needs, far away from a secure place where he could find refuge, warm himself up, refresh himself or rest (that is, away from his cavern), he spent an enormous amount of energy in barely obtaining his daily survival receiving, therefore, a small product, a small amount of energy. After several hundred thousand years, after having passed around 98% of his existence on planet Earth[2] running and hunting just to be able to satisfy his hunger, one evening, dead tired inside his cavern, *homo sapiens* realized that it would be more intelligent to cultivate plants and raise livestock near his cavern if the ground allowed him to or, alternatively, to build his hut near fertile land with space to fence in livestock. In so doing, he started providing himself with increased well-being. Thus, the agricultural revolution began. The energy consumed to produce was much smaller than that obtained with a much more intelligent and efficient productive technique. And about 10,000 years after that revolution, man had another thought: that is, to invent machines and make them work in his place, at the beginning by moving them with steam, then, by making them run with electric energy and oil products. And thus he obtained a higher and even more rapid leap forward with regard to his well-being: the industrial revolution began. Then man understood that . . . "man does not live by bread alone", and the services, the tertiary, the revolution of immaterial productions began.

Certainly, every time, after technological discontinuity and the leap forward to well-being, and because . . . "no man is an island", the problem was also to see how to spread out well-being among the community of men and how to distribute among men the resources that had been created. And then Helen is abducted, Samson loses his strength with Delilah, David throws a stone at Goliath, Athens fights Sparta, Archimedes burns ships with mirrors, *Cartago delenda est . . . et fuit*. And then the Roman Empire falls, and then universities are born, and then Christopher Columbus departs for America, and then, and then, and then . . .

What impresses the reader the most about Carlo Maria Cipolla is a graph that, with some approximation, he has constructed to represent a very long period of about 10,000 years. It shows the impressive, exponential acceleration that technological leaps have determined in human production and, therefore under conditions of well-being, obtained by transforming the

[2] See. W. Howells, *Mankind in the Making*, Double Day, New York, 1959.

resources that nature makes available through the use of mind, intelligence, intuition and research, along with man's failures and successes.

Furthermore, Carlo Maria Cipolla's thoughts are still valid today and largely useful in understanding the world that we are facing: globalization. Perhaps we should limit ourselves to focus only on the most recent times, for example, the last 2000 years.

In fact, since the beginning of the Christian era and up to the nineteenth century the great eras of history seemed to last about 500 years.

From the year zero to the fall of the Roman Empire (476 AD) and then, when culture and research remain closed in the monasteries, another 500 years. From the birth of the first university in Bologna in 1087 AD with culture and research leaving the monasteries and entering civil society to the discovery of America (1492 AD). Then there was the arrival of new American resources in Europe, accompanied during those same years in Lombardy,[3] in Italy, by the technique of crop rotation in agriculture which produces a sudden economic surplus. The Renaissance was first financed by this surplus and then later, when bourgeoisie replaced aristocracy, the industrial revolution.

In the twentieth century the eras shorten and pass from 500 to 50 years.

The first era had at its centre the last great European war, which not quite properly is called World War I, and ends with the first true world war, which is called World War II.

The second era of the twentieth century begins at Yalta, it falters with the fall of the Berlin Wall and it dissolves with the demolition "from within" of the Beijing wall, which, on the economic front, sees the explosion of Asia headed by China and India on the international scene.

In this new millennium the era changes and passes from 50 to 5. In fact, the economic data between 2000 and 2005 demonstrate that, as we will see later, a new world has been already quite well-defined.

Indeed, if a historical era lasts 500 years, the adjustment that it determines involves a sequence of 20 generations. If it lasts 50 years, it involves 2 generations. But if everything changes in 5 years the problems of adjustment become more complex since the times of adjustment must necessarily be strongly accelerated and the situation arises which economists call "overlapping generations": grandparents, fathers, children and nephews who must all understand these changes, appraise new risks and new opportunities and, consequently, adjust their behaviours, their mental schemes and their way of living.

On a collective level, the behavioural adjustment cannot but raise the problem of how to govern this new world and, therefore, what kind of

[3] See Mario Romani, *L'agricoltura in Lombardia, Vita e pensiero*, Vita e Pensiero Publishing Company, Milano, 1957.

"international governance" must be readily defined in order to guide, to everyone's advantage, the globalization of ideas, techniques and productions, before the ridges, upon which the planet's various continental plates meet, accumulate such large amount of compressed and depressed energy that disruptive earthquakes break out.

1
The World Has Changed: Wake Up, Europe!

The first impression that everyone had after having seen, live, the collapse of the Twin Towers was that from then on, the world would never be the same. At first, it was not easy to evaluate the impact that such an event would have on political and economic equilibrium. September 11 will be a watershed in history, dividing what came before from what has come after. Many other elements, since then, have emerged and exploded on the international scene regarding new structures, new phenomena and new risks. Less than five years have gone by and a new world is already looming. Day by day, events are unfolding and can be measured in a way that perhaps was not even imaginable until just recently.

In Europe, after the war and during the last half century, we have created a great model of economic development associated with the redistribution of resources and a solid network of social protection. Certainly we could not have imagined the sudden and swift change in our scenario. After we had created the single market in the 90s, we made a double bet: on the one hand, to transfer monetary sovereignty to a single European Central Bank and create a single currency, the euro; and, on the other, to restrict, with the Maastricht Treaty, national public finance policies in order to guarantee the public good in two ways – price stability and financial equilibrium. These should have served as a foundation for the necessary structural reforms which would have guaranteed a sufficient growth rate. It was on this basis that the European Union expanded to the east and is undergoing the economic (and potentially, political) reunification that briefly came to pass under Charlemagne, in 800 AD. Indeed, in 2000 years, Europe has had only three "single currencies": the Roman sestertium, the denarius-lira under Charlemagne and the euro today.

Certainly, after a century of two devastating world conflicts which were both created by deep-seated internal conflicts, the historical relevance as well as the political and cultural significance of this project to construct a united Europe is clearly an enormous undertaking. This passage is already

bearing fruit: monetary stability, low interest rates and public balances in financial equilibrium.

However, there is a single important condition that is missing: sustained economic growth.

We have been under the illusion for a long time that international recovery in America and in Asia would be able to, by itself, bring about European recovery. Indeed, recovery appears strong and structural in these two continents, but continental European countries, in particular, France, Germany and Italy are still having difficulty showing credible signs of recovery. While Asia is growing at 8% and America at 4%, Europe is having problems reaching 2%; that is, it is growing at half the pace of the United States and a quarter of Asia's. As soon as these two continents begin slowing down, Europe's growth tends to zero.

Low growth stifles confidence and reduces hope. It isn't an accident that this situation causes people to react in a negative way, as was the case in the referendums in France and Holland. This makes agreements among governments more difficult. Another example is the well-known difficulty encountered in planning the European Agenda for 2007–2013. And the compromise on the European budget was reached after a night of heavy negotiations.

The lack of growth carries a risk that, instead of prompting us to ask ourselves if, how and why the instruments used in economic integration and monetary union may have been used inappropriately so far, makes us slow down to a snail's pace which negates the potential usefulness of those instruments. Thus, we are led to turn back history's clock. It is an act of great responsibility to severely and serenely criticize behavioural errors and ideological rigidities by European institutions and try to correct our aim, to avoid throwing out the baby with the bathwater. In other words, if the race does not yield the hoped-for results, it doesn't help if you change the bicycle but it's better to keep the bicycle and find a cyclist who pedals faster and who doesn't always and only apply his brakes.

This doesn't imply a conflict between Maastricht and Lisbon. It means that one must understand that the world has radically changed these last few years and that it's necessary, therefore to "interpret Maastricht so that the Lisbon's targets can be seriously pursued and concretely reached".

The British Prime Minister sent out quite a clear signal while preparing to take over the presidency of the European Union in the second half of 2005. However, it is necessary that others respond positively. It's also necessary that all the others choose between what appears to be two alternatives. And the choice cannot be based on ideological prejudices but on solid, pragmatic information: where can our Europe go if it continues to hang on to past successes but is blocked by a vision reflected in the rear view window? or, alternatively, how far can Europe go if it begins thinking of itself in the light of a changed world, assuming its responsibilities and proposing itself as a protagonist on both an international economic and political level?

Let's begin, therefore, with one crucial concept.

After having spoken for years about globalization, most of Europe seem not to understand its true essence: no single country and no single continent can fool itself into thinking that it can be a "happy island" or, above all, that it can remain a "happy island" any longer.

For this reason, no single country's agenda can exist if it is not connected to a European agenda, but no European agenda can exist if it is not an integral part of a World agenda.

In reality, as Carlo Maria Cipolla wrote many many years ago, there exists a World agenda, that is, a careful reading of the large movements and changes that are occurring on the planet and it is necessary that single entities, (single countries like Italy, France, Germany or continents like Europe, America, Asia, Africa) understand their own roles, what they risk and the opportunities that are opening up for each one of them. On this basis, courage and coherence are needed in political choices, with a clear definition of objectives to reach, instruments to use and decisions to take.

We're trying at this time to fully understand what has happened in the last ten years in the world and what has radically changed since the beginning of this millennium, so much so as to foreshadow a new world profoundly different than before. Unfortunately, in this new world, while America and Asia are growing and prospering, Europe is becoming limp and declining and most of Africa is dying.

Europe (since its beginning) and the Atlantic alliance (in the last two centuries) have marked, in good times and bad, the history of humanity in all past millenniums, before and after Christ. Its Judeo-Christian roots represent the true cultural identity of Europe.

It's clear that a new Pacific economic axis (not yet an alliance) is appearing on the scene in this new era with different cultural roots. The European cultural identity is growing limp and disappearing into a relativism without reference points. It would be worthwhile, therefore, to try to understand what has happened to the world in the last 50 years under the leadership of the Atlantic alliance, what is already happening and what could happen in the next 30 years with the emerging Pacific axis.

2
Fifty Years Ago . . . Until a Few Years Ago

In the last 50 years the terms of trade between industrialized countries (prices of industrial products) and developing non-oil producing ones (prices for raw materials excluding petroleum) have shifted in favour of the first group of countries, rising at a yearly average rate of 0.7% (Figure 2.1 below).

It's significant that the trend in relative prices has directly resulted in a continuing transfer of world income from the South to the North. In the last half century, this trend has shifted 40% of world GDP. The overall increase in the wealth of industrialized countries has also produced an improvement in their income distribution. In this context, therefore, the economic well-being and the greater social justice realized in the northern world depends on the growing gap between rich and poor countries. More explicitly, greater "domestic" distributive justice in northern countries is also connected to greater "external" injustice between the world's northern and southern nations.

Within the group of developing countries, only the oil exporters have been in a position to constantly improve their terms of trade with respect to the industrialized countries. Over the same time period, their terms of trade increased, in fact, by 2.4% a year as a consequence of the great oil "shocks" which, at irregular intervals (in 1973, in 1979 and in the current period), have made crude oil quotations surge upwards (see Figure 2.2).

Finally, there has been a group of countries, that for historical-political reasons have decided to pursue autarchic development outside the free trade of goods and services. In fact, the former Communist Bloc countries came on the international economic scene after the fall of the Berlin Wall and only after the mid-nineties.

This is the reason why we find ourselves, at the beginning of the new millennium, with a world where the industrialized North has 15% of the world's population but 55% of world's GDP, as you can see in Figures 2.3 and 2.4 and Maps 2.1, 2.2, 2.3 and 2.4, presented here.

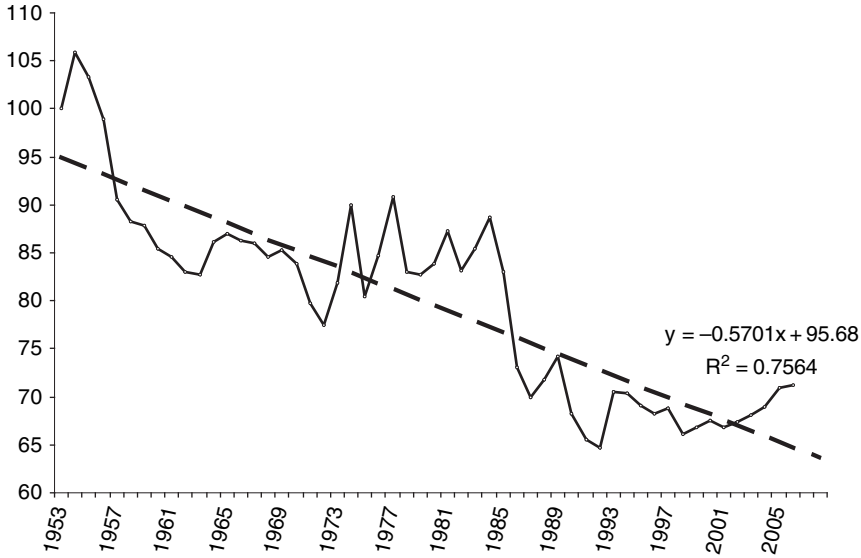


Figure 2.1 Terms of trade between developing non-oil producing countries and industrialized countries (1953–2006)
Source: International Monetary Fund

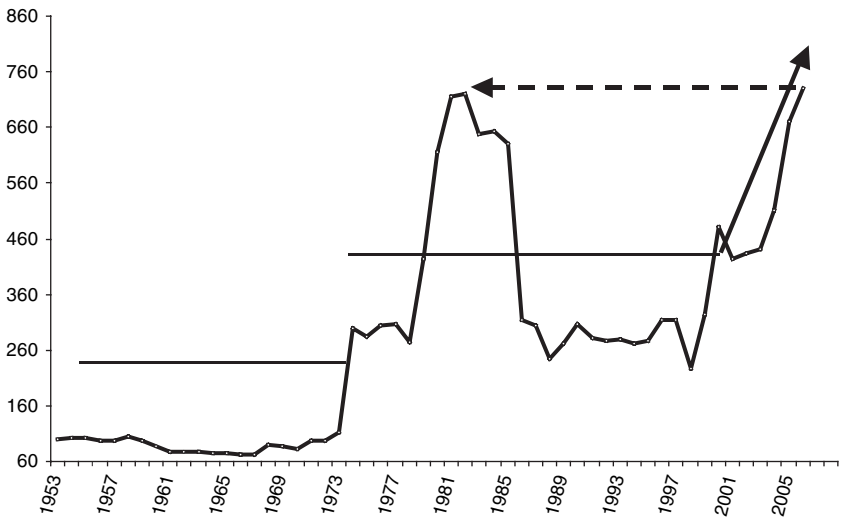


Figure 2.2 Terms of trade between oil producing developing countries and industrialized countries (1953–2006)

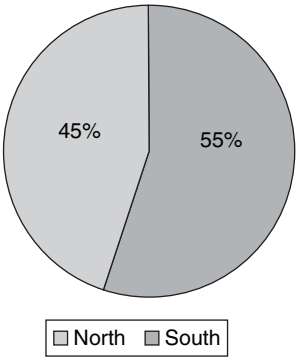


Figure 2.3 Shares of world GDP (2003)

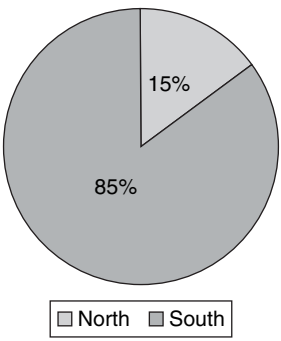
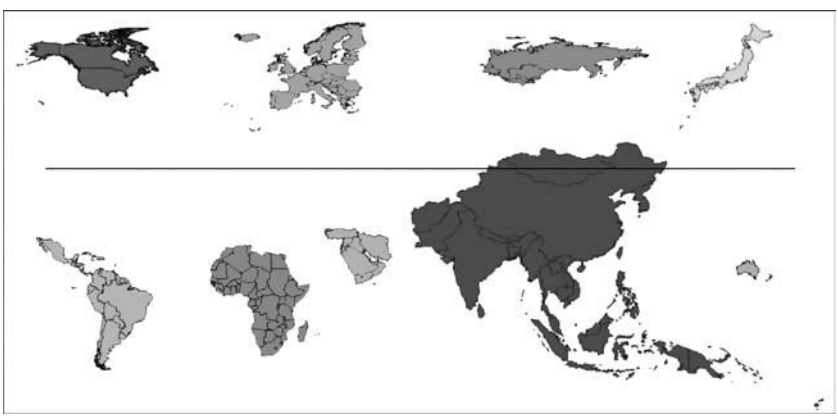
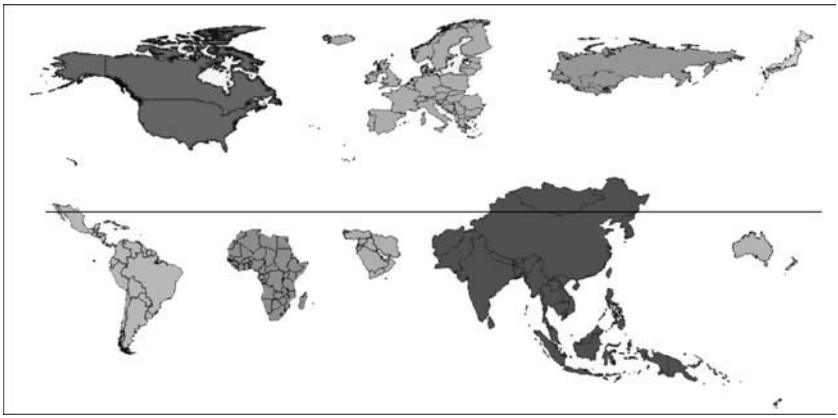


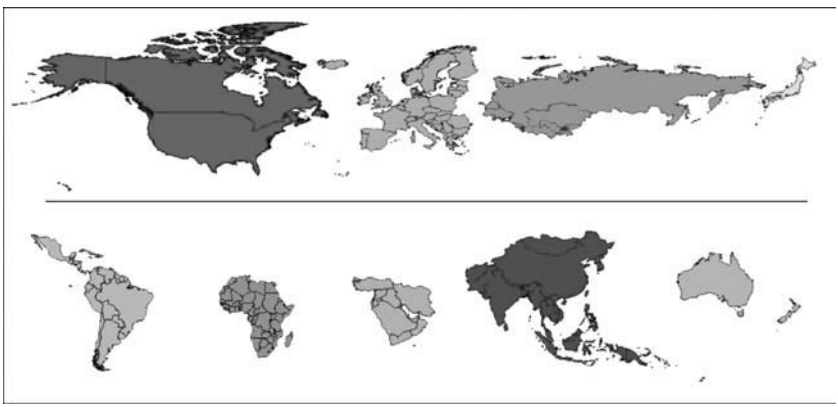
Figure 2.4 Shares of world population (2003)



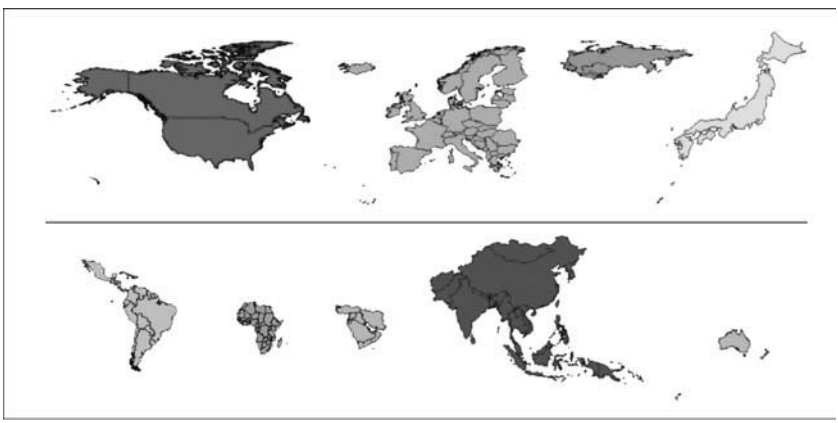
Map 2.1 The world continents weighted by population (2003)



Map 2.2 The world continents weighted by agricultural resources (2003)



Map 2.3 The world continents weighted by mineral resources (2003)



Map 2.4 The world continents weighted by real GDP (2003)

Instead, the world's South, with 85% of the population, 67% of the agricultural resources and 53% of the mineral resources finds itself with only 45% of the world's GDP.

To sum things up, every person who is born in the northern part of the world has an income which is seven times greater than every person who is born in the South. These conditions were not established when the good Lord distributed men and primary resources over all the areas of the world but is a product of political processes and the economic power of men.

Agricultural and mineral resources which originate, for the most part, in the southern area of the world, are then processed, transformed and utilized to create high value-added finished products in the wealthier countries, promoting north-to-north trade, which has grown at the vertiginous rate of 7% a year since the early 50s. Certainly, technological innovation and better-trained human capital have played a role in this enormous growth. But this has also all come about as a result in the development of the terms of trade between North and South.

The economies of the most developed countries have traded finished products which are mostly complementary (Italian fashion and mechanics, German and American chemical products, American and Japanese high-tech products, European and American aviation, American and British financial products, etc.) since they are meant to satisfy the needs of well-heeled consumers who desire a variety of differentiated products, all belonging, however, to this restricted club of prosperous people. This trade in differentiated goods among similar groups has come about in competitive markets where the businesses surviving competition have acquired, over time, an oligopolistic power allowing them to re-invest their own profits in process and product innovation in order to win over increasingly demanding consumers.

On the other hand, raw mineral and agricultural product market outlets have chiefly operated under competitive conditions, which in economic theory is defined as pure competition. The differentiation of products doesn't play a role in this kind of market and prices are established on a daily basis on the large stock exchange markets (Chicago, New York and London) where the power of the producer-exporter is practically nil. Moreover, some of the important raw material markets from the southern part of the world are actually controlled by the large multinational corporations from the North.

The encounter and clash between these two forms of markets, (one organized as concentrated oligopolies, the other characterized by pure competition, since the latter is split up into myriad groups of primary-resource producers) contribute in explaining, *ex post*, the growing gap between the favourable terms of trade in the North to the detriment of the South. This helps us understand why 500–600 kilograms of rice has the same value as a mobile phone.

In order to understand how this phenomenon has shaped the world map during the course of the second half of the last century, one only has to carefully examine the planispheres presented here (Maps 1–4). Each continent is represented by a size which defines its weight with respect to the rest of the world in terms of population, agricultural resources, mineral resources and GDP. By looking from one map to the other, one can see that the size-weight of the North increases and the South diminishes. And, although Latin America and Asia seem, in any case, to be surviving, it is clearly evident that Africa is disappearing. This last continent appears to be the Atlantis of the Third Millennium.

It was necessary and it is necessary to understand if this model of the past 50 years can be sustainable and be used in the next 50 years. We must ask ourselves, therefore, if we can be egocentric and nearsighted much longer, or, if we do wish to remain egocentric, if it wouldn't be necessary to be at least farsighted in the long term.

On a geopolitical level, this model for development has brought about, as we noted, the creation of a group of countries, the G7, whose explicit objective is to coordinate its own economic policies so it can maximize world development, but, also, guarantee a high and ever improving standard of living to the inhabitants of the northern "club". If we refer to the most restricted G7 group of countries, things won't change. In 2003, these countries represented 14% of the worldwide population and accounted for 50% of GDP.

The fall of the Berlin Wall brought about the creation of the G8, in order to include the Russian Federation in the club of the most developed countries, after the break-up of the Soviet Union. Indeed, in 2006, the Russian Eagle is chairing the G8. But this cannot be enough. The Russian Eagle with two heads, one looking West and the other looking East, could also be tempted to become cross-eyed using the power of its energy resources on both sides. The gas crisis with the Ukraine could be a first, albeit small, sign of this.

3

Thirty Years from Now . . . If Everything Continues as It Has in the Last Five Years

During recent years, the scenario for world development has radically changed. A growing number of countries have joined the WTO and their explicit intention of breaking down commercial barriers has favoured a progressive integration of world trade. China and India, above all, have availed themselves of the opportunities offered by this altered scenario. For different historical and political motivations these two countries had previously excluded themselves from the mechanisms of world trade. Now that they have joined the already strong presence of other smaller economies of Southeast Asia (the so-called "tigers of the East") on the international scene, they have, in turn, spurred the dramatic acceleration of economic and financial integration currently taking place around the world.

The present development model is similar but much more complex than the one which characterized macroeconomic developments during the last half of the last century. Geographical aggregations have changed, with repercussions on terms of trade. In fact, new and large world areas, which had based their economies on agricultural and mineral resources alone, have directly and aggressively joined the production and industrial markets.

Let's carry out a numerical exercise projecting the same rates of growth that we've had, on average, from 2000 to 2005 for the next ten or twenty years.

On this basis, where GDPs are measured in purchasing power parity (PPP), we can see that the Asian countries would emerge with great strength (with a share that, during the period 2003 to 2030, would rise from 26% to 50%) and reach and pass Europe-25 (which would see its share of GDP drop from 23% to 12%) and the United States as well (whose GDP share drops from 23% to 15%, see Figures 3.1 and 3.2).

The weight of South American countries would tend to decline while the Russian Federation would gain (from 3.7% to 7.3%) since it would be pulled along by the growing Asian demand for raw materials. In this sense, as already mentioned, the Russian Eagle could become cross-eyed. She looks

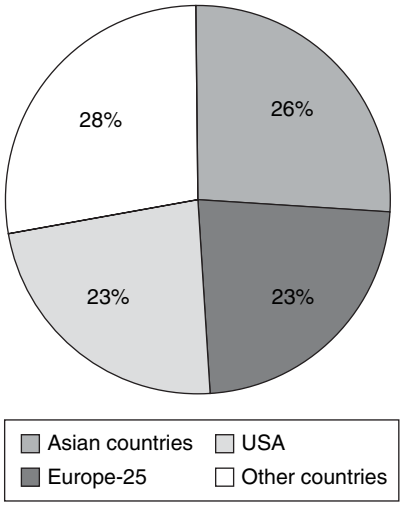


Figure 3.1 Shares of world GDP – 2003

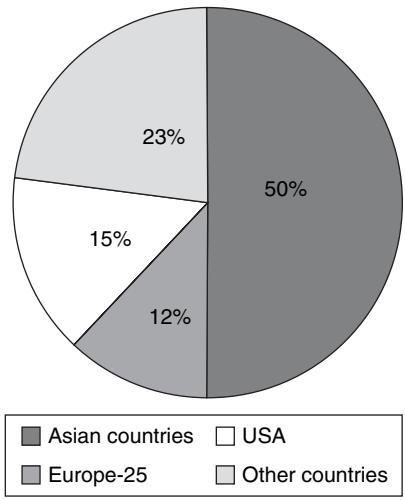
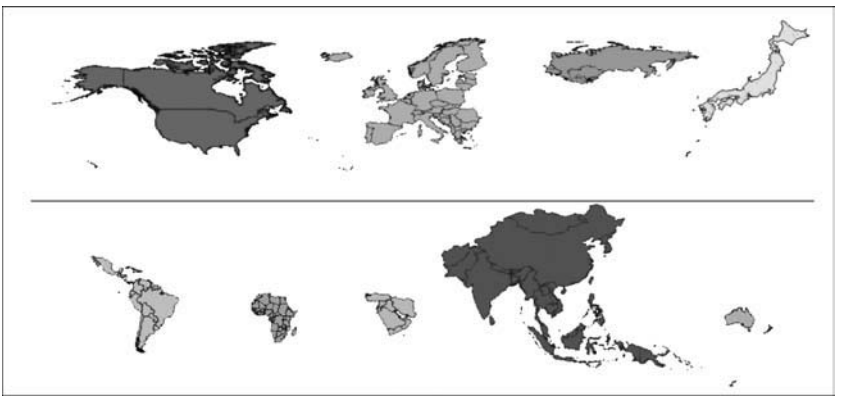


Figure 3.2 Shares of world GDP – 2030

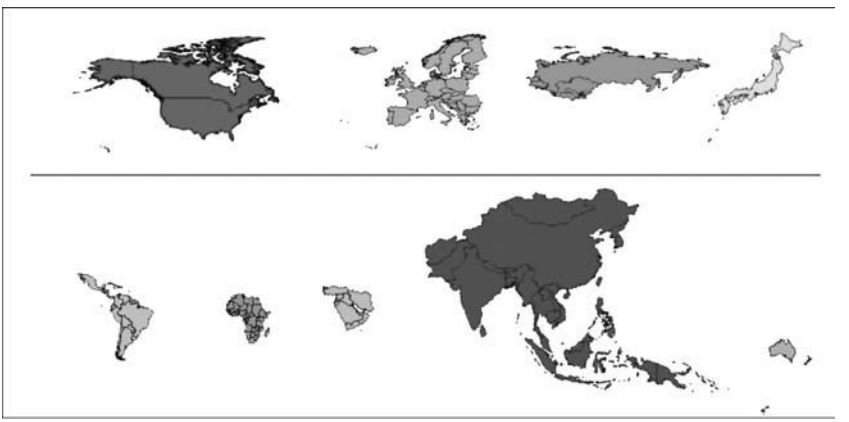
to the West towards its European roots and towards integration with the European Union who uses her as its primary source of energy and she also looks to the East towards the enormous potential of trade with China and the rest of Asia. She is also tempted to use the power of its energy resources to exercise political pressure towards the ex-Soviet Union countries as well as towards Asia and Western Europe.

Within this context, the African continent's situation would worsen even more and, with its population of 15% of the world's total, would see its already modest share of world GDP reduced from 3.8% to 3.4% in 2030, as shown in the following Maps, 3.1 and 3.2.

Given this scenario in world growth, trade among equals (North-North) in complementary products is increasingly accompanied by trade between unequals (North-South) in goods which are direct substitutes for those of the industrialized countries. This phenomenon of competitive imitation ranges from textiles and clothing to the technologically more advanced computer products, passing through intermediate ones such as mechanical products and automobiles. Trade in complementary goods is, therefore, flanked by



Map 3.1 The world continents weighted by real GDP (in PPP): projections to 2015



Map 3.2 The world continents weighted by real GDP (in PPP): projections to 2030

trade in substitution goods: China and other Asian countries are increasingly able to substitute all or a large part of some of the most advanced producers in North-North trade, offering similar products at much lower prices. The most vulnerable countries in this competition are the traditional ones which are present in the mature sectors (textiles, clothing, machinery, automobiles) and those which have a labour market structure which is slower in absorbing this foreign competitive "shock". It's not an accident that only the "Atlantic" countries in Europe are growing, that is, those which have chosen to follow, during the course of the last ten to fifteen years, an Anglo-Saxon model of development. This is a model characterized by an excellent training system for its labour force and a very flexible labour market structure which can respond rapidly, efficiently, and successfully to the constantly new demands of consumers, changing market conditions, and opportunities to reduce costs (by transferring part of its production to foreign countries) offered by the competition from new emerging areas.

These virtuous countries (Ireland, the United Kingdom, but Spain and Portugal as well) are growing despite the monetary policy of the European Central Bank (excessively worried about price stability and, until now, indifferent to the euro appreciation) finding it easier to comply with the limitations of a budget policy imposed by the Stability and Growth Pact, rightly so because of their own higher economic growth.

A system of more flexible industrial relations permits a more efficient use of national capital account expenditures with positive consequences on the public administration budget, despite and perhaps also because of lower fiscal pressure with respect to the other European countries. Both domestic and foreign productive investments are also rising in these countries, establishing an even more solid base for future development.

There has been a radical change in the model that has dominated the second half of the last century in this historic phase. The terms of trade in the most advanced countries are worsening due to the fall in the prices of many manufactured products determined by China and other Asian countries' low cost competition, while prices of raw material producing countries and countries which are gaining export market shares are rising.

This new mechanism of development could last for a long time, even if one should consider that there could be risks in making radical changes in the domestic political institutional structure. One only has to think about China where there are still more than 400 million rural workers who are underemployed. If they are absorbed at the current rate of 10 million a year, this mechanism of development could last for at least another 40 years. Other developing countries (India, Indonesia, etc.) are already following the same path, reinforcing this trend and lengthening the time horizon.

As stated before, this is only a numerical exercise. However, in case the average growth rates of the last five years should persist in the medium to long run, the G8 would undergo a radical transformation. The current composition of the G8 (the United States, Japan, Germany, the United

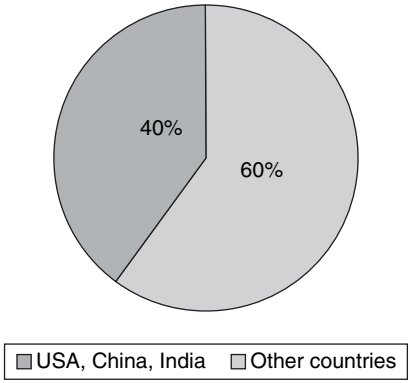


Figure 3.3 Shares of world GDP – 2030

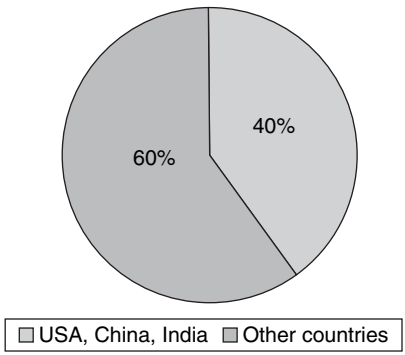


Figure 3.4 Shares of world population – 2030

Kingdom, France, Italy, Canada, Russia) would be completely upset and there would appear a new G8 (China, the United States, India, Japan, Russia, Korea, the United Kingdom, Brazil). In 2030, only three countries (China, the United States, and India) would produce nearly 60% of the world's GDP with respect to a population which is equal to about 40% (see Figures 3.3 and 3.4).

In the new G8, if GDP is measured in PPP, with its share rising from 12.7% in 2003 to 34.4% in 2030, China would achieve a dominant position, overtaking, between 2010 and 2015, the United States as well. Russia, pulled along by China, would become, after India, the fourth economic world power, overtaking even Japan. Among the current European countries belonging to the G8 (Italy, France, Germany and the United Kingdom), only the United Kingdom would have the right, based on its share of world GDP, to sit at the table with the most industrialized countries in 2030 (see Figure 3.5).

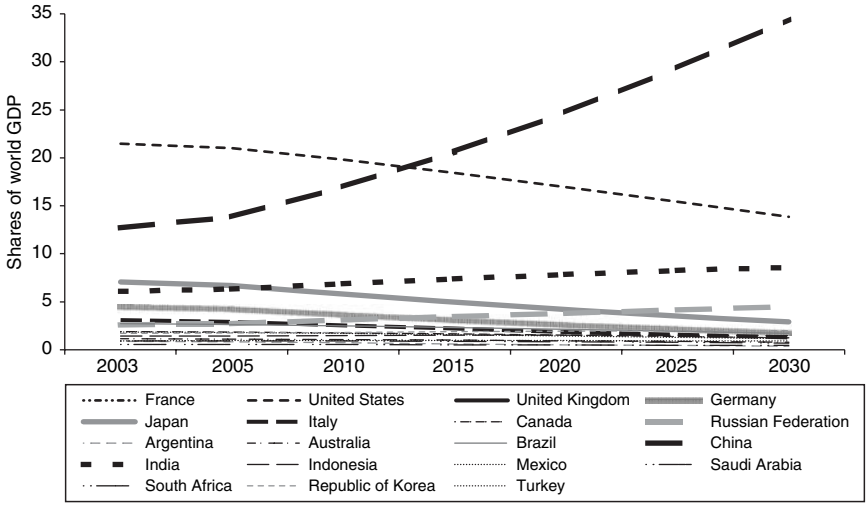


Figure 3.5 The G8 and the G20: 2003 composition and the "New" composition in 2030 (Europe considered as single countries) (Purchasing Power Parity)

Only if it remains united, and despite a sizable drop in its share (from 22% to 11%) would Europe-25 remain the third world power of a G8 which would be, however, from a geopolitical point of view, more well-balanced (see Figure 3.6). Thus, only if Europe is united will it be able to maintain

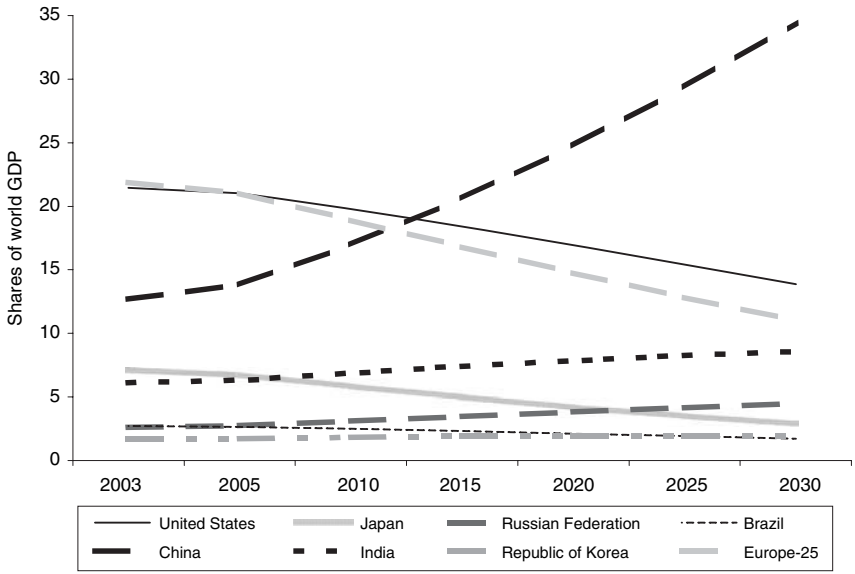


Figure 3.6 The "New" G8 from 2003 to 2030, (considering Europe-25) (Purchasing Power Parity)

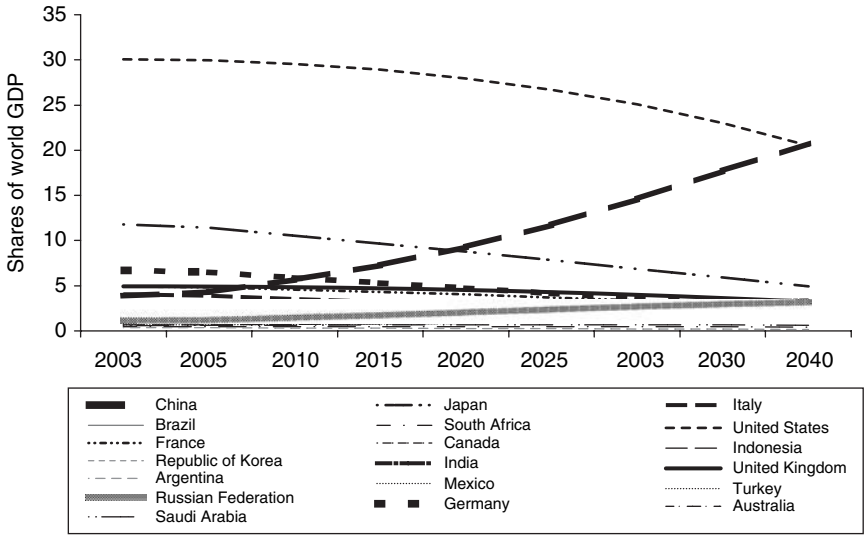


Figure 3.7 The G8 and the G20: 2003 composition and the "New" composition in 2040 (Europe considered as single countries) (at 2003 $ exchange rates)

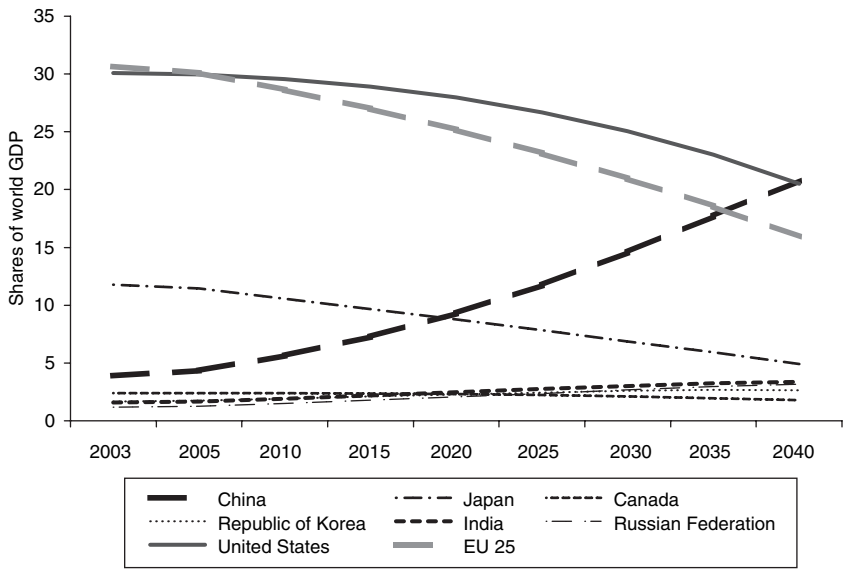


Figure 3.8 The "New" G8 from 2003 to 2040, (considering Europe-25) (at 2003 $ exchange rates)

a geopolitical influence which would also be justified by its economic importance.

Here lies a crucial point for Europe: continuing to enlarge without deepening, while deepening seems to be needed to play a role in the international scenario. The United States of Europe may represent the perspective that is needed. But only a limited number of countries could be ready to follow such a road, while numerous other countries will aim enlarging without deepening. But in this case one would foresee a political union, the United States of Europe, formed by a limited number of countries as the core institution within an enlarging purely economical and financial European Union.

These kinds of conclusions do not change in terms of overall trends if we consider GDPs measured in dollars at 2003 exchange rates. Only the timing of the structural change in the world economy will change, taking a longer time to reach the same final results (see Figures 3.7 and 3.8).

However, even if Europe accepted its own decline and its own declassification on the world scene, a well-balanced globalization would still not be possible since it would be hampered by a serious and powerful bug, as shown in the next chapter.

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Part II

How to Prevent Global Disequilibrium in the World Economy

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4

The American Grasshopper, the Chinese Ant, the Russian Eagle and the European Sleeping Beauty

When people talk about globalization they often tend to forget two essential aspects of Europe and the world's agenda: do we really think that two examples of "benign neglect" that, in truth, are two examples of hypocrisy, can be tolerated internationally in the medium and long term?

The first example of "benign neglect" regards America's growing foreign deficit and debt and its depreciating dollar.

The second example of "benign neglect" is Europe's resignation to "inexistent growth".

These two neglects are closely related. And here, evidently, it isn't a problem of whom to blame or who should make the first move. Instead, it is necessary to look carefully together at the global scene.

Let's concentrate once again on the three great blocs on which the world economy depends: the United States, Europe and Asia.

The United States is the rich Grasshopper: for some time now it demands more than it produces, even if it does produce a lot, above all, of highly innovative goods. This demand, greater than its production, determines a notable foreign deficit, a large public deficit (the twin deficits) and an equally important flow of capital from the rest of the world necessary to finance these deficits which are being transformed, year after year, into an imposing double stock of foreign and public debt.

China, today's symbol in Asia, is the industrious Ant which produces more than it demands. Its political leaders have chosen a model based on export growth which has been implemented thanks to an abundant workforce which leaves the countryside to earn more in the city, but which represents a labour cost ten to twenty times lower than that of the industrialized countries. This is a policy which is perfectly complementary to the United States' policy: huge commercial surpluses allowing China to collect huge foreign exchange resources that are not spent in consumer goods within

the country now but are saved and then invested in the financial markets, where it acquires mainly US treasury bonds. Thus, Chinese savings sustain excessive consumer spending in the US, including military spending. Beware, however, because today China holds already 20% of America's debt. If we are to take the numbers exercise in the previous section seriously and project current trends over the long term, this 20% would, in a few years, become 30, then 40, then 50 . . . and then? The United States is aware that, at that point, China would put a noose around America's neck and tighten or loosen it as it liked. Moreover, although it continues to buy American treasury bonds, China has recently begun buying up pieces of the real Western economy like IBM, Maytag, Thomson and attempted to buy the American oil company Unocal. And what would happen if, on the contrary, the Chinese boom stopped due to the explosion of economic, political and social domestic contrasts within its own country? Where would America and the rest of the world's economies find themselves?

Then, there's the third actor, the Sleeping Beauty of the world, the Europe which doesn't grow, with its governments which maintain a level of public expenditure that, in many cases, is close to 50% of GDP and which is, in any case, the highest in the world. Moreover, 93–95% of these public expenditures are due to current expenses and only 5–6% to investments. These countries, therefore, collectively spend too much and spend badly. On the other side, there is the constant vigilance of the European Central Bank which really doesn't feel like printing money and resorting to inflation to illusorily help them out.

Finally, between Asia and Europe but not excluding the United States, there is Russia, the two-headed cross-eyed Eagle, which could play a relevant role by using its energy resources in strategic geo-economical and geopolitical terms.

It doesn't seem that this scenario will change in the short term: it doesn't seem that the end of the threat from international terrorism is near, nor the strong growth of China and the emerging countries, nor the somnambulism of Europe. At the end of 2005, the gas crisis between Russia and Ukraine with its repercussions in western European countries could also be a first signal of the strategic role aimed to be played by the Russian Eagle.

This is how the current trend in the dollar-euro exchange rate is explained. We are in a paradoxical situation: America is growing and the dollar is devaluating, Asia is growing even more and the Chinese yuan is devaluating together with the dollar, Europe is stagnating and the euro is appreciating. And it's even more paradoxical to see how, recently, the euro has been falling a bit, not as a result of a well thought-out and conscientious monetary policy, but because of some eccentric political declaration asking to turn back to old currencies. This political declaration is reasonable if it refers to the Central Bank's error in allowing the single currency to revaluate by 50%, but it is nonsense when it calls for a return to the old national currencies

to remedy the situation. If, during a bicycle race, the cyclist were to lose the race and lose contact with the front group, solving the problem would not be in changing the bicycle (the euro) but convincing the cyclist (the European Central Bank) to pedal harder or else change rider for the next race.

But, the euro that appreciates against the dollar is not only a paradox, it's also a nearsighted illusion, the illusion of thinking that a weak dollar would help to balance the US deficit. The devaluation of the dollar, in fact, will not, in itself, correct the enormous American foreign debt.

All the available studies demonstrate that, even if the dollar-euro exchange rate were to be above 1.7, the American deficit would only be reduced by a quarter and therefore, the debt would be enormous and continue to grow. Actually, this is fairly obvious because shifting prices (that is, the dollar-euro devaluation) would not be enough to adjust the position of a large economy like the United States with the rest of the world. There must also be an adjustment in quantity (that is, lasting and sustained growth on both sides of the Atlantic) and a much more relevant adjustment of that clearly anomalous price (actually not determined by markets) which is the yuan pegged to the dollar and which, therefore, devaluates with it, thus increasing, in an artificial way, the already strong competitiveness of the Chinese economy.

By counting only on price variation, limited to the dollar-euro exchange rate, what you get is a cat chasing its own tail. In fact, the more the dollar devaluates, that is, the more the euro appreciates, the more Europe puts on the brakes, absorbing fewer and fewer American exports, therefore contributing to fuel the trade deficit.

Moreover, under these conditions, the European countries, as we have seen, will gradually exit the G8 and America could then be induced to make the great pact with Asia. It's not an accident that, in fact, the dollar is not devaluating against the Chinese yuan.

The political trade-off is clear even if not out in the open. The American currency is not devaluating with respect to the yuan only because the Chinese authorities are continuing, by selling yuans, to buy dollars that they then invest in American treasury bonds, thereby financing public expenditures and American economic growth. One should observe that this financing is established not so much by markets as it is by the Chinese authority. It's also a political choice. At the same time, the undervalued yuan, because it follows the devaluation of the dollar, not only allows Chinese products access into the largest market in the world, the United States, but also becomes disruptive for the second largest market in the world, Europe, where it has an enormous impact on competitiveness due to its low labour cost and, in addition, to the devaluation of the yuan which follows the dollar.

The world economy – like the old system established at Bretton Woods in 1948 and ending in 1971 when Nixon removed the gold standard – is even today made up of a centre and a periphery. The centre is the same (the

United States) but the periphery, which enjoys protection by the centre, has changed. Yesterday it was Europe and today it's Asia.

Therefore, this is a prospect that regards everyone and which cannot but worry everyone in the world: those two situations of "benign neglect" mentioned previously, together with the illusion of the direct China-USA relationship, risk causing the global system to explode.

5

How Long Can the European Beauty Keep Sleeping: Maastricht and Lisbon together or Maastricht Alone . . . For Ever and Ever. Amen?

The third millennium cannot exclusively be the Millennium of the Pacific, with Atlantic ties fading away, and, what is more, a new Atlantis, Africa, disappearing.

This cannot be globalization. It risks becoming collective nearsightedness, in America, in Europe and also in Asia.

Europe (and here we are primarily referring to the three large continental countries, Germany, France and Italy) resembles, at this point, a great closed and autarchic economy which is losing the challenge of globalization and which risks losing even its precious bordering countries if the states which have recently joined it begin fearing that the euro game is not worth playing.

For a closed economy the solution to the puzzle of how to grow can only be solved internally. This doesn't mean continuing to idolize the double totem of absolute monetary rigidity and bookkeeperish restraints on the public budget. And much less does it mean returning to a wanton monetary policy or a carefree public finance. The awakening of the European economy can only come about with wise and long-ranging macroeconomic policies, both on the monetary and fiscal fronts. These can create a positive picture on which structural supply-side policies can be based, capable of reawakening the trader instinct and productive soul of men and women living in our continent and at the same time reducing the perverse incentives for not working and not investing in technologically advanced sectors. Planning this type of strategy calls for an ambitious policy. Actualizing it is difficult but realistic. However, a courageous policy is called for.

If all this is a correct interpretation, it is, indeed, an exclusively economic interpretation. It's not enough. There must also be a political interpretation.

Europe cannot limit itself and continue being a great closed economy but it must come politically closer again to the United States. This is also true

of the United States which must come closer to Europe again. It's in both of our interests. US politics, although advantageous in the short term, is nearsighted. China does not have the democratic traditions of Europe. It is a country held together by a communist regime which is accumulating foreign exchange reserves at an impressive rate: 600 billion dollars at this point. What will it do with them? It could, being the large power that it is, concentrate on increasing its stock of arms. And, if it needs to, it will not have difficulty finding sellers: Europe itself seems willing to abandon the arms embargo against China. Until China not only opts for a market economy but also chooses to safeguard human rights, any re-arming cannot help but leave one worried and perplexed. This is not the future that we want to leave to our children.

It would be better to sit down at the table and reach an agreement about a new international monetary order and re-launch a plan for a common foreign policy which would have Europe and the United States working together against world terrorism and favouring the spreading of the seeds of democracy in all of those nations able to harvest them through humanitarian help. Above all, the international economic institutions (the International Monetary Fund, the World Bank, the World Trade Organization, etc.) must be thoroughly reformed.

In any event, Europe must stop arguing about issues of no importance. If this new world is the new moon that someone is pointing to with his finger, Europe cannot limit itself to looking at the finger. The moon is what it takes to make Europe grow, the finger is the tenths of a percentage point of deficit or a few basis points in interest rates or decimals of inflation.

In fact, we agree that structural reforms are needed and often they are well-aimed microeconomic interventions (to support services and professions, infrastructures, training, human capital, technological innovations, law enforcement, the efficiency and efficacy of the justice system, etc.). It's obvious that these are all things that we share, that are necessary and urgent. On the other hand, we have a tendency to bury our heads in the sand, use wrong macroeconomic policies or those which are, in any case, clearly inadequate.

Certainly, it is necessary to make structural reforms. It's hard to understand, however, why it would be easier to make them using a wrong macroeconomic policy which slows down growth and makes conditions of financial equilibrium more and more suffocating. It's certain that there is no development without rigour but it's just as certain that without development there cannot be a rigorous budget that will hold. And without rigour and without development it will be still more difficult, if not impossible to make structural reforms.

What does it, in fact, mean to make structural reforms? It almost always means making 30,000 people worse off immediately in order to give better prospects to 40–50 million people tomorrow. It means, perhaps, removing

the passive guarantee of assistance or protection from a few in order to activate guarantees, that is, offer opportunities to millions of people. The choice of which side of the scale should weigh more seems evident. In reality, however, if the economy stagnates and difficulties increase, there is the risk that the side which protects the corporative interest of a few will weigh more in the illusion of maintaining consensus in the short term. If, on the contrary, the economy grows and resources increase, the correct choice to give opportunities to many people will become politically more feasible and therefore easier to be obtained.

A stifled economy is like looking at the horizon through the wrong end of a telescope. An economy which grows means, instead, to look into the distance through the right end.

This is the link between macroeconomic policies (monetary and fiscal policies) and structural policies. Even though there is agreement on the necessity of structural reforms, it's not possible to forget that a framework exists, a macroeconomic picture, which is also the responsibility of politics.

Here is the transition from the World Agenda to Europe's Agenda.

The only serious transition which makes good sense is certainly not to abandon financial rigor but to make it an objective of economic growth. It's necessary therefore to analyse the level and the components of public expenditures and tax collection. It's necessary to insist on being more rigorous regarding current expenditures (zero deficit) and leave adequate space for investments, certified by the European Union (to avoid simple accounting tricks) and eventually financed by issuing European Bonds. No one in the world, no family nor business could think of being able to pay off all its investments in a year. No family would buy a house and no business would decide to expand its factory or build a new factory if it were forced to pay all the costs in only one year.

What does it really mean, in fact, to maintain an absolute ceiling of 3% for the total public deficit? You could have a country which, with a current deficit equal to zero but with 4% of investments, breaks the rules and another country, with a current deficit of 3% but zero investments, which respects the rules. In reality, the first country is virtuous, covering all its current expenses and financing its own future through debt. The second country, instead, is irresponsible because it doesn't invest in its own future and, in getting into debt to finance current consumption, eats away pieces of its own future.

Certainly it is legitimate to counter this idea by saying that it is important to consider the stock of public debt which has been already accumulated and that, therefore, it is necessary to distinguish between a country that has a lower Debt/GDP ratio and a country which has a higher Debt/GDP ratio. But to obtain financial stability, what is important is the trend not the level. The trend to reduce the Debt/GDP ratio is a condition of financial stability for everyone, but the speed by which this reduction is achieved is exclusively

in the national interest, because the faster it is reduced, the faster resources are available which otherwise would go towards interest payments. In fact, a country which is reducing its Debt/GDP ratio, even if slowly and starting from a high level, contributes to the stability of the European Union. On the contrary, a country which sees its Debt/GDP ratio increase, even if it starts from a lower level, contributes in making the Union's future financial conditions unstable.

This is Europe's agenda. Individual European countries, such as Germany, France and Italy, must be coherently set into the European and the world's agenda. Here we will use Italy as an example, a case study, to make the distribution of national and EU responsibilities clear.

It should be stated that Italy's responsibilities would become clearer if European responsibilities were contextually defined. Europe must not restrict its action in posing limits, barriers and sanctions. Its policies must also be evaluated in terms of the opportunities they offer as well as for their errors, their negative impact on the economies of different countries, and, consequently, for the necessary corrections they require once they are operating.

Let's give a concrete example which helps to clarify the responsibilities and commitments each country should assume.

There is no doubt that the super-euro, which went from 0.80 dollars at the beginning of 2002 to 1.30 at the beginning of 2005, appreciating more than 50%, is strongly contributing to slow down growth in Europe. Even the Vice President of the European Central Bank has recognized this anomalous and frankly masochistic position. It's therefore necessary to distinguish the responsibility of Europe from the responsibilities of each nation, perhaps even by measuring the effect of the super-euro on each individual country in terms of lower growth and larger deficit. It must be clear that this is not done with the idea of removing national responsibilities with the alibi that there are constraints and weights imposed by Europe. On the contrary, the aim is to build a coordinated and positive synergy between different levels of responsibility where everyone must focus on a common objective, that of sustaining economic growth while maintaining conditions of monetary and financial equilibrium.

5.1 The euro appreciation and its macroeconomic effects on growth and financial equilibrium

It's neither easy nor simple to measure the macroeconomic effect of a euro appreciation. On one hand, in fact, the revaluation of the euro penalizes exports, on the other hand, a strong euro reduces raw material costs quoted in dollars (oil products in particular). Consequently, domestic inflation is driven down and both, terms of trade and disposable income, are improved. This may lead to a stimulus in domestic demand, mainly on consumption. However, the loss of competitiveness cannot be limited to the markets

where other currencies are used but may indeed also regard export flows going towards foreign markets denominated in euro. For instance, 45% of Italian exports are directed toward euro markets. Therefore, any product not denominated in euro can reap an advantage from its currency devaluation whenever it enters any euro market by having the opportunity to reduce its prices in euro maintaining or even increasing its profit margin in its own currency.

However, there is no doubt that the rapid and strong appreciation of the euro, which went from 0.80 to 1.35 with respect to the dollar in only two years has produced relevant effects on the growth performances of every European economy, mainly in Germany and Italy.

To measure such an impact, several estimates have been produced in recent years.

One of these estimates comes from Confindustria's Economic Research Department[4] which, by using its own econometric model, estimated that a 10% euro appreciation vis-à-vis the dollar together with a 4–6% appreciation with respect to other currencies, produces a GDP reduction of 0.2% per year with respect to an inertial scenario. In particular, exports and investments seem to be the main demand components negatively affected. Exports because they directly reflect the loss of competitiveness in foreign markets while investments are influenced through the reduction in aggregate demand, growth perspectives and lower profits. A higher reduction appears to be produced for specific items such as machinery, equipment and means of transport although construction does not appear to be significantly affected. Initially, euro appreciation appears to give some push to household consumption. Indeed, the advantage of a positive gain in terms of trade and in the price reductions for imported goods more than compensate for the negative effects which are the reduction in employment and in the self-employed incomes. In later years, however, these latter negative effects overcome the positive ones and household consumption tends to be reduced as well.

Imports will be slightly affected where the estimated impact is about 0.1%.

The relevant reduction in import prices almost totally counterbalances the reduction in investments, and the production by exporting firms, which are the components of GDP with higher import intensity. Therefore, the rate of growth of industry value-added seems to be reduced by 0.6% a year. Finally, a deterioration of 0.1% of GDP should be produced in both the trade balance and the government deficit.

More generally, it could be of interest to quantify, for each given cent of euro appreciation, the negative effect that the super-euro has on growth

[4] See Confindustria, Note dal CSC n. 03-02 P. Capretta and G. Foresti *Quali sono gli effetti dell'apprezzamento dell'euro sull'economia e sui settori industriali italiani*, Rome, 2004.

prospects and, consequently, on the public deficit and debt with unchanged domestic conditions and national economic policies.

In the following Table 5.1.1, the results of several econometric simulation exercises are shown. They measure effects in terms of lower growth and greater public deficit (with respect to current trends) which would occur in the Italian economy for each 10 cent unit of euro appreciation with respect to the dollar above the 1 to 1 parity ratio. This table presents the results obtained according to four different hypotheses, if in the first year and following years the euro were to be quoted at, respectively, 1.30, 1.20, 1.10 and 1.00. In order to obtain these different euro quotations, it could be sufficient to reduce the projected baseline interest rates for the same period by 0.25%, 0.50%, 0.75 % and 1%, respectively.

As can be seen in the strongest case, that is, where there is a reduction of one percentage point in the entire interest rates structure bringing about a return to the parity between euro and dollar and during the period taken into consideration, accrued Italian GDP growth would be about 6% higher. The deficit-to-GDP ratio would top the 3% ceiling in the first year but would be much lower than that limit in later years. Obviously, the impact in terms of greater growth and lower deficit would be more contained than the one obtained by reducing interest rates by a full point and returning the euro/dollar rate to parity, given the hypotheses where there are more limited rate cuts and a more gradual euro realignment. In fact, given the hypothesis of a reduction in interest rates by half a point and a realignment of the dollar to 1.1 with respect to the euro, the effects on growth would still be great. At the end of the four-year simulation period, growth would be approximately 4% higher. There would be an automatic reduction in the deficit, which, as in the previous case, would remain superior to 3% for a

Table 5.1 The effect of the super euro on growth and deficit
(with variations on the euro/dollar ratio determined by the reduction in interest rates)

		€/$ ratio					
		1.40	1.30	1.20	1.10	1.00	Variations with respect to the €/$ rate of 1.40
2005	GDP growth rate	−0.05	0.40	0.86	1.32	1.77	1.82
	Deficit/GDP ratio	3.98	3.79	3.59	3.39	3.17	−0.81
2006	GDP growth rate	1.22	1.54	1.89	2.28	2.72	1.50
	Deficit/GDP ratio	3.93	3.53	3.10	2.65	2.17	−1.76
2007	GDP growth rate	1.62	1.87	2.12	2.40	2.69	1.07
	Deficit/GDP ratio	3.71	3.20	2.66	2.10	1.50	−2.21
2008	GDP growth rate	1.57	1.80	2.04	2.30	2.59	1.02
	Deficit/GDP ratio	3.51	2.91	2.28	1.62	0.92	−2.59

single year but would then settle well below this figure as early as the second year and afterwards. In contrast, consequences would be serious if the euro should return to 1.30 or above. Italian growth would become even more compressed and it would be nearly impossible to bring the deficit-to-GDP ratio below 3% for at least four years.

5.2 The euro appreciation and its impact on the structure of the economic system

In addition to the macroeconomic effects, it could also be interesting to measure the impact of the super euro within different industries as a structural impact on the economic system. Let's again look at Italy as an example and refer again to a previous study published by Confindustria.[5]

In order to measure the effects of the euro appreciation on the exports of each single sector of the economy, it is not sufficient to simply refer to its export propensity, measured as the ratio between the value of exports and that of production at current prices. Another factor to be considered is indeed the degree of competition that each Italian industry is subjected to, from extra-euro competitors in foreign markets which can be measured by their market share as registered in 2001. In this case, there is no distinction between non-euro countries and euro countries. However, the problems given by this kind of simplification are at least in part reduced when considering that the euro has appreciated, albeit differently, with respect to most of the world's currencies. Therefore, in the analysis which is referred to here, the degree of exposure of different Italian sectors to euro appreciation has been approximated in an index calculated by multiplying the Italian propensity to export by the world market share with reference to extra-euro countries. Such an index ranges between zero and 100. It is zero when the export propensity is zero (no exposure simply because that sector does not export) or the share of extra-euro countries is zero (in this case the total world exports of a single sector is given exclusively by the euro area countries). On the other hand, the index would tend towards 100 if the single sector exports a relevant share of its production and the share of competitors of non-euro countries is also high.

This study indicates that the leather and footwear sector is exposed the most to euro appreciation followed by the machinery and electrical appliances sector, the mechanical and precision instruments sectors, then means of transport and furniture. The wood and wood product sectors and the paper industry appear to be less susceptible. The highest propensity to export is related to sectors such as leather and footwear (63.4% of total production has been exported in 2001), machinery and mechanical equipment (61.7%),

[5] See references in footnote 4.

the production of means of transport (56.5%), machinery and electrical appliances (47.5%), chemicals, and synthetic and artificial fibres (40.6%). On the other hand, very low export propensity is shown by oil refineries (10.2%), the paper, printing and publishing sector (13%), food, beverages and tobacco (14.7%).

With regard to the second component of the index, i.e. the degree of competition given by non-euro countries, this analysis shows that the most exposed sectors are textile and clothing, electrical and precision instruments, oil refineries and leather and footwear, while chemical and synthetic fibres, paper, printing and publishing, food beverages and tobacco, non-metallic minerals and means of transport are less subject to competition.

This kind of analysis is an initial and general way of listing some aspect of this problem. It is clear that the intensity of competition facing Italian enterprises within the same sector is also dependent upon the different foreign markets to which they export. Indeed, market shares of non-euro competitors differ with respect to different geographical areas as well. Therefore, the index used in this analysis can be considered just as an average. Indeed, within the same sector, there might be production facing high competition intensity due to extra-euro competitors but other production in which such a competition is much lower.

Further, the degree of non-price competitiveness and the indirect effect of the euro appreciation given by direct effects produced in sectors in which the single industries find their own customers are completely neglected.

Up to here, this is the impact of the euro appreciation on Italian enterprises with respect to the foreign markets. But what about the impact of a euro appreciation on the domestic market? Indeed, non euro-area producer can increase its market shares in the Italian market by reducing its prices in euro by the same amount (or less) of the euro appreciation with respect to its own currency.

Therefore, the degree of exposure of Italian domestic markets to competition from non-euro producers has been calculated similarly to the situation of exports, by multiplying foreign producers' propensity to sell in the domestic market. The intensity of such competition can be measured by the share in the domestic market due to imports from non-euro area countries. This index also varies from zero to 100. It is zero if the propensity to sell in the domestic market is zero (i.e. the entire national production is exported) or if non-euro competitors have a zero share in the Italian market (i.e. no imports in the domestic market come from non-euro area competitors). On the other hand, the index tends to 100 if a relevant share of its production is sold in the domestic market and the share of imports from non-euro countries is also relevant.

Even from this point of view the index assigns the most vulnerable position to leather and footwear, followed by electrical appliances. The sectors of non-metallic minerals, food, beverages and tobacco, rubber and plastic materials seem to be much less exposed.

Also, the degree of domestic exposition, as it was for exports, is seriously influenced by the degree of sectoral aggregation and does not refer to non-price competitiveness.

In short, by combining the degree of exposition to imports with the one to export, a synthetic index can be obtained by referring to a classification of the different exposures in each of the Italian production sectors to a euro appreciation. Even this combined index varies between zero (no exposure at all) and 100 (the maximum of exposure). Again, leather and footwear is the most affected sector followed by electrical and precision instruments. On the contrary, sectors which do not seem to be affected by the exchange rate are food, beverages and tobacco, wood and wood products (with the exclusion of furniture), paper, printing and publishing, oil refineries and non-metallic minerals.

This is just an example of what a significant and sudden variation in the exchange rate could produce in an economic system, not only in terms of macroeconomic effects but also in terms of microeconomic structural effects putting sharply different industries in a better or worse shape, beyond the system's inherent technology, organization, efficiency, factor and final product competitive elements.

It is completely true that whenever newcomers enter the market they tend to occupy the low-technology more labour-intensive productions more quickly and the best way to react is to upgrade old production and technology and to diversify. But a sudden and relevant appreciation of the exchange rate may give no time and no sufficient financial resources to pursue such a logical strategy. And with no time and no resources, entire sectors risk dying well before they can upgrade and diversify.

5.3 The super-euro and a paradoxical triangle

Up to now, the attempt to measure the impact of the euro appreciation, with ECB benign neglect, has been evaluated with regard to macro effects on growth and financial equilibrium and to the structural effects on different industries. Such estimates have been based on simple econometric exercises that have to be taken with caution.

But a paradoxical triangle is emerging: currently, a European authority, the Commission, starts an infraction procedure against a single country for excessive deficit, Italy for instance, where a great part of its deficit is "externally" induced by another European authority, the ECB, but the latter does not seem at all worried about a strong and fast euro appreciation. Both authorities neglect the direct effects of this appreciation on the real and financial conditions of each single country. It's not only by chance, therefore, that France and Germany and many other countries of the Union exceeded the 3% limit well in advance.

Here, two things should be clarified.

The first is that these estimates can only measure the single and circumscribed effect of an appreciation on a single country, Italy for instance. Indeed, they exclude the additional positive effect of the greater growth and smaller deficit that would come about if we were to consider the effect of these outcomes on the other economies in the euro area, in particular, Germany and France. Those effects, would, in turn, obviously give an additional push to Italian growth which, as a consequence, would fuel greater growth in France and Germany.

The second consideration is that these estimates could be used as the basis for a discussion between the Union and national government authorities, so as to coordinate European responsibilities and national responsibilities concerning the common objective of creating conditions for solid growth in Europe. It's necessary to define a common agenda of choices, certainly not to give national governments alibis for not having taken the necessary decisions within their own countries. At the same time it's important not to limit the role of the Union authority to that of a blind referee who whistles a penalty kick without evaluating how the game is being played on the field, with the risk of the authorities asking only for deficit cuts, thereby putting the brakes on growth even more and worsening both the real economy and the prospects for financial equilibrium.

5.4 Devaluation of the dollar, international cooperation and interest rates

As we described, the euro/dollar appreciation/devaluation severely affects a single country economy such as Italy but significant risks also appear for the economic recovery in Europe. We can again resort to an econometric simulation[6] to estimate the impact of a 10% decrease in the effective nominal exchange rate of the dollar on growth and inflation in the euro zone. In the worst of the hypotheses considered, this devaluation reduces the GDP growth rate in the euro zone by two percentage points during a three-year period. However, international cooperation could limit the negative effects of the appreciation of the euro. In this simulation, greater coordination would help to recover 0.8% of growth during the period considered. A reduction in interest rates by the European Central Bank is required to reduce the negative consequences of euro appreciation on economic growth. The inflation rate that results from the cut in interest rates would remain well within the ECB target limits for monetary stability.

Notwithstanding the wide positive differential in growth rates (and productivity) between the United States, on the one hand, and the euro

[6] See Confindustria, Note dal CSC n. 03-10, D. Antonucci and P. Capretta *Devaluation of the Dollar and the Impact on the European Economies*, Rome, 2004.

zone and Japan, on the other hand, the devaluation of the dollar addresses the need to re-adjust American external deficit balance and the difficulties faced by the United States in financing a current account deficit that has exceeded 6% of GDP. The euro zone is called upon to bear most of the burden for the adjustment in the dollar. In practice, the Asian central banks have made huge purchases of American government securities in order to prevent or attenuate appreciation of their currencies with respect to the dollar. In particular, as we mentioned in previous sections, Japan is the largest foreign investor in American government securities, having accumulated a portfolio of almost 50% of the total held by non-Americans. China comes in second place, albeit far behind the Japanese, with a share of approximately 20% of the total. By comparison, the percentage of American government securities purchased by Italy, Germany, and France totals less than 10%. If Japan, China, and the newly industrialized economies of Asia were to continue acting on the foreign exchange market, the risk is that the dollar would decline even further with respect to the euro, undermining the fragile economic recovery in the euro zone.

The ECB, whose statutory mission is to maintain monetary stability, could nonetheless decide to act in two ways: 1) intervene on the foreign exchange market, or 2) cut interest rates. Alternative 1) would be relatively ineffective in the medium term, unless US monetary authorities affirmed their willingness not to oppose these measures. Nevertheless, the US seems to prefer an undervalued dollar in the current economic situation, which permits not only a re-adjustment of trade imbalances but also the repayment of foreign debt within advantageous terms (the United States borrows more than $50 billion a month to continue consuming more than it produces).

The problem is, however, that a weak dollar represents no solution to the problem of reducing the American current account deficit to below the 3% of GDP usually considered the physiologically sustainable threshold. If an undervalued exchange rate drives the United States to limit its demand for imports, the more desirable alternative (i.e. without excessive negative repercussions on the rest of the world) is that other countries sustain global demand as well. But until now, hardly any signs of strengthening in world demand have appeared, aside from those reported by East Asia, which are by themselves insufficient. The euro zone, in particular, has not assumed the role of locomotive in the world economy and, given the importance that the foreign trade assumes for its overall performance, its prospects for recovery are connected with the evolution of the currency markets. Alternative 2) would make it possible to limit the impact of the appreciation of the euro on the real economy, and it is the object of the econometric simulation illustrated in the following section. However, it is necessary that the conditions for a cut in interest rates actually exist without stimulating inflationary pressures.

The February 2005 meeting of the G8 represented an opportunity for the euro zone to reach an agreement with its other partners regarding a further

devaluation of the dollar without it impacting the euro alone. A comparison with the Plaza Accord of 1985 (where the depreciation of the dollar was decided) is appropriate only to a certain point, since, on that occasion, there were representatives of countries whose currencies were then supposed to rise against the dollar (Japan and Germany), while in this case, the Asian countries, which should play a leading role, were absent.

Therefore, in this section, we assess the possible effects of a 10% permanent devaluation in the effective nominal exchange rate of the dollar, with the objective of assessing whether it improves the imbalance in the current account deficit of the United States. Furthermore, we measure its impact on the real economy of the euro zone. In all the simulations carried out, a depreciation of 10% in the effective nominal exchange rate of the dollar is assumed, keeping it constant with respect to the base scenario for the following three years. Finally, we assess whether action by the European Central Bank can neutralize or, at the least, mitigate the negative effect of the exchange rate on growth in the euro zone. From the results obtained, we can deduce that, in terms of GDP growth and employment, the consequences of a depreciation of the dollar on the economies of the euro zone change according to whether it involves all or only some currencies. It has also been confirmed that a cut in interest rates by the ECB, even if the consequent effects on the euro exchange rate are not considered, can significantly mitigate the effects of the dollar devaluation on the European real economy. This is the hypothesis where the costs of adjusting American imbalances fall almost exclusively on European countries and substantially reflects the current situation. In fact, maintaining the overall amount of the depreciation of the effective nominal dollar exchange rate (10%) would translate into an appreciation that is necessarily greater than 10% of the other currencies considered in the simulation. In this case, the devaluation of the American currency would have a fairly significant expansionary effect on American growth in the first two years (+0.3% on average per year), but it would drive the level of the United States GDP below the base simulation starting from the third year, when the effects of the slowdown in foreign demand (particularly in Europe) and the increase in US interest rates would start to weigh on the economy. In fact, the Fed would remain somewhat neutral during the first year but would be forced to take more decisive action starting in the second, when inflationary pressures would become more intense. Furthermore, the depreciation of the dollar would not have significant effects on the American current account balance, which would worsen slightly with respect to GDP in the first year and improve only a little in following years. The negative repercussions on real growth in the euro zone would be dramatic both in terms of GDP (−2% in aggregate over three years) and in terms of employment (approximately 1,450,000 fewer jobs during the period). Inflation would decrease significantly starting in the first year (−0.6% with respect to the base scenario), and decline further in the third year of the simulation.

Now let's move on to another simulation: Japan allows its currency to appreciate, but the other six Asian countries keep their exchange rates unchanged with respect to the dollar. The ECB does not intervene. In this case, Japan shares the costs of the American adjustment, limiting the loss of eurozone GDP, whose effective exchange rate would appreciate less than in the preceding simulation. Eurozone GDP would decrease by 1.5% overall during the three year period, with a loss of approximately one million jobs. Inflation would decline by a half to one point during the three-year period. The performance of the American economy would be slightly better (+0.4% in the first two years, with a more modest decrease in the third), and the current account balance would improve by one tenth of a point with respect to the preceding simulation.

Finally, we simulated a dollar depreciation of 10% against all currencies, including the Chinese Yuan and those of the other Asian countries that were previously excluded. Again, the ECB does not intervene. In this hypothesis, the burden of the American adjustment is shared by everyone in proportionately equal terms. The euro would appreciate by 10% against the dollar but would remain substantially unchanged with respect to the other currencies. The loss in competitiveness of European products on foreign markets would be lower in this case. Eurozone growth would decrease by 1.2% over the period of the simulation, and the number of jobs would decrease by about 750,000. Inflation would gradually decline.

The three preceding simulations have been then repeated by assuming intervention by the European Central Bank on interest rates in response to the decrease in inflation and a growth rate that is far less than the European economy growth potential. In all three cases, the ECB's prompt reaction is crucial and capable of significantly limiting the negative repercussions of the euro appreciation on growth and employment. In the most favourable case, where the dollar depreciates against all currencies, the loss of GDP in the euro zone would be nil and very limited in the following two years (−0.7% overall). Against approximately 1.5 million fewer jobs estimated in the hypothesis of the first simulation, the coordination of currency policies and action by the ECB would limit the loss of employment to little more than 300,000 jobs. Inflation would remain at a lower level than in the base scenario and be consistent with the ECB monetary policy targets.

In all the simulations performed, notwithstanding the action taken on interest rates, inflation would remain firmly under control and always below that of the base scenario. The expansionary effect of monetary policy is not such as to create excessive inflationary pressures, and GDP, while recovering, would remain beneath its growth potential. In the current European situation, with weak global demand and inflation stuck at around 2%, the appreciation of the euro causes a decrease in imported inflation determining an increase in real interest rates and, consequently, a decrease in the

demand for money. Therefore, no change in monetary policy would have a dampening effect on the entire system and an action by the ECB would offset, at least partially, the negative effect caused by the appreciation in the exchange rate. On the other hand, there are expectations that inflation will definitely decline, due to the concomitant effects of currency appreciation, below potential growth and despite increases in oil prices. These simulation exercises also show that, even in the most favourable case, international coordination of currency policies and intervention by the European Central Bank can limit, even significantly, the dampening effects of the appreciation of the euro on the real economy.

However, a realignment of exchange rates in terms of dollar devaluation is by itself incapable of correcting the US current account deficit. Currency and monetary policies should thus be flanked by tax policy and reforms aimed at stimulating both internal demand and improving the overall competitiveness of Europe and Japan. As we show here for Italy, a growth-oriented policy of economic reforms, both at the national and EU level, aimed at increasing the stock of public capital and consequently, Europe's productivity and growth potential is deeply needed.

5.5 A blinkered horse

It appears to be emblematic to look at the events that we have been facing during the last three years.

A few quarters after September 11, growth in the American economy was restored to high levels, in part due to a rapid and courageous decrease in interest rates guided by the Federal Reserve. The European Central Bank has always followed in the wake of the American Fed's decisions and also took more cautious steps (see Figures 5.5.1, 5.5.2, 5.5.3). This was done until the end of the second quarter of 2003 when US interest rates reached the bottom level of 1%, while the European interest rates decrease was stopped at 2%. The euro started to appreciate toward a maximum level of 1.37. Successively, the Federal Reserve started increasing interest rates, cautiously and progressively, with the aim of controlling inflation without hampering growth too much. In this phase, the European Central Bank correctly maintained European interest rates at 2%, since no fear of inflation appeared, while the European real economy was stagnating. The divergence between interest rates successively induced a virtuous path in the euro-dollar exchange rate which declined to 1.16 at the end of November from the peak level of 1.35 reached at the beginning of 2005, which seemed to lead to a physiological realignment towards parity.

However, as soon as the European Central Bank made its intention clear to start an upward trend in European interest rates, on the basis of presumed future inflation risks, the previous physiological and healthy process came to an end. When, on 1 December 2005 the ECB decided to increase interest

rates, even if only by a quarter of a point, leaving any further decision vague and uncertain, the euro started to appreciate again to settle, after some obvious fluctuations, at around 1.20.

Then a new increase in interest rates was decided on March 2006 and the euro jumped up again at 1.30.

The masochistic story of interest rates targeted to control non-existing inflation, neglecting the euro exchange rate appreciation without caring about the low-growth trap could continue . . .

If, only as an example, that previous trend had not been stopped and had been allowed to continue, the quotation of the dollar to the euro could have reached 1.10 at the beginning of 2006. On the basis of the previous rough

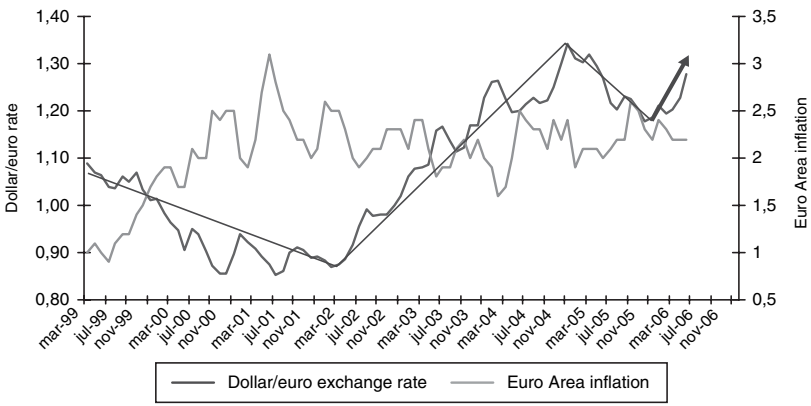

Figure 5.5.1 Dollar/euro exchange rate and euro area inflation

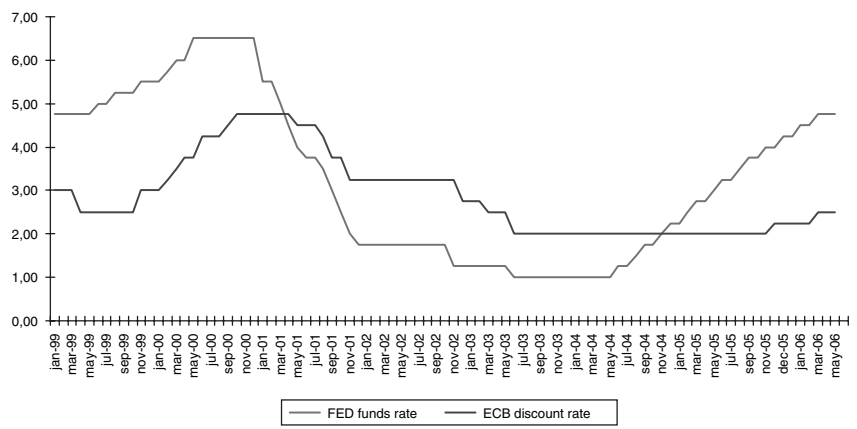

Figure 5.5.2 Discount rates (FED-ECB)

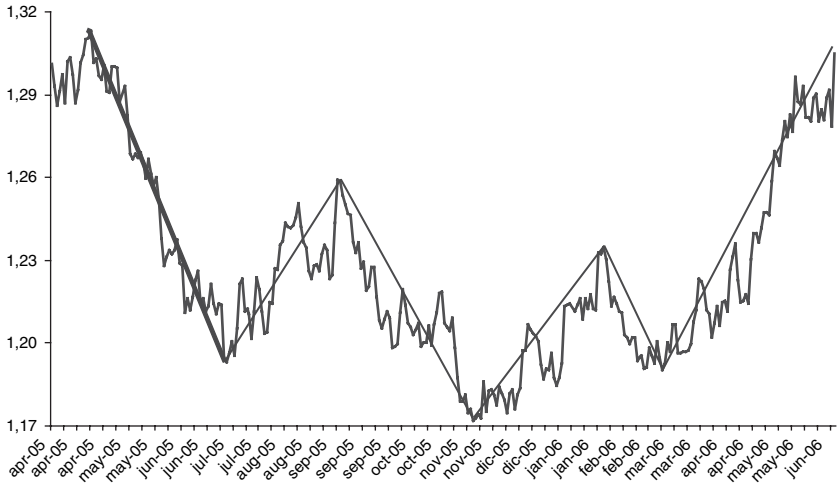

Figure 5.5.3 Dollar/euro daily exchange rate (April 2005–June 2006)

estimates and presuming that the decision taken made a 20 cent difference in the exchange rate (between 1.30 and 1.10), we could say that, on an annual basis, this would have caused a negative impact of about 1.0% on the rate of growth with a consequent higher deficit of about 0.5–0.6% of GDP.

But in any case, well beyond these accounting or econometric tricks, the true question here is that a monetary policy, devoted to controlling inflation, cannot neglect the resulting effects on the exchange rates with consequent impact on the real and financial conditions of the economy.

5.6 Macroeconomic policies and the European institutional gap: pessimism and optimism

For almost three decades after World War II, European growth has been structurally higher than in the US and, on the other hand, European unemployment has been structurally lower.

Over the last 20 years the parts appear to have reversed. Statistical data for the last ten years seem to reinforce such a reversal position mainly referring to continental Europe within the Euro area. Indeed, US growth has been double the European one and US unemployment has been one half the European.

In previous sections we tried to investigate how deeply these poor European performances can be attributed to wrong macroeconomic policies together with the need for structural reforms.

We do believe that deep structural reforms are urgently needed in Europe, but we do also believe that it can be much more difficult to implement

structural reforms within the low-growth trap mainly induced by what we consider wrong macroeconomic policies.

Now we wish to investigate whether different institutional frameworks in the US and Europe could help to explain why we are seeing a galloping horse on one side and a blinkered, slow, waddling horse on the other.

During the eighties US reaction to the second oil shock led to a jump in long-term interest rates and a dollar appreciation with respect to European currencies. Consequently, tighter European monetary policies were induced to fight inflationary pressures. Therefore, that period of low European growth could be largely attributed to an external shock.[7]

On the contrary, during the nineties, the shock hitting the European economy appears to be an internal one. Indeed, the unification of Germany led, on the one hand, the Kohl government to follow an expansionary fiscal policy to generously integrate East German Landers and, on the other hand, the Bundesbank to react with a tight monetary policy which was forced on the rest of Europe.

Then, the single currency and the Stability and Growth Pact were introduced. The Bundesbank fear of inflation was transferred on to the European Central Bank without any reference to the impact of monetary policy on the euro exchange rate and growth performances. Furthermore, total deficit-to-GDP ratio became the only guideline for fiscal policy without respect for any criteria referring to the level and the composition of both government expenditures and revenues.

In synthesis, mere inflation targeting and financial balances, without respect for growth, had been followed, i.e. two blinkers had been put on the European horse preventing him from looking to the West (the fast-growing US economy) and to the East (the superfast-growing China and Asian economies).

But can an exogenous shock that took place a little more than a quarter of a century ago and an endogenous shock which occurred more than 15 years ago explain today's persistent errors and stubbornness? And are these persistent errors and stubbornness real "errors and stubbornness" or are they the result of a perverse mix of interests between single categories/groups and corporative links? Each one of them may be acquainted with his present situation and not available to take a new route along where new opportunities are opened but new risks have to be taken.

The mix of interests could come, first, from widespread social protection, generous welfare systems and black labour market opportunities, leading a major share of the population to fear changes and structural reforms. Furthermore, specific interests of markets and categories protected by regulations, lack of competition, normative barriers preventing them from entering

[7] See J. P. Fitoussi and E. S. Phelps, *The Slump in Europe*, Blackwell, Oxford, 1988.

into activities and an enormous incentive to gain rents within the financial economy rather than seeking profits through investments, innovation, research within the real economy sectors could complete the mix.

Here, addictions and hidden interests could turn economic policy mistakes into specific wills and choices.

However, we do believe that addictions and hidden interests are both selfish and myopic.

On the one hand, new generations and any outsider are out of the game and, being a minority faction, cannot influence the game itself.

On the other hand, widespread social protection and generous welfare systems lead to high and sticky government expenditures. Financial interests require price stability and equilibrium in government budgets. Hence, strong fiscal pressure is induced. The State absorbs a share close to or above 50% of GDP, distorting resources allocation. In the medium to long run, it turns the economy into a low-growth trap, produced and fed by addictions and hidden interests. So the intergenerational myopic view joins an intra-generational myopic one since, out of a long period of low growth, social protection and generous welfare systems cannot last. Financial interests, within a framework of poor real economic performances, cannot be fed any longer.

Different social and political attitudes and structures between the US and Europe may, therefore, explain a lot of different institutional frameworks inducing, in the US, an active economic policy to open wider opportunities even if it takes on risks and, in Europe, a passive/inertial economic policy pursuing targets of price and financial stability and social protection, appears both myopic and illusory in the long run.

This social and political trap very often leads European governments to behave like a "buridano donkey", i.e. a donkey that starves only because he is unable to decide which way to go, being equally distant from two batches of grass.

Here lies the European institutional gap.

Whatever is socially and politically difficult to decide at a single government level has been delegated to a superior supranational "technical" institution with no social and political responsibility. This technical institution has been given specific and very limited targets to be pursued: price stability to ECB and financial stability to the EU Commission. But who is responsible for growth? The answer could seem easy: each single national government devoted to introduce structural reforms. And, in addition, a question can be raised: each single national government alone or within a European agreement, i.e. competition or coordination? And, again, which is better: competition or coordination and coordination to introduce or to avoid structural reforms?

Finally, we may ask whether there is an independent rationale for structural reforms. We do agree with an attempted answer recently given by J. P. Fitoussi.[8]

> . . . the inertia of European governments in the past decades is due to a "hidden agenda", namely the tentative to bring the European social system to a lower degree of protection, and hence to prove the ineluctability of structural reforms. These, in turn, should push Europe towards the situation required by the new social norms. But wouldn't be more straightforward, and more intuitive, to admit that structural reforms simply smoothen the working of the economy, and hence are conducive to higher growth and welfare for all? After all the NAIRU could have increased as a consequence of the in-adaptation of the social system to a new environment – the thesis of the interaction between shocks and institutions – rather than as a consequence of an exogenous move in the desired wage distribution.
>
> The reference model, in the plea for structural reforms, is centred on an economy with perfect competition and rational expectations. In such a model full employment is always assured absent rigidities, and policy is ineffective. This framework emphasizes the role of institutions in economic performances, especially labour market institutions: any rigidity leads to departures from the reference model and hence to bad economic outcomes.
>
> This vision has two major (and related) flaws: The first, theoretical, is that it is based on a simplistic application of the welfare theorems, by which a perfectly competitive market will always reach the most efficient price/quantity allocation . . . but once we admit, because of "market failures", the impossibility to attain the first best equilibrium, the theory is incapable of establishing a unique ranking of alternative institutional arrangements. In other words, it has still to be proven that efficiency is monotonically related to flexibility, so that the closer we get to the benchmark, the better; and unless this is proven, "more reforms are good" may not be seen as an unconditionally true statement. Thus we have a first dismissal, on theoretical grounds, of the argument in favour of structural reforms. If we broaden the perspective, things become even more complex . . . democracy and political adhesion of the population to the economic government of a society can actually enhance efficiency, guaranteeing the flexibility, transparency and consensus that would be missing when ruling according to the strict application of a doctrine.

[8] See J. P. Fitoussi, "Macroeconomic Policies and Institutions" in *Rivista di Politica Economica*, Nov.–Dec. 2005, SIPI, Rome, Italy.

Take as an example the different bargaining power of workers and entrepreneurs. In its Wealth of Nations Smith had already highlighted the problems that this asymmetry could cause. The norms on labour protection can then be seen as a legitimate outcome of the democratic process, aimed at re-establishing some fairness in the bargaining process. The only candidate left, for arguing in favour of structural reforms, is then empirical analysis . . .

. . . To sum up, the assumption that the free market paradigm is always superior to any other institutional arrangement, is not supported by a strong theoretical argument, nor by the data. Two recent studies independently conducted on the subject reached the same conclusion out of a sample of 19 OECD countries. In market democracies, the institutional structure is not a powerful factor in explaining economic performances. Capitalism is sufficiently robust to accommodate rather different institutional settings. If we had in each decade followed a common wisdom saying that there is one institutional arrangement that it is best, we would have recommended to follow the French institutional model in the sixties, the Japanese one in the seventies, the German one in the eighties and the US one in the nineties. The nationality of the model in the present decade is still unknown. [Note by the authors: Could China be the one?]

The diversity of the institutional framework in OECD countries shows that institutions are the outcome of a political process anchored in the specific history, culture and anthropology of the country, rather than a way to increase efficiency. If for example, the typical labour contract which emerged after the World War II was almost everywhere of long duration, it may be just because after a war, the solidarity between social groups had to be reassessed. It may well be that the social norm has since then evolved; but this only adds to the evidence that the notion of "best" institution is endogenous.

Before concluding we are left with another question . . . In fact the policy inertia and the push towards structural reforms were a common characteristic of European policy making, regardless of the political side of the government involved. Is it possible that any government in Europe has pushed an agenda aimed at reducing the generosity of the social system? Why would governments that had programs centred on growth and social solidarity take a completely different course once elected, even when they had a reasonable expectation of being punished by their electorate?

. . . The question we ask is why governments have accepted restrictions to their fiscal behaviour, when the economic debate on the rationale of restrictions is still unsettled both theoretically and empirically. In the framework of EMU, the question is all the more important because national governments in the Union have few instruments left, having already given up monetary sovereignty, i.e. the manipulation of the exchange rate and the short term rate of interest. A common monetary

policy has differentiated effects on the dynamics of public debt: countries "enjoying" the lowest rate of inflation will suffer from the highest level of real interest rate; as a consequence, it is particularly difficult to understand the rationale of the policy mix which will be imposed by a strict obedience to the stability pact. And even harder it is proving, nowadays, to explain to the electorate and to public opinion why the generalized stagnation of these years is not being dealt with by means of a robust active fiscal policy.

We argue that the consideration of reputation issues may go a long way to solve this puzzle. First, decisions concerning the Union are the outcome of a bargaining process between the different governments of Europe. Each government may believe that its weight in the negotiations depends on its reputation. In a similar vein, one may consider the European Union as a Club were members obey a social norm because they believe that failing in doing so will result in expulsion by the others; then, the obedience to the norm may emerge as a self fulfilling equilibrium void of any economic premise (but with serious consequences).

A newly elected government, regardless of its political colour and mandate, must show to its EU partners that it is in fact worthy of sitting at the table. As a consequence, it will adhere to the mainstream agenda regardless of its convenience and of the electorate preferences. Paradoxically, governments whose constituencies care more about the social contract, will be those who must work harder to convince the partners, pushing the reforms aimed at dismantling the contract itself. Of course, one may wonder why reputation is founded on criteria of budget balance, and not on criteria of low unemployment or high GDP growth. And the answer is most probably to be traced to a sort of path dependency. The transition towards the EMU has been dominated by the Maastricht criteria; it is now plainly admitted, even by high rank officials, that the criteria were motivated, among other things, by the attempt (failed) to exclude from the Euro the so called "Club Med" countries (Italy, Spain, Greece, Portugal). The norm that emerged with non economical motivations is now trapping those who wanted it, and has heavy welfare consequences for the Club as a whole. [Authors' note: Germany and France were the first to widely overshoot the 3% deficit/GDP threshold with no consequences but a light promise to re-enter within the parameter within several years. Is this only a case?].

There might be a further way of reading this perverse mix of European macroeconomic policy also beyond its link with addictions and hidden interests. Indeed, a long lasting gusting wind of pessimism seems to be extremely widespread all over continental Europe as if growth rates between zero and 2% were the only range pursuable with no chance of growing faster to reach 3% and more. This pessimism cannot be justified if we

consider high European unemployment, relatively low European activity rates, strong requirements for European infrastructural networks to truly integrate continental Europe and connect with Eastern countries, high potentiality which could be expressed in terms of innovation, scientific research and human capital formation. Obviously, these potentialities cannot be fully expressed within a low growth trap where there is a wrong macroeconomic policy together with the difficulties of implementing structural reforms and finally with the widespread pessimism and attitudes of renunciation.

It may seem like a paradoxical situation that different historical conditions experienced at the beginning of the thirties of the last century when wrong theoretical roots led to stagnation and depression, active economic policies suggested by the Keynesian revolution proved to be the only way of guaranteeing 50 years of high and sustained growth in Europe together with fundamental social protection and more equitable income distribution.

Pessimism or optimism are not simply interior sentiments. They could become elements of resignation or a stimulus towards new challenges.

Here again, we do agree with a short analysis produced in 1930 by J. M. Keynes:[9]

> We are suffering just now from a bad attack of economic pessimism. It is common to hear people say that the epoch of enormous economic progress which characterised the nineteenth century is over; that the rapid improvement in the standard of life is now going to slow down – at any rate in Great Britain; that a decline in prosperity is more likely than an improvement in the decade which lies ahead of us.
>
> I believe that this is a wildly mistaken interpretation of what is happening to us. We are suffering, not from the rheumatics of old age, but from the growing-pains of over-rapid changes, from the painfulness of readjustment between one economic period and another. The increase of technical efficiency has been taking place faster than we can deal with the problem of labour absorption; the improvement in the standard of life has been a little too quick; the banking and monetary system of the world has been preventing the rate of interest from falling as fast as equilibrium requires. And even so, the waste and confusion which ensue relate to not more than $7\frac{1}{2}$ per cent of the national income; we are muddling away one and sixpence in the £, and have only 18s. 6d., when we might, if we were more sensible, have £1; yet, nevertheless, the 18s. 6d. mounts up to as much as the £1 would have been five or six years ago. We forget

[9] See J. M. Keynes, "Economic Possibilities for our Grandchildren", in *Essays in Persuasion*, W. W. Norton & Co., New York, 1963.

that in 1929 the physical output of the industry of Great Britain was greater than ever before, and that the net surplus of our foreign balance available for new foreign investment, after paying for all our imports, was greater last year than that of any other country, being indeed 50 per cent greater than the corresponding surplus of the United States. Or again – if it is to be a matter of comparisons – suppose that we were to reduce our wages by a half, repudiate four fifths of the national debt, and hoard our surplus wealth in barren gold instead of lending it at 6 per cent or more, we should resemble the now much-envied France. But would it be an improvement?

The prevailing world depression, the enormous anomaly of unemployment in a world full of wants, the disastrous mistakes we have made, blind us to what is going on under the surface to the true interpretation of the trend of things. For I predict that both of the two opposed errors of pessimism which now make so much noise in the world will be proved wrong in our own time – the pessimism of the revolutionaries who think that things are so bad that nothing can save us but violent change, and the pessimism of the reactionaries who consider the balance of our economic and social life so precarious that we must risk no experiments.

My purpose in this essay, however, is not to examine the present or the near future, but to disembarrass myself of short views and take wings into the future. What can we reasonably expect the level of our economic life to be a hundred years hence? What are the economic possibilities for our grandchildren? [Note by the authors: Now we are close to Keynes' deadline, we are those grandchildren and what are the economic possibilities for our children and grandchildren by 2030?]

From the earliest times of which we have record – back, say, to two thousand years before Christ – down to the beginning of the eighteenth century, there was no very great change in the standard of life of the average man living in the civilised centres of the earth . . .

. . . This slow rate of progress, or lack of progress, was due to two reasons – to the remarkable absence of important technical improvements and to the failure of capital to accumulate.

The absence of important technical inventions between the prehistoric age and comparatively modern times is truly remarkable. Almost everything which really matters and which the world possessed at the commencement of the modern age was already known to man at the dawn of history. Language, fire, the same domestic animals which we have to-day, wheat, barley, the vine and the olive, the plough, the wheel, the oar, the sail, leather, linen and cloth, bricks and pots, gold and silver, copper, tin, and lead-and iron was added to the list before 1000 B.C. – banking, statecraft, mathematics, astronomy, and religion. There is no record of when we first possessed these things.

At some epoch before the dawn of history perhaps even in one of the comfortable intervals before the last ice age – there must have been an era of progress and invention comparable to that in which we live to-day. But through the greater part of recorded history there was nothing of the kind.

The modern age opened; I think, with the accumulation of capital which began in the sixteenth century. I believe-for reasons with which I must not encumber the present argument – that this was initially due to the rise of prices, and the profits to which that led, which resulted from the treasure of gold and silver which Spain brought from the New World into the Old. From that time until to-day the power of accumulation by compound interest, which seems to have been sleeping for many generations, was re-born and renewed its strength. And the power of compound interest over two hundred years is such as to stagger the imagination.

Let me give in illustration of this a sum which I have worked out. The value of Great Britain's foreign investments to-day is estimated at about £4,000,000,000. This yields us an income at the rate of about $6\frac{1}{2}$ per cent. Half of this we bring home and enjoy; the other half, namely, $3\frac{1}{4}$ per cent, we leave to accumulate abroad at compound interest. Something of this sort has now been going on for about 250 years.

For I trace the beginnings of British foreign investment to the treasure which Drake stole from Spain in 1580. In that year he returned to England bringing with him the prodigious spoils of the Golden Hind. Queen Elizabeth was a considerable shareholder in the syndicate which had financed the expedition. Out of her share she paid off the whole of England's foreign debt, balanced her Budget, and found herself with about £40,000 in hand. This she invested in the Levant Company – which prospered. Out of the profits of the Levant Company, the East India Company was founded; and the profits of this great enterprise were the foundation of England's subsequent foreign investment. Now it happens that £40,000 accumulating at 3 per cent compound interest approximately corresponds to the actual volume of England's foreign investments at various dates, and would actually amount to-day to the total of £4,000,000,000 which I have already quoted as being what our foreign investments now are. Thus, every £1 which Drake brought home in 1580 has now become £100,000. Such is the power of compound interest!

From the sixteenth century, with a cumulative crescendo after the eighteenth, the great age of science and technical inventions began, which since the beginning of the nineteenth century has been in full flood – coal, steam, electricity, petrol, steel, rubber, cotton, the chemical industries, automatic machinery and the methods of mass production, wireless, printing, Newton, Darwin, and Einstein, and thousands of other things and men too famous and familiar to catalogue.

What is the result? In spite of an enormous growth in the population of the world, which it has been necessary to equip with houses and

machines, the average standard of life in Europe and the United States has been raised, I think, about fourfold. The growth of capital has been on a scale which is far beyond a hundredfold of what any previous age had known. And from now on we need not expect so great an increase of population.

If capital increases, say, 2 per cent per annum, the capital equipment of the world will have increased by a half in twenty years, and seven and a half times in a hundred years. Think of this in terms of material things – houses, transport, and the like.

At the same time technical improvements in manufacture and transport have been proceeding at a greater rate in the last ten years than ever before in history. In the United States factory output per head was 40 per cent greater in 1925 than in 1919. In Europe we are held back by temporary obstacles, but even so it is safe to say that technical efficiency is increasing by more than 1 per cent per annum compound. There is evidence that the revolutionary technical changes, which have so far chiefly affected industry, may soon be attacking agriculture. We may be on the eve of improvements in the efficiency of food production as great as those which have already taken place in mining, manufacture, and transport. In quite a few years – in our own lifetimes I mean – we may be able to perform all the operations of agriculture, mining, and manufacture with a quarter of the human effort to which we have been accustomed.

For the moment the very rapidity of these changes is hurting us and bringing difficult problems to solve. Those countries are suffering relatively which are not in the vanguard of progress. We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come – namely, technological unemployment. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour.

But this is only a temporary phase of maladjustment. All this means in the long run that mankind is solving its economic problem. I would predict that the standard of life in progressive countries one hundred years hence will be between four and eight times as high as it is to-day. There would be nothing surprising in this even in the light of our present knowledge. It would not be foolish to contemplate the possibility of a far greater progress still.

Let us, for the sake of argument, suppose that a hundred years hence we are all of us, on the average, eight times better off in the economic sense than we are to-day. Assuredly there need be nothing here to surprise us.

Now it is true that the needs of human beings may seem to be insatiable. But they fall into two classes – those needs which are absolute in the sense that we feel them whatever the situation of our fellow

human beings may be, and those which are relative in the sense that we feel them only if their satisfaction lifts us above, makes us feel superior to, our fellows. Needs of the second class, those which satisfy the desire for superiority, may indeed be insatiable; for the higher the general level, the higher still are they. But this is not so true of the absolute needs – a point may soon be reached, much sooner perhaps than we are all of us aware of, when these needs are satisfied in the sense that we prefer to devote our further energies to non-economic purposes.

Now for my conclusion, which you will find, I think, to become more and more startling to the imagination the longer you think about it.

I draw the conclusion that, assuming no important wars and no important increase in population, the economic problem may be solved, or be at least within sight of solution, within a hundred years. This means that the economic problem is not – if we look into the future – the permanent problem of the human race.

Why, you may ask, is this so startling? It is startling because – if, instead of looking into the future, we look into the past – we find that the economic problem, the struggle for subsistence, always has been hitherto the primary, most pressing problem of the human race – not only of the human race, but of the whole of the biological kingdom from the beginnings of life in its most primitive forms.

Thus we have been expressly evolved by nature – with all our impulses and deepest instincts – for the purpose of solving the economic problem. If the economic problem is solved, mankind will be deprived of its traditional purpose.

Will this be a benefit? If one believes at all in the real values of life, the prospect at least opens up the possibility of benefit. Yet I think with dread of the readjustment of the habits and instincts of the ordinary man, bred into him for countless generations, which he may be asked to discard within a few decades.

To use the language of to-day – must we not expect a general "nervous breakdown"? We already have a little experience of what I mean – a nervous breakdown of the sort which is already common enough in England and the United States amongst the wives of the well-to-do classes, unfortunate women, many of them, who have been deprived by their wealth of their traditional tasks and occupations – who cannot find it sufficiently amusing, when deprived of the spur of economic necessity, to cook and clean and mend, yet are quite unable to find anything more amusing.

To those who sweat for their daily bread leisure is a longed-for sweet-until they get it.

There is the traditional epitaph written for herself by the old char-woman:

> Don't mourn for me, friends, don't weep for me never,
> For I'm going to do nothing for ever and ever.

This was her heaven. Like others who look forward to leisure, she conceived how nice it would be to spend her time listening-in – for there was another couplet which occurred in her poem:

> With psalms and sweet music the heavens'll be ringing,
> But I shall have nothing to do with the singing.

Yet it will only be for those who have to do with the singing that life will be tolerable and how few of us can sing!

Thus for the first time since his creation man will be faced with his real, his permanent problem – how to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well.

The strenuous purposeful money-makers may carry all of us along with them into the lap of economic abundance. But it will be those peoples, who can keep alive, and cultivate into a fuller perfection, the art of life itself and do not sell themselves for the means of life, who will be able to enjoy the abundance when it comes.

Yet there is no country and no people, I think, who can look forward to the age of leisure and of abundance without a dread. For we have been trained too long to strive and not to enjoy. It is a fearful problem for the ordinary person, with no special talents, to occupy himself, especially if he no longer has roots in the soil or in custom or in the beloved conventions of a traditional society. To judge from the behaviour and the achievements of the wealthy classes to-day in any quarter of the world, the outlook is very depressing! For these are, so to speak, our advance guard – those who are spying out the promised land for the rest of us and pitching their camp there. For they have most of them failed disastrously, so it seems to me – those who have an independent income but no associations or duties or ties – to solve the problem which has been set them.

I feel sure that with a little more experience we shall use the new-found bounty of nature quite differently from the way in which the rich use it to-day, and will map out for ourselves a plan of life quite otherwise than theirs.

For many ages to come the old Adam will be so strong in us that everybody will need to do some work if he is to be contented. We shall do more things for ourselves than is usual with the rich to-day, only too glad to have small duties and tasks and routines. But beyond this, we shall endeavour to spread the bread thin on the butter – to make what work there is still to be done to be as widely shared as possible. Three-hour shifts or a fifteen-hour week may put off the problem for a great while. For three hours a day is quite enough to satisfy the old Adam in most of us!

There are changes in other spheres too which we must expect to come. When the accumulation of wealth is no longer of high social importance, there will be great changes in the code of morals. We shall be able to rid ourselves of many of the pseudo-moral principles which have hag-ridden us for two hundred years, by which we have exalted some of the most distasteful of human qualities into the position of the highest virtues. We shall be able to afford to dare to assess the money-motive at its true value. The love of money as a possession – as distinguished from the love of money as a means to the enjoyments and realities of life – will be recognised for what it is, a somewhat disgusting morbidity, one of those semicriminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease. All kinds of social customs and economic practices, affecting the distribution of wealth and of economic rewards and penalties, which we now maintain at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital, we shall then be free, at last, to discard.

Of course there will still be many people with intense, unsatisfied purposiveness who will blindly pursue wealth – unless they can find some plausible substitute. But the rest of us will no longer be under any obligation to applaud and encourage them. For we shall inquire more curiously than is safe to-day into the true character of this "purposiveness" with which in varying degrees Nature has endowed almost all of us. For purposiveness means that we are more concerned with the remote future results of our actions than with their own quality or their immediate effects on our own environment. The "purposive" man is always trying to secure a spurious and delusive immortality for his acts by pushing his interest in them forward into time. He does not love his cat, but his cat's kittens; nor, in truth, the kittens, but only the kittens' kittens, and so on forward forever to the end of cat-dom. For him jam is not jam unless it is a case of jam to-morrow and never jam to-day. Thus by pushing his jam always forward into the future, he strives to secure for his act of boiling it an immortality . . .

. . . Perhaps it is not an accident that the race which did most to bring the promise of immortality into the heart and essence of our religions has also done most for the principle of compound interest and particularly loves this most purposive of human institutions.

I see us free, therefore, to return to some of the most sure and certain principles of religion and traditional virtue – that avarice is a vice, that the exaction of usury is a misdemeanour, and the love of money is detestable, that those walk most truly in the paths of virtue and sane wisdom who take least thought for the morrow. We shall once more value ends above means and prefer the good to the useful. We shall

honour those who can teach us how to pluck the hour and the day virtuously and well, the delightful people who are capable of taking direct enjoyment in things, the lilies of the field who toil not, neither do they spin.

But beware! The time for all this is not yet. For at least another hundred years we must pretend to ourselves and to every one that fair is foul and foul is fair; for foul is useful and fair is not. Avarice and usury and precaution must be our gods for a little longer still. For only they can lead us out of the tunnel of economic necessity into daylight.

I look forward, therefore, in days not so very remote, to the greatest change which has ever occurred in the material environment of life for human beings in the aggregate. But, of course, it will all happen gradually, not as a catastrophe. Indeed, it has already begun. The course of affairs will simply be that there will be ever larger and larger classes and groups of people from whom problems of economic necessity have been practically removed. The critical difference will be realised when this condition has become so general that the nature of one's duty to one's neighbour is changed. For it will remain reasonable to be economically purposive for others after it has ceased to be reasonable for oneself.

The pace at which we can reach our destination of economic bliss will be governed by four things: our power to control population, our determination to avoid wars and civil dissensions, our willingness to entrust to science the direction of those matters which are properly the concern of science, and the rate of accumulation as fixed by the margin between our production and our consumption; of which the last will easily look after itself, given the first three.

Meanwhile there will be no harm in making mild preparations for our destiny, in encouraging, and experimenting in, the arts of life as well as the activities of purpose.

But, chiefly, do not let us overestimate the importance of the economic problem, or sacrifice to its supposed necessities other matters of greater and more permanent significance. It should be a matter for specialists – like dentistry. If economists could manage to get themselves thought of as humble, competent people, on a level with dentists, that would be splendid!

Mr Keynes was deeply right in foreseeing the huge increase in the standard of living for many and in expressing optimism against the prevailing pessimism of the time. Perhaps, he had overvalued the impact of technology and innovation on producing leisure since he referred to the advanced world of his time.

However, he could not even imagine the appearance on the world economic scenario of 3 to 4 billion newcomers who are pressing to join the

wealthy world club in this new century and millennium. Yet, however, his lesson may still be valid.

Optimism means facing problems, being active in solving them. It would imply taking risks and seizing opportunities. The balance between risks and opportunities makes the world move forwards.

Pessimism means fearing any risk and renouncing any opportunity in the illusion of saving the present given from the past, without building any future. But accepting a passive role will not lead anywhere other than, maybe, backwards.

5.7 Blinkered horse and institutional gap: no alibis to avoid national responsibility

It's without a doubt that credibility for this kind of reasoning in Europe must be based on a precise strategy of economic policy that must be defined on a national government level, with appropriate economic and industrial policies, policies concerning infrastructures, labour, innovation, research and professional training. Just by chance, let's refer to Italy.

The central themes for Italy are competitiveness and productivity in order to raise the country's growth potential.

Then, we must necessarily begin by directly addressing the heavy clogs that make the Italian system non-competitive.

If we compare Italy to France and Germany today (not to China and India) we find the following situation. First, about 25% of lower competitiveness is due to Italy's strategic position on energy, to which one can add a greater dependence on natural gas and petroleum, a greater dependence on foreign countries and a greater risk of blackouts. Second, between 10 and 15% is due to higher logistical costs (that is transport, infrastructures, logistic bases, ports, airports). Third, a larger fiscal wedge accounts for about another 15–20%. Thus, these three aspects alone account for 50–60% of Italy's lower competitiveness with respect to other European countries and other advanced countries. On top of this, and, here, together with the other countries in the European Monetary Union, Italy must add the approximately 50% appreciation of the euro from 0.80 to 1.30 in little more than two years.

It's clear that if we make a comparison with China by considering only labour cost, we can see that theirs is 5–10 times lower than Italy's and the themes we have just discussed would not offer any solution. But do we seriously think that if Italy were 100% more competitive (50% due to removal of internal causes and 50% due to removal of the super-euro effects) and if Europe were 50% more competitive (in this case considering only the super-euro effects) we would be having the same discussions about Europe's decline, the necessity of making structural reforms, the necessity of increasing liberalization, proceeding with privatizations,

making new rules regarding professions, introducing reforms in the bankruptcy law, etc.? These last are all shared and sacrosanct things, but they shouldn't lead us to totally forget or neglect macroeconomics in Europe and, in part, even in the United States, with the alibi that we only need to do the microeconomics of structural reforms. We mustn't make trade-offs, counter-posing the two things. We need to put them in synergy, because a macroeconomic policy picture which would make more sense, above all but not only in Europe, would more effectively drive the engine of structural reforms.

Therefore, macroeconomic policies capable of re-launching development and structural reforms must march together. Macro and microeconomics are organs in a single body. Regarding structural reforms, it is certain that some of them do not cost anything and therefore we must make them, mainly because they don't cost anything. However, there are structural reforms which cost, because if one wants to make infrastructures, if one wants to gain positions on energy, etc., one needs money and one must also say where the money is coming from. Do we seriously believe that it's enough to exclusively trust private investors in these sectors of the Italian production system? Certainly, project financing is an extremely important instrument in the realization of infrastructures. The fact is, however, that without substantial participation from public finance, projects are not implemented.

Moreover, there is another determining aspect which should be taken into account. The introduction of the single currency, with the passage of prices in lire to prices in euro didn't reduce purchasing power across the board for all Italians. Undoubtedly, sneaky behaviour, made possible by protected and non-competitive market structures, have led to price conversions on the basis of an exchange rate of 1000 lira per euro rather than the official rate of 1936.27 lira per euro. The effect of this behaviour has been a strong shift in purchasing power from low to middle income groups relying on fixed income to medium to high income groups which were counting on other forms of income. This shift in purchasing power has led to a rather subdued trend in consumption and an increase in savings. In fact, on the one hand, the low to middle income groups relying on fixed income are forced to consume less and have difficulty maintaining their standard of living, on the other hand, the middle to high income groups which have increased their purchasing power, are not spending it all on consumption and therefore do not offset the slowdown in consumption by the fixed income groups. In fact, a large part of that purchasing power is transformed into savings, invested largely in housing and, to a minor extent, in stocks. Proof of this is the strong increase in housing prices and some sign of recovery in the stock market. The shift in purchasing power has therefore had the effect of compressing the income account while raising the patrimonial account. The Italian economy, therefore, appears like a business that has worsened

its profit/loss account but has improved, with the re-evaluation of its fixed assets, its balance sheet.

The re-launching of development must, therefore, take this social redistribution aspect into account, not only because it's fair to pay attention to the less fortunate groups, but also because of the strong macroeconomic need to correct the slowdown in consumption which the shift in purchasing power has induced and whose effects contribute in restraining development as well.

Again, we must stop acting like the cat that chases its tale. If there is no growth, reforms are more difficult, without reforms growth remains stifled.

Here are, therefore, three pieces of a single agenda:

1) The unsustainable imbalance in the world economy (which in the short term appears in equilibrium only because China is holding it up, buying American bonds) between American and Asian growth and the lack of growth in Europe: Europe cannot be too absent from the world.
2) Europe, which is too absent in the world cannot be so present in Europe, with its rigid and obtuse rules and so "absent" from its own responsibilities in determining, by itself, the key to its development.
3) The necessity of implementing structural reforms in each single European country (Italy, France, Germany, etc.) by containing current account public expenditure, reducing fiscal pressure on families and businesses and increasing public and private investments. Italy in particular, must do all of this, respecting European pacts but also taking the responsibility of contributing to making these pacts a bit more rational, i.e. introducing the Golden Rule.

6

World Growth, Trade, Real and Financial Imbalances, the International Monetary System and Exchange Rates: A Global Vision

In Chapter 3 we produced a very rough projection of the world economy according to the average rate that the various continents recorded over the last five years. Just to be thought provoking, we showed how the composition of the G8 could change and what a huge share of world GDP would be concentrated in the first three economies (China, the US and India) starting by 2015 and until 2030. Obviously, that was a game.

Here we use some econometric exercises that are a little more sophisticated in order to show the way that the world economy is globalizing in the medium to long run by using a Base Simulation, which is widely in line with the projections that emerge from the current debate among institutions and research centres. To this aim, we refer here to the August 2005 simulation made by Oxford Economic Forecasting.[10]

Such a simulation assumes a case that could be called world disequilibria soft landing (basesl). Indeed, it is based on the assumption that US foreign

[10] See: Oxford Economic Forecasting. Oxford Economic Forecasting was founded in 1981 to provide independent forecasting and analysis tailored to the needs of business economists and planners. Its services cover both the international economy and the UK, and range from regular reports and business seminars to user-friendly PC-based econometric models. In addition, OEF is able to offer consultancy across a broad range of economic issues, and commands a high degree of professional and technical expertise, both in its own staff in Oxford and Philadelphia, USA, and through its close links with Oxford University and a wide range of economic research groups around the world.

Oxford Economics USA. Oxford Economics was founded in 1990, both to support a growing US client base and to give greater depth and breadth to analysis of the US economy in particular and North America in general.

imbalances will gradually shrink with the US current account deficit passing from 6.4% of GDP to 4.4% in 2009–2010 (see Figure 6.1), still remaining, however, at 700 billion dollars per year. This is well above the 3% threshold which is considered as physiological and sustainable by the growth of dollar demand by the rest of the world (see Figure 6.2). Even exchange rate adjustments can be considered "soft" since the yuan appreciation (more or less 14% in 5 years) would go from the current ratio of 8.14 yuan to the dollar to 7 at the end of this decade (see Figure 6.3).

As can be seen in Figure 6.4, growth is continuing at a sustained pace in Asia, with China (average 8%) and India (average 7%) leading the continent. The US economy will grow at its potential of 3–4% a year while the Euro Area will continue to lag behind with 1–2% rates of growth. Africa and Latin America (with few exceptions) will never be able to enter an acceptably rapid catch-up process also due to their relatively low per-capita income.

As we have also seen in the previous world maps, and the case is confirmed here, the Pacific axis will dominate the world economy in a couple of decades with three countries (the US, China and India) representing almost two-thirds of world GDP.

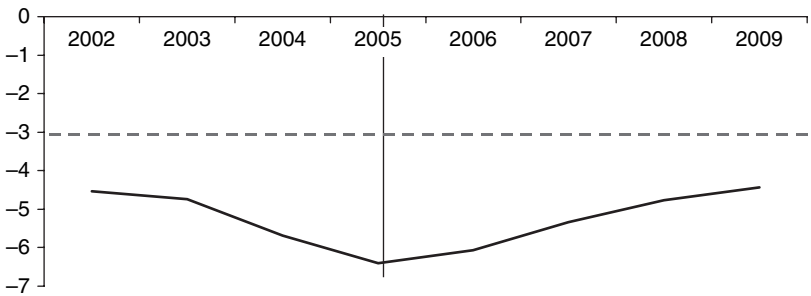

Figure 6.1 US Foreign Current Account Deficit (% of GDP) Base simulation

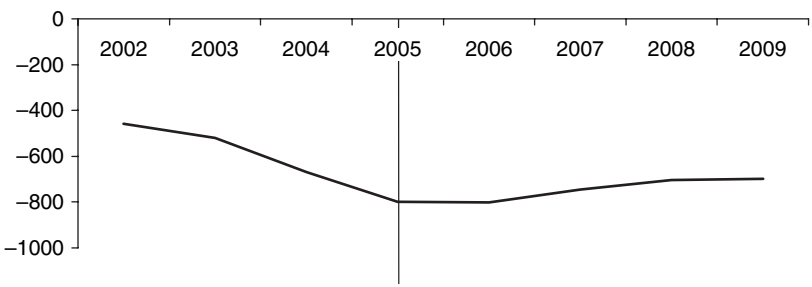

Figure 6.2 US Foreign Current Account Deficit (billions of $) Base simulation

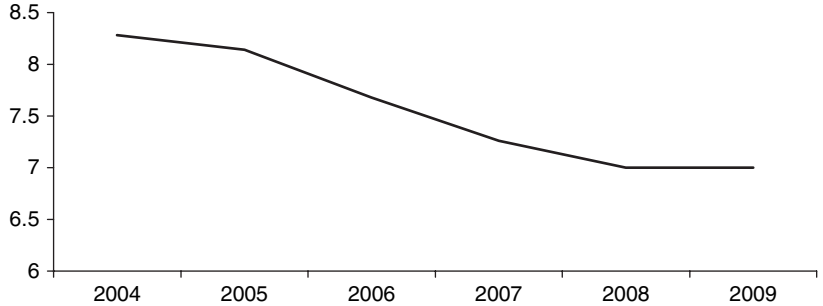

Figure 6.3 Yuan per dollar Base simulation

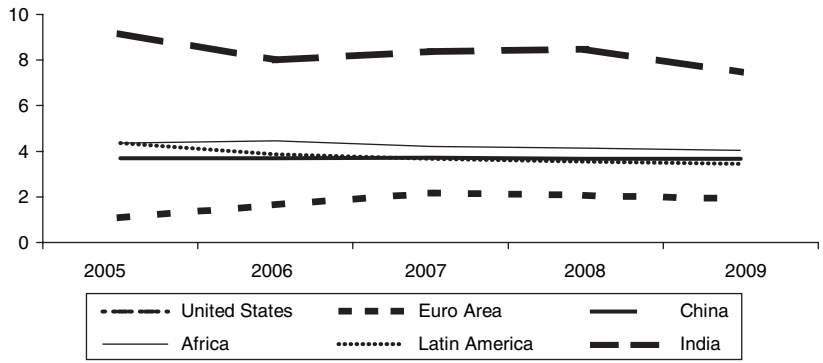

Figure 6.4 GDP growth rate Base simulation

In the second half of the last century the real world disequilibrium was between the North (the US, Europe and Japan) and the South (Asia, Africa and Latin America), while the financial disequilibrium was North-North with European and Japanese savings financing the US debt. In this new era, the new world disequilibrium in terms of real economy (growth) appears, on the one side, to be dominated by a new strongly synergic Pacific economic alliance between the US and Asia and, on the other side, a relatively declining Europe, a Latin America which is barely moving along and a forgotten Africa. The new financial disequilibrium will see, instead, Chinese (and Asian) savings financing the US debt.

Temptation and addiction could make this new disequilibrium acceptable or, in any case, accepted.

Temptation could lead the US and Asia not to care about Europe and the other continents in the conviction that their growth lag is their own fault.

Addiction could lead Europe to be fully satisfied with the standard of living already reached in the last 50 years, in the illusion of maintaining such a

level without seeing that its relative decline will reduce its weight and role in the world economy.

Addiction could also lead Latin America to accept its secondary role.

Finally, addiction could condemn Africa to become the missing continent of the world.

However, even if this condition of "real" disequilibrium in the world economy is accepted, an increasing "financial" disequilibrium makes this scenario unsustainable in the long run.

Indeed, high US growth rates could last only under the condition that China and the rest of the world continue to sustain a huge, albeit slightly decreasing, US current account deficit by investing their excessive savings in US debt (see Figures 6.5 and 6.6). Only five years ago, China held less than 10% of US foreign debt. By the end of 2005 China had already reached almost 20%. This figure will become 30%, 40% and progressively more in the not-too-distant future.

On the one hand, this perspective doesn't appear very positive for the US at least in a geo-political sense, even beyond its economic and financial sustainability. Such a financial atomic bomb could be much more effective and dangerous than a real nuclear weapon.

On the other hand, it's quite difficult to see why China should continue to buy US pieces of green paper in huge amounts thereby compressing its own social and economic standard of living in order to produce enough savings to offset the US current account deficit and an ever-increasing US debt.

To paraphrase what the Apollo 13 crew said many years ago, we could also say now: "Washington, Beijing, Europe, Moscow and the rest of the world . . . we've got a problem".

If this world scenario of soft-landing, with real and financial disequilibrium, is not sustainable and since the problem lies in the US deficit and debt, we have to ask ourselves which alternatives could provide a solution acceptable for everybody.

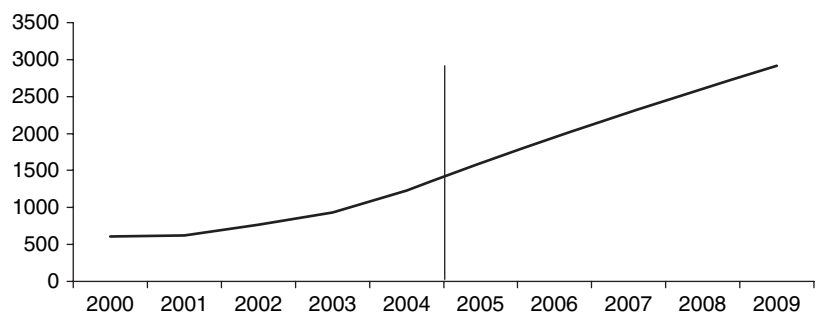

Figure 6.5 US foreign debt (billions of $) Base simulation

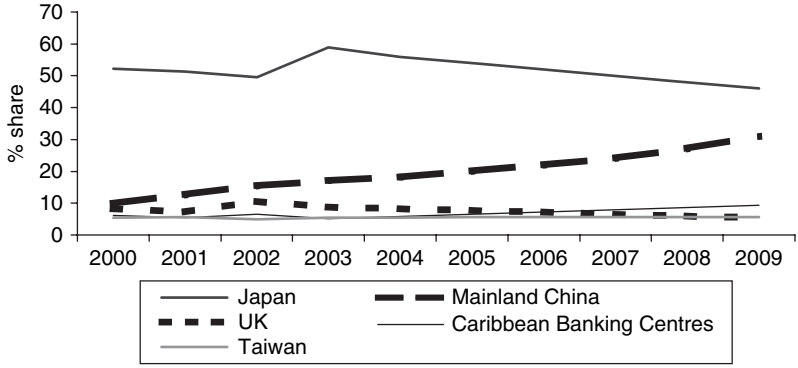

Figure 6.6 Major foreign holders of US Treasury securities Base simulation

A masochistic solution on the part of the US and a sadomasochistic one for the rest of the world would be to drastically put the brakes on the US economy and let the rest of the world feel the consequences.

Clearly, the real solution is to obtain the highest sustainable rate of growth in the world economy, more equally spread among the different continents, where "the" problem (i.e., US deficit and debt) is brought to a solution.

A positive sum game for each player must be found so that each player can have his own interest in playing the game (a larger slice) and make, all together, a larger overall world cake.

A shared opinion among world analysts is that any US foreign current account deficit below 3% of GDP is sustainable since the demand for dollars increases more or less at such a rate as a consequence of world rates of growth and trade. Therefore, we do consider such a threshold as the target to reach in order to make globalization solid and sustainable and to make each player confident in playing the game since it will face better opportunities for everyone and fewer risks for both single areas and the world as a whole.

To achieve this aim, we'll now try to use some stupid econometric games to find some smart hints.

We have tried three lines of approach:

1) A dollar devaluation able to lead the US current account deficit below 3% of GDP.
2) Waking Europe up by structurally pushing its own growth to a higher level (by reducing taxes and current accounts government expenditures and increasing investments) in order to improve European perspectives and contribute to reducing the US deficit through a higher absorption effect.
3) Since under the present international monetary system and current exchange rates world perspectives are not sustainable, we therefore need to approach the problem the other way around. Is there, and what is

the timing and size of an exchange rate adjustment that could lead to sustainability with a high rate of growth and financial equilibrium in the world economy?

With respect to these three lines of approach, here are the results which seem of great interest to us especially with respect to the suggestions that these "econometric games" tend to provide, limiting our analysis to the results obtained for the three greatest continental countries, Germany, France and Italy. We are certainly aware of the limits of these exercises and we are obviously open to any suggestion which may contribute to an improved interpretation of the results obtained and, above all, to the economic policy lines that those results may indicate. We are convinced, however, that a solution must be found all together to give globalization a perspective of solidity and acceptance and not a prospect of increasing and deflagrating conflict. A new world is clearly foreseeable and it seems difficult to govern this new world through an old *governance*. If we face a new world we have to build a new and more adequate *governance*.

To this effect, these are the conclusions that we have reached:

1) A dollar "hyper" devaluation

A dollar devaluation up to 1.90 dollars per euro, to 5 yuan per dollar and to 61 yen per dollar could reduce the US current account deficit below 3%. However, the inflation rates in the US will jump upwards. Furthermore there is another side effect: the rest of the world will be almost reduced to starvation with rates of growth at about 5% for China, below 2% for the Euro Area, about 3% for Africa and about 1% for Latin America (see Figures 6.7–6.18).

If the dollar devaluates up to 1.90 against the euro . . .

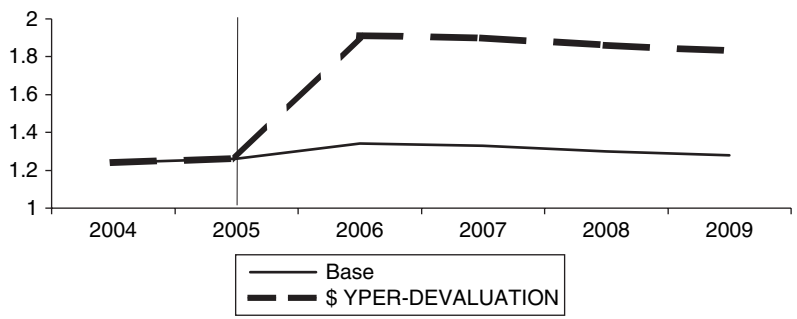

Figure 6.7 Dollar per euro

. . . and up to 5 yuan per dollar . . .

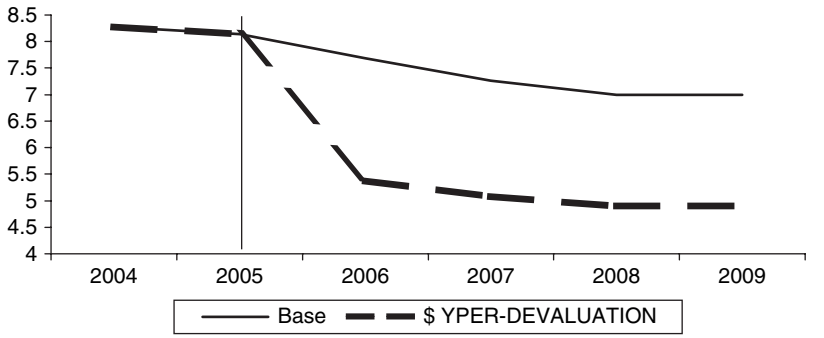

Figure 6.8 Yuan per dollar

. . . and 61 yen per dollar,

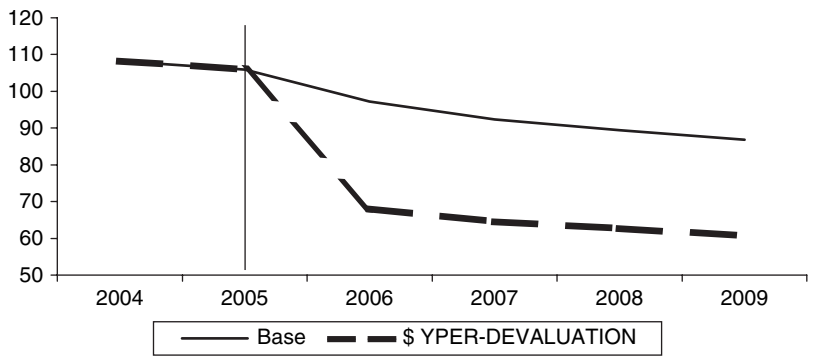

Figure 6.9 Yen per dollar

the US would initially have even higher growth,

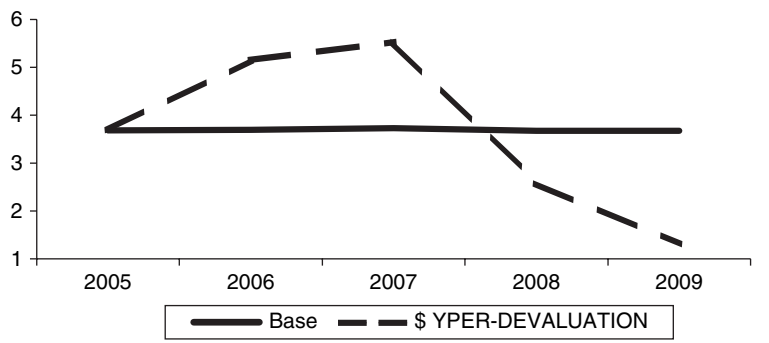

Figure 6.10 US GDP growth rates

the US foreign account deficit would drop below 3% of GDP . . .

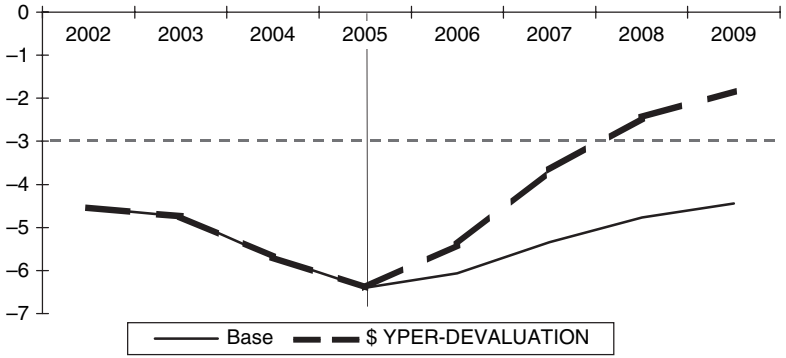

Figure 6.11 US current account (% of GDP)

. . . reduced in absolute value to 300 billion dollars a year.

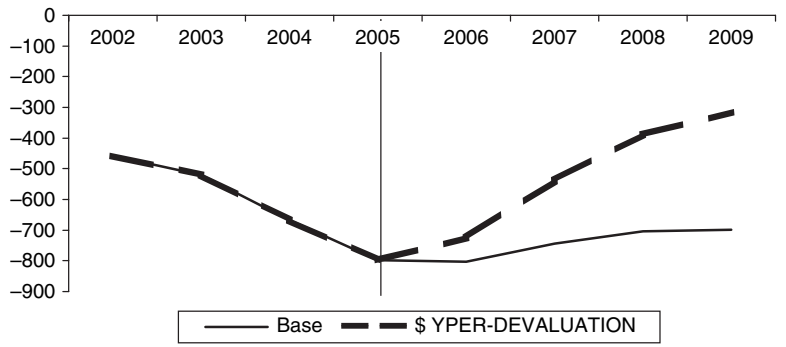

Figure 6.12 US current account ($ bn)

The US debt would tend to stabilize . . .

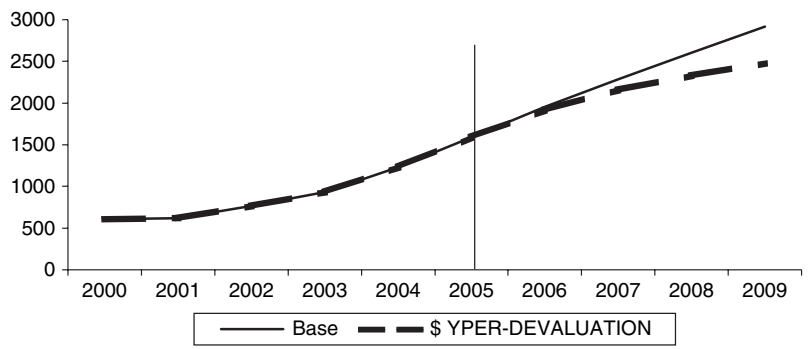

Figure 6.13 US foreign debt ($ bn)

but US inflation would jump upwards . . .

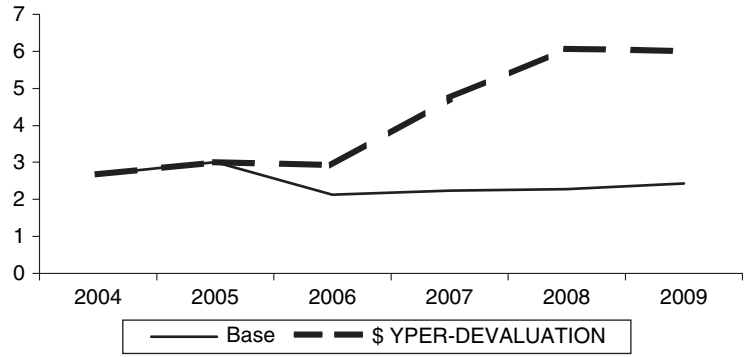

Figure 6.14 US CPI

. . . and China's growth rate would be halved.

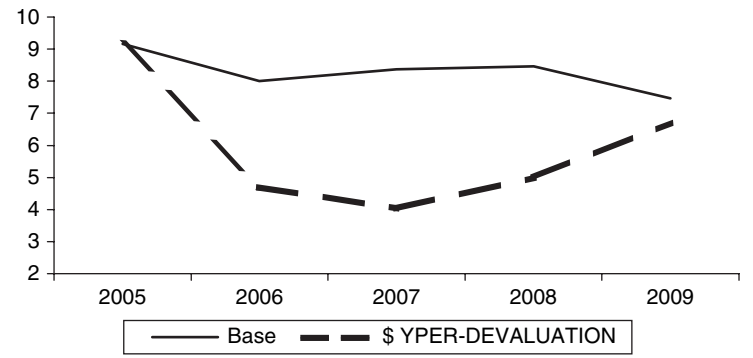

Figure 6.15 China GDP growth rates

European growth would shrink again to well below 2%,

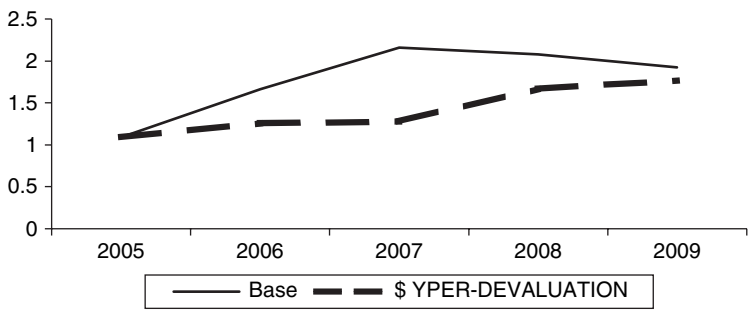

Figure 6.16 Euro area GDP growth rates

Africa would starve . . .

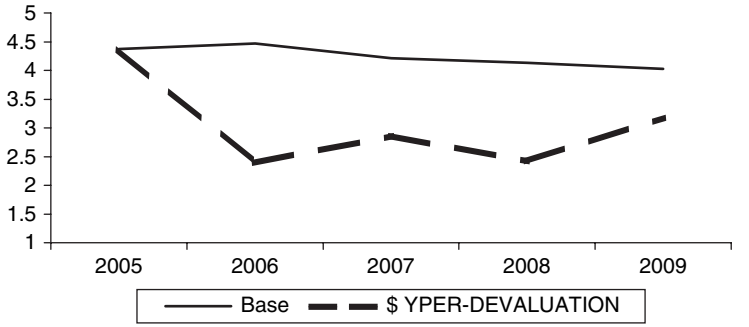

Figure 6.17 Africa GDP growth rates

and Latin America's growth would be killed

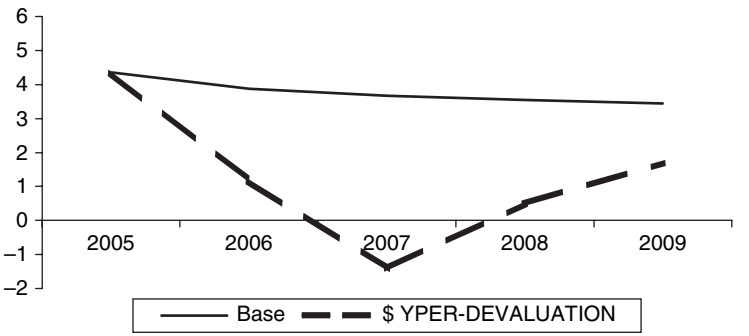

Figure 6.18 Latin America GDP growth rates

2) Higher domestically-driven growth in Europe

In Europe, higher growth figures are possible, desirable and pursuable through more effective European fiscal policies to reach full employment and higher activity levels. Structural microeconomic reforms are also clearly needed but would be better if based on a macroeconomic policy framework able to sustain growth both through fiscal policies (by restructuring level and composition of expenditures and taxes) and with a monetary policy which, maintaining inflation under control, could lead the exchange rate of the euro to parity with the dollar without slavishly following each single decision by the Fed.

Higher growth in Europe would also lead to much better financial equilibrium in the government budget. However, it seems that the inflation target would need to be revised by half or one percentage point, but, in this case, the game is worth it.

However, the European absorption effect would give small relief to the US deficit while the dollar appreciation would, instead, increase the problem of the US deficit. Therefore, higher European growth is possible and foreseeable but is not in itself a solution to world financial disequilibrium (see Figures 6.19–6.30).

If Europe implemented a policy of domestic push and the euro is led to the parity against the dollar . . .

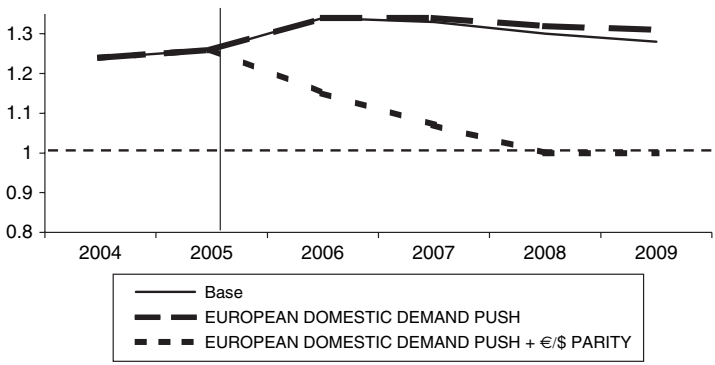

Figure 6.19 Dollar per euro

. . . the European rate of growth could jump to 3–4%

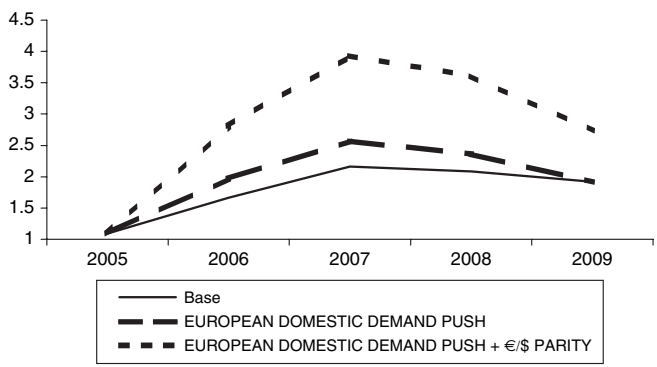

Figure 6.20 Euro Area GDP growth rates

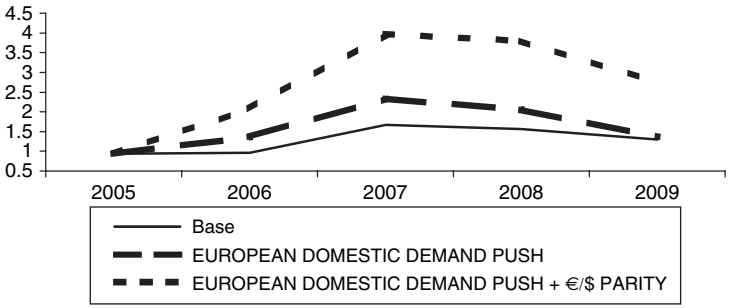

Figure 6.21 Germany GDP growth rates

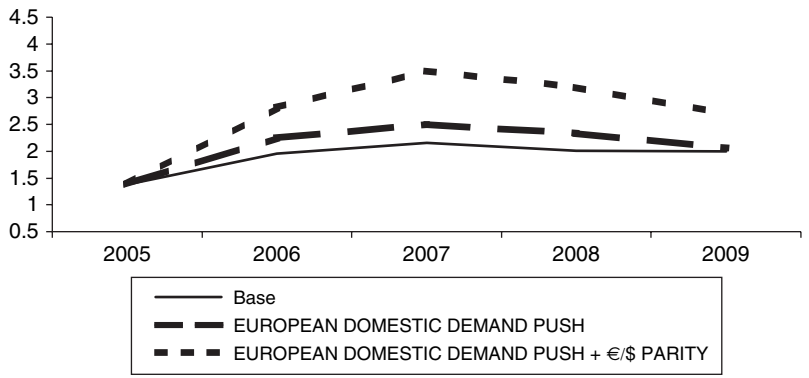

Figure 6.22 France GDP growth rates

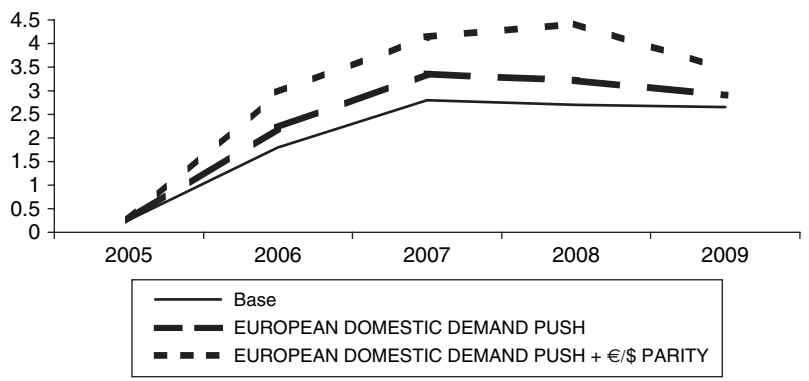

Figure 6.23 Italy GDP growth rates

and government deficits would be driven to zero with some increase in inflation which could, however, be easily controlled.

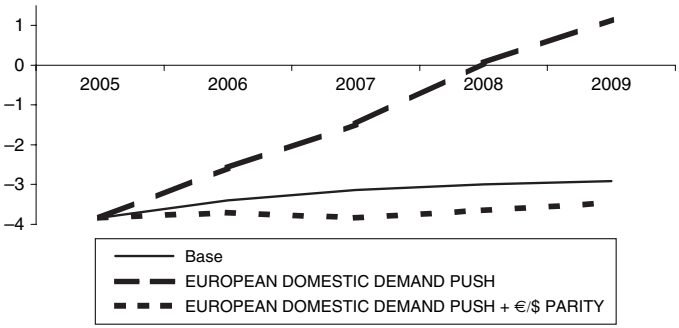

Figure 6.24 Germany deficit/GDP

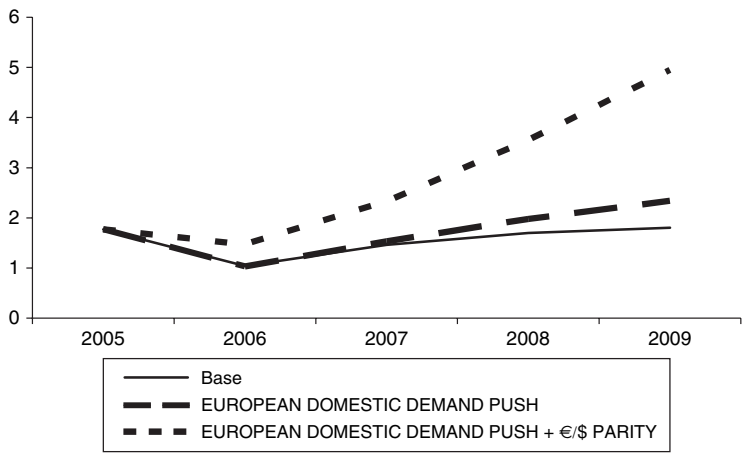

Figure 6.25 Germany CPI

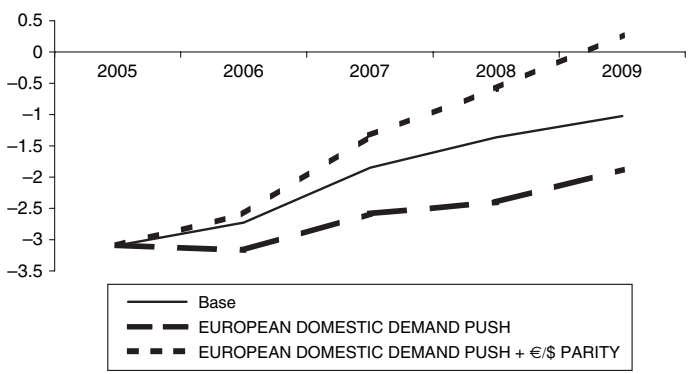

Figure 6.26 France deficit/GDP

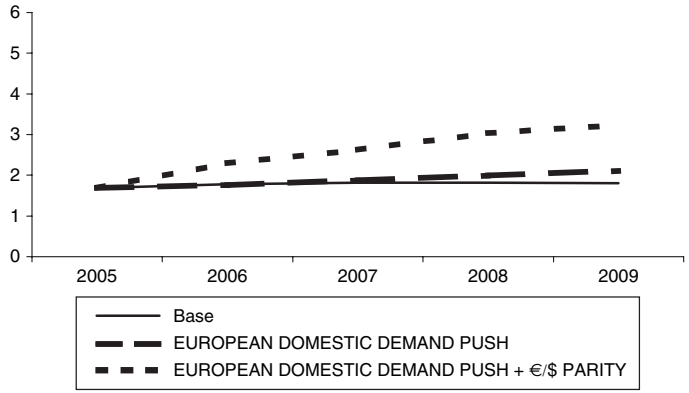

Figure 6.27 France CPI

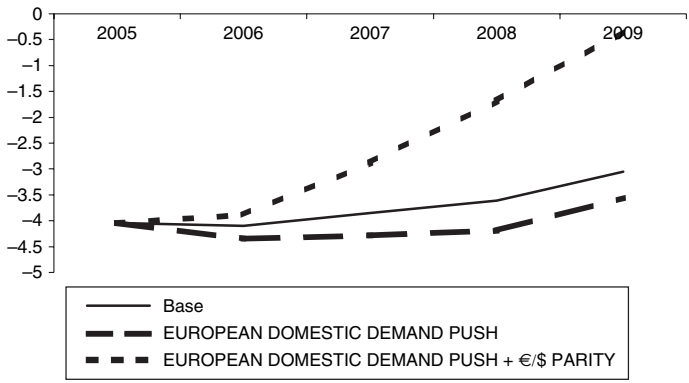

Figure 6.28 Italy deficit/GDP

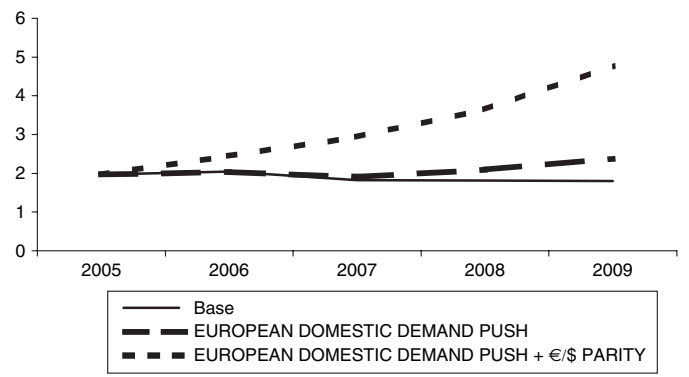

Figure 6.29 Italy CPI

However, "the" problem, i.e. the US foreign deficit, would not be solved and would remain well above 3%.

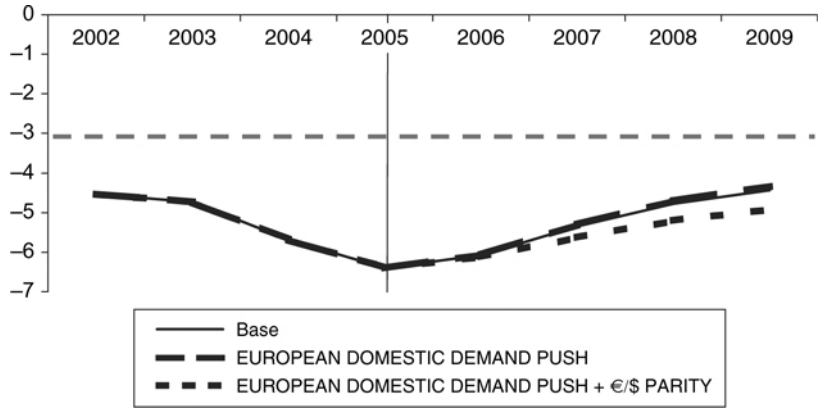

Figure 6.30 US current account (% of GDP)

3) Exchange rates, new world equilibria, new world governance

A new exchange rate system able to give a perspective of sustainability to world financial conditions with high growth well-distributed internationally seems to need a yuan appreciation of 40% with respect to the dollar and 60% with respect to the euro, with a consequent 20% dollar appreciation with respect to the euro (i.e., dollar and euro at parity and both below 4 yuan per dollar): this seems to represent "the" solution to "the" problem.

Under these conditions, the US current account deficit would drop below 3% in four years, growth would remain high in the US economy and could be significantly higher in Europe, Latin America and Africa.

However, China's growth would slow down from about 9% to about 5%, but China could implement a domestic push in consumption and investment (as Europe must do in any case if she wishes to avoid the low-growth trap) and would be able to jump up again to a 9% growth rate. This would be a result of a lower export-led effect and higher domestically-driven push. In this case China, instead of accumulating pieces of paper in US debt, has the chance to provide a higher standard of living and more welfare protection to its own people. As a matter of fact, this shift appears to be politically and historically inevitable and ancient Chinese wisdom should remind Chinese leaders to lead and govern the process, with prudence but timed so it is perceivable at least in the medium term (see Figures 6.31–6.41).

If the yuan appreciates by 40% against the dollar

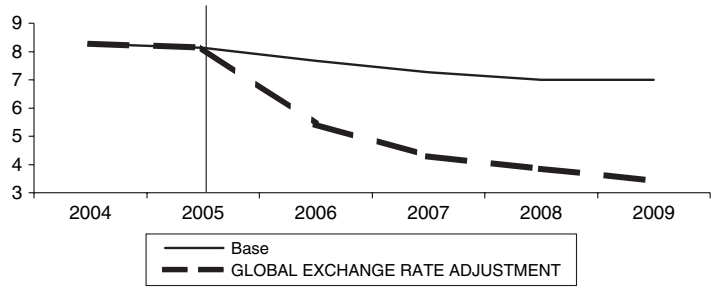

Figure 6.31 Yuan per dollar

and the dollar goes back to the parity with the euro

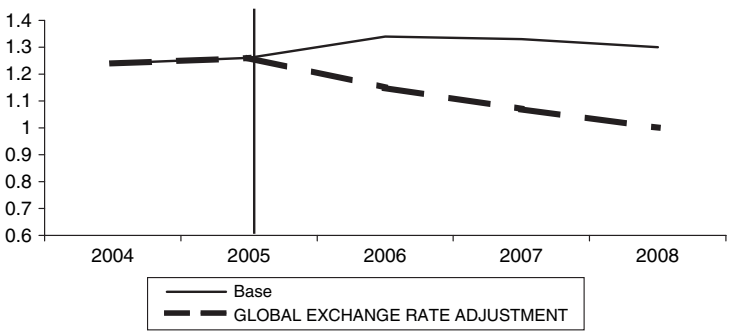

Figure 6.32 Dollar per euro

and the yen follows the dollar,

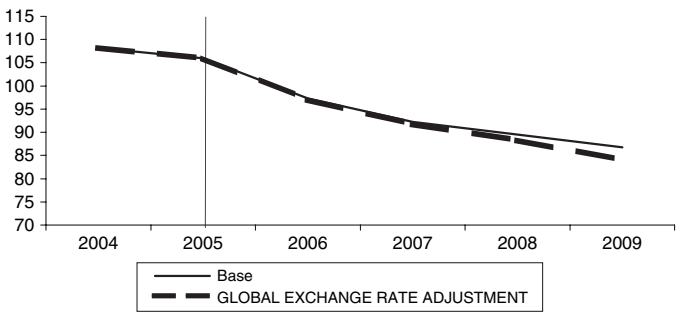

Figure 6.33 Yen per dollar

growth would be even higher in the US.

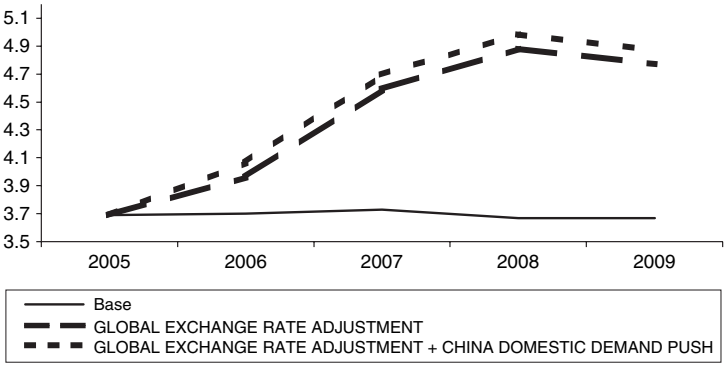

Figure 6.34 US GDP growth rates

"The" problem would be solved, i.e. the US foreign deficit would be driven below 3% of GDP.

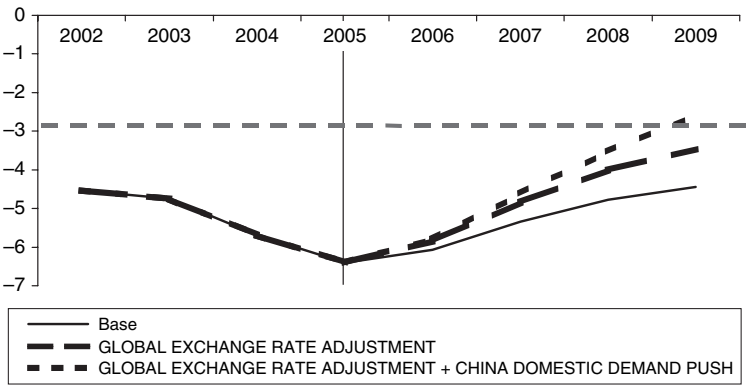

Figure 6.35 US current account (% of GDP)

US foreign debt would be under control . . .

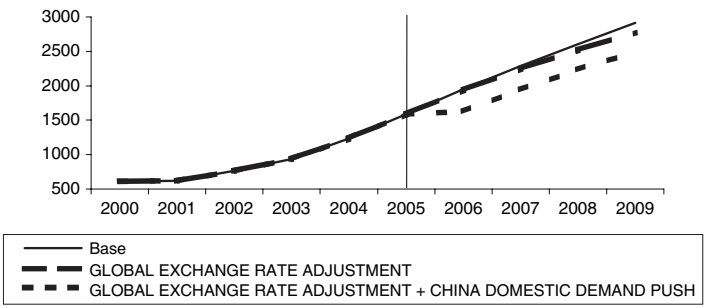

Figure 6.36 US foreign debt ($ bn)

. . . and inflation as well.

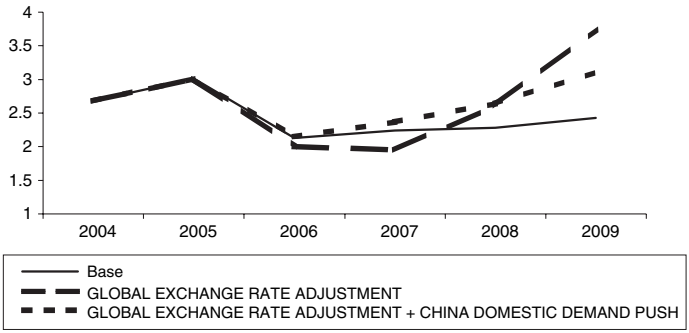

Figure 6.37 US CPI

Europe would grow between 3 and 4% . . .

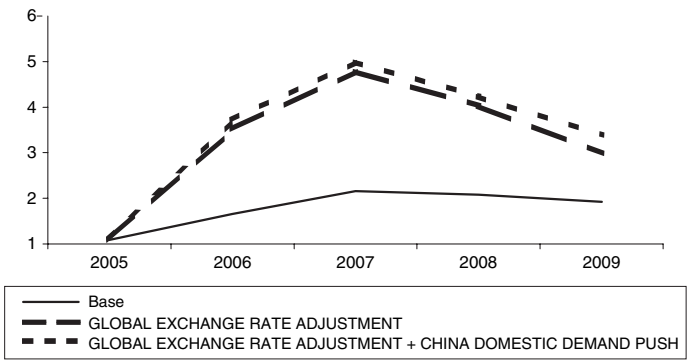

Figure 6.38 Euro Area GDP growth rates

. . . Africa would reach 5% . . .

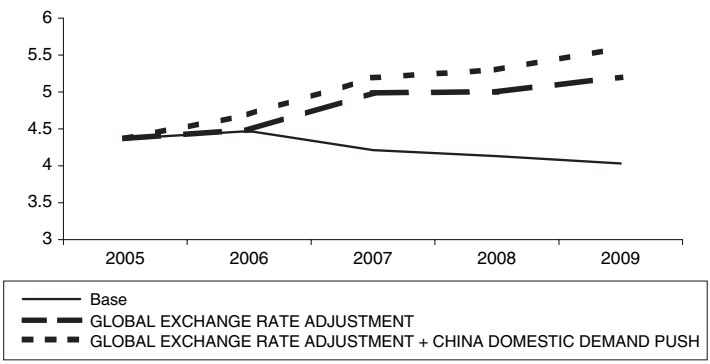

Figure 6.39 Africa GDP growth rates

. . . and so would Latin America.

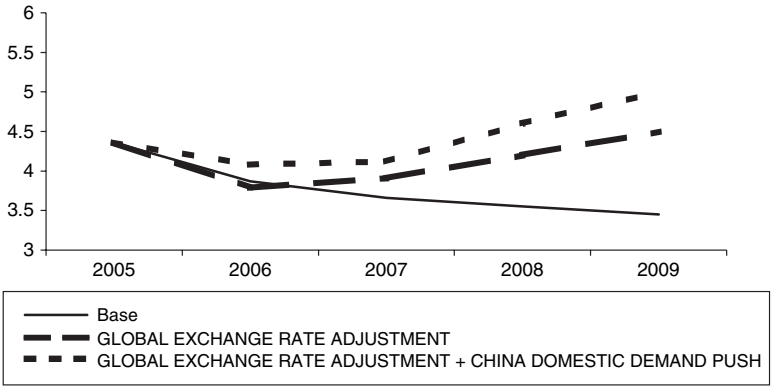

Figure 6.40 Latin America GDP growth rates

China could have, at first, a negative impact from the yuan appreciation (– line) but then can achieve even higher growth rates of 9–10% (- line) by shifting from an export-led to a domestic-push policy, thus providing faster growth and better living conditions for the Chinese people.

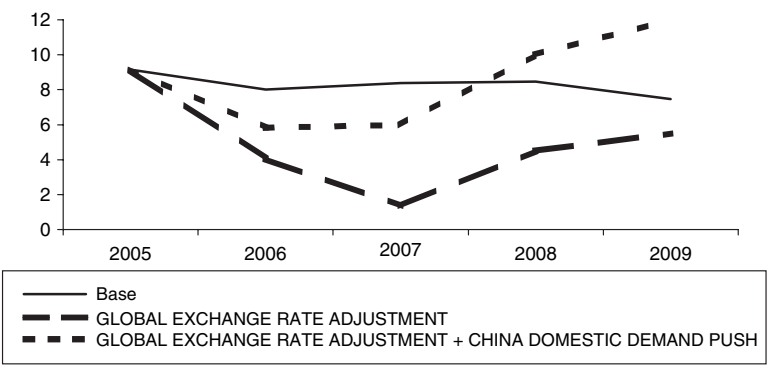

Figure 6.41 China GDP growth rates

Appendix to Chapter 6: Tables of Simulations

Base simulation

Table 1

	GDP growth rate				
	2005	**2006**	**2007**	**2008**	**2009**
United States	3,69	3,7	3,73	3,67	3,67
Euro area	1,09	1,66	2,16	2,08	1,92
Germany	0,94	0,97	1,67	1,56	1,3
France	1,38	1,96	2,15	2,01	2
Italy	−0,59	0,95	1,95	1,85	1,81
China	9,16	8,01	8,37	8,47	7,47
India	6,86	7,43	7,26	7,24	7,22
Africa	4,37	4,47	4,21	4,13	4,03
Latin America	4,36	3,87	3,66	3,55	3,45

Table 2

	CPI				
	2005	**2006**	**2007**	**2008**	**2009**
United States	3,01	2,13	2,24	2,28	2,43
Euro area	3,56	1,33	1,35	1,77	1,82
China	2,31	2,5	3,05	3,04	3,04
India	4,1	4,6	5,94	5,7	5,4
Africa	18,63	19,88	19,66	19,71	20,53
Latin America	9,6	8,63	8,61	8,48	8,39

Table 3

	US economy				
	2005	**2006**	**2007**	**2008**	**2009**
US current account (% of GDP)	−6,40	−6,07	−5,34	−4,77	−4,44
US current account ($ BN)	−798,25	−802,31	−743,88	−704,13	−698,50
US foreign debt ($ BN)	1.591,45	1.951,73	2.285,77	2.601,95	2.915,61

Table 4

	Major foreign holders of Treasury securities (% share)					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**
Japan	55,9	53,9	51,9	49,9	47,9	45,9
Mainland China	18,1	20,1	22,1	24,1	27,1	31,1
UK	8,3	7,7	7,2	6,6	6,1	5,5
Caribbean Banking Centres	5,8	6,5	7,2	7,9	8,7	9,4
Taiwan	5,5	5,6	5,6	5,6	5,6	5,6

Table 5

	European deficit/GDP					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**
Germany	−3,7	−3,8	−3,4	−3,1	−3,0	−2,9
France	−3,7	−3,1	−2,7	−1,9	−1,4	−1,0
Italy	−3,0	−4,0	−4,1	−3,9	−3,6	−3,1

Table 6

	Exchange rates				
	2005	**2006**	**2007**	**2008**	**2009**
Dollar per euro	1,26	1,34	1,33	1,30	1,28
Yen per euro	133,57	130,38	122,72	116,31	111,10
Yen per dollar	106,01	97,30	92,27	89,47	86,80
Yuan per dollar	8,14	7,68	7,26	7,00	7,00

US Dollar perdevaluation ($ YPER-DEVALUATION)

Table 7

	Dollar per euro				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,26	1,34	1,33	1,30	1,28
$ YPER-DEVALUATION	1,26	1,91	1,9	1,86	1,83

Table 8

	Yuan per dollar				
	2005	**2006**	**2007**	**2008**	**2009**
Base	8,14	7,68	7,26	7	7
$ YPER-DEVALUATION	8,14	5,38	5,08	4,9	4,9

Table 9

	Yen per dollar				
	2005	**2006**	**2007**	**2008**	**2009**
Base	106,01	97,3	92,27	89,47	86,8
$ YPER-DEVALUATION	106,01	68,11	64,59	62,63	60,76

Table 10

	US GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	3,69	3,7	3,73	3,67	3,67
$ YPER-DEVALUATION	3,69	5,15	5,53	2,58	1,3

Table 11

	US current account (% of GDP)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	−6,4	−6,07	−5,34	−4,77	−4,44
$ YPER-DEVALUATION	−6,4	−5,4	−3,67	−2,44	−1,83

Table 12

	US current account ($ BN)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	−798,25	−802,31	−743,88	−704,13	−698,5
$ YPER-DEVALUATION	−798,25	−724,41	−537,06	−388,43	−316,2

Table 13

	US foreign debt ($ BN)					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**
Base	1233	1591,453	1951,728	2285,766	2601,954	2915,614
$ YPER-DEVALUATION	1233	1591,453	1916,747	2157,913	2332,337	2474,326

Table 14

	US CPI				
	2005	**2006**	**2007**	**2008**	**2009**
Base	3,01	2,13	2,24	2,28	2,43
$ YPER-DEVALUATION	3,01	2,93	4,74	6,06	6,01

Table 15

	China GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	9,16	8,01	8,37	8,47	7,47
$ YPER-DEVALUATION	9,16	4,69	4,03	5	6,7

Table 16

	Euro area GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,09	1,66	2,16	2,08	1,92
$ YPER-DEVALUATION	1,09	1,26	1,28	1,67	1,77

Table 17

	Africa area GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	4,37	4,47	4,21	4,13	4,03
$ YPER-DEVALUATION	4,37	2,39	2,86	2,42	3,18

Table 18

	Latin America area GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	4,36	3,87	3,66	3,55	3,45
$ YPER-DEVALUATION	4,36	1,17	−1,42	0,5	1,7

European Domestic Demand PUSH Plus Euro Devaluation

Table 19

	Dollar per euro				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,26	1,34	1,33	1,30	1,28
EUROPEAN DOMESTIC DEMAND PUSH	1,26	1,34	1,34	1,32	1,31
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	1,26	1,15	1,07	1,00	1,00

Table 20

	Euro Area GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,09	1,66	2,16	2,08	1,92
EUROPEAN DOMESTIC DEMAND PUSH	1,09	1,97	2,57	2,36	1,91
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	1,09	2,81	3,93	3,61	2,73

Table 21

	Germany GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	0,9	1,0	1,7	1,6	1,3
EUROPEAN DOMESTIC DEMAND PUSH	0,9	1,4	2,3	2,1	1,4
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	0,9	2,1	4,0	3,8	2,7

Table 22

	France GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,4	2,0	2,2	2,0	2,0
EUROPEAN DOMESTIC DEMAND PUSH	1,4	2,3	2,5	2,3	2,1
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	1,4	2,8	3,5	3,2	2,7

Table 23

	Italy GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	0,26	1,8	2,8	2,7	2,63
EUROPEAN DOMESTIC DEMAND PUSH	0,26	2,21	3,36	3,22	2,9
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	0,26	2,96	4,14	4,42	3,45

Table 24

	US current account (% of GDP)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	−6,40	−6,07	−5,34	−4,77	−4,44
EUROPEAN DOMESTIC DEMAND PUSH	−6,40	−6,07	−5,3	−4,70	−4,34
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	−6,40	−6,12	−5,63	−5,21	−4,92

Table 25

	US current account ($ BN)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	−798,25	−802,31	−743,88	−704,13	−698,5
EUROPEAN DOMESTIC DEMAND PUSH	−798,25	−801,43	−739,6	−694,59	−684,38
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	−798,25	−806,03	−773,9	−741,58	−725,48

Table 26

	US foreign debt ($ BN)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1.591,45	1.951,73	2.285,77	2.601,95	2.915,61
EUROPEAN DOMESTIC DEMAND PUSH	1.591,45	1.951,33	2.283,45	2.595,35	2.902,67
EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	1.591,45	1.953,40	2.300,92	2.633,92	2.959,70

Exchange Rate Adjustment Plus China Domestic Demand push

Table 27

	Yuan per dollar				
	2005	**2006**	**2007**	**2008**	**2009**
Base	8,14	7,68	7,26	7	7
GLOBAL EXCHANGE RATE ADJUSTMENT	8,14	5,42	4,3	3,85	3,43

Table 28

	Dollar per euro				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,26	1,34	1,33	1,30	1,28
GLOBAL EXCHANGE RATE ADJUSTMENT	1,26	1,15	1,07	1,00	1,00

Table 29

	Yen per dollar				
	2005	**2006**	2007	**2008**	**2009**
Base	106,01	97,3	92,27	89,47	86,8
GLOBAL EXCHANGE RATE ADJUSTMENT	106,01	97,47	92,97	91,58	90,79

Table 30

	US GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	3,69	3,7	3,73	3,67	3,67
GLOBAL EXCHANGE RATE ADJUSTMENT	3,69	3,96	4,59	4,88	4,77
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	3,69	4,07	4,69	4,98	4,87

Table 31

	US current account (% GDP)				
	2005	**2006**	**2007**	**2008**	**2009**
Base	−6,4	−6,07	−5,34	−4,77	−4,44
GLOBAL EXCHANGE RATE ADJUSTMENT	−6,4	−5,85	−4,84	−4,01	−3,46
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	−6,4	−5,79	−4,61	−3,53	−2,59

Table 32

	US foreign debt ($ BN)					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**
Base	1233	1591,5	1951,7	2285,8	2602,0	2915,6
GLOBAL EXCHANGE RATE ADJUSTMENT	1233	1591,5	1939,5	2245,6	2518,3	2774,9
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	1233	1591,5	1624,9	1946,2	2233,5	2490,5

Table 33

	US CPI				
	2005	**2006**	**2007**	**2008**	**2009**
Base	3,01	2,13	2,24	2,28	2,43
GLOBAL EXCHANGE RATE ADJUSTMENT	3,01	2	1,95	2,61	3,75
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	3,01	2,15	2,37	2,64	3,11

Table 34

	Euro Area GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	1,09	1,66	2,16	2,08	1,92
GLOBAL EXCHANGE RATE ADJUSTMENT	1,09	3,51	4,78	4,03	2,98
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	1,09	3,72	4,98	4,23	3,39

Table 35

	Africa GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	4,37	4,47	4,21	4,13	4,03
GLOBAL EXCHANGE RATE ADJUSTMENT	4,37	4,49	4,99	4,47	4,32
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	4,37	4,69	5,20	4,59	4,51

Table 36

	Latin America GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	4,36	3,87	3,66	3,55	3,45
GLOBAL EXCHANGE RATE ADJUSTMENT	4,36	3,79	3,91	3,8	3,15
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	4,36	4,08	4,12	3,79	3,22

Table 37

	China GDP growth rates				
	2005	**2006**	**2007**	**2008**	**2009**
Base	9,16	8,01	8,37	8,47	7,47
GLOBAL EXCHANGE RATE ADJUSTMENT	9,16	4,05	1,35	7,79	8,35
GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH	9,16	5,82	5,04	9,63	12,90

7

Does a Positive Sum Game that Makes Everyone Better Off Really Exist? The Risks and Temptations from the Myopic and Egoistic Viewpoints of Individual Continents and Countries

In the previous chapter we started by considering that the world economy has no long-run real and financial equilibrium, given current world governance, i.e. the current situation in which China has entered the WTO, without having allowed her exchange rate to float freely in the market but, instead, pegging the yuan to a devaluating US dollar. With this in mind we performed several alternative simulations and we measured the different perspectives in terms of a final result which would be to obtain sustainable US deficit and debt with higher growth for each area in the world.

We proved that the only way to give equilibrium to the world economy is to behave the other way around, i.e. by instituting a new world governance with an appropriate exchange rate system, following market rules rather than political and single government decisions, where world financial equilibrium is assured and sustainable paths for both US foreign deficit and debt are obtained, those being the key to world equilibrium.

Among the different alternatives that we have outlined, this appears to be the only effective one from a global viewpoint of the world economy. Indeed, a positive sum game for each single continent seems to exist since, after reaching the target of real and financial equilibrium in the world economy, each single continent has the chance to grow at higher rates than those given from the perspective of the base soft-landing scenario.

However, each single continent could be attracted by a purely egoistic and myopic approach. In fact, on the one hand, its own performance and perspective could appear even better than those implied in the global equilibrium scenario, even if they proved to only be an illusory achievement within a framework of world disequilibrium. On the other hand, each single continent or country may believe it would be better off not to take economic policy decisions within a framework of world coordination and common responsibility

in this new world governance and/or by not taking the risks that certain decisions could produce in its own domestic political and social environment.

Therefore, in this chapter we will try to focus on each single continent's egoistic interest. Although we had previously compared the different alternatives with respect to a global equilibrium target, we now wish to compare the different alternatives with specific reference to the economic, political, social and geographical framework of each continent or country, whether or not compatible and coherent with the long-run equilibrium of world economy.

We should now know that globalization means that no one can ever again behave as an "island". And this should lead everyone to contribute to a *first best* solution. But we wish to prove that even an apparently *second best* one, due to a purely egoistic and myopic single continent or country's behaviour, could indeed lead to the *first best*, i.e. to decisions compatible and coherent with a global equilibrium viewpoint and a framework for global responsibility.

The only case we need to exclude is the one in which a single continent or country not only behaves in a purely egoistic and myopic way but also in a purely stupid one. This would be the case when a *first or second worse* condition is pursued where a better alternative is available for the single "island" without any respect for the world economy's long-run equilibrium.

The result is that the solution of a general exchange rate realignment and both China and Europe's domestic demand push is not only a solution to give real and financial equilibrium to the world economy from a global point of view, but also represents the *best solution* for each single continent or country from their egoistic point of view without any respect to an aim of world general equilibrium, as described below for each single case.

7.1 The United States

World financial equilibrium is undermined by a huge US current account deficit running over 6–7% of GDP and an exponentially increasing US foreign debt.

The US could be tempted to adjust its foreign imbalance by allowing a huge devaluation of the dollar. Our simulations prove that almost a 60% dollar devaluation against any other currency in the world (and, in particular, the yuan, the yen and the euro) is needed to cut the US current account deficit to below 3% of GDP, the level considered sustainable within the world economy. But this road to adjustment wouldn't provide a solution to either the world economy, as we have already seen in the previous chapter, or the US economy. Such a large dollar devaluation would give the US economy the chance to perform very well in the first two years and reduce its foreign account deficit to below 3%. Indeed, with respect to the base soft-landing simulation, the growth rate of GDP would even be higher with lower unemployment and inflation more or less under control. But in the years that follow the situation would be out of control. Inflation would spike up to around 6–7%, growth would slow down to between 1–2% and unemployment would jump

up to over 8–9%. By the end of the period, cumulative GDP, consumption, investment and employment would be lower than in the base simulation.

Therefore, the policy of dollar devaluation wouldn't seem to match US economic interests.

The case of a European demand push by itself, sustained by the realignment of the euro to the dollar towards the parity, would give the US economy even worse perspectives. The absorption effect of higher European growth is indeed totally counterbalanced by the dollar appreciation with respect to the euro. Hence, the US foreign account deficit would be even higher.

A general realignment of the exchange rates in the world economy with a 40% appreciation of the Chinese yuan with respect to the dollar and 60% with respect to the euro, implying a path towards parity between dollar and euro, would provide the US economy with the best perspective with high and sustainable growth and, consequently, high employment and low unemployment. If a domestic push in China and Europe is added to a world exchange rate general realignment, the results obtained would be even better.

Therefore, for the US economy, the best long-run solution appears to be the one combining the exchange rate adjustment with a domestic driven growth in both China and Europe, with China, after entering the WTO, joining the IMF and letting her exchange rate be determined by markets.

The US cannot be the grasshopper much longer: a grasshopper pursuing its own equilibrium in its foreign current account putting the rest of the world in very poor unacceptable conditions, as would be the case where there is a huge dollar devaluation. See Figures 7.1.1–7.1.18.

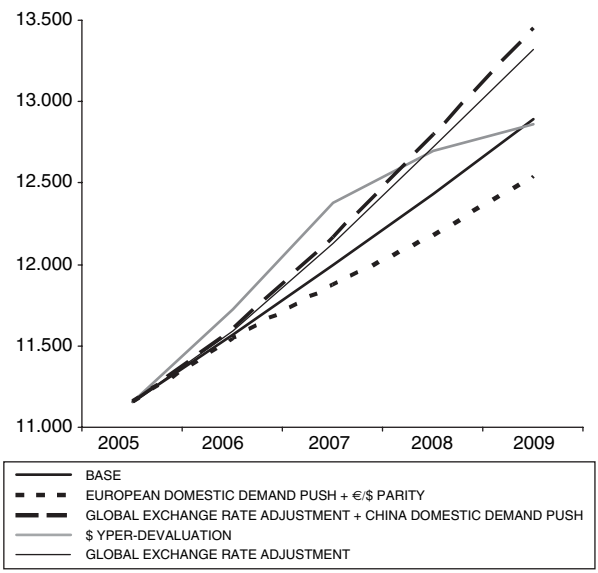

Figure 7.1.1 USA, real GDP (BN $ 2000)

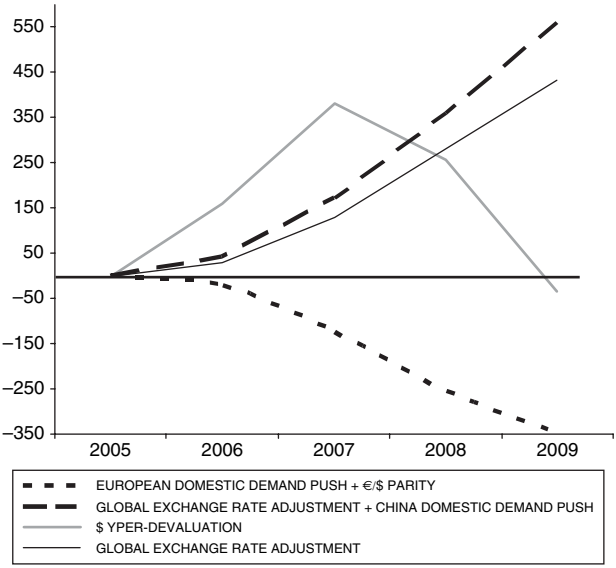

Figure 7.1.2 USA, real GDP: absolute differences with respect to base (BN $ 2000)

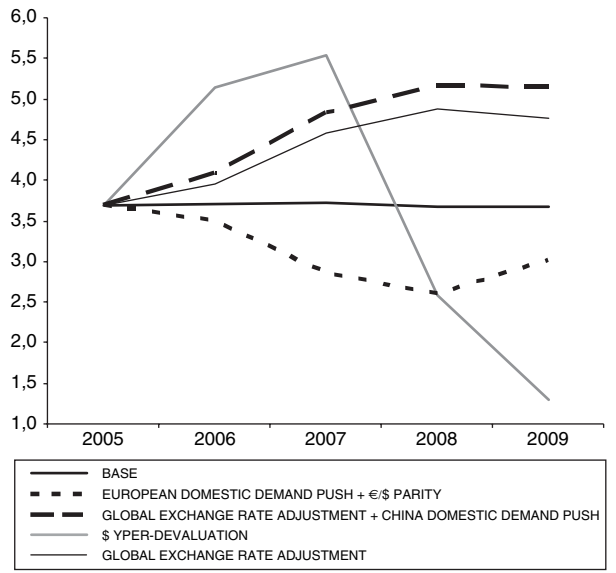

Figure 7.1.3 USA, real GDP growth rate

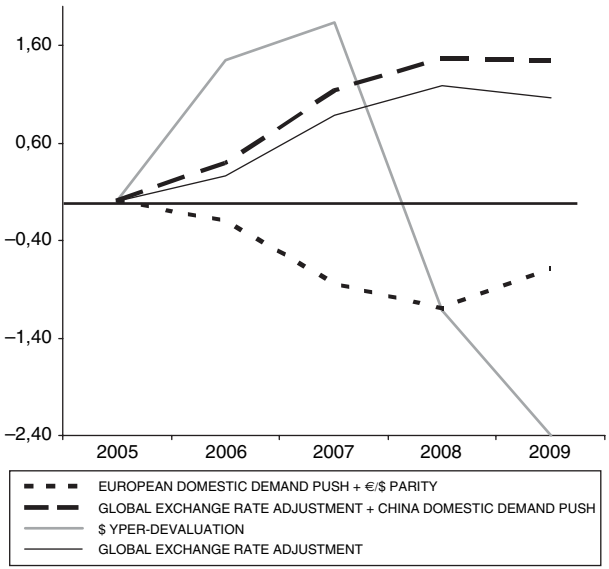

Figure 7.1.4 USA, GDP growth rate: annual differences with respect to base

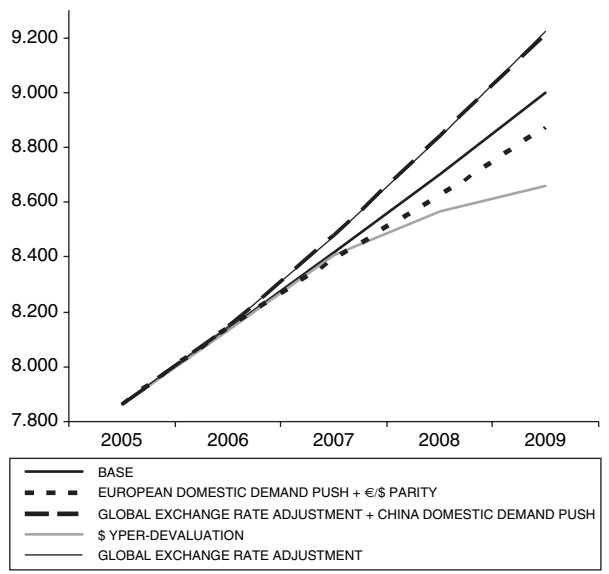

Figure 7.1.5 USA, consumption (BN $ 2000)

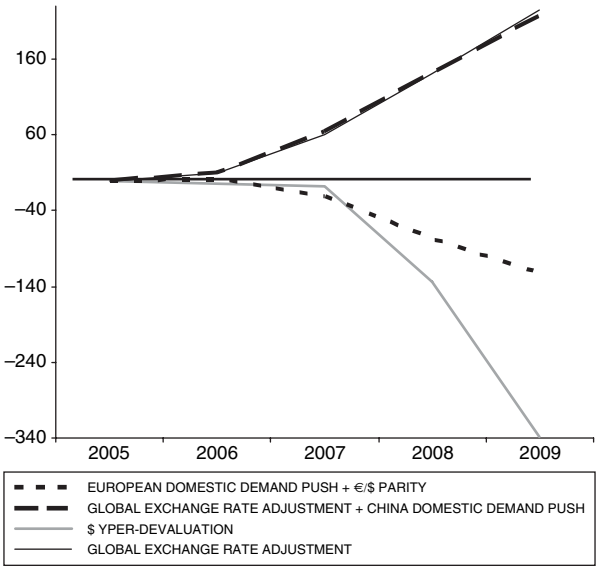

Figure 7.1.6 USA, consumption: absolute differences with respect to base (BN $ 2000)

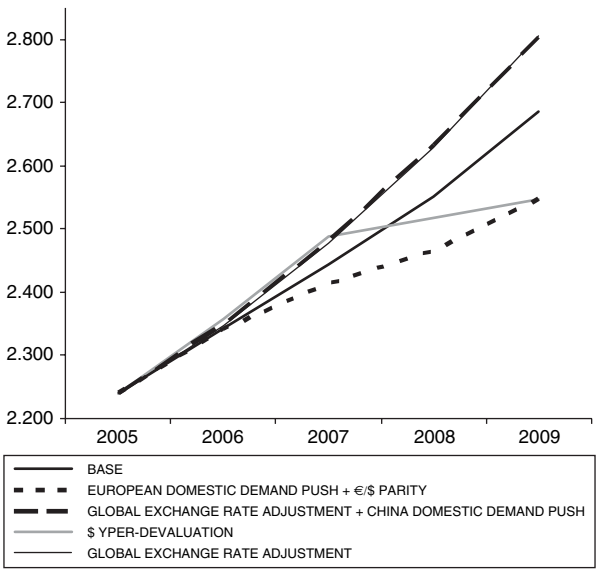

Figure 7.1.7 USA, investment (BN $ 2000)

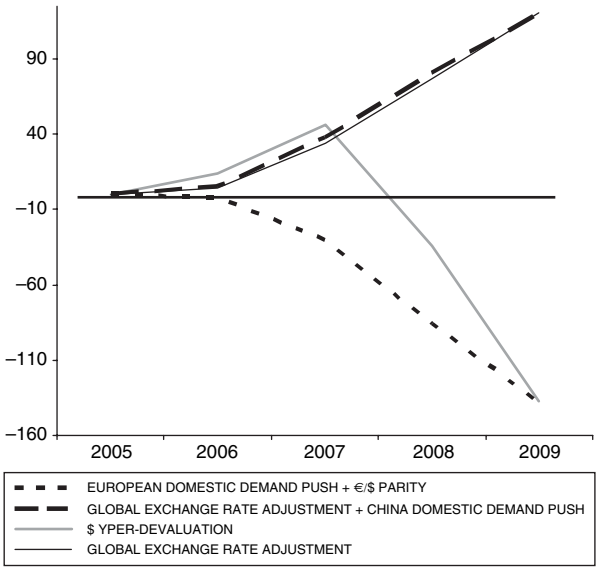

Figure 7.1.8 USA, investment: absolute differences with respect to base (BN $ 2000)

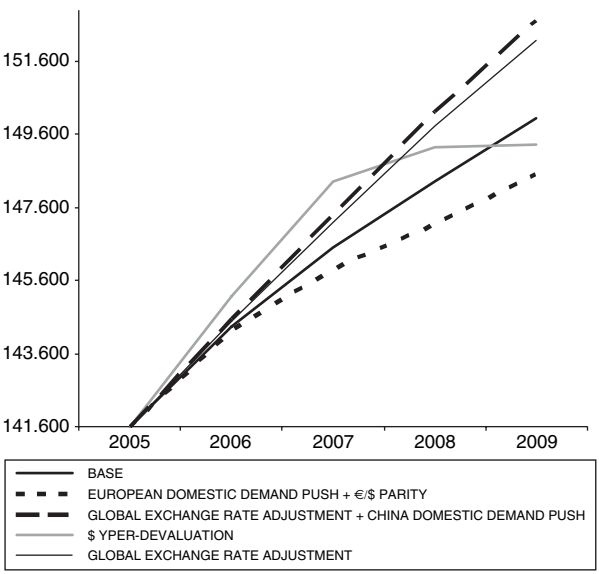

Figure 7.1.9 USA, employment (000s)

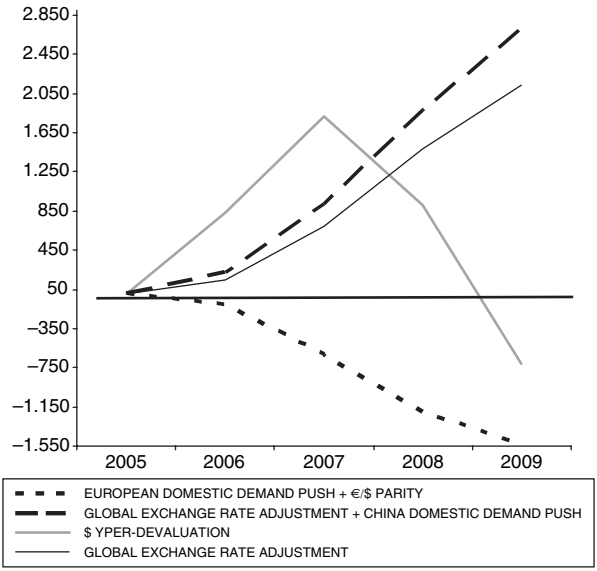

Figure 7.1.10 USA, employment: absolute differences with respect to base (000s)

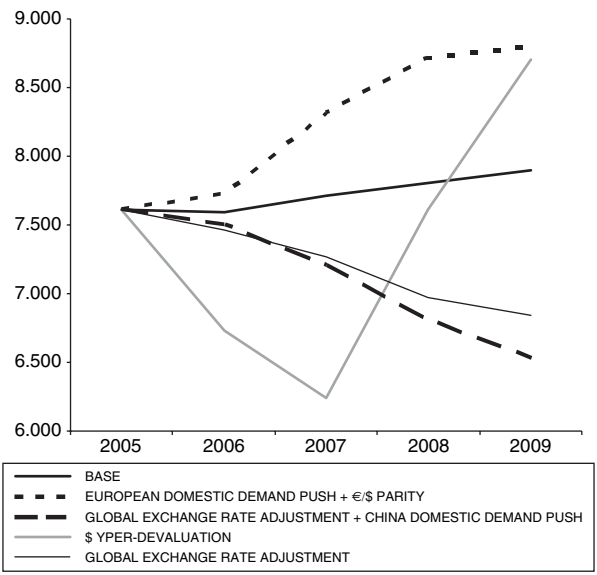

Figure 7.1.11 USA, unemployment (000s)

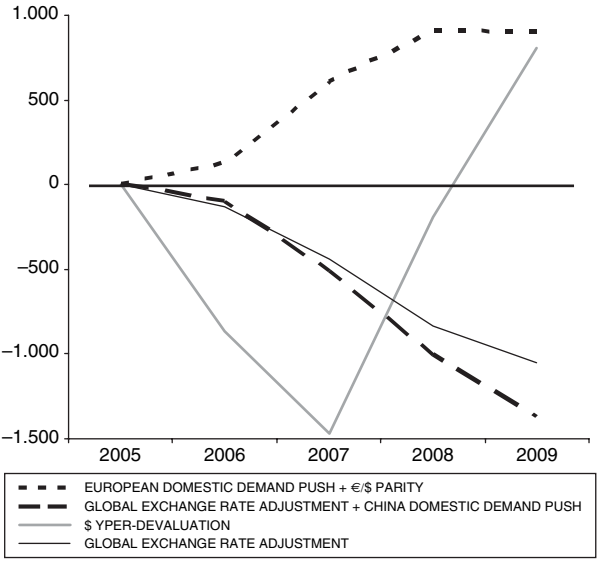

Figure 7.1.12 USA, unemployment: absolute differences with respect to base (000s)

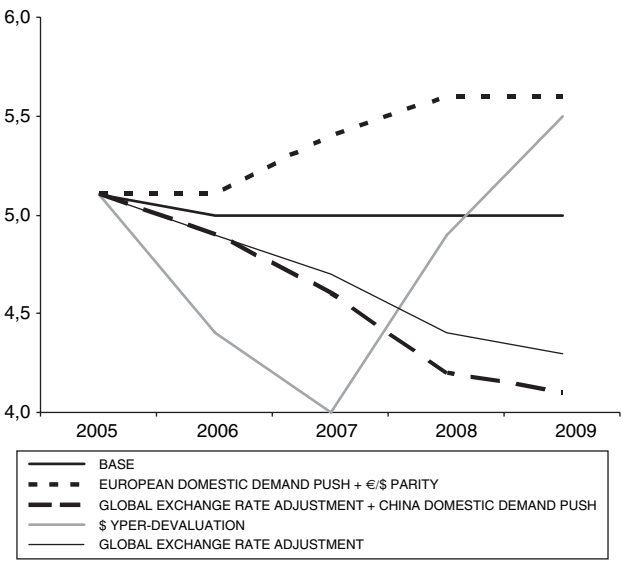

Figure 7.1.13 USA, unemployment rate

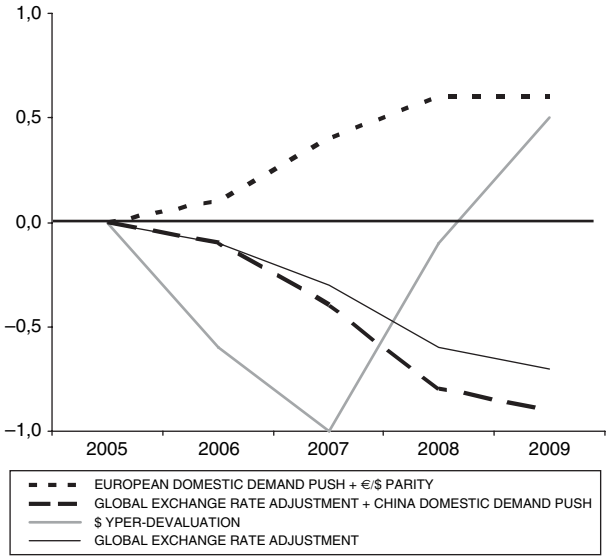

Figure 7.1.14 USA, unemployment rate: differences with respect to base

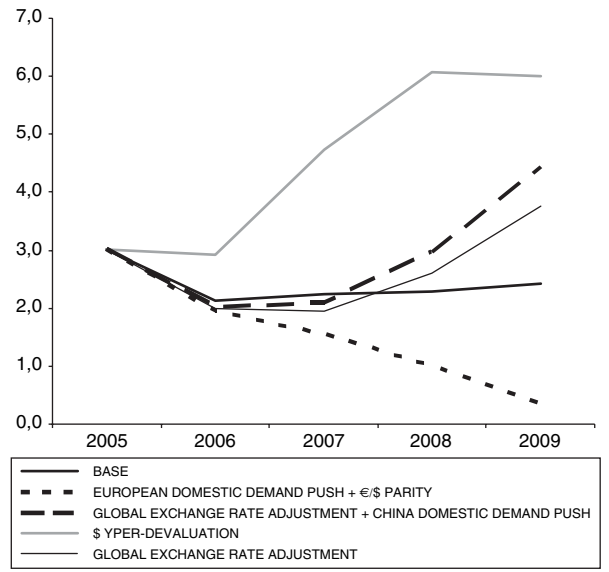

Figure 7.1.15 USA, CPI

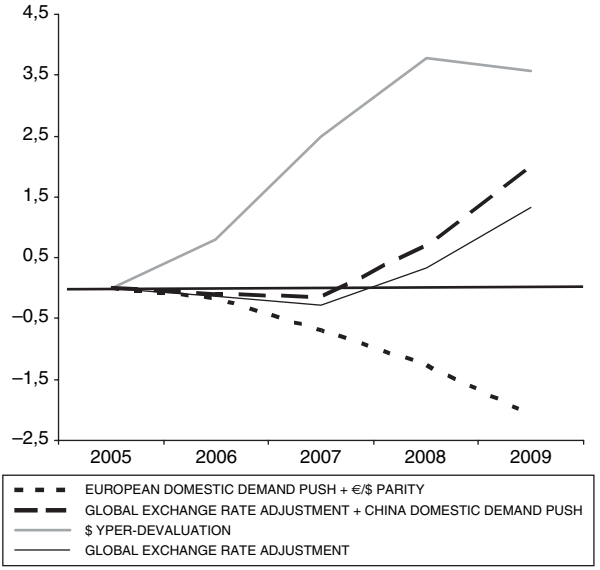

Figure 7.1.16 USA, CPI: differences with respect to base

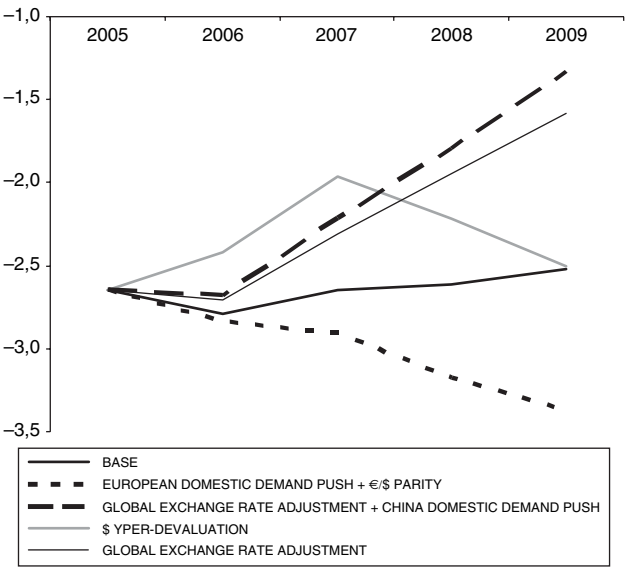

Figure 7.1.17 USA, deficit/GDP

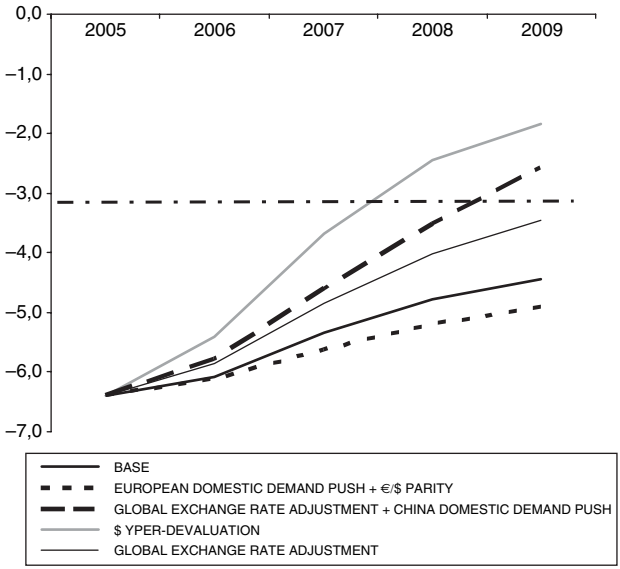

Figure 7.1.18 USA, current account/GDP

7.2 Latin America

A hyper dollar devaluation would be disruptive for Latin American economies. In the first two years a big shock will push them into negative growth and inflation will abruptly fluctuate wildly.

A European domestic-demand push and a euro/dollar realignment to the parity do not seem to produce any significant impact on Latin America with respect to the base simulation.

On the contrary, the combination of a global exchange vote adjustment with China's domestic demand push and a European domestic demand push would offer the chance to obtain higher growth with inflation under control and remain more or less unchanged with respect to the base simulation results.

Thus, even for Latin America this case would be the best route to be pursued. See Figures 7.2.1–7.2.6.

In South America, three countries have a major GDP weight: Brazil, Argentina and Chile. In the section that follows we will include more details regarding these economies.

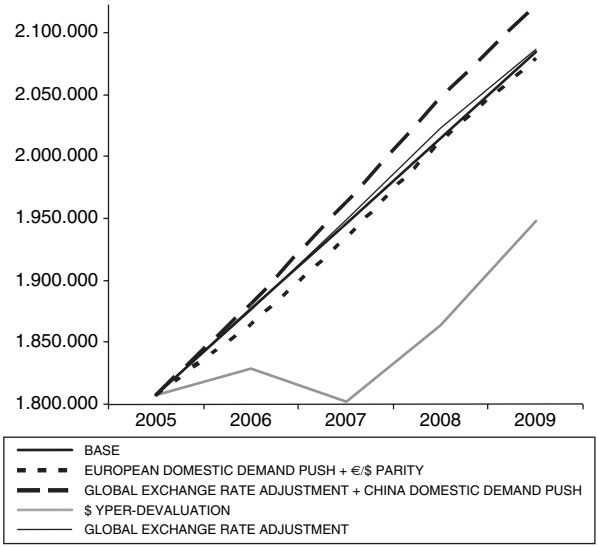

Figure 7.2.1 Latin America, real GDP (constant 1995 prices and exchange rates, $m)

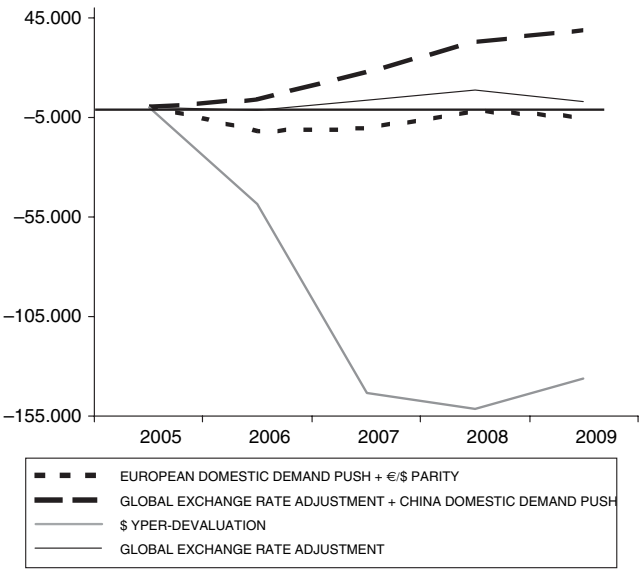

Figure 7.2.2 Latin America, real GDP: absolute differences with respect to base (constant 1995 prices and exchange rates, $m)

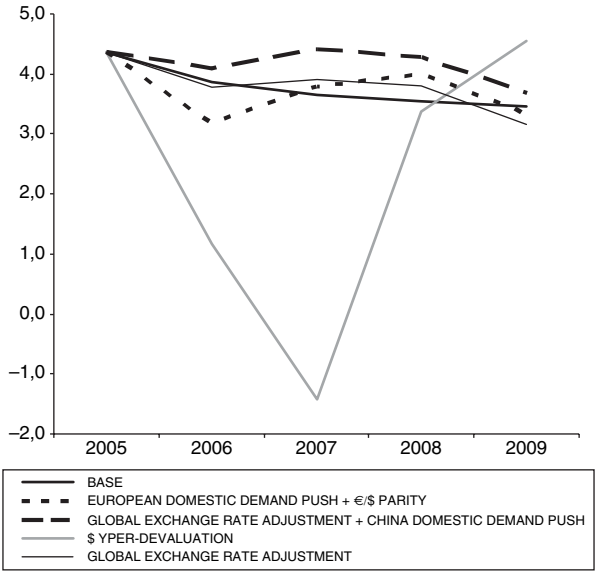

Figure 7.2.3 Latin America, real GDP growth rate

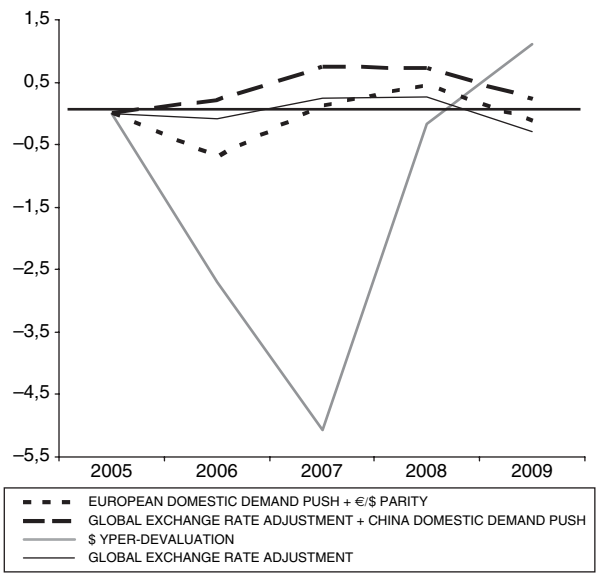

Figure 7.2.4 Latin America, GDP growth rate: differences with respect to base

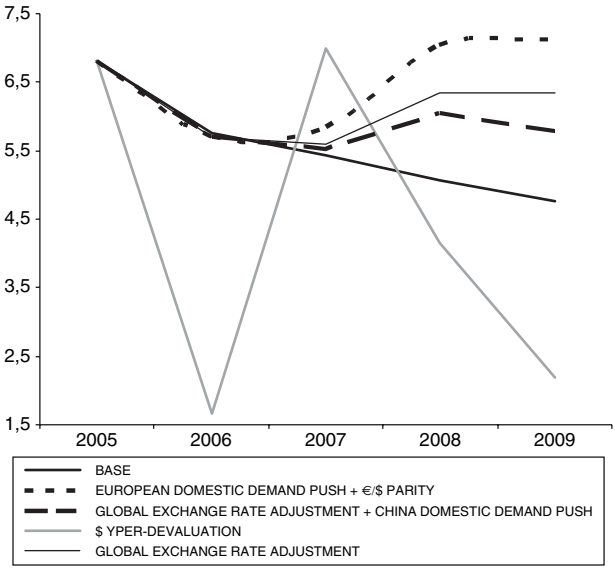

Figure 7.2.5 Latin America, CPI

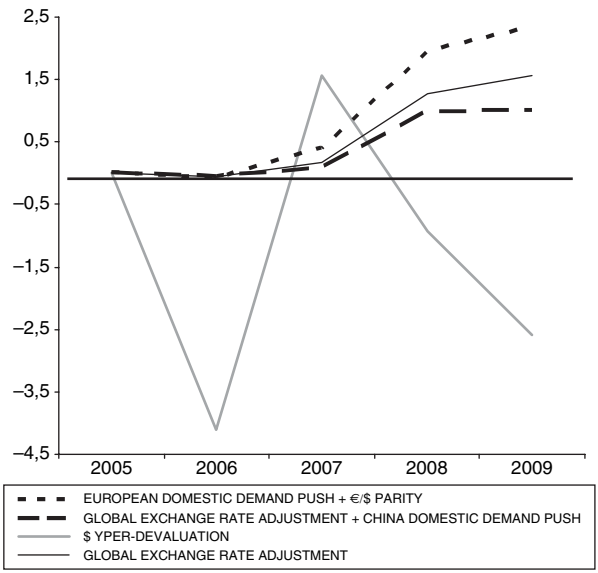

Figure 7.2.6 Latin America, CPI: differences with respect to base

7.2.1 Brazil

The Brazilian economy would be seriously affected by a huge dollar devaluation which would cause a GDP loss of about 10% in the first two years and its rate of growth wouldn't begin to approach and be close again to the base hypothesis until the end of the fourth year. Consumption and investment would be drastically reduced and the foreign current account would turn into deficit. Inflation would drastically drop as a consequence of the Brazilian currency appreciation and the decrease in real domestic consumption. The internal deficit-to-GDP ratio would jump by more than 10–12%.

A European domestic demand push and a euro/dollar parity would have light effect on the Brazilian economy. Such effects would be slightly negative in the first year of impact while it would turn moderately positive in later years. The best perspective for Brazil appears to be the one including a global exchange vote adjustment with China's and Europe's domestic demand push.

Brazil would indeed obtain, with respect to the base simulation, higher growth, higher consumption and investment, lower inflation, lower government deficit-to-GDP ratio and a surplus in its foreign account. See figures 7.2.1.1–7.2.1.12.

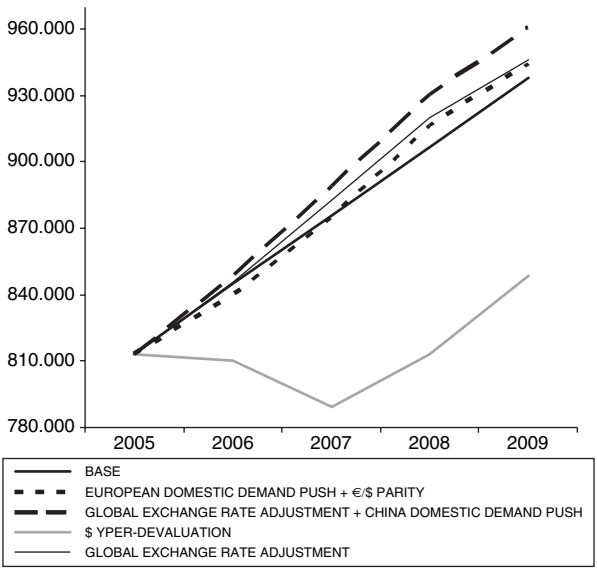

Figure 7.2.1.1 Brazil, real GDP (constant prices)

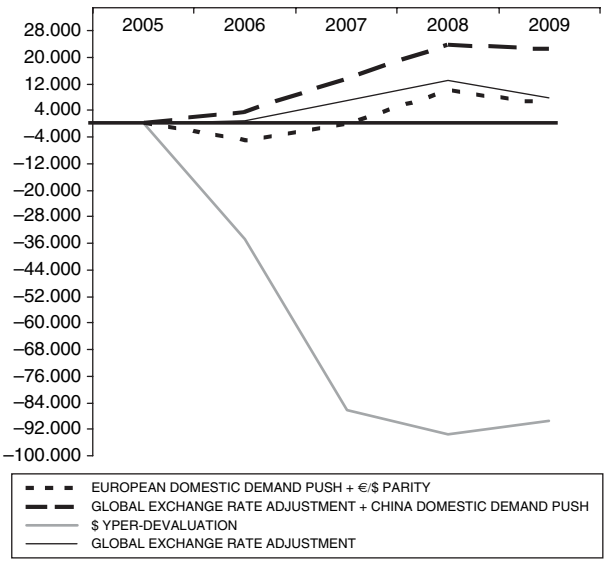

Figure 7.2.1.2 Brazil, real GDP: absolute differences with respect to base (constant prices)

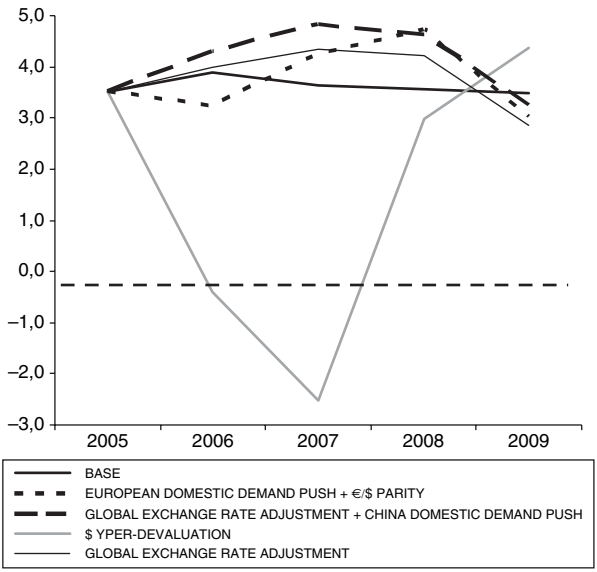

Figure 7.2.1.3 Brazil, real GDP growth rate

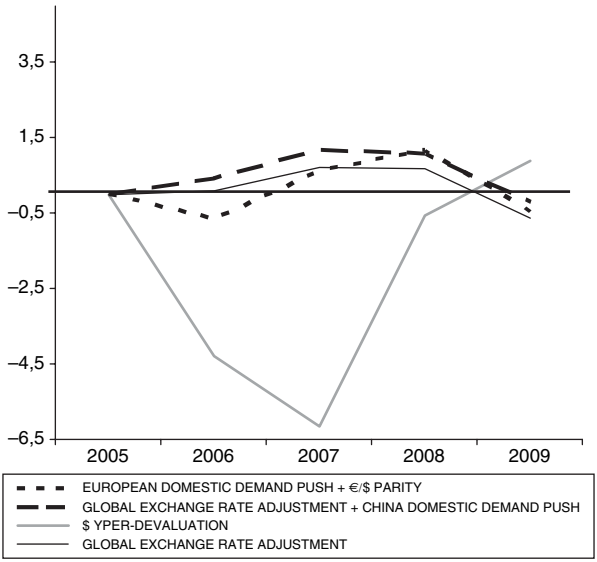

Figure 7.2.1.4 Brazil, GDP growth rate: differences with respect to base

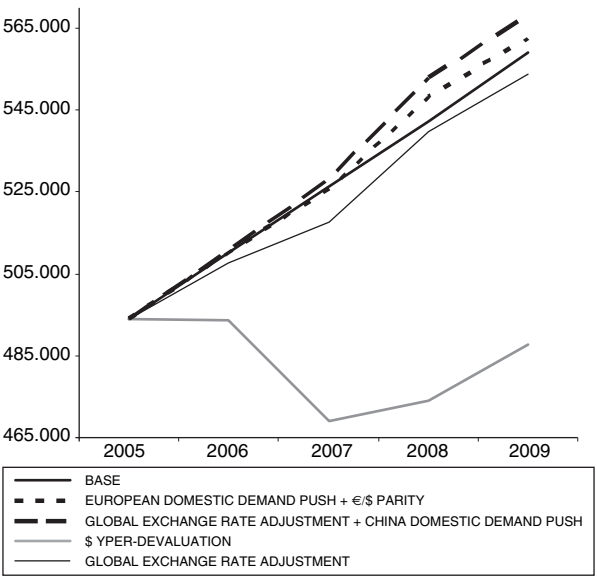

Figure 7.2.1.5 Brazil, consumption (constant prices)

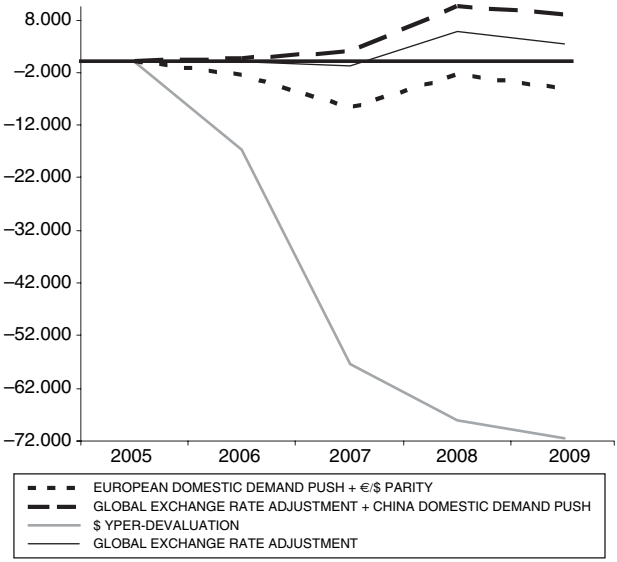

Figure 7.2.1.6 Brazil, consumption: absolute differences with respect to base (constant prices)

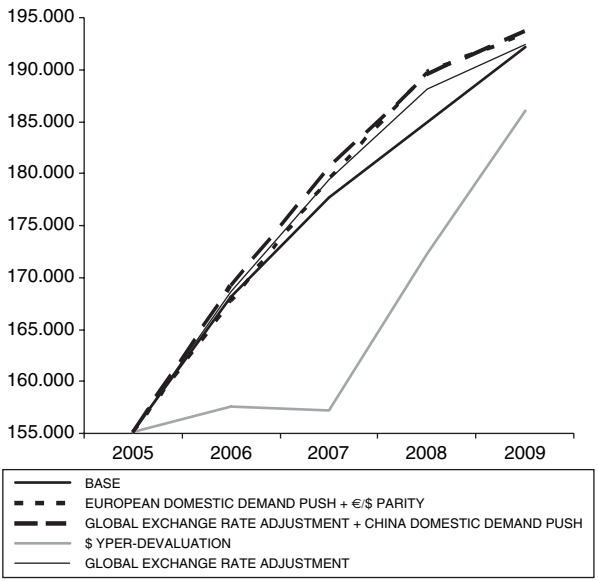

Figure 7.2.1.7 Brazil, investment (constant prices)

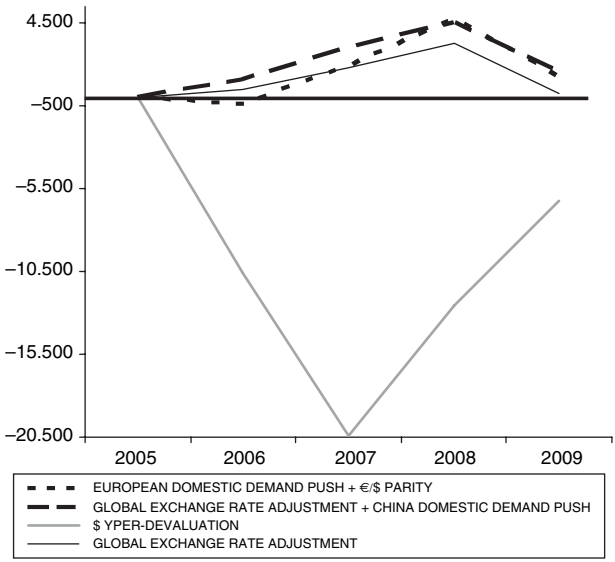

Figure 7.2.1.8 Brazil, investment: absolute differences with respect to base (constant prices)

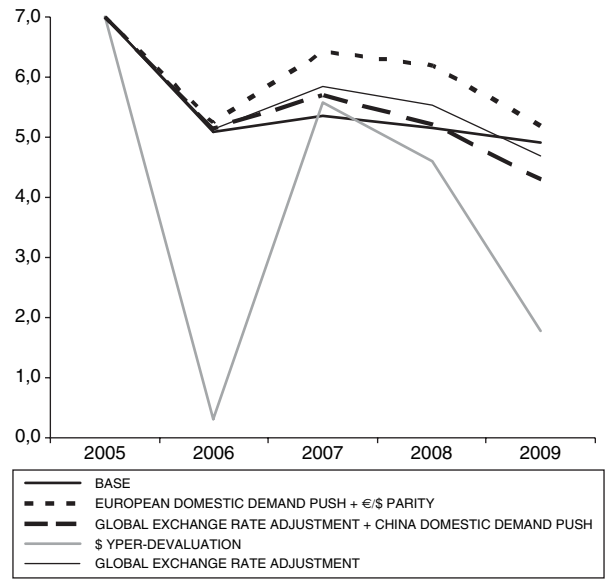

Figure 7.2.1.9 Brazil, CPI

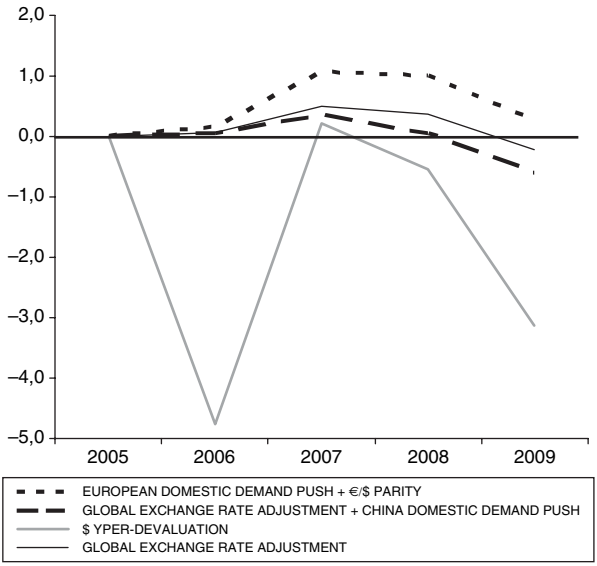

Figure 7.2.1.10 Brazil, CPI: differences with respect to base

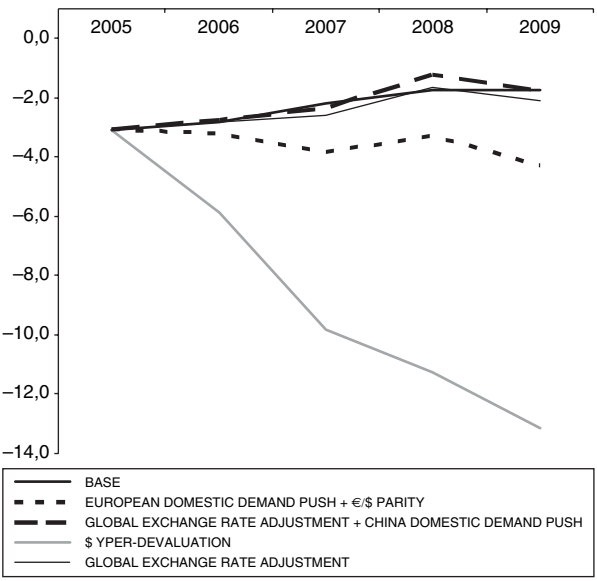

Figure 7.2.1.11 Brazil, deficit/GDP

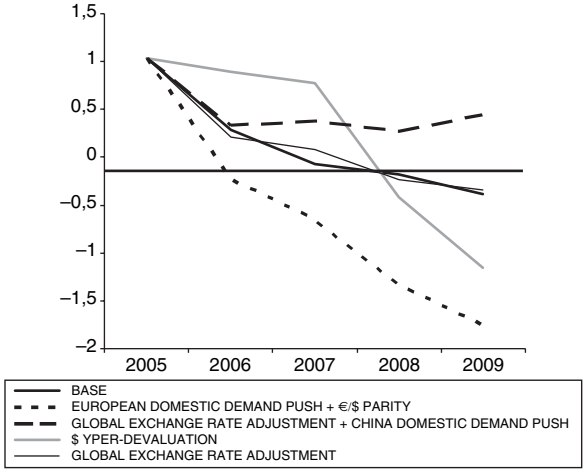

Figure 7.2.1.12 Brazil, current account/GDP

7.2.2 Argentina

Even if it were not as negatively affected as Brazil, Argentina too would suffer by the dollar hyper-devaluation. The GDP loss would be around 7/8% in the first two years and it would go back to the level of the base simulation between the third and the fourth year.

Instead, with regard to euro/dollar parity and the European domestic push, Argentina would suffer more than Brazil.

The global exchange vote adjustment with China's domestic push simulation has a very small effects on Argentina, but in any case it would be the best growth prospective for her as well. See Figures 7.2.2.1–7.2.2.12.

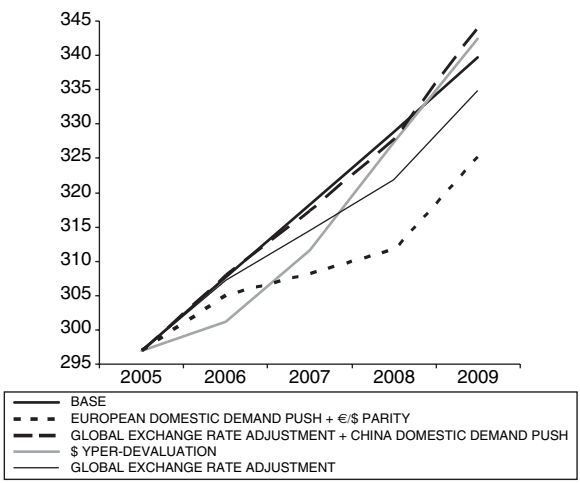

Figure 7.2.2.1 Argentina, real GDP (1993 base year Peso BN)

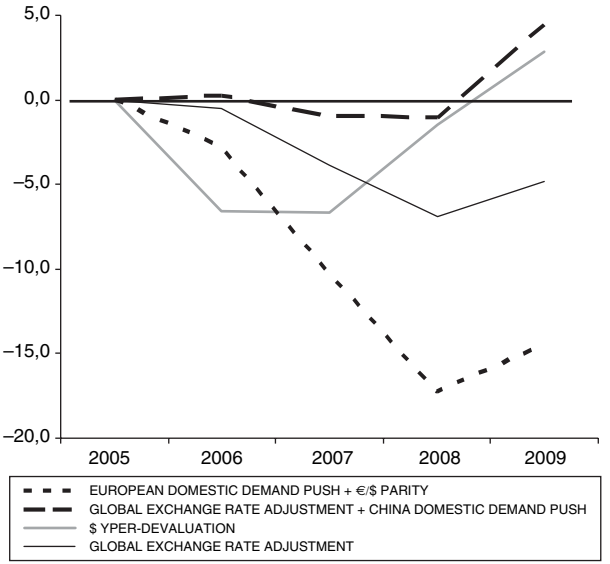

Figure 7.2.2.2 Argentina, real GDP: absolute differences with respect to base (1993 base year Peso BN)

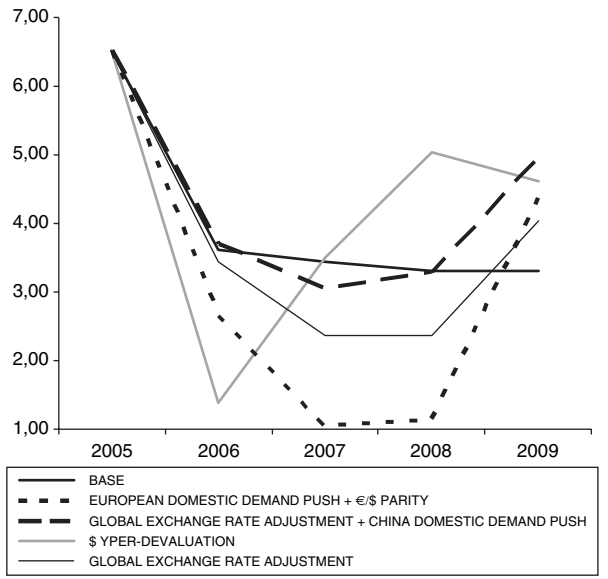

Figure 7.2.2.3 Argentina, real GDP growth rate

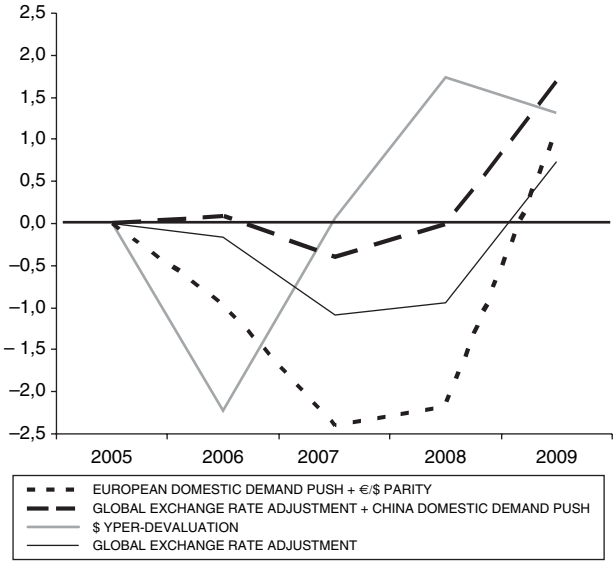

Figure 7.2.2.4 Argentina, GDP growth rate: differences with respect to base

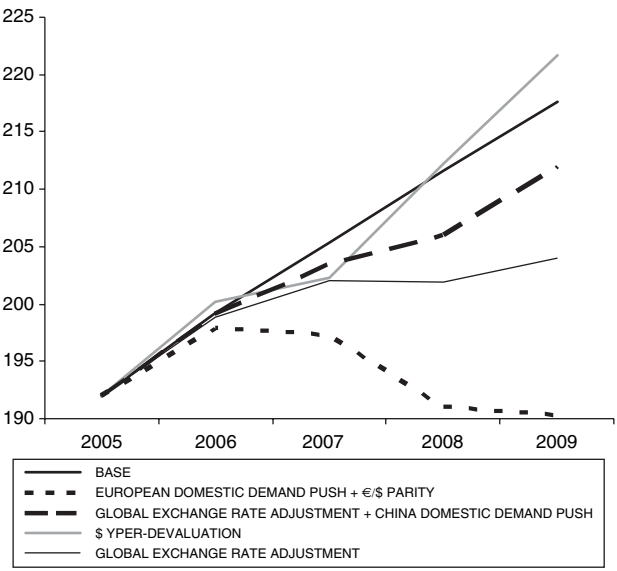

Figure 7.2.2.5 Argentina, consumption (1993 base year Peso BN)

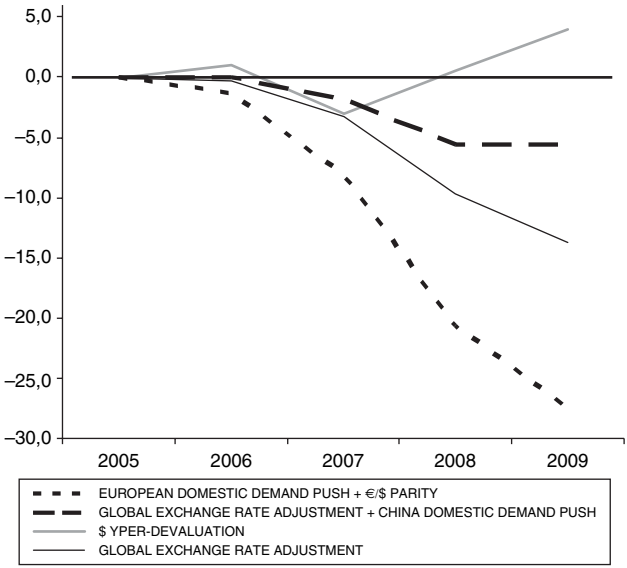

Figure 7.2.2.6 Argentina, consumption: absolute differences with respect to base (1993 base year Peso BN)

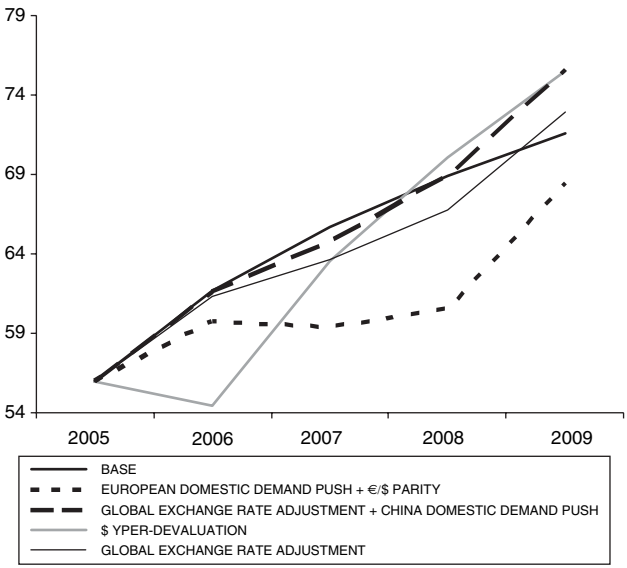

Figure 7.2.2.7 Argentina, investment (1993 base year Peso BN)

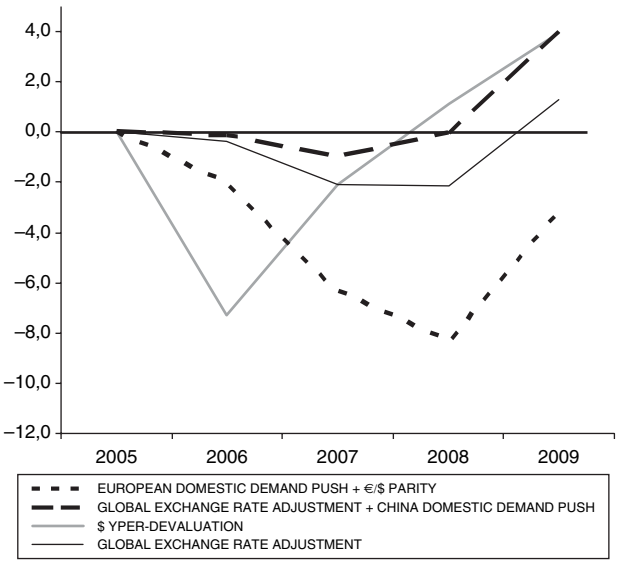

Figure 7.2.2.8 Argentina, investment: absolute differences with respect to base (1993 base year Peso BN)

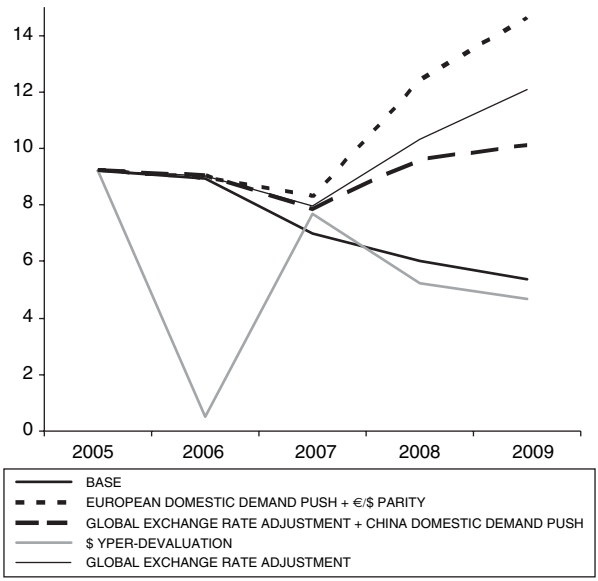

Figure 7.2.2.9 Argentina, CPI

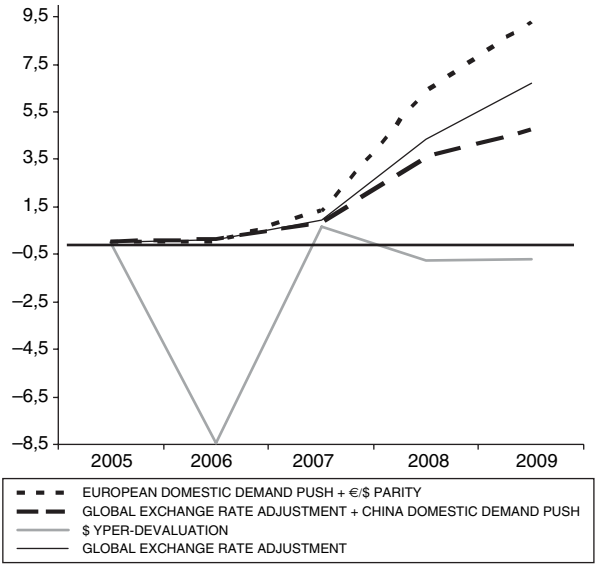

Figure 7.2.2.10 Argentina, CPI: differences with respect to base

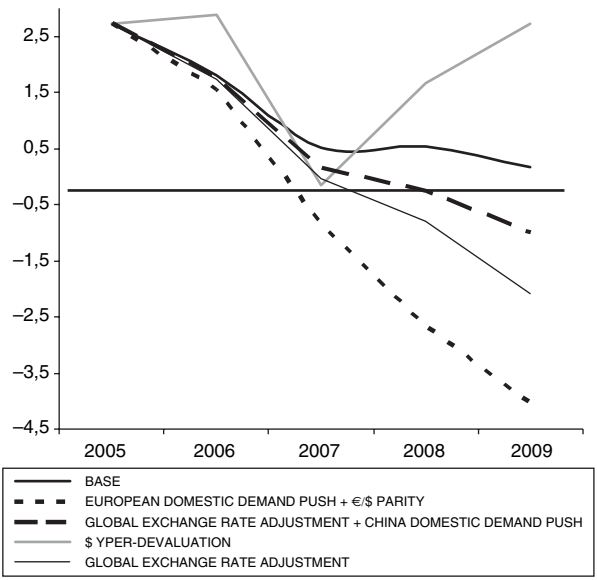

Figure 7.2.2.11 Argentina, deficit/GDP

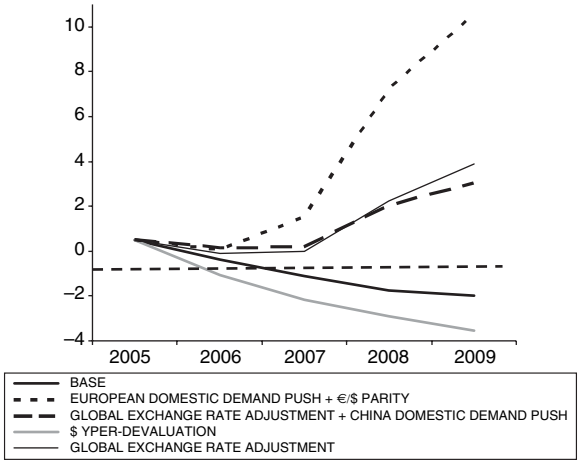

Figure 7.2.2.12 Argentina, current account/GDP

7.2.3 Chile

A dollar hyper-devaluation would be disastrous for the Chilean economy. In the four years of simulation the loss in GDP would be around 25% with respect to the base hypothesis. Consumption and investment would drop severely in real terms and a huge deficit-to-GDP ratio would be induced while the foreign account surplus would shrink to zero and a deflationary frame would characterize the entire scenario.

Some small positive effects on the Chilean economy would be produced by a European demand push.

But again, the best prospect for Chile would be a world exchange rate realignment accompanied by China and Europe's domestic demand push. See figures 7.2.3.1–7.2.3.12.

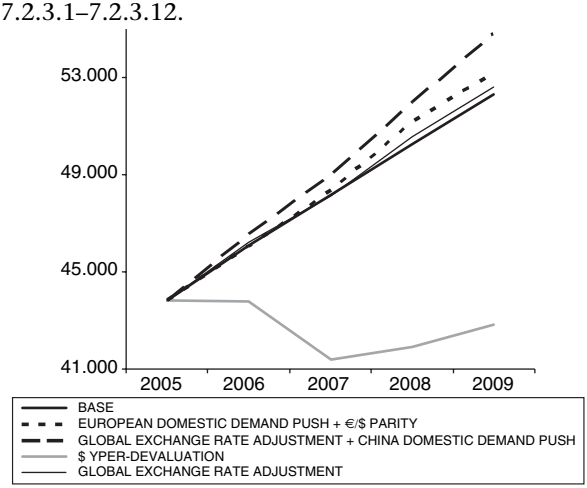

Figure 7.2.3.1 Chile, real GDP (constant prices)

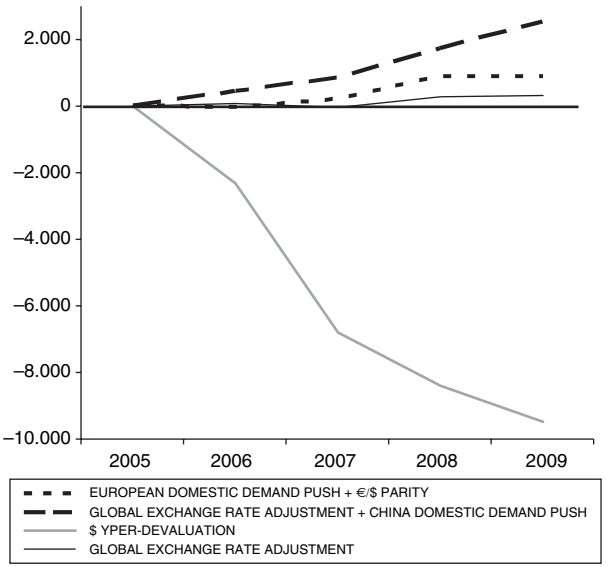

Figure 7.2.3.2 Chile, real GDP: absolute differences with respect to base (constant prices)

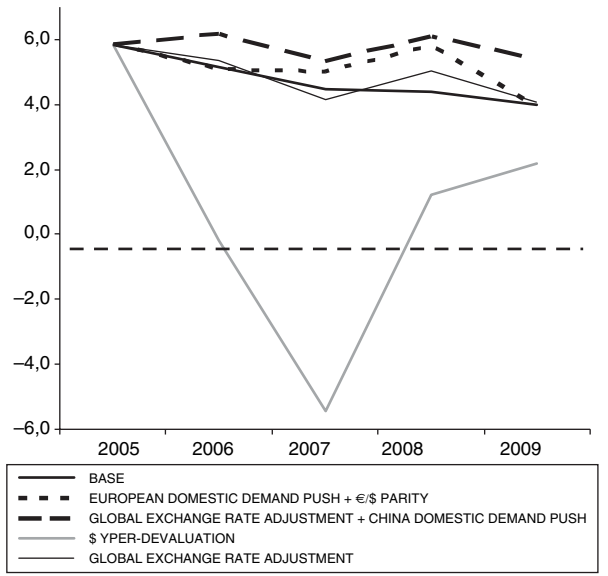

Figure 7.2.3.3 Chile, real GDP growth rate

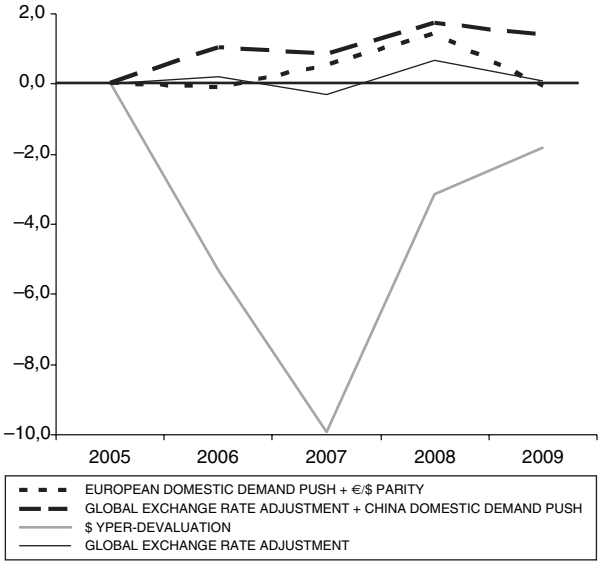

Figure 7.2.3.4 Chile, real GDP growth rate: differences with respect to base

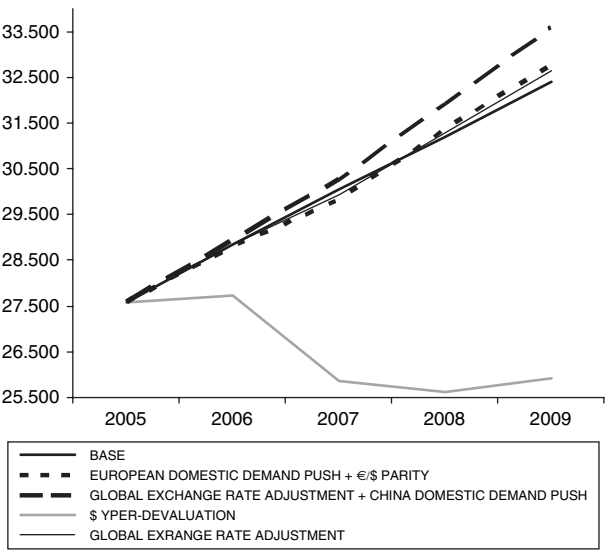

Figure 7.2.3.5 Chile, consumption (constant prices)

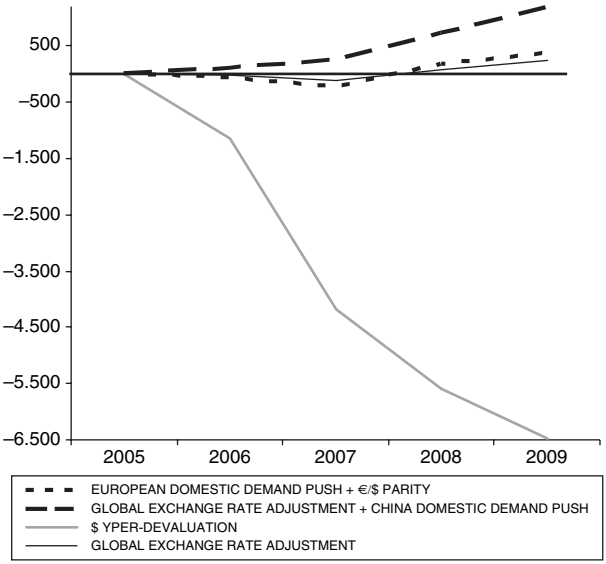

Figure 7.2.3.6 Chile, consumption: absolute differences with respect to base (constant prices)

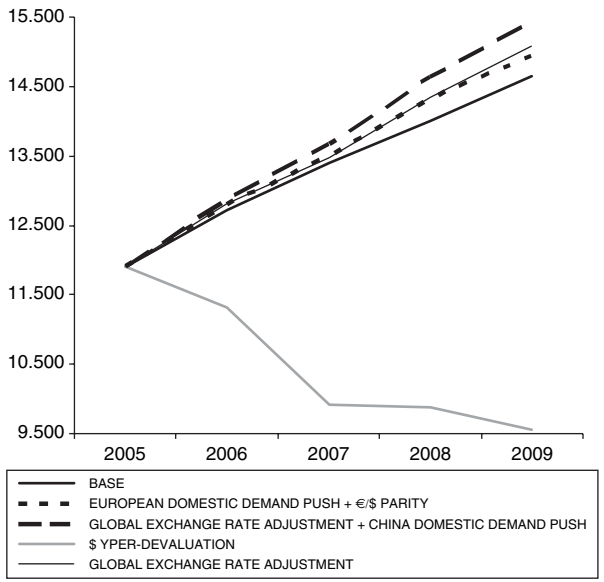

Figure 7.2.3.7 Chile, investment (constant prices)

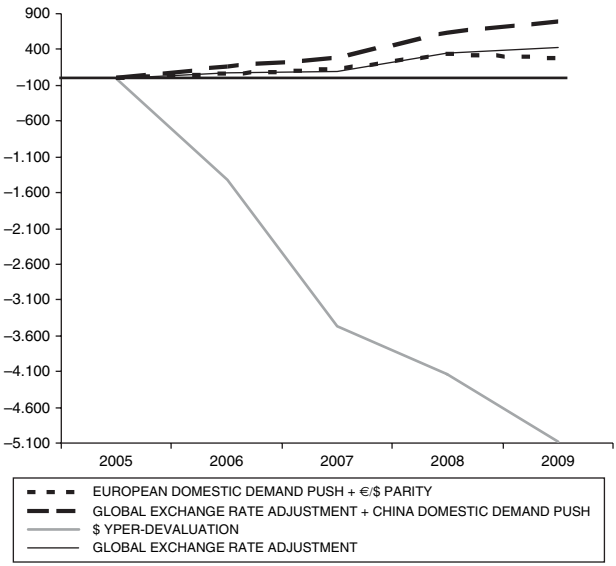

Figure 7.2.3.8 Chile, investment: absolute differences with respect to base (constant prices)

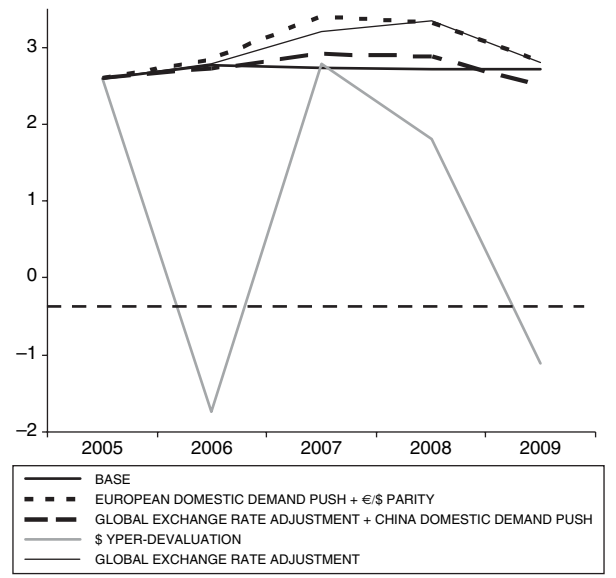

Figure 7.2.3.9 Chile, CPI

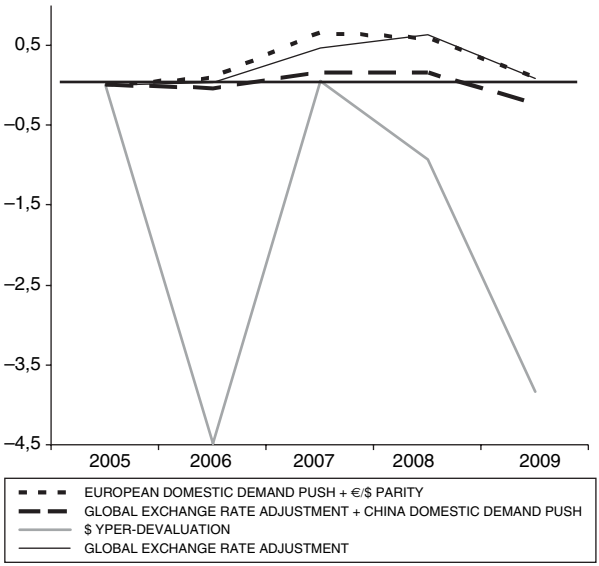

Figure 7.2.3.10 Chile, CPI: differences with respect to base

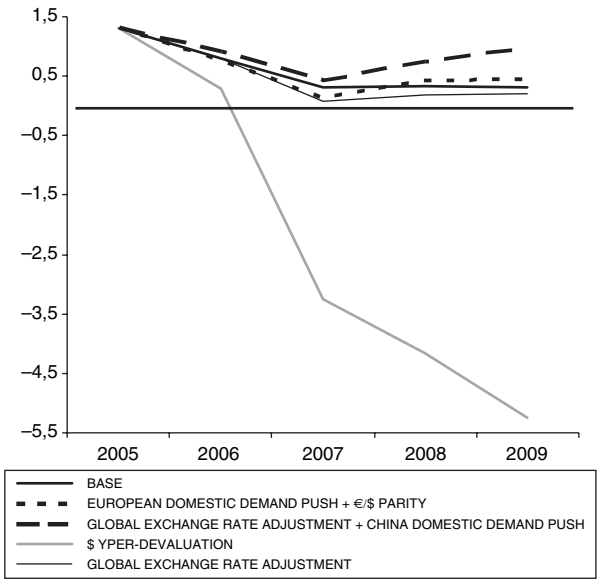

Figure 7.2.3.11 Chile, deficit/GDP

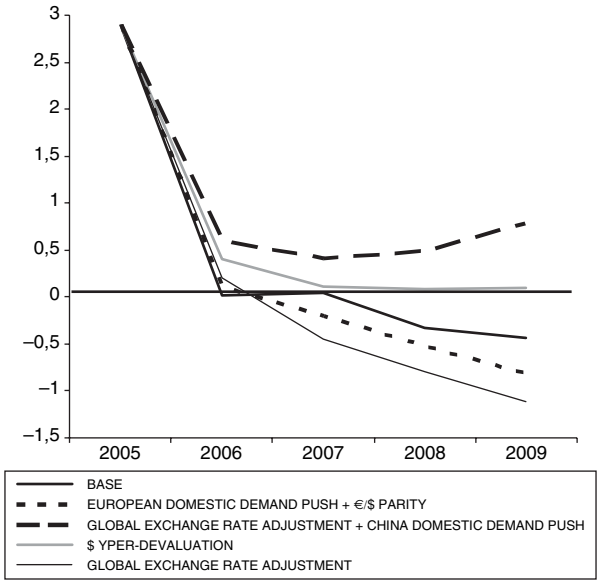

Figure 7.2.3.12 Chile, current account/GDP

7.3 The United Kingdom

The UK economy, like other European Atlantic countries such as Ireland, Spain and Portugal, seems to be performing more like the US economy than the other continental European countries. And we also have to take into account that the UK did not join the European Monetary Union and the British pound seems to be mirroring the dollar's movements more than the euro.

Under these conditions, the British economy would be slightly negatively affected by an hyper-devaluation of the dollar, while more significant positive effects would be induced by a European demand push.

The most relevant positive effects for the UK economy would clearly come from the global exchange rate adjustment plus China's and Europe's domestic demand push simulation.

Growth rates would jump between 4–5% with both higher consumption and, even if slightly, higher investments. A little less than 1 million additional jobs would be created with the unemployment rate dropping further down from an already low level.

No significant inflationary push would be produced in the first two years, while some risks would appear in the final years of simulation.

The deficit-to-GDP ratio would be driven to zero as would be the foreign current account. See Figures 7.3.1–7.3.18.

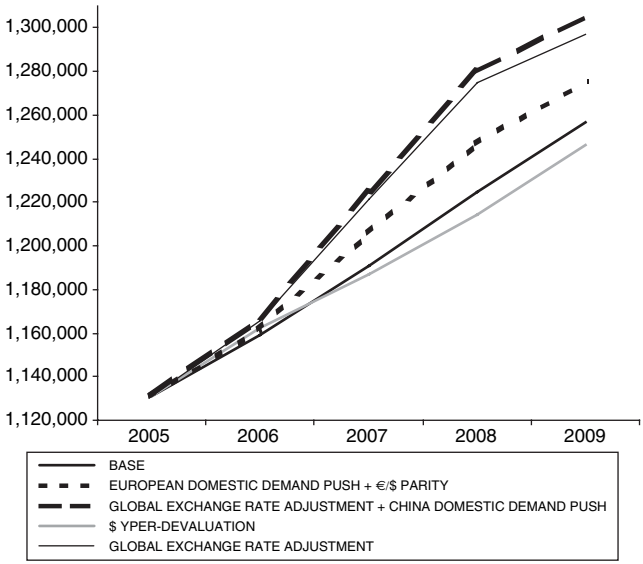

Figure 7.3.1 United Kingdom, real GDP (constant prices, BN pounds, reference year 2002)

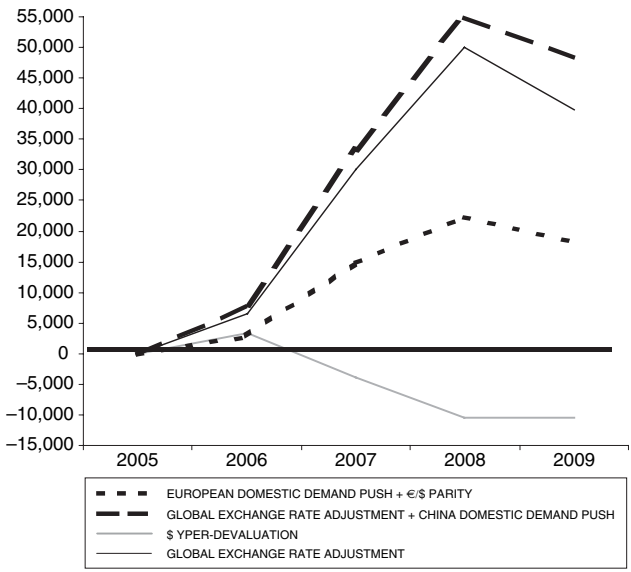

Figure 7.3.2 United Kingdom, real GDP: absolute differences with respect to base (constant prices, BN pounds, reference year 2002)

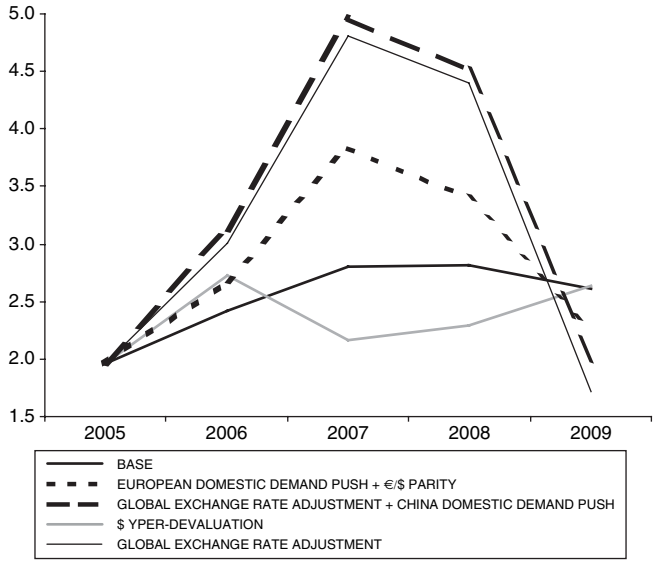

Figure 7.3.3 United Kingdom, real GDP growth rate

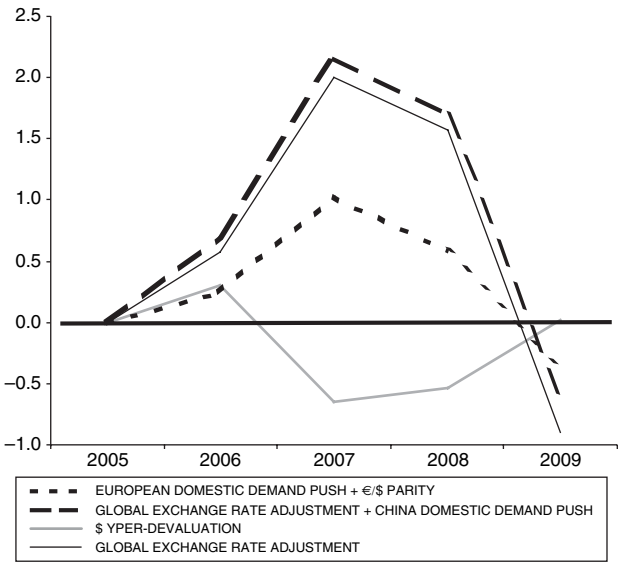

Figure 7.3.4 United Kingdom, real GDP growth rate: differences with respect to base

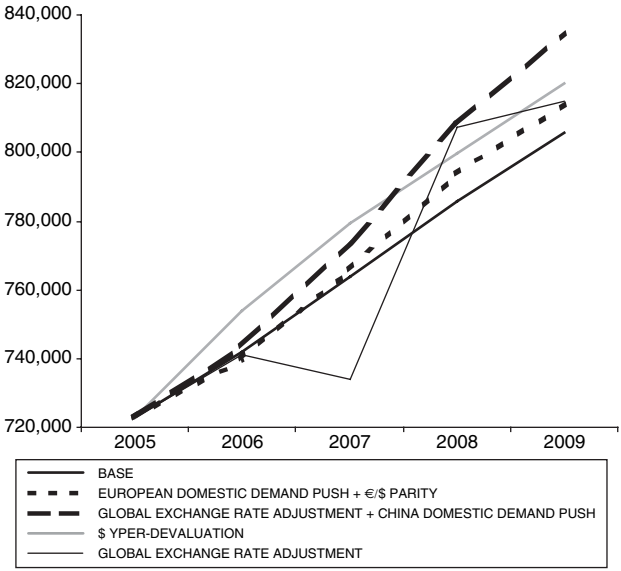

Figure 7.3.5 United Kingdom, consumption (constant prices)

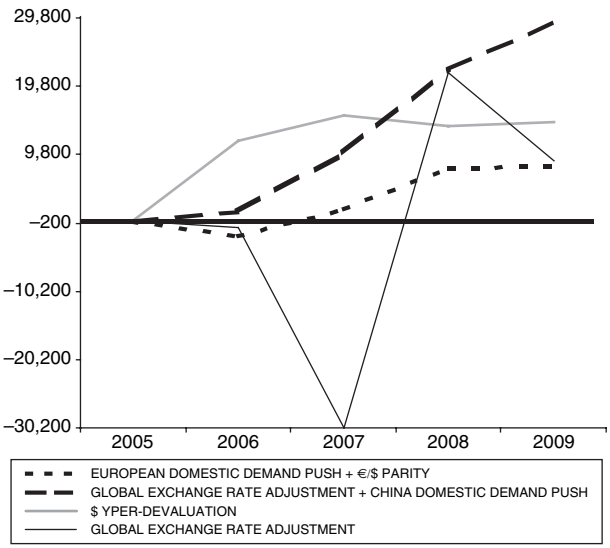

Figure 7.3.6 United Kingdom, consumption: absolute differences with respect to base (constant prices)

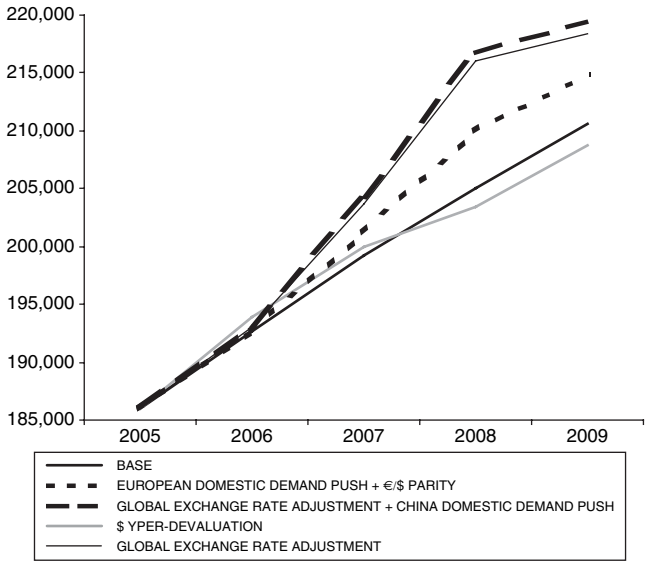

Figure 7.3.7 United Kingdom, investment (constant prices)

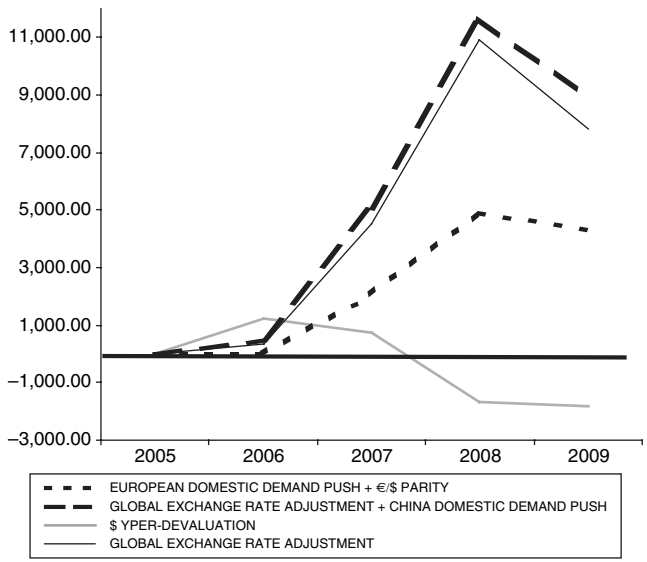

Figure 7.3.8 United Kingdom, investment: absolute differences with respect to base (constant prices)

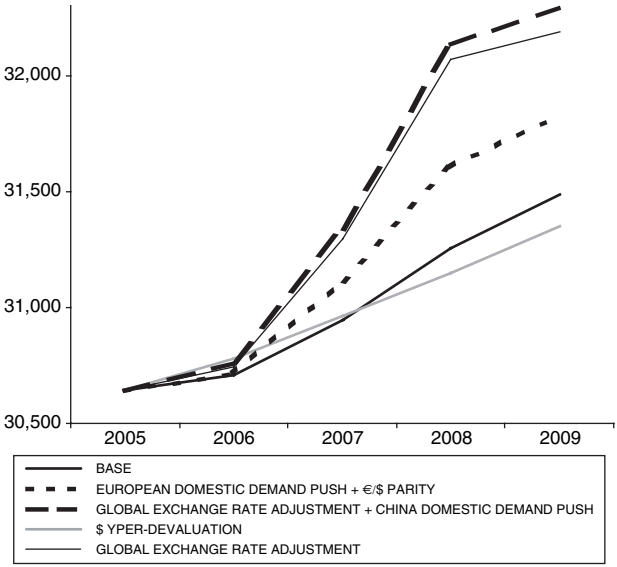

Figure 7.3.9 United Kingdom, employment (000s)

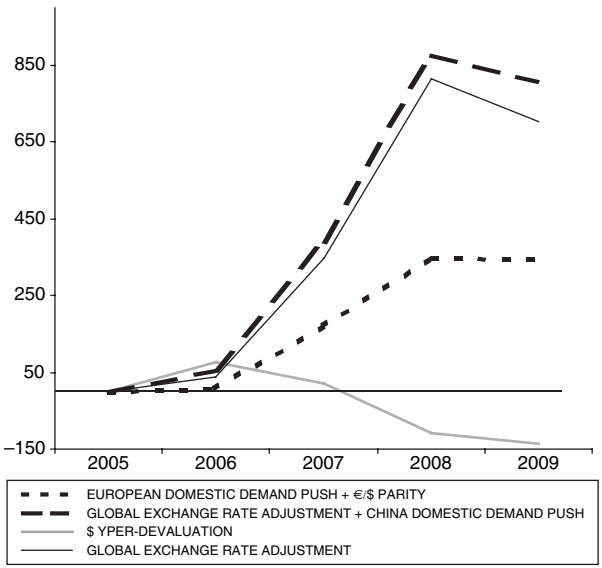

Figure 7.3.10 United Kingdom, employment: absolute differences with respect to base (000s)

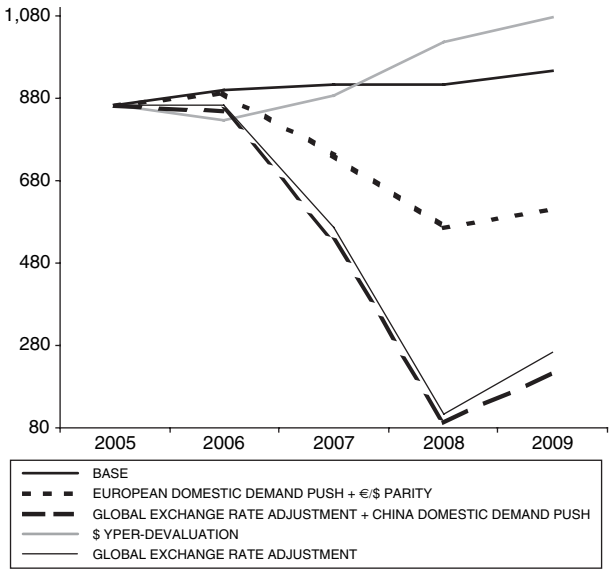

Figure 7.3.11 United Kingdom, unemployment (000s)

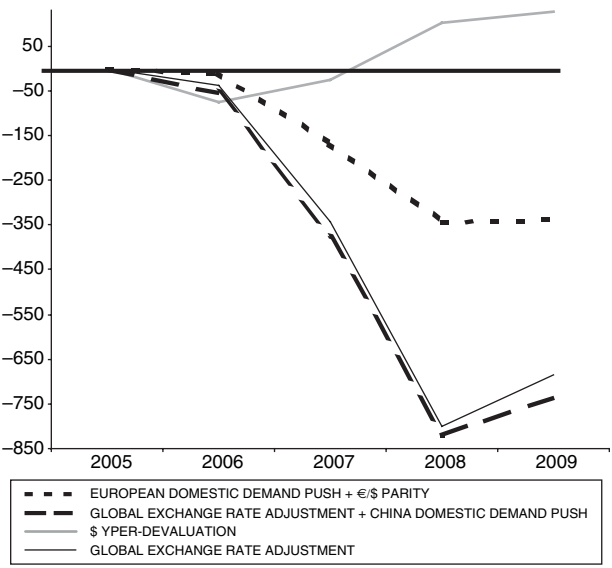

Figure 7.3.12 United Kingdom, unemployment: absolute differences with respect to base (000s)

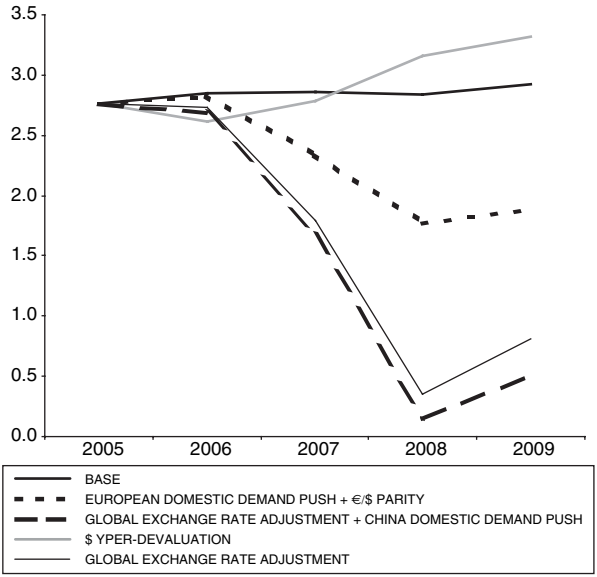

Figure 7.3.13 United Kingdom, unemployment rate

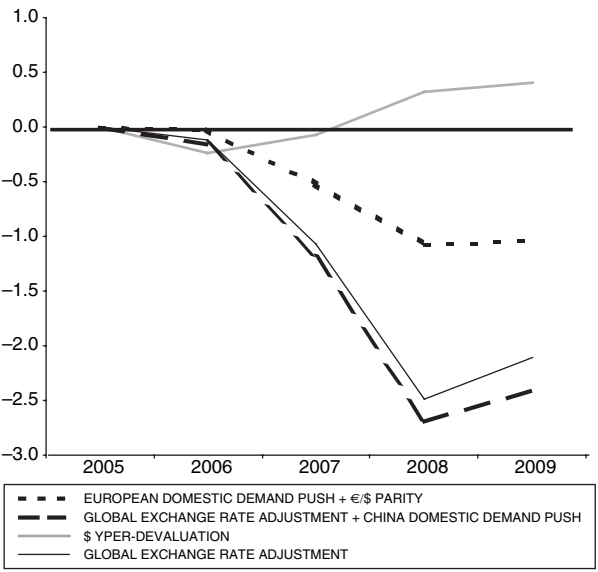

Figure 7.3.14 United Kingdom, unemployment rate: differences with respect to base

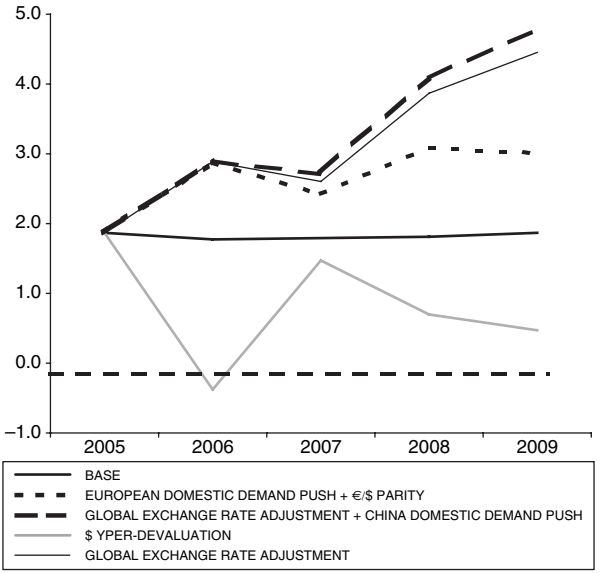

Figure 7.3.15 United Kingdom, CPI

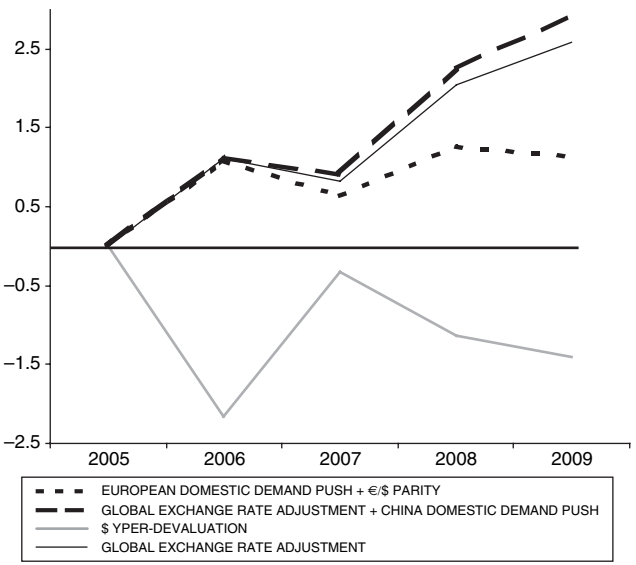

Figure 7.3.16 United Kingdom, CPI: differences with respect to base

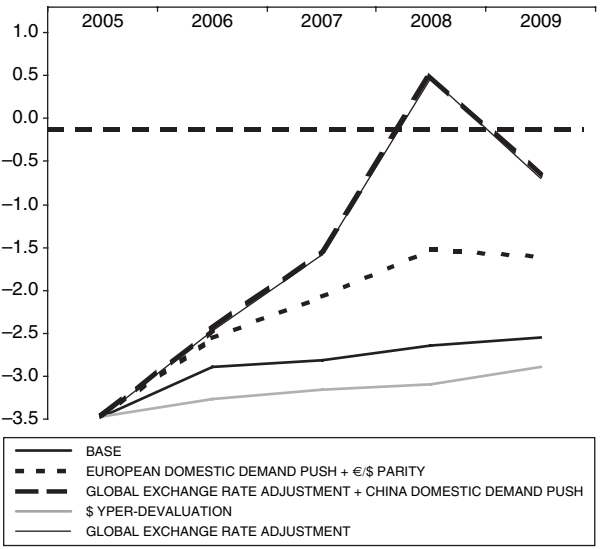

Figure 7.3.17 United Kingdom, deficit/GDP

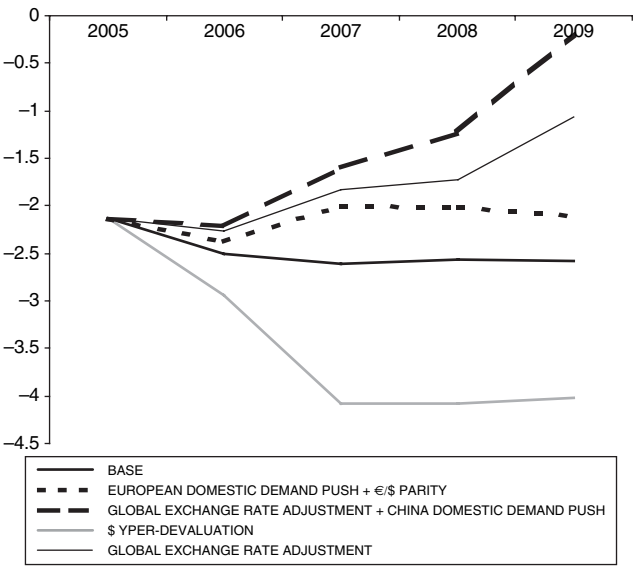

Figure 7.3.18 United Kingdom, current account/GDP

7.4 The Euro Area

The base hypothesis shows that what is called the Euro area recovery means that growth rates would slightly reach 2%, still far from US and Asian rates of growth.

A dollar hyper-devaluation would further slow down such a recovery. Indeed, a dollar devaluating down to 1.90 with respect to the euro will mean that the Euro area economies will remain closer to 1% rather than the 2% growth in the base simulation. Employment would be affected, resulting in more than half a million fewer jobs and the unemployment rate would be even greater remaining at 8.5% at the end of the period.

Obviously, inflation would be driven down below 1% and towards zero.

But a foreign current account deficit would appear and, above all, financial equilibrium would be fragile with a deficit-to-GDP ratio stacked at around 3%, higher than the one given by the base simulation.

Very important opportunities appear, instead, with a European domestic demand push reinforced by a euro/dollar rate tending to parity. In this case, after more than ten years, the Eurozone could have a solid structural growth of around 3–4% a year with higher consumption and investments, much higher employment (almost 2 million additional jobs created), lower unemployment with the rate driven down to 6%, higher activity rates, financial equilibrium with much lower deficit-to-GDP ratio ranging between 1.5 and 0%, maintaining foreign current account surpluses.

In the first two years of simulation, with respect to these positive results, inflation would approach 3% rather than staying stable below 2%.

An internal trade-off has, then, to be faced by the European economic policy-makers: an active macroeconomic policy positioning the European economy on a structural growth path of 3% or more (which would keep Europe closer to the US and China's speed of growth) *versus* a 1% increase in inflation which could be, in any case, faced and managed after three to four years of sustained growth, i.e. after having taken Europe out of the low-growth trap.

Here is where we believe the really correct way to stress the need and the urgency for structural reforms lies. These reforms must remain a major target to be pursued in Europe but they could be much better and more easily implemented within an environment where there is higher growth. This would provide, in any case, more opportunities and resources to be allocated and an increasingly more efficient way to raise potential growth and to maintain equitable social conditions. From this point of view, structural reforms would also have the necessary time to produce their effects in terms of reducing inflationary tensions just after three to four years when such risks seem to appear.

In synthesis, higher growth in Europe is possible and this possibility basically rests on Europe's decisions.

However, further and better opportunities could be added to the European economy if a general world exchange rate realignment is pursued and if, within this, China would add its own domestic push.

Indeed, for the Euro area, the best perspectives are opened within the framework described in the global exchange rate adjustment plus China's domestic demand push and the European domestic demand push simulations.

As can be seen from Figures 7.4.1–7.4.18 below, Europe could grow at least by 3 to 4 percentage points higher than the poor average achieved in the last ten years. Generally speaking, two thirds of this higher growth would come about from a domestic European push accompanied by a euro/dollar realigned to parity. One third would come from the world exchange rate realignment and China's domestic demand push.

In any case, the European Sleeping Beauty has to wake herself up.

If she is also able to play her role to obtain a more general and reasonable world exchange rate adjustment, she could have an even better and more fruitful awakening. See Figures 7.4.1–7.4.18.

Within the Eurozone, Germany, France and Italy represent more than two-thirds of the area's GDP and obviously the considerations that we have just proposed for the total group apply to each individual country.

However, there are some differences among the three countries.

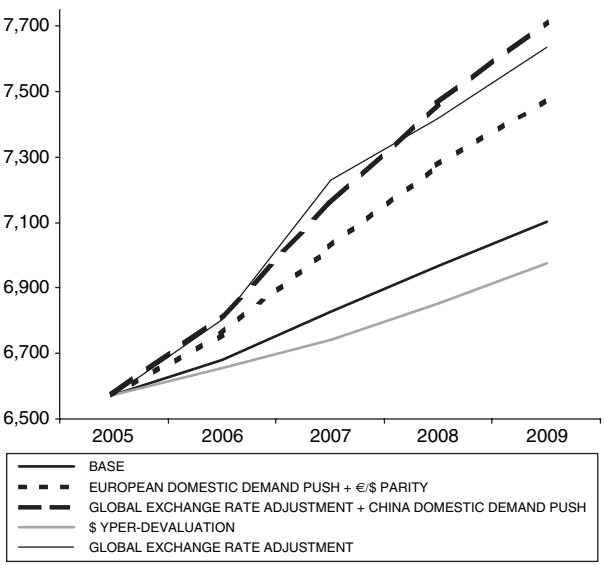

Figure 7.4.1 Euro Area, real GDP (1995 prices and exchange rates, Euro BN)

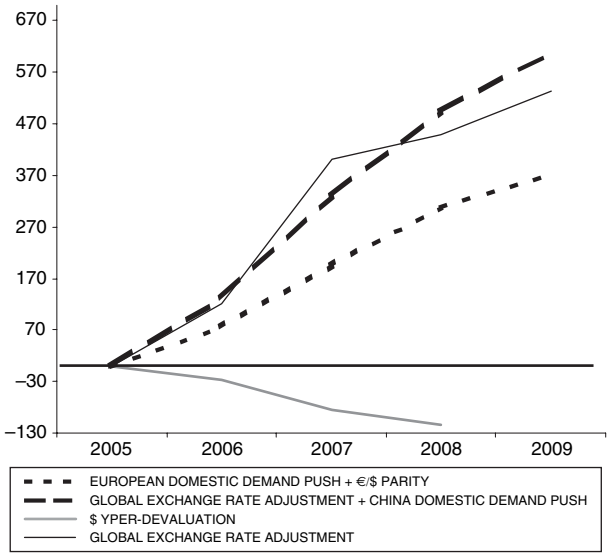

Figure 7.4.2 Euro Area, real GDP: absolute differences with respect to base (1995 prices and exchange rates, Euro BN)

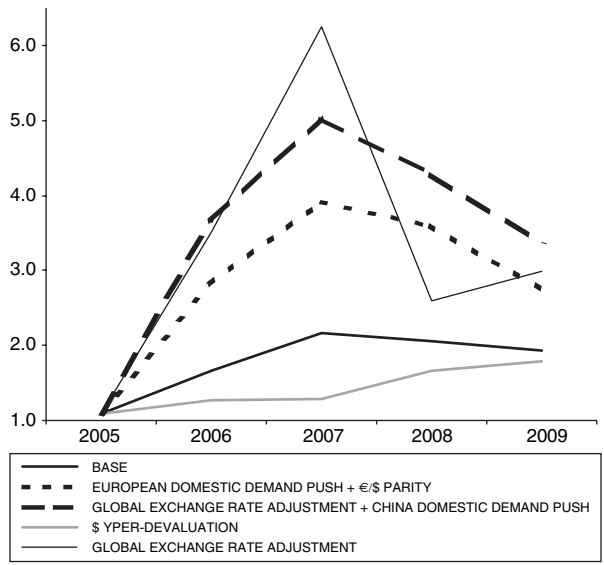

Figure 7.4.3 Euro Area, real GDP growth rate

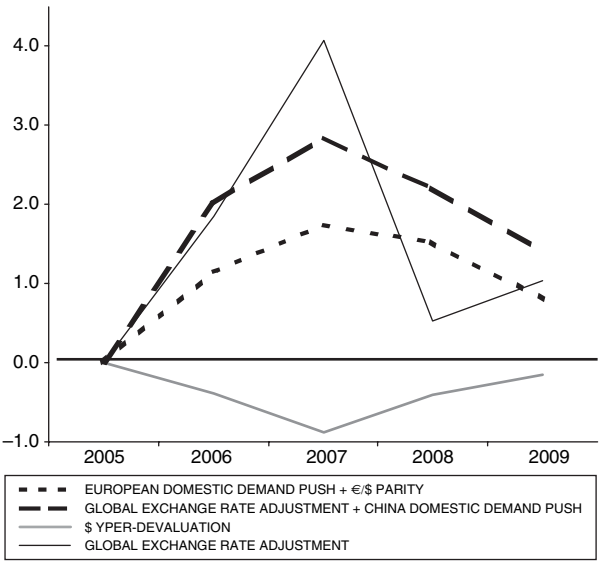

Figure 7.4.4 Euro Area, real GDP growth rate: differences with respect to base

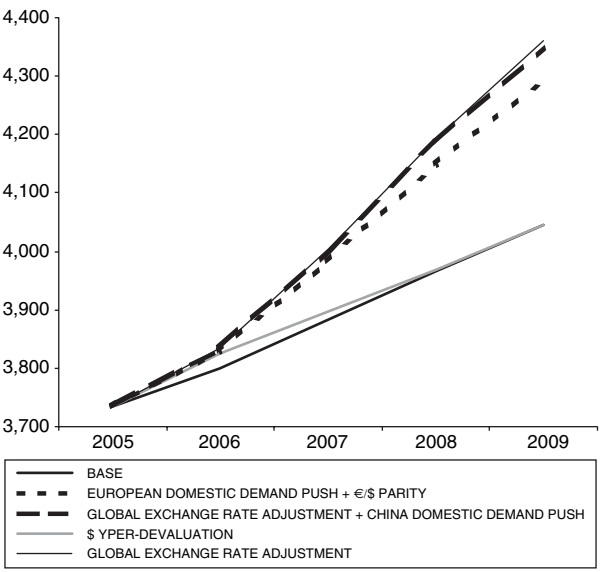

Figure 7.4.5 Euro Area, consumption (1995 prices and exchange rates, Euro BN)

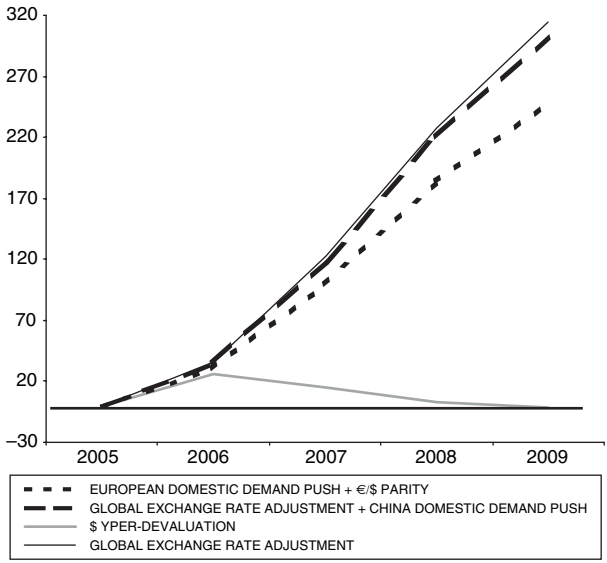

Figure 7.4.6 Euro Area, consumption: absolute differences with respect to base (1995 prices and exchange rates, Euro BN)

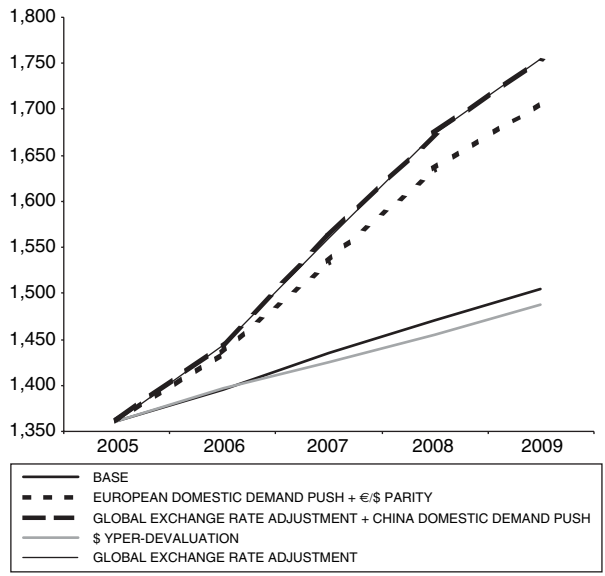

Figure 7.4.7 Euro Area, investment (1995 prices and exchange rates, Euro BN)

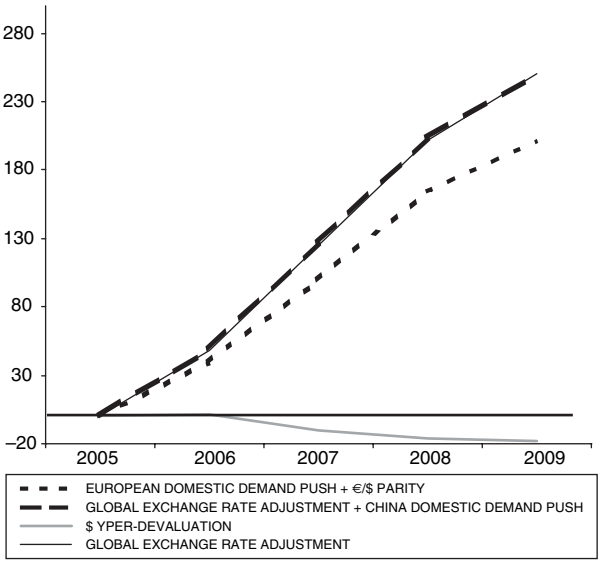

Figure 7.4.8 Euro Area, investment: absolute differences with respect to base (1995 prices and exchange rates, Euro BN)

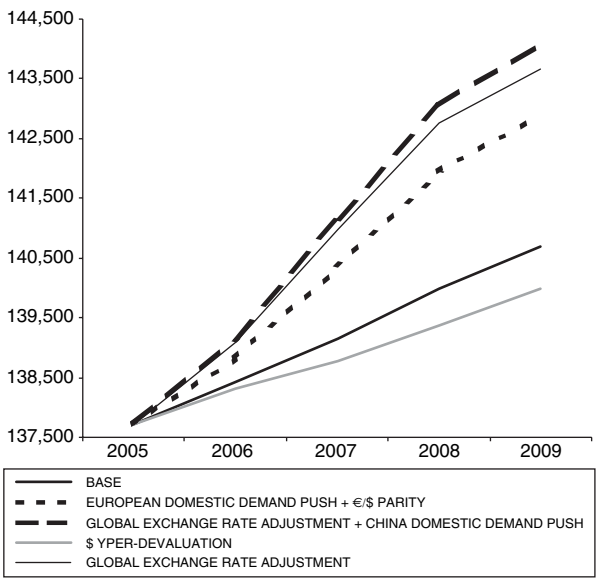

Figure 7.4.9 Euro Area, employment (000s)

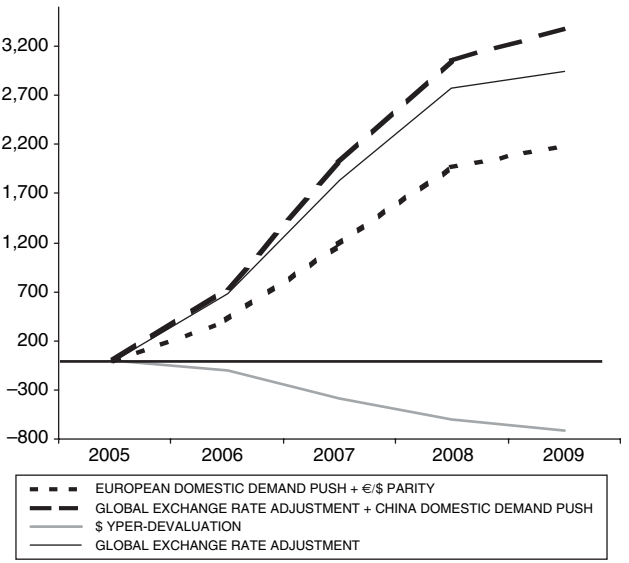

Figure 7.4.10 Euro Area, employment: absolute differences with respect to base (000s)

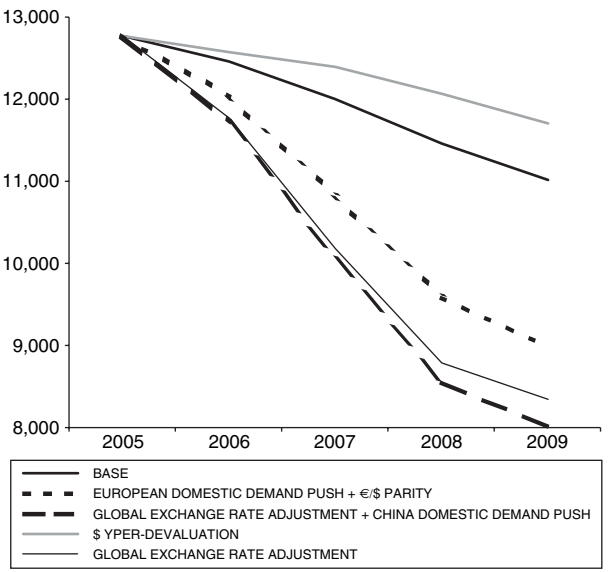

Figure 7.4.11 Euro Area, unemployment (000s)

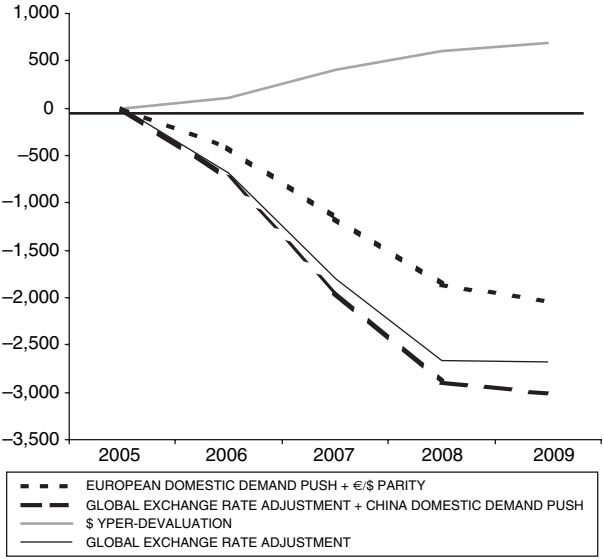

Figure 7.4.12 Euro Area, unemployment: absolute differences with respect to base (000s)

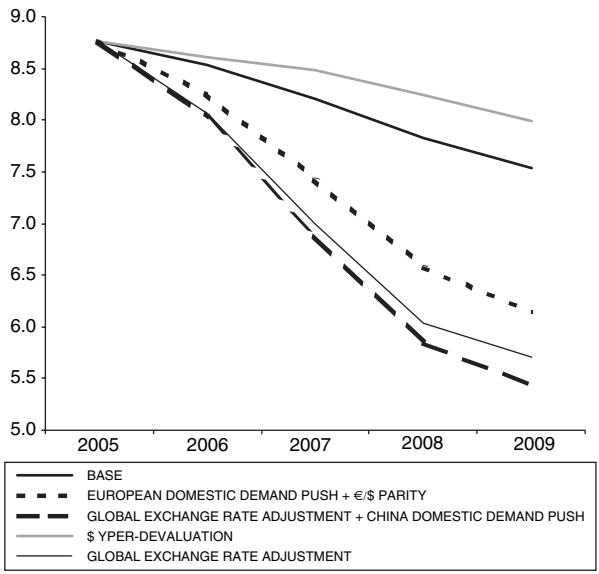

Figure 7.4.13 Euro Area, unemployment rate

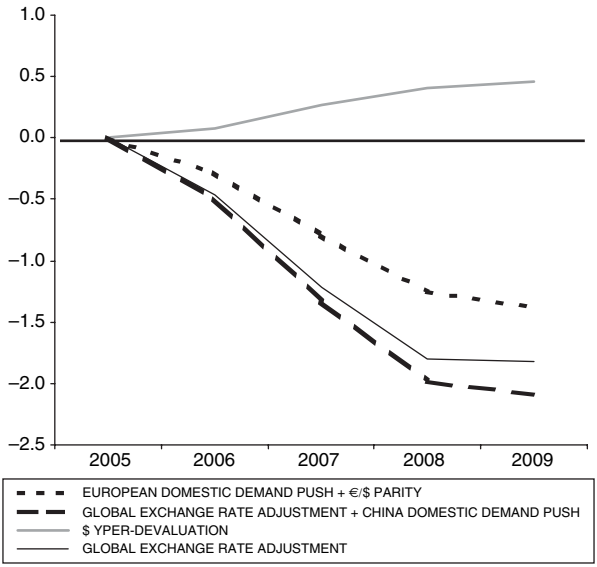

Figure 7.4.14 Euro Area, unemployment rate: differences with respect to base

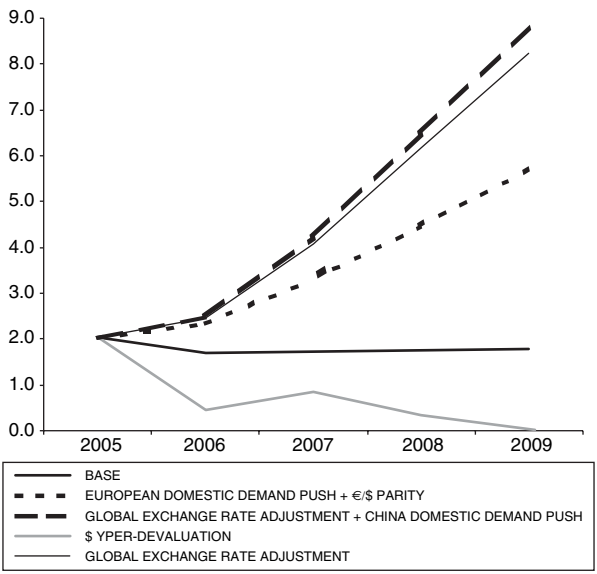

Figure 7.4.15 Euro Area, CPI

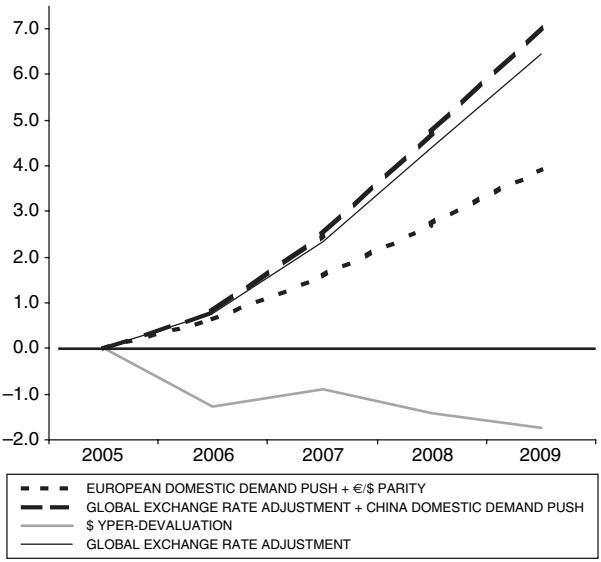

Figure 7.4.16 Euro Area, CPI: differences with respect to base

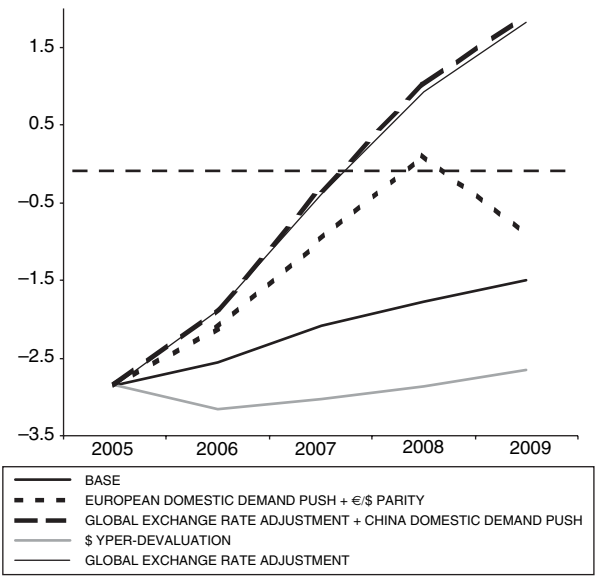

Figure 7.4.17 Euro Area, deficit/GDP

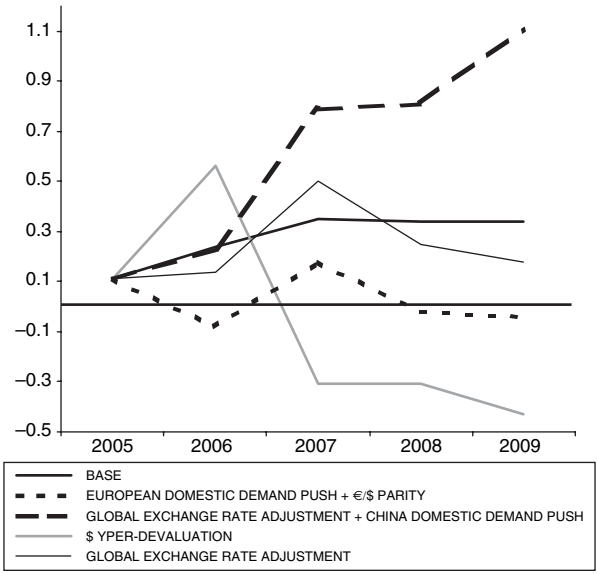

Figure 7.4.18 Euro Area, current account/GDP

Germany seems to be the most negatively affected by a dollar hyper-devaluation and less positively influenced by a European demand push.

France, instead, appears to be less affected by a dollar devaluation and more able to develop autonomously from the rest of Europe and the world since it has more concentrated markets and there is more of a presence of state corporations in the country which in a certain way determines higher links between growth performances and government decisions.

Finally, Italy appears to be much more positively influenced by a European demand push and much less negatively influenced by a dollar devaluation. But we will see this in more details in the following sections.

7.4.1 Germany

A dollar hyper-devaluation would force the German economy to creep back to a 0 to 0.5% growth from an already poor 1.5–2% growth according to the base hypothesis. Consequently, unemployment would increase and stay at 4.5 million units, a rate of 11%. The foreign account surplus would be drastically reduced from 4% to 1% of GDP. On the other hand, the government deficit-to-GDP ratio would deteriorate well beyond 5%. Again, this would be another proof of masochistic benign neglect towards euro appreciation and dollar devaluation which would reduce growth and employment and increase financial disequilibrium.

Instead of a passive economic policy, an active European domestic push and a euro which moves to the parity (instead of passively resigning itself to a huge dollar devaluation) would create the prospects of a 3% or more increase in growth in Germany with no significant inflation risks in the first two years, higher employment by about 1 million additional jobs and a reduced unemployment rate down to 8.5%. A foreign surplus above 3% of GDP would be maintained and the deficit-to-GDP ratio would be reduced to zero in three to four years.

Such positive results would be all the greater and much more solid within a context of general exchange rate realignment and China's domestic push. Growth rates would range between 4% and 5%, a little less than 2 million jobs would be created and the unemployment rate would be driven below 7.5%. What is extremely interesting here is that the risk of inflation would not appear relevant even at the end of the period. Financial equilibrium could be much more solid and the deficit-to-GDP ratio sharply reduced from 4–0% in almost two years. Germany, like the all Eurozone, needs an active domestic economic policy and, in addition, the best national condition could be given within a world equilibrium perspective resulting from, according to our simulations, a global exchange rate adjustment with China's domestic demand push and a European domestic demand push. See Figures 7.4.1.1–7.4.1.18.

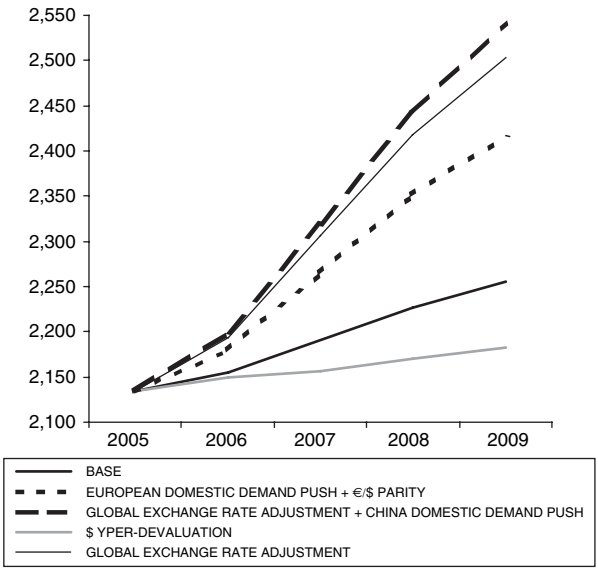

Figure 7.4.1.1 Germany, real GDP

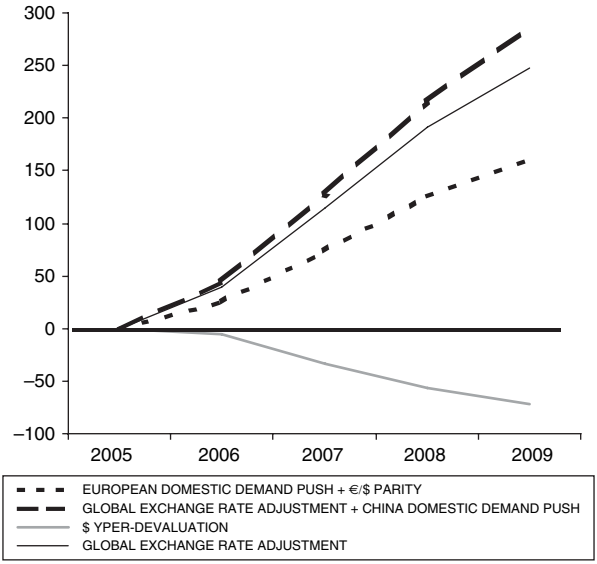

Figure 7.4.1.2 Germany, real GDP: absolute differences with respect to base

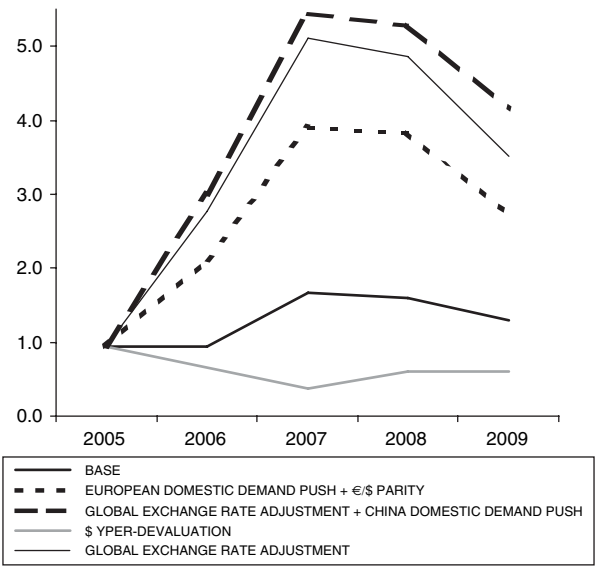

Figure 7.4.1.3 Germany, real GDP growth rate

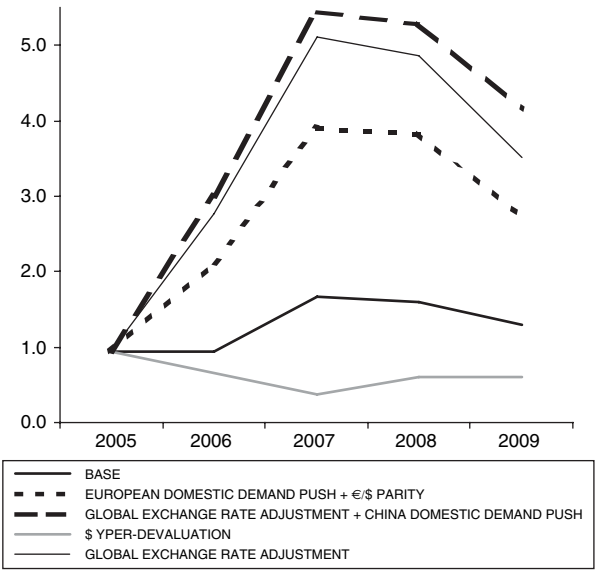

Figure 7.4.1.4 Germany, GDP growth rate: annual differences with respect to base

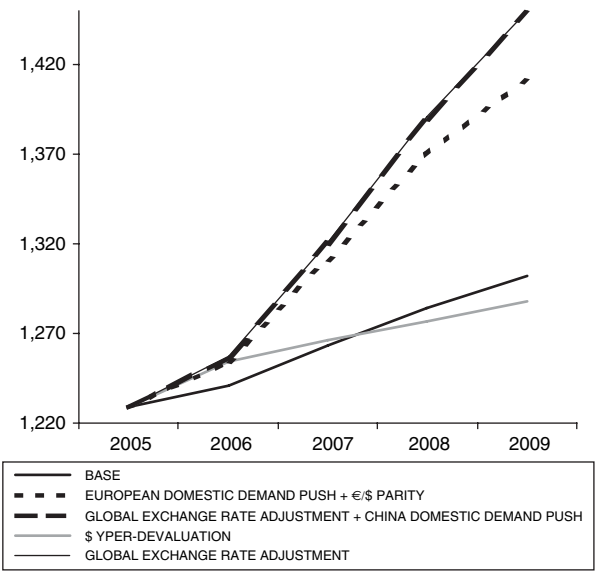

Figure 7.4.1.5 Germany, consumption

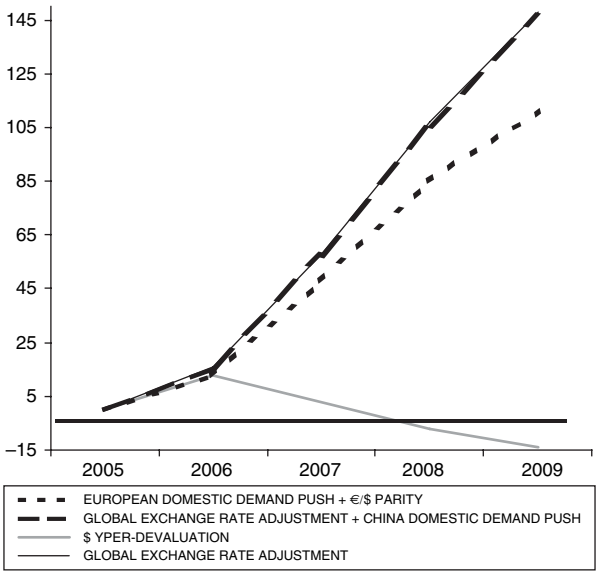

Figure 7.4.1.6 Germany, consumption: absolute differences with respect to base

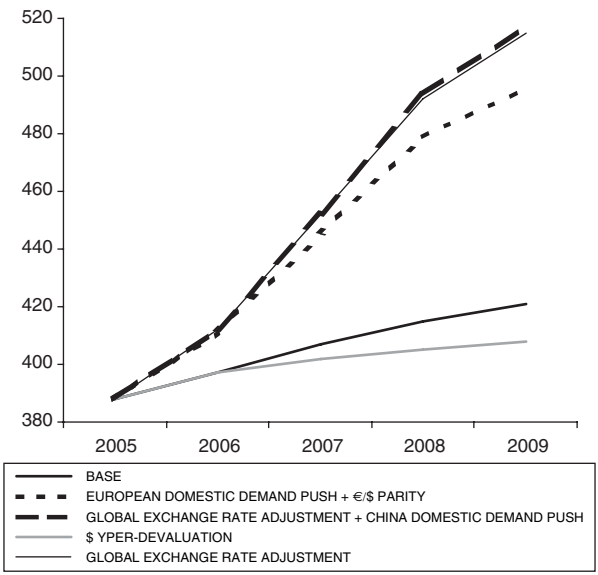

Figure 7.4.1.7 Germany, investment

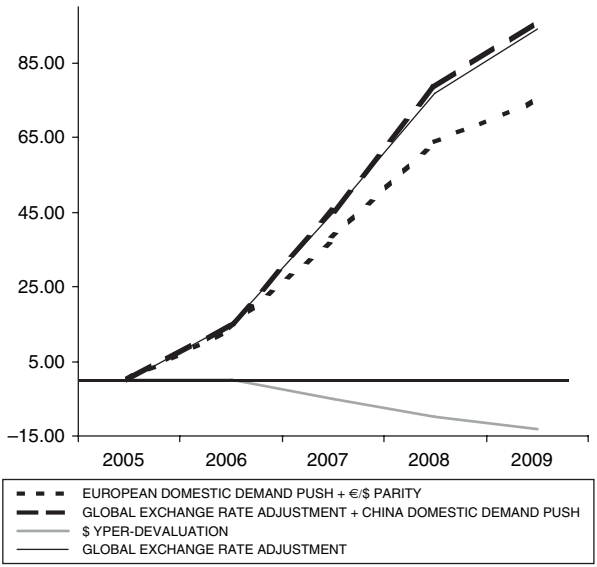

Figure 7.4.1.8 Germany, investment: absolute differences with respect to base

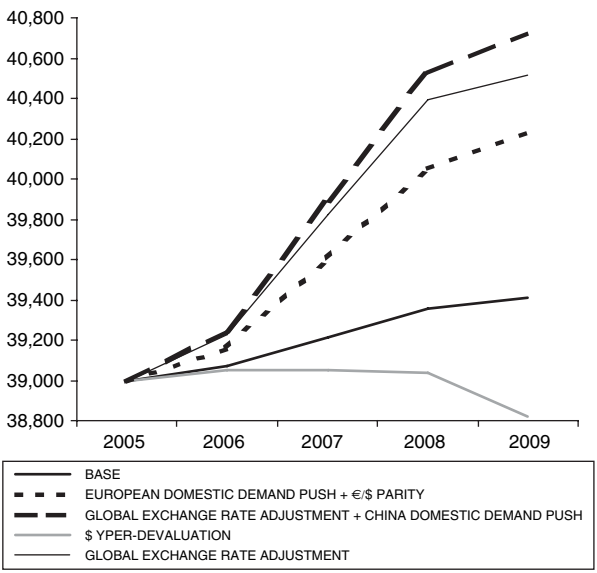

Figure 7.4.1.9 Germany, employment

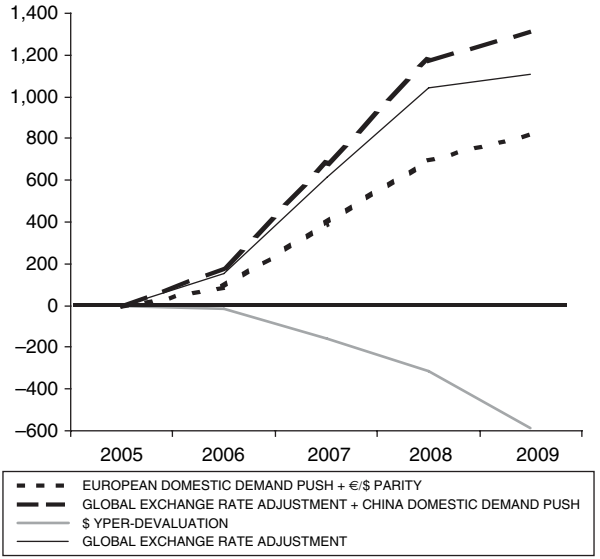

Figure 7.4.1.10 Germany, employment: absolute differences with respect to base

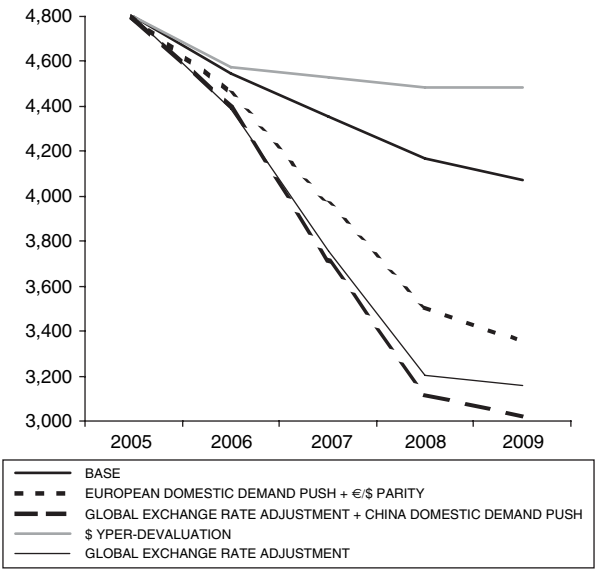

Figure 7.4.1.11 Germany, unemployment

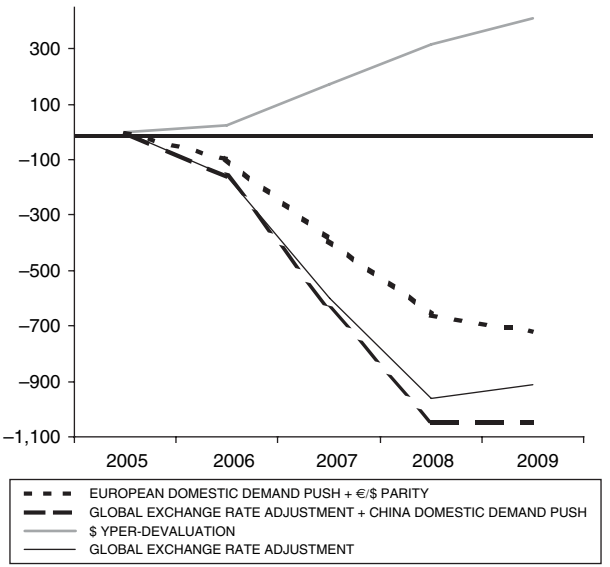

Figure 7.4.1.12 Germany, unemployment: absolute differences with respect to base

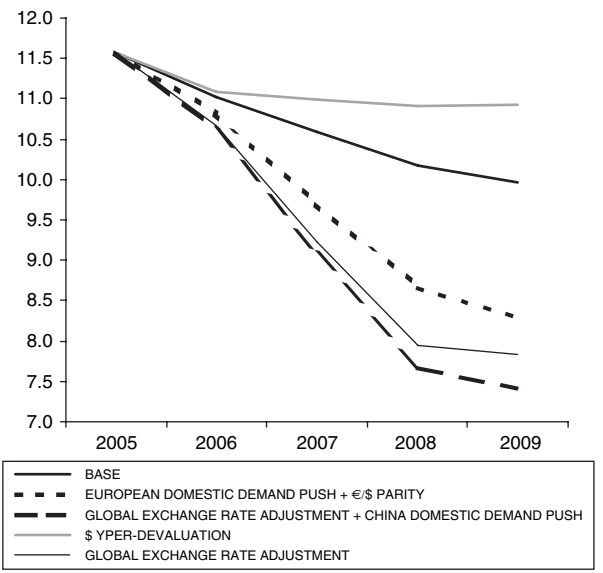

Figure 7.4.1.13 Germany, unemployment rate

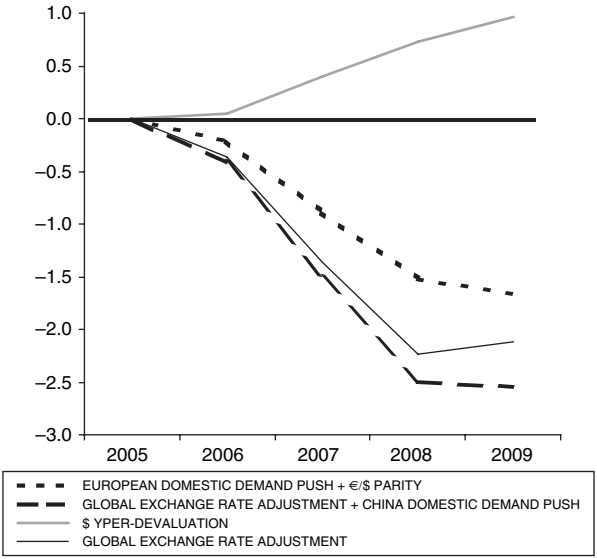

Figure 7.4.1.14 Germany, unemployment rate: differences with respect to base

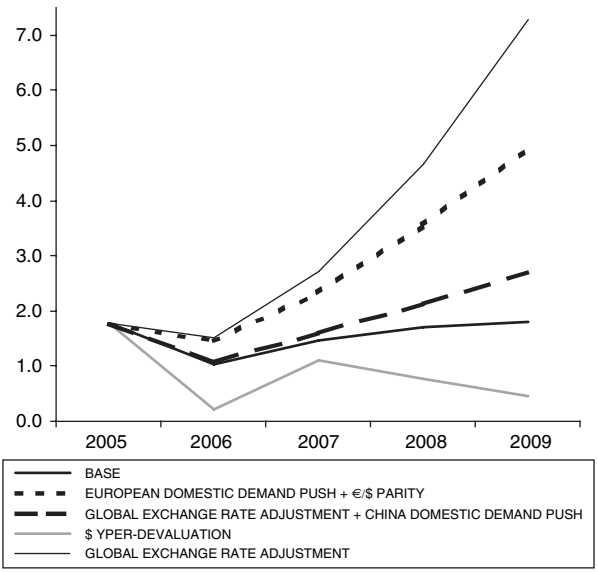

Figure 7.4.1.15 Germany, CPI

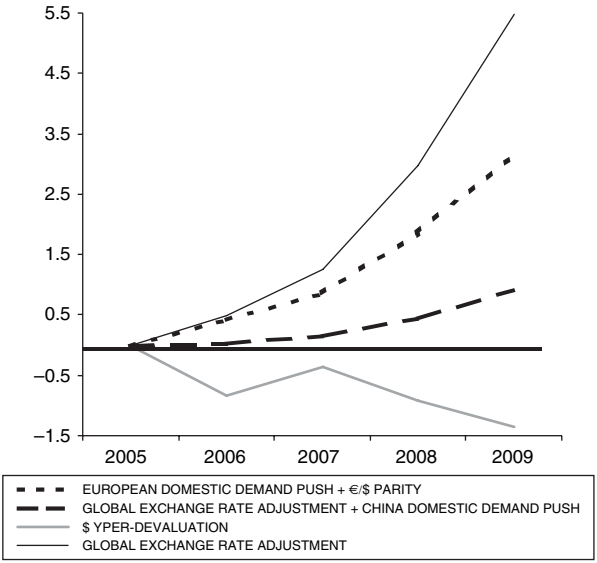

Figure 7.4.1.16 Germany, CPI: differences with respect to base

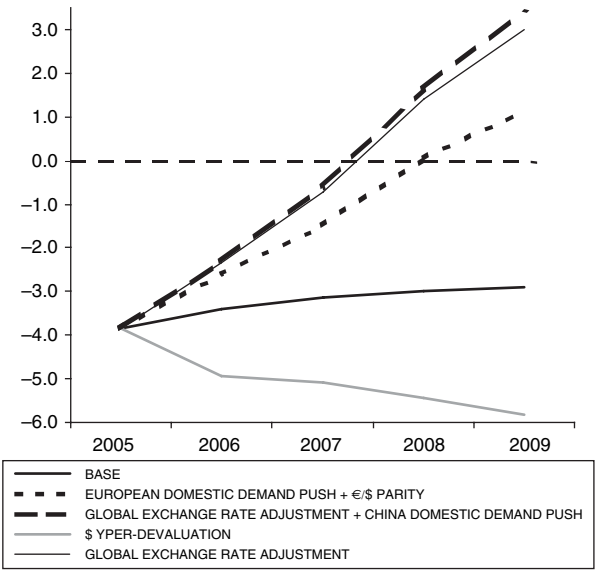

Figure 7.4.1.17 Germany, deficit/GDP

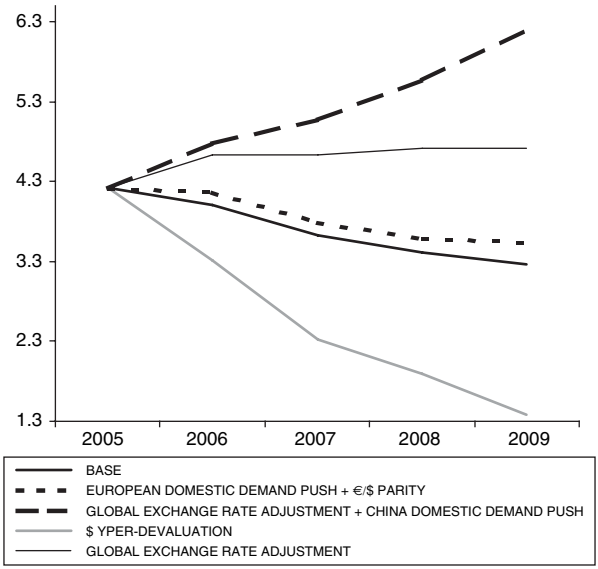

Figure 7.4.1.18 Germany, current account/GDP

7.4.2 France

As we mentioned before, with respect to Germany, the French economy has demonstrated that it is less sensitive to a dollar devaluation and more reactive to a European demand push.

In any case, a hyper-devaluation of the dollar would heavily affect the French economy as well. A growth rate forecasted to be about 2% in the base simulation would be pushed down to about 1.5%. Consequently, unemployment would slightly increase by 0.5% and the deficit-to-GDP ratio would be stuck at about 3%, rather than tending to 1% as in the case of the BASE simulation.

If we consider a European domestic demand push and a euro/dollar at parity, the French economy will be put on a 3% growth path with a sharp decrease in the unemployment rate that would be driven down to 7.3% with no significant inflationary effects beyond the ones already mentioned for the entire Eurozone. Some deterioration in the foreign account balance would develop but the deficit-to-GDP ratio would reach zero by the fourth year of the simulation.

In addition, even for France the perspectives are better if we consider the world exchange rate realignment and the China push. The rate of growth would be driven to between 3.5–4.0% and unemployment would be reduced by almost 1 million units by the end of the period. Even better conditions on financial equilibrium could be reached with a deficit-to-GDP ratio driven to zero one year earlier.

In short, while two/thirds of the positive effects for Germany would come about as a result of a European demand push and one-third from a global exchange rate adjustment plus China's domestic demand push, for France this splitting appears to be three-fourths and one-fourth respectively. See Figures 7.4.2.1–7.4.2.18.

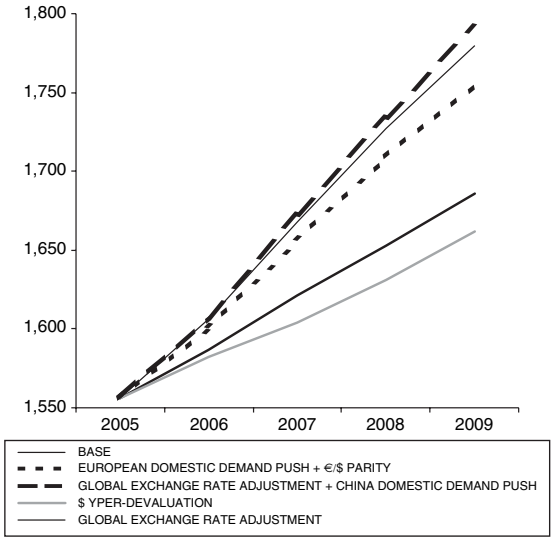

Figure 7.4.2.1 France, real GDP (2000 prices, Euro BN)

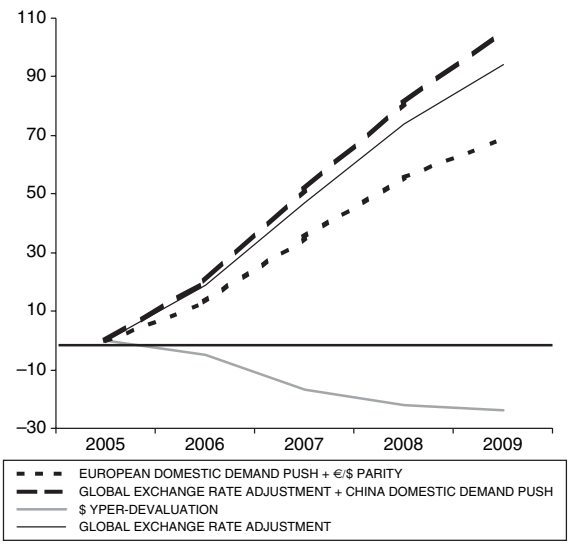

Figure 7.4.2.2 France, real GDP: absolute differences with respect to base (2000 prices, Euro BN)

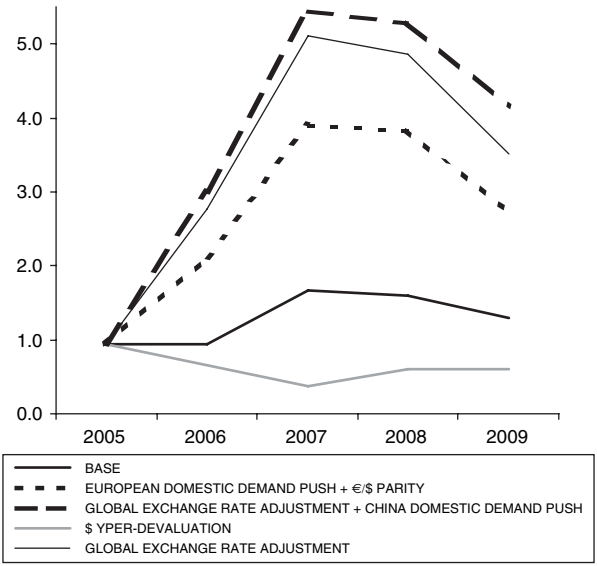

Figure 7.4.2.3 France, real GDP growth rate

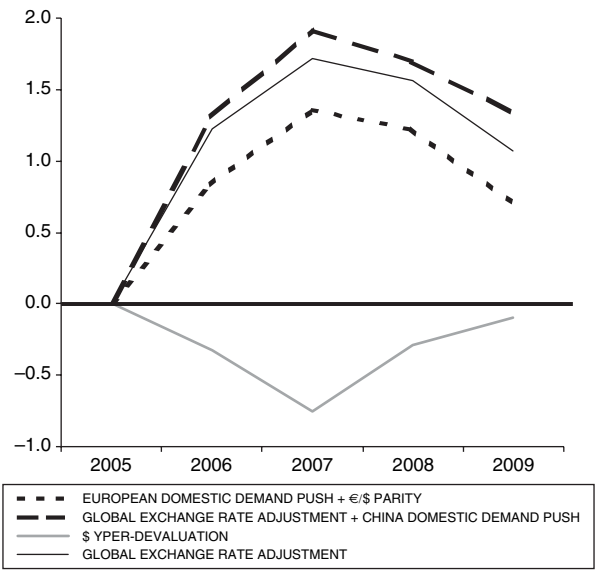

Figure 7.4.2.4 France, real GDP growth rate: differences with respect to base

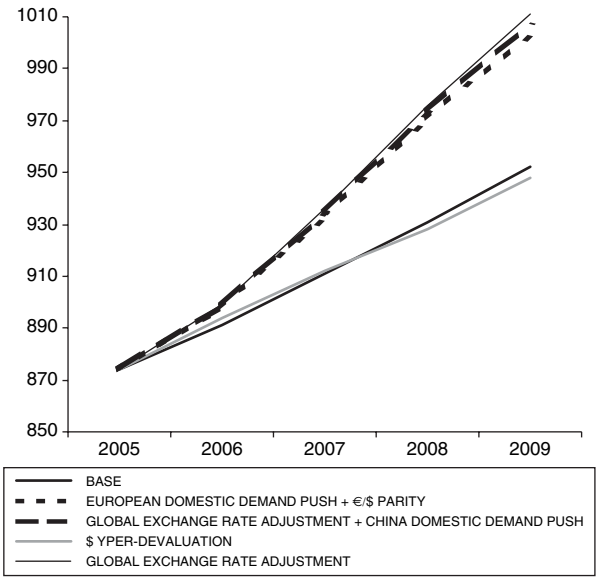

Figure 7.4.2.5 France, consumption (2000 prices, Euro BN)

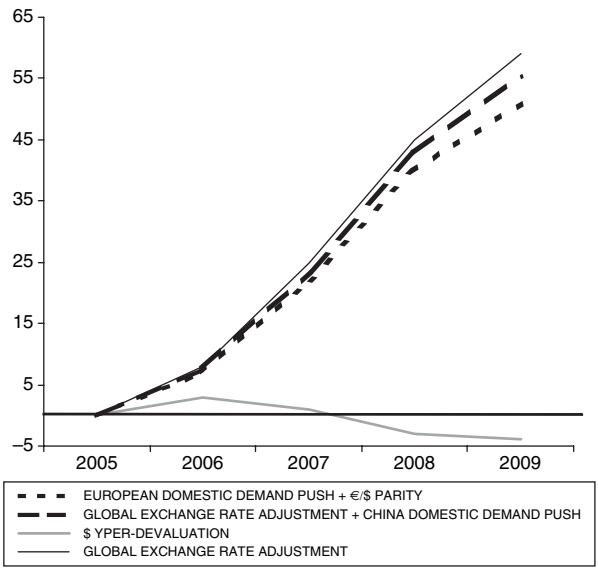

Figure 7.4.2.6 France, consumption: absolute differences with respect to base (2000 prices, Euro BN)

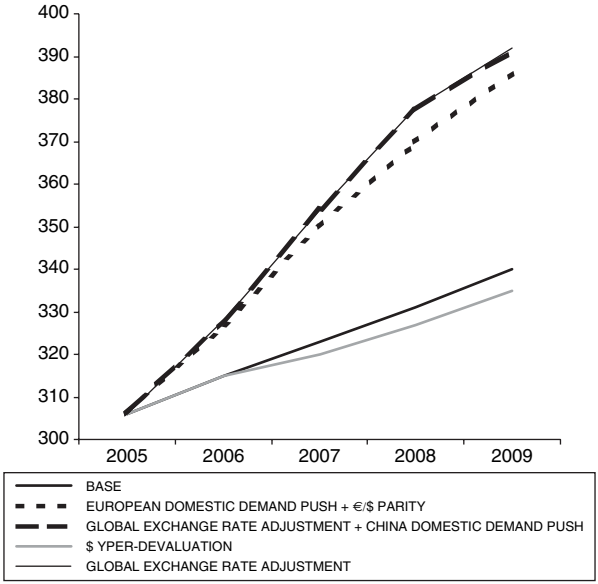

Figure 7.4.2.7 France, investment (2000 prices, Euro BN)

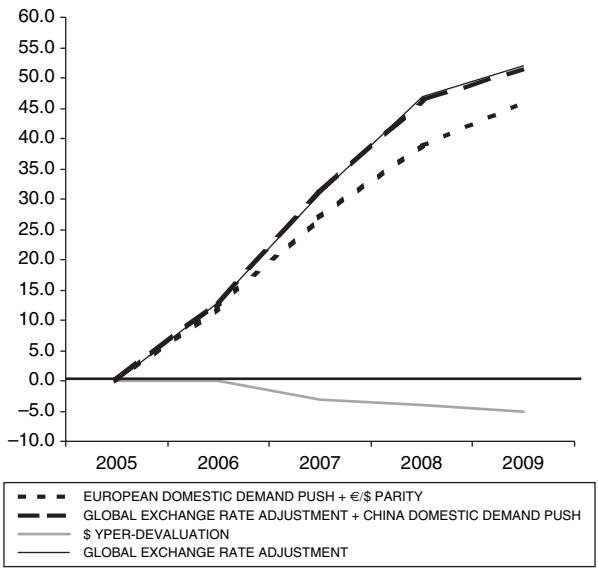

Figure 7.4.2.8 France, investment: absolute differences with respect to base (2000 prices, Euro BN)

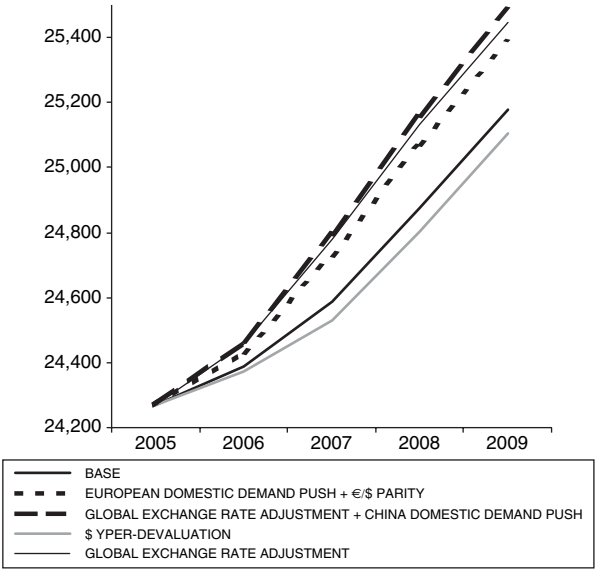

Figure 7.4.2.9 France, employment (000s)

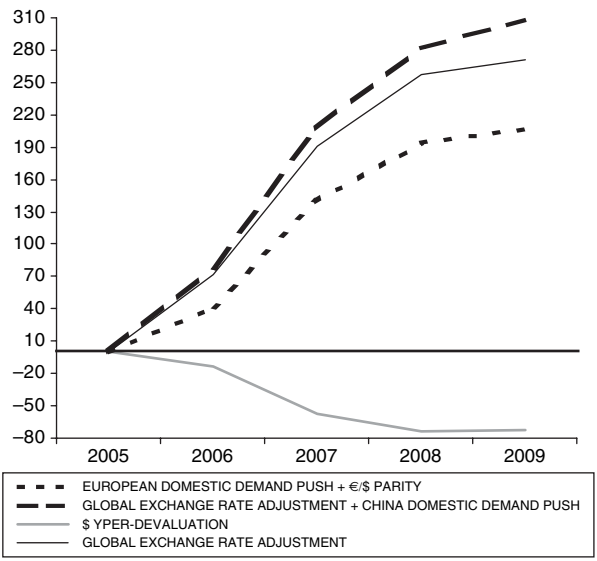

Figure 7.4.2.10 France, employment: absolute differences with respect to base (000s)

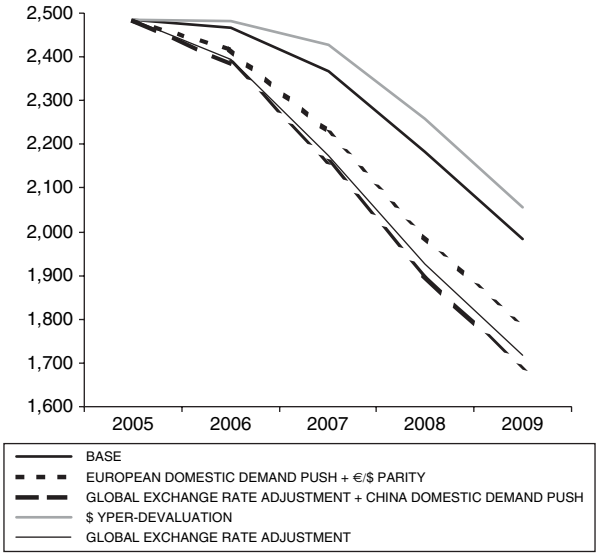

Figure 7.4.2.11 France, unemployment (000s)

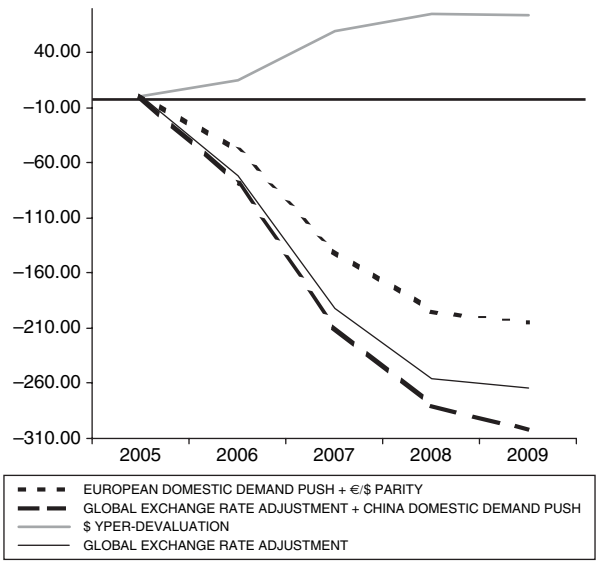

Figure 7.4.2.12 France, unemployment: absolute differences with respect to base (000s)

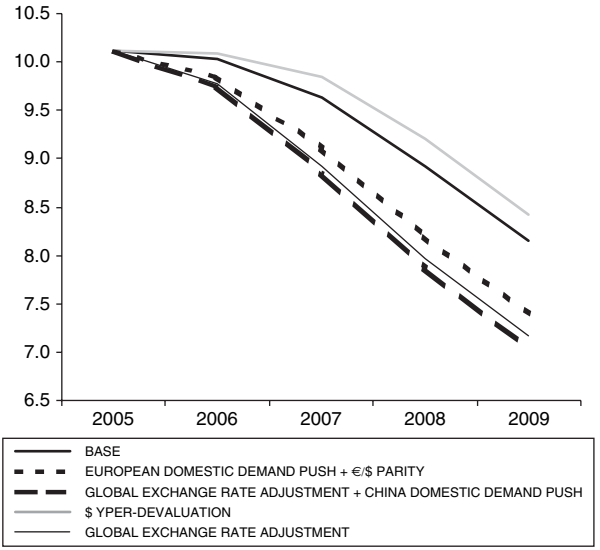

Figure 7.4.2.13 France, unemployment rate

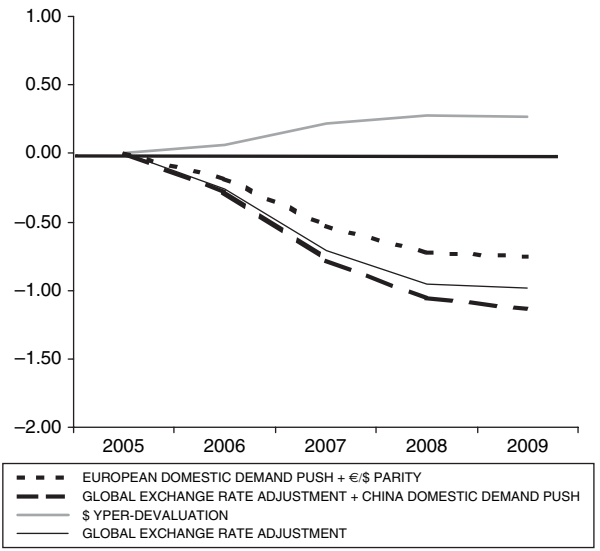

Figure 7.4.2.14 France, unemployment rate: differences with respect to base

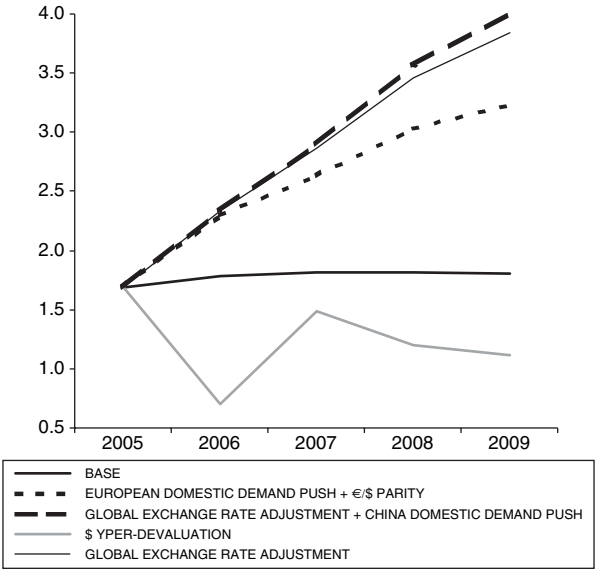

Figure 7.4.2.15 France, CPI

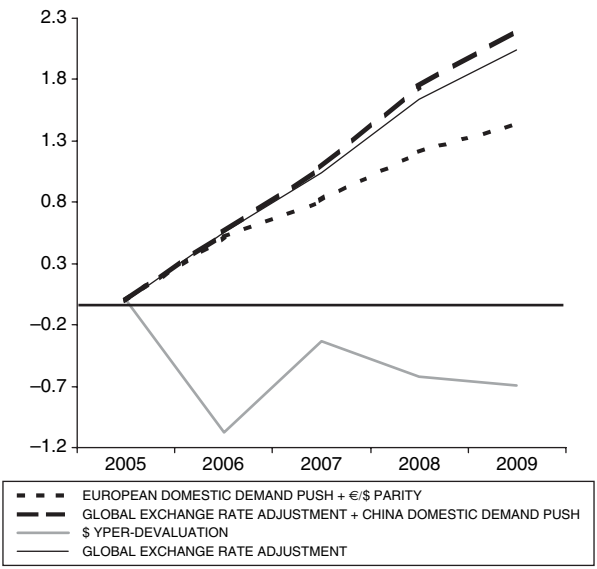

Figure 7.4.2.16 France, CPI: differences with respect to base

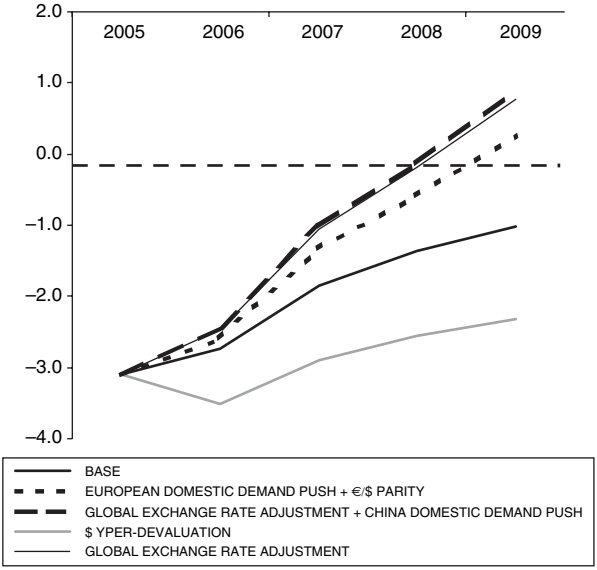

Figure 7.4.2.17 France, deficit/GDP

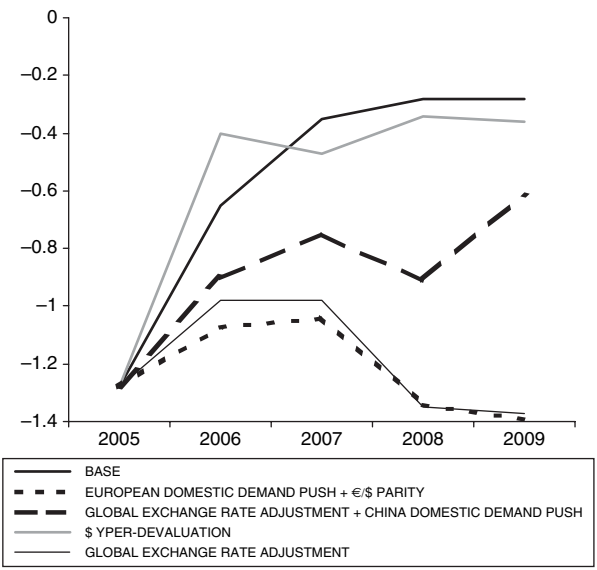

Figure 7.4.2.18 France, current account/GDP

7.4.3 Italy

The Italian economy appears to be a little less sensitive to the negative impact from a hyper-devaluation of the dollar than France and Germany but considerably more reactive in terms of the positive impact of the European domestic push and the euro approaching the parity with the dollar.

Indeed, in the case of a dollar hyper-devaluation, the Italian economy would be held down to a rate of growth below 1.0% in the first two years and always below 1.5% for the rest of the period. The unemployment rate, in any case, will be lower than in France and Germany, settling at about the level reached in 2005.

With a European demand push Italy too would have the chance to jump to a rate of growth ranging between 3–4%, a perspective that could be reinforced in the case of the world exchange rate realignment and the China push. But for Italy, four-fifths of the positive effect would simply come from the European domestic push and only one fifth of additional effect would be produced by the global exchange rate adjustment plus China's domestic demand push hypothesis.

Unemployment would be driven down by 30% and the unemployment rate down to 5%.

Financial equilibrium could be obtained by a zero deficit-to-GDP ratio reached in the fourth year as is the case for Germany. However, a certain higher risk of inflation would appear after the second year of simulation. See Figures 7.4.3.1–7.4.3.18.

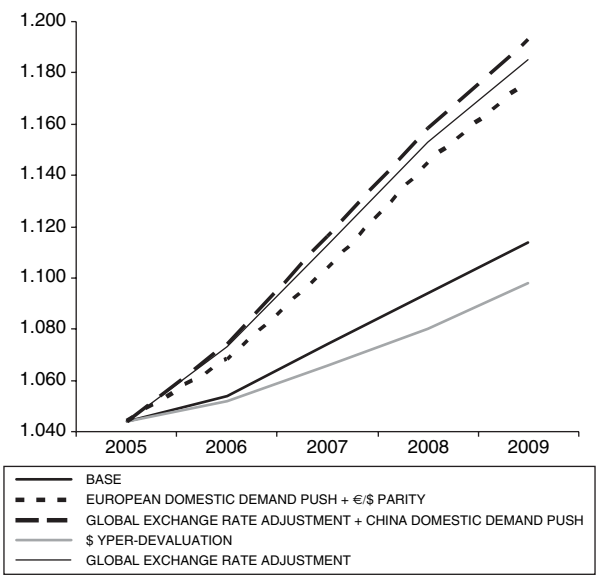

Figure 7.4.3.1 Italy, real GDP (1995 prices, Euro BN)

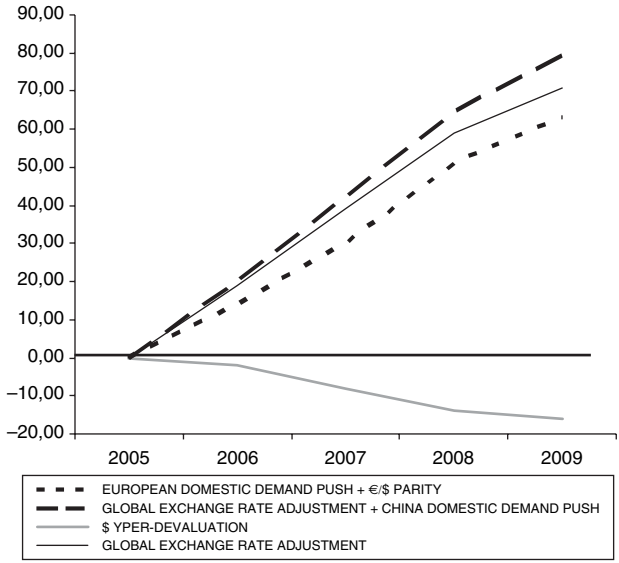

Figure 7.4.3.2 Italy, real GDP: absolute differences with respect to base (1995 prices, Euro BN)

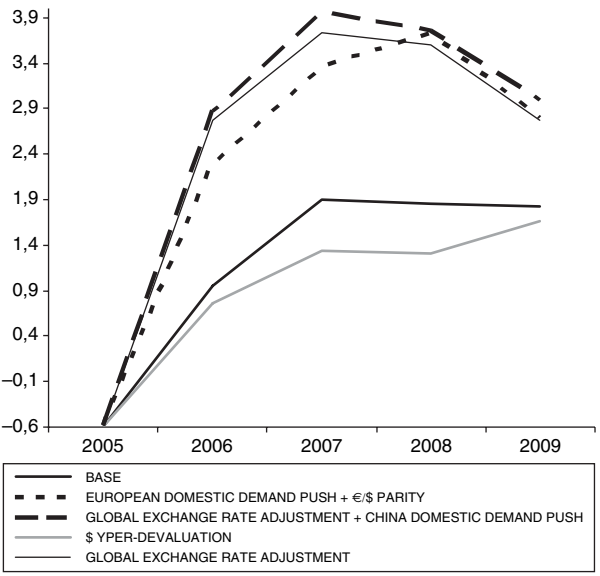

Figure 7.4.3.3 Italy, real GDP growth rate

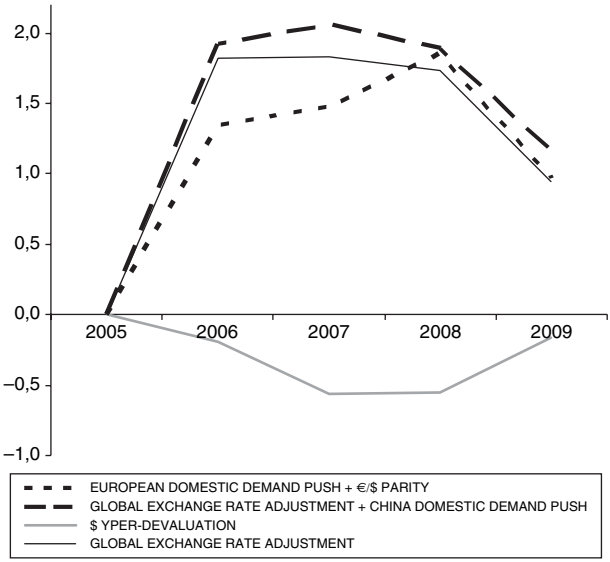

Figure 7.4.3.4 Italy, real GDP growth rate: differences with respect to base

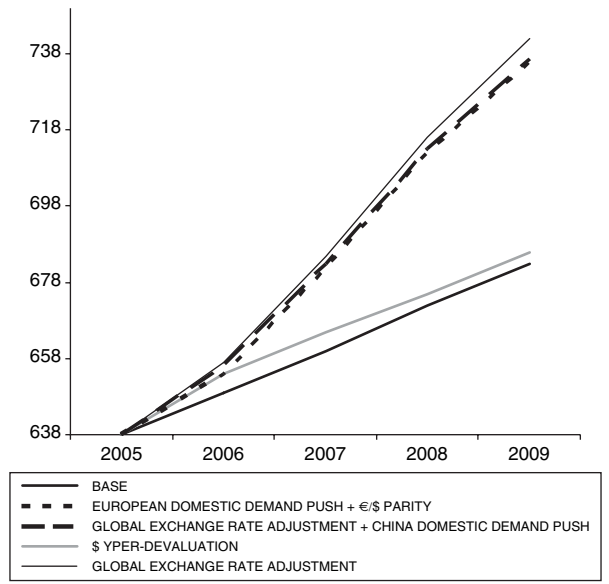

Figure 7.4.3.5 Italy, consumption (1995 prices, Euro BN)

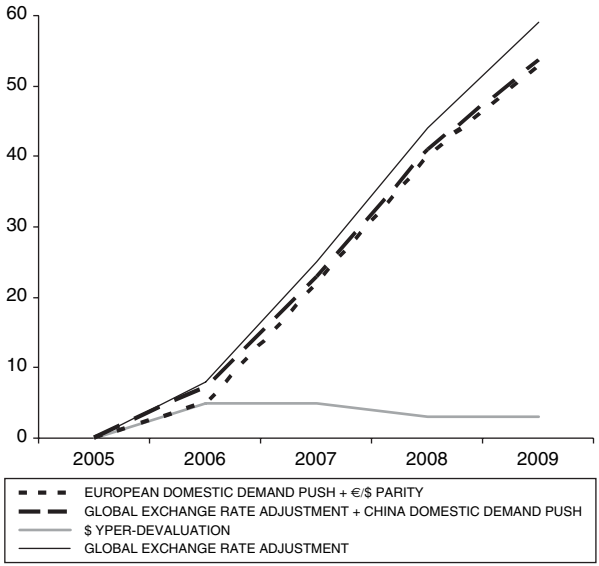

Figure 7.4.3.6 Italy, consumption: absolute differences with respect to base (1995 prices, Euro BN)

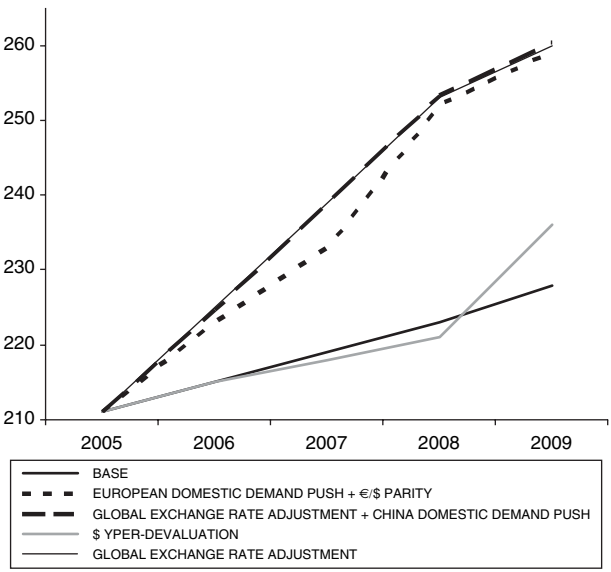

Figure 7.4.3.7 Italy, investment (1995 prices, Euro BN)

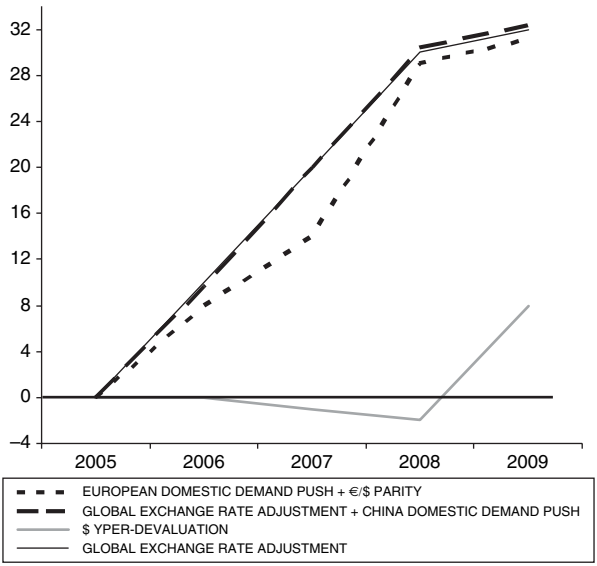

Figure 7.4.3.8 Italy, investment: absolute differences with respect to base (1995 prices, Euro BN)

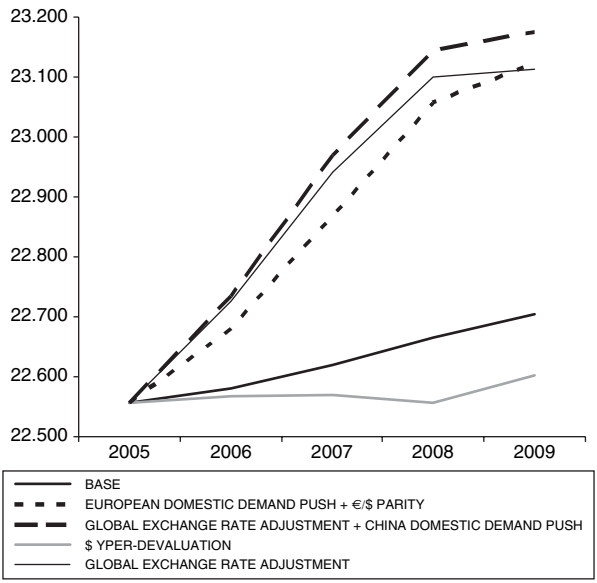

Figure 7.4.3.9 Italy, employment (000s)

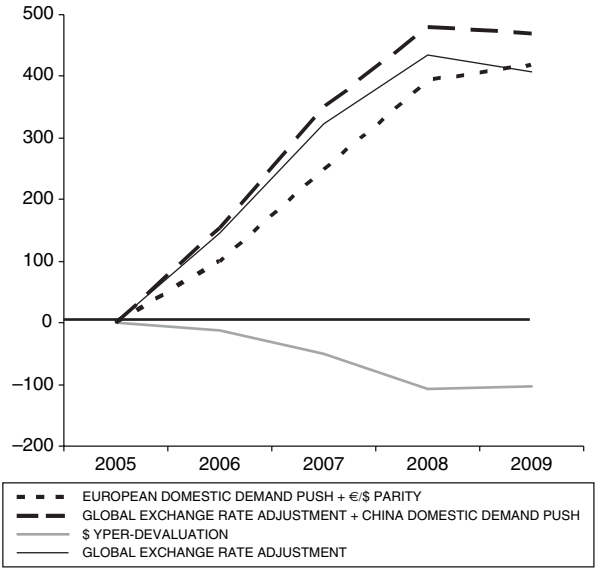

Figure 7.4.3.10 Italy, employment: absolute differences with respect to base (000s)

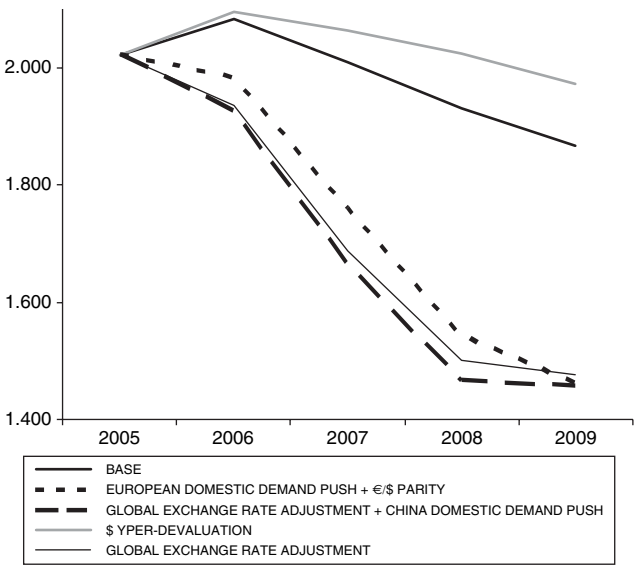

Figure 7.4.3.11 Italy, unemployment (000s)

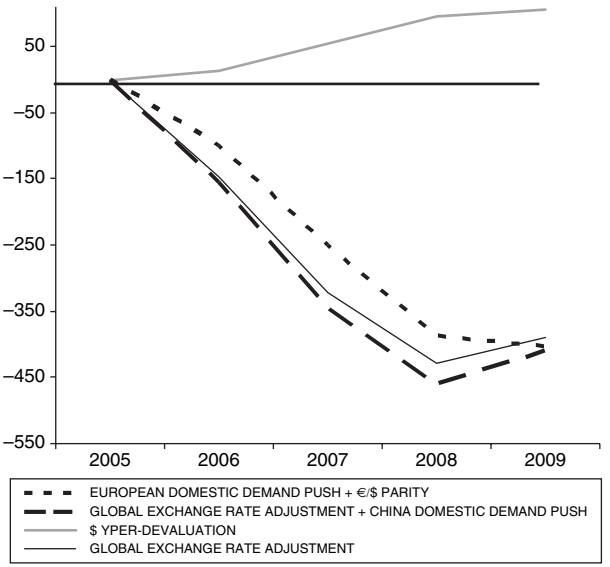

Figure 7.4.3.12 Italy, unemployment: absolute differences with respect to base (000s)

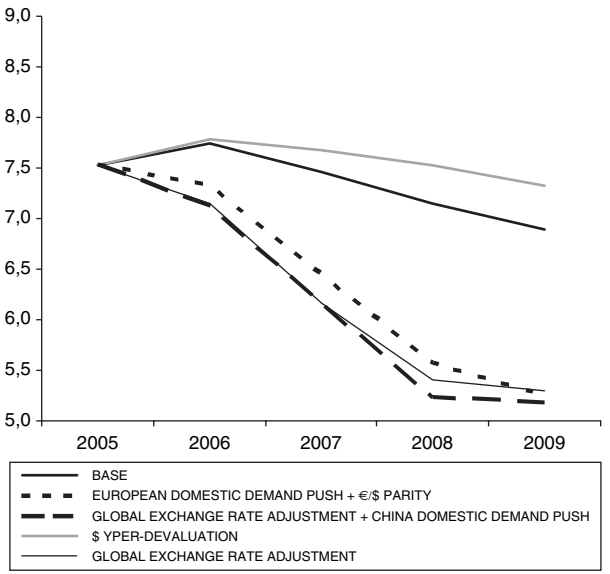

Figure 7.4.3.13 Italy, unemployment rate

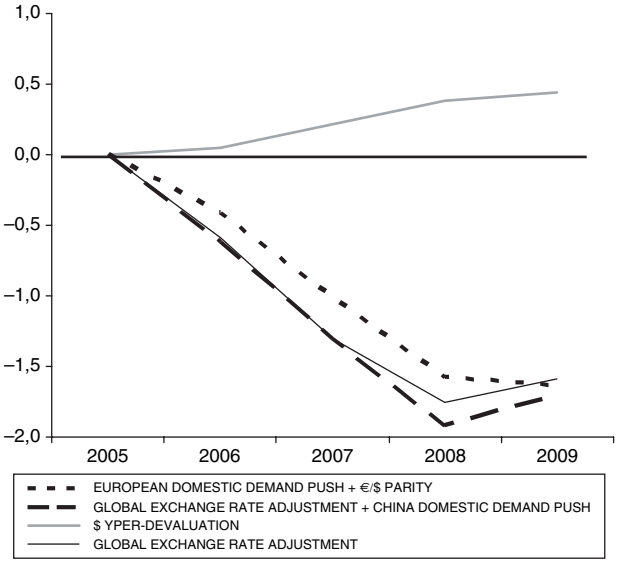

Figure 7.4.3.14 Italy, unemployment rate: differences with respect to base

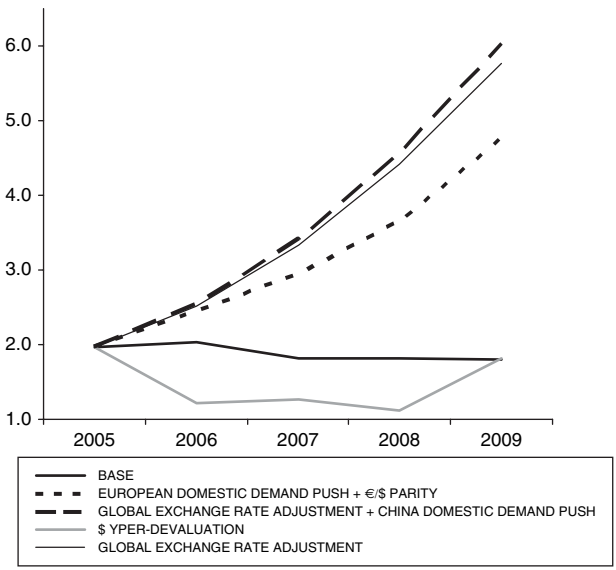

Figure 7.4.3.15 Italy, CPI

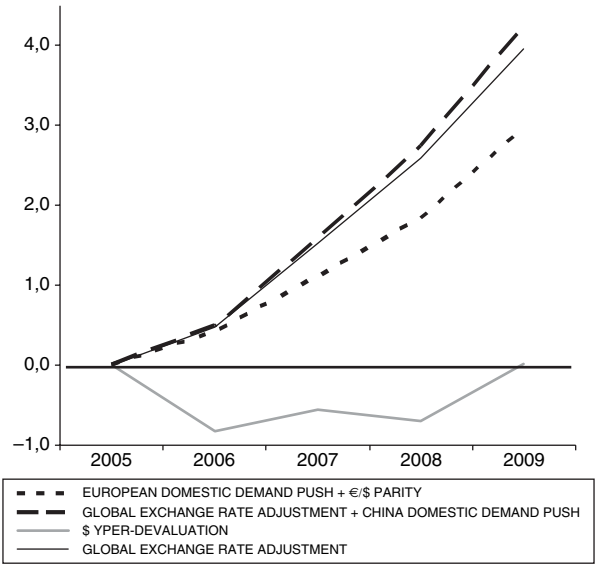

Figure 7.4.3.16 Italy, CPI: differences with respect to base

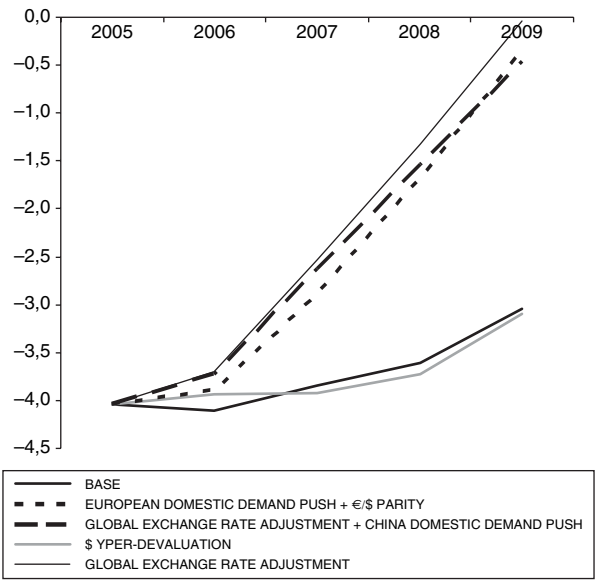

Figure 7.4.3.17 Italy, deficit/GDP

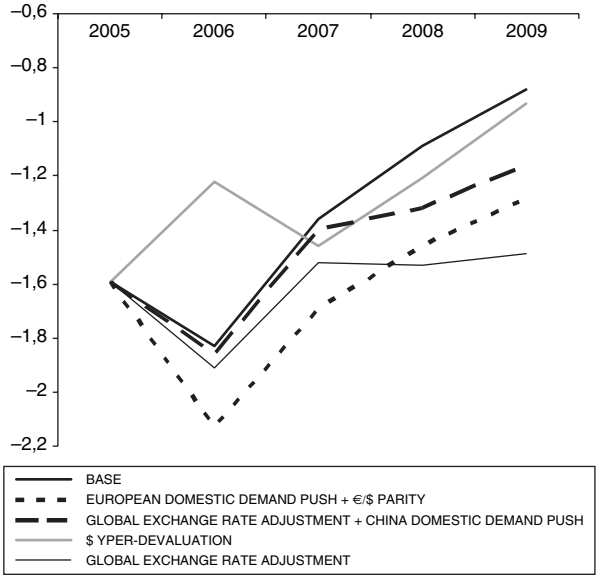

Figure 7.4.3.18 Italy, current account/GDP

7.5 Russia

Growth perspectives in Russia appear to be high and sustainable even using the base inertial hypothesis.

The only case that would affect the Russian economy sharply and negatively appears to be the hyper-devaluation of the dollar. The average rate of growth would be cut by one half, unemployment could increase and its huge foreign account surplus almost nullified. And in a few years, the government budget would turn from a 5% surplus with respect to GDP to almost a 5% deficit.

On the contrary, the case of European and Chinese domestic push with a world exchange rate adjustment would improve Russian perspectives with respect to their forecast obtained using the base simulation. These kinds of positive effects seem to add less than one percentage point to Russian growth while the effect in terms of unemployment and inflation reduction would be noticeably higher.

So, even for the Russian eagle, a dollar devaluation should be avoided while a world exchange rate adjustment with a Chinese and European demand push could be, in any case, helpful and pursuable. Hence, the Russian eagle can certainly be cross-eyed but, in any case, needs to avoid the Far-West world of disequilibrium re-adjustment, i.e. the wrong road of the hyper-devaluation of the dollar. See Figures 7.5.1–7.5.18.

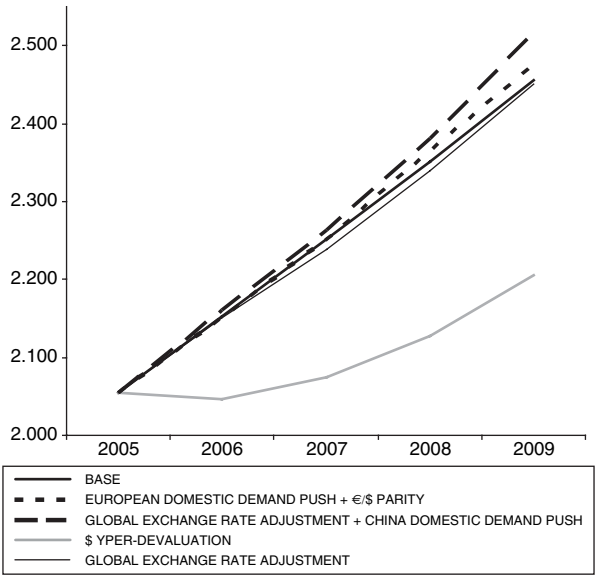

Figure 7.5.1 Russia, real GDP (1995 prices, Rb billions)

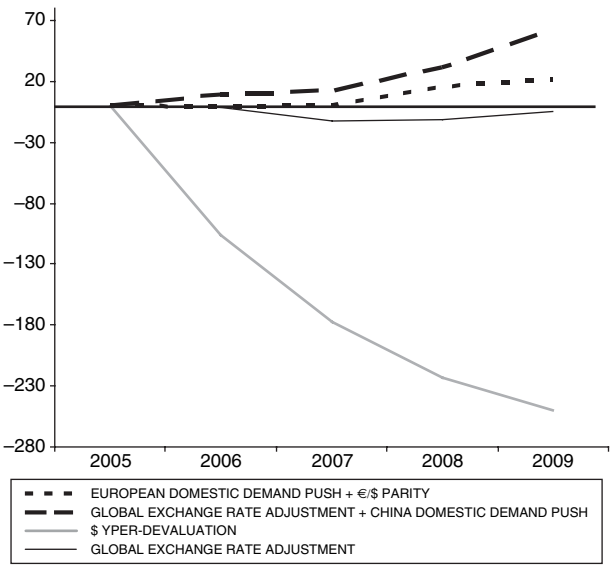

Figure 7.5.2 Russia, real GDP: absolute differences with respect to base (1995 prices, Rb billions)

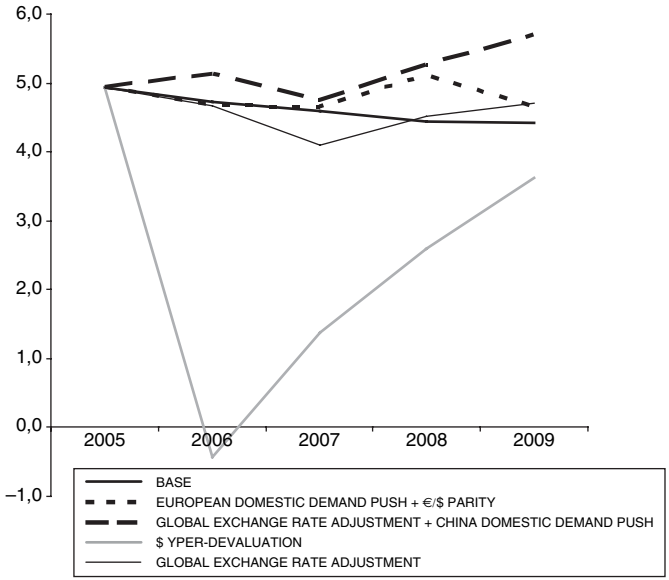

Figure 7.5.3 Russia, real GDP growth rate

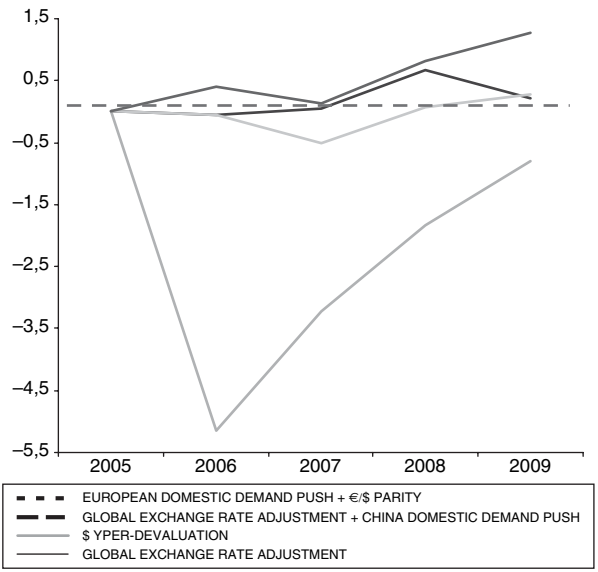

Figure 7.5.4 Russia, real GDP growth rate: differences with respect to base

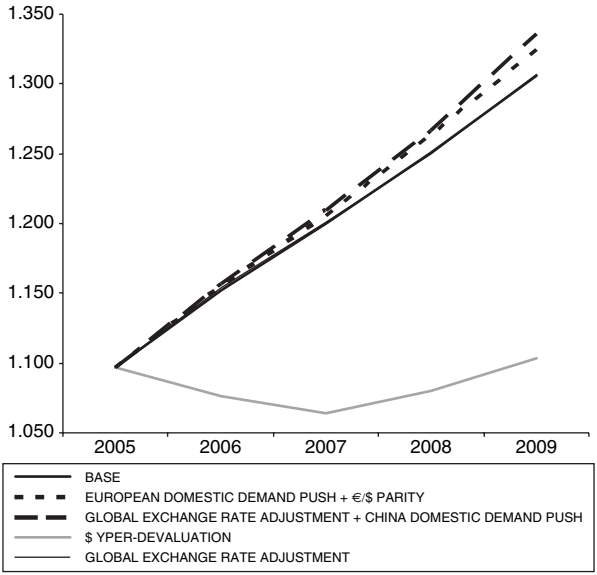

Figure 7.5.5 Russia, consumption (1995 prices, Rb billions)

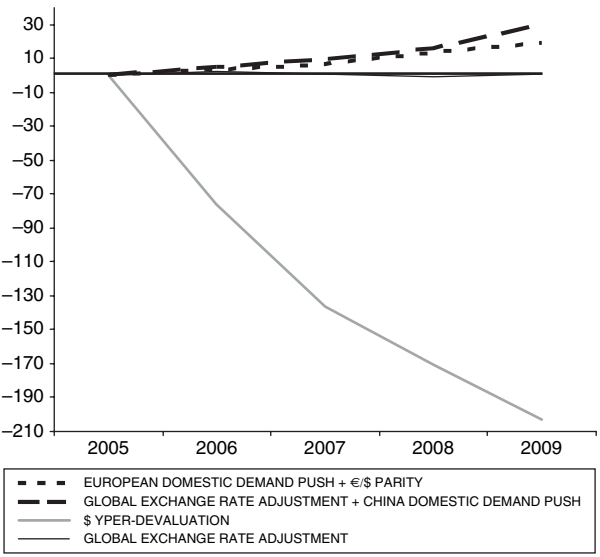

Figure 7.5.6 Russia, consumption: absolute differences with respect to base (1995 prices, Rb billions)

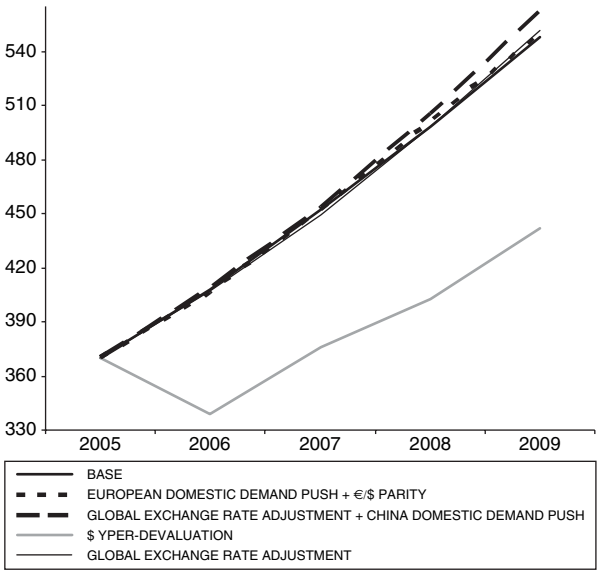

Figure 7.5.7 Russia, investment (1995 prices, Rb billions)

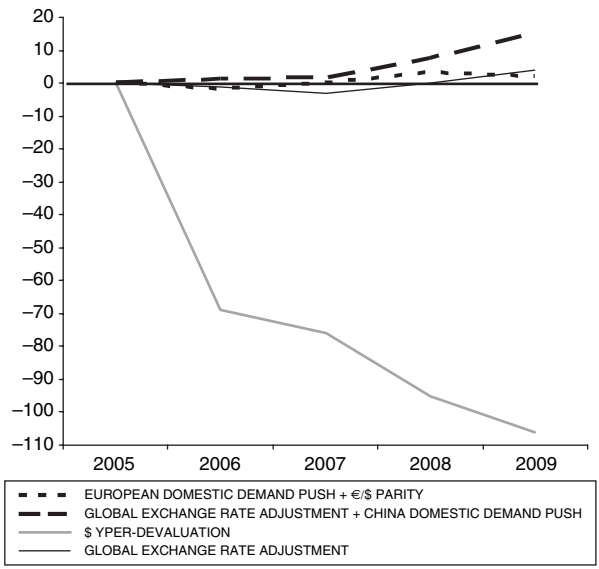

Figure 7.5.8 Russia, investment: absolute differences with respect to base (1995 prices, Rb billions)

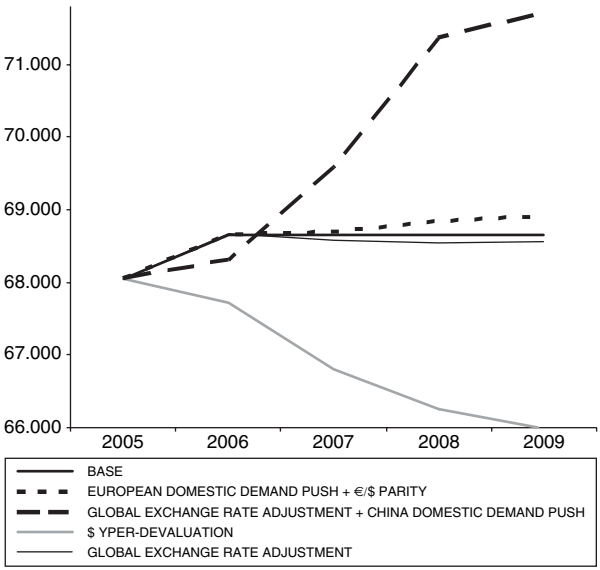

Figure 7.5.9 Russia, employment (000s)

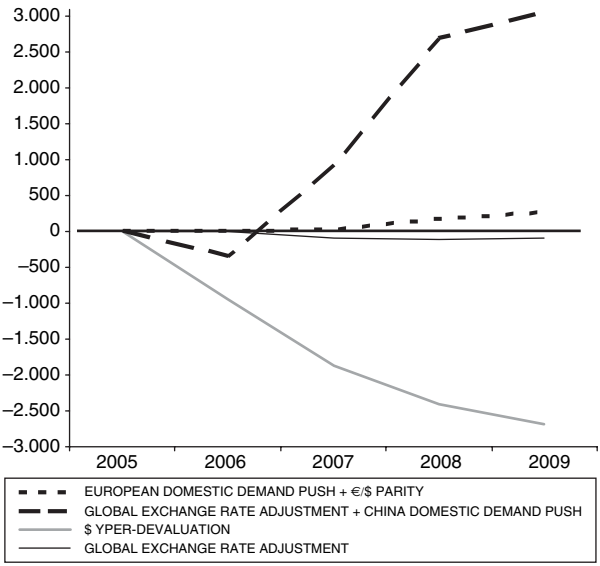

Figure 7.5.10 Russia, employment: absolute differences with respect to base (000s)

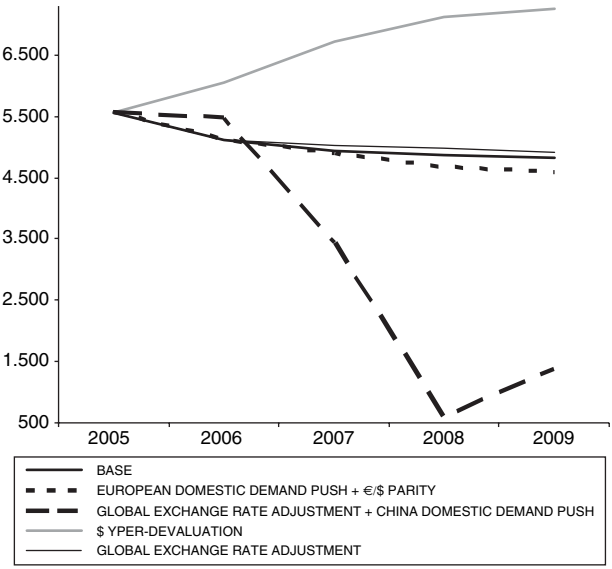

Figure 7.5.11 Russia, unemployment (000s)

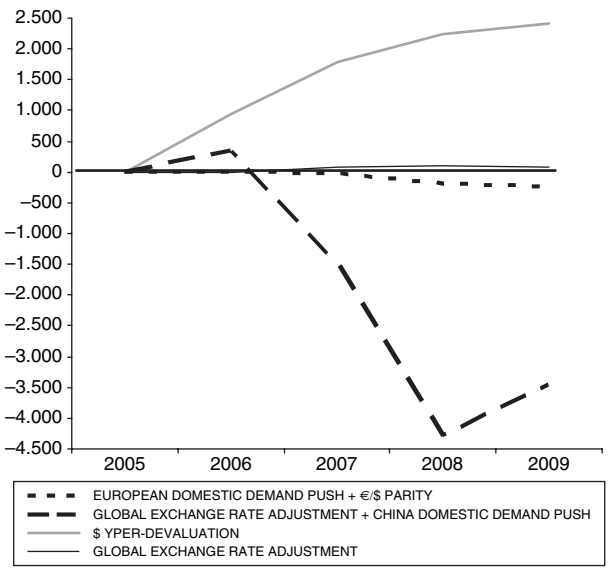

Figure 7.5.12 Russia, unemployment: absolute differences with respect to base (000s)

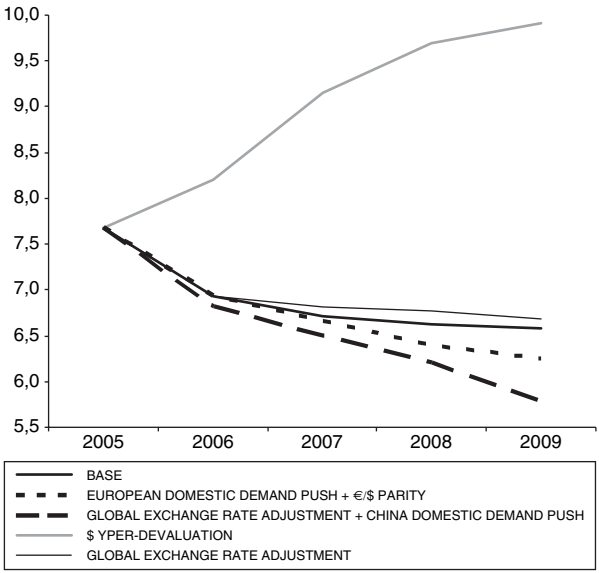

Figure 7.5.13 Russia, unemployment rate

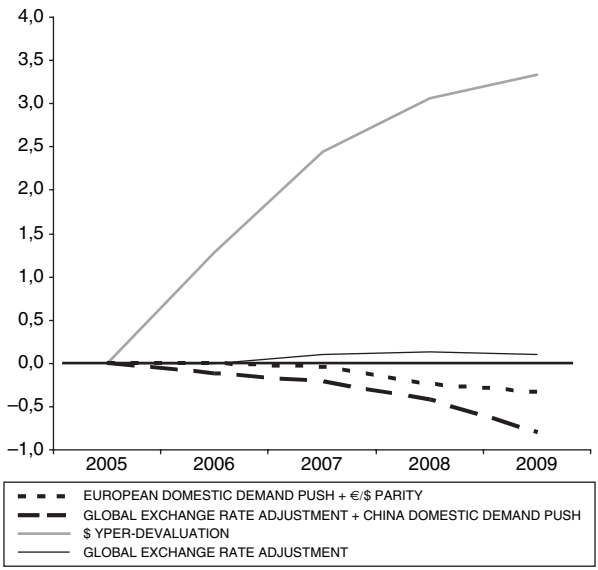

Figure 7.5.14 Russia, unemployment rate: differences with respect to base

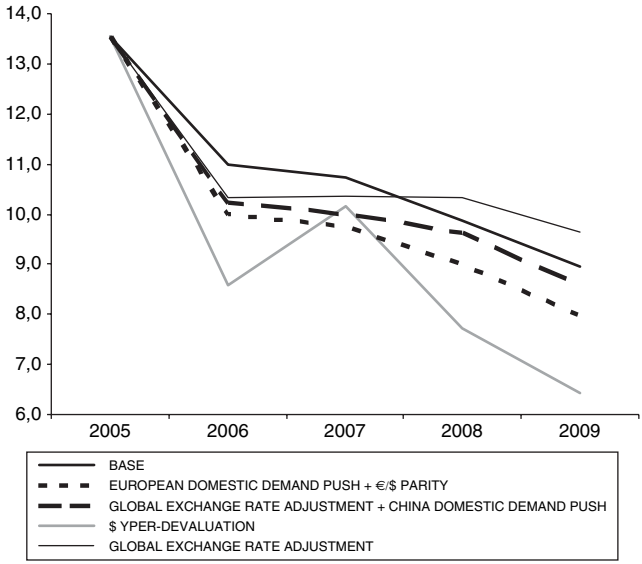

Figure 7.5.15 Russia, CPI

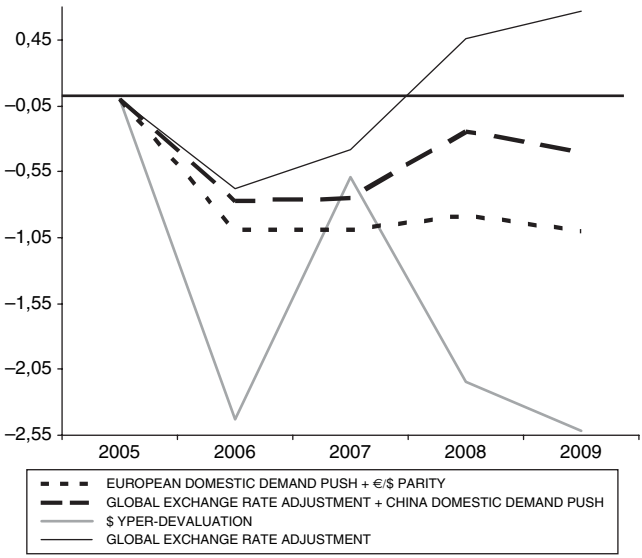

Figure 7.5.16 Russia, CPI: differences with respect to base

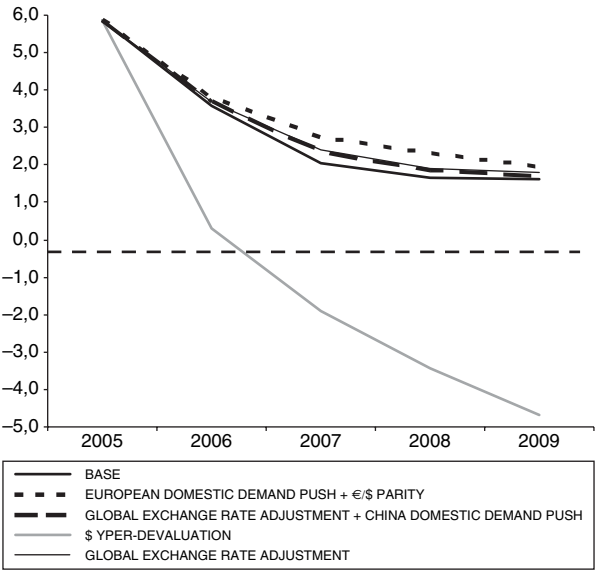

Figure 7.5.17 Russia, deficit/GDP

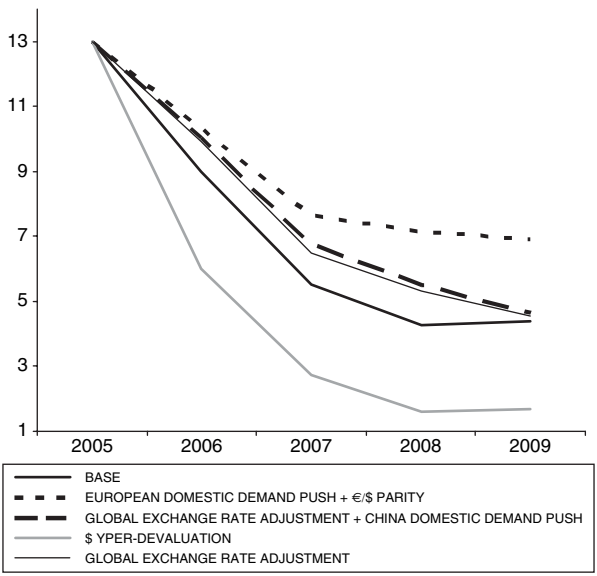

Figure 7.5.18 Russia, current account/GDP

7.6 Africa

The perspectives for African growth would be drastically reduced by a dollar devaluation, from rates of growth of about 4% in the base simulation down to 2.5%.

On the contrary, significant improvements could be induced by a European domestic demand push with a rate of growth having the chance to reach 5%.

Since economic relationships between Africa and Europe are much tighter than the ones between Africa and China, the positive effects induced by a Chinese domestic demand push and a yuan appreciation appear to be positive but much smaller than the ones induced by a strong European recovery.

So, both the European and Chinese push within an exchange rate realignment are good for Africa and the only risk of a worse outcome could be produced in the case of a dollar devaluation. See Figures 7.6.1–7.6.6.

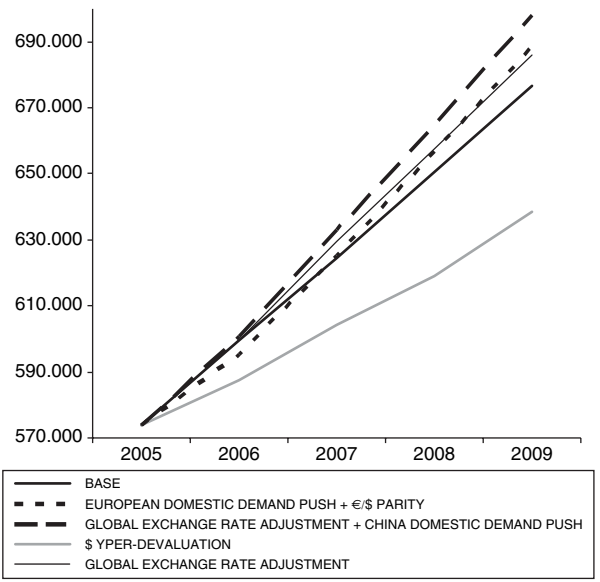

Figure 7.6.1 Africa, real GDP (1995 prices and exchange rate $ m)

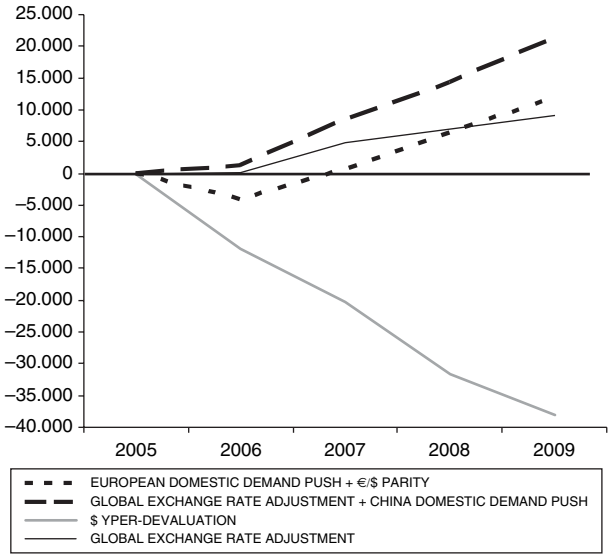

Figure 7.6.2 Africa, real GDP: absolute differences with respect to base (1995 prices and exchange rate $ m)

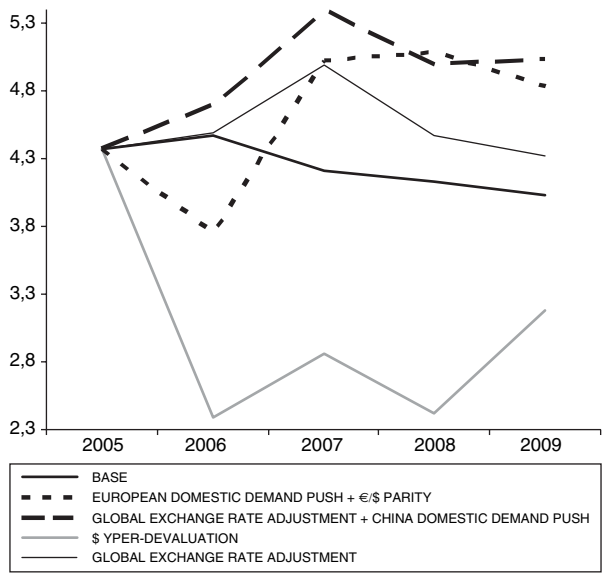

Figure 7.6.3 Africa, real GDP growth rate

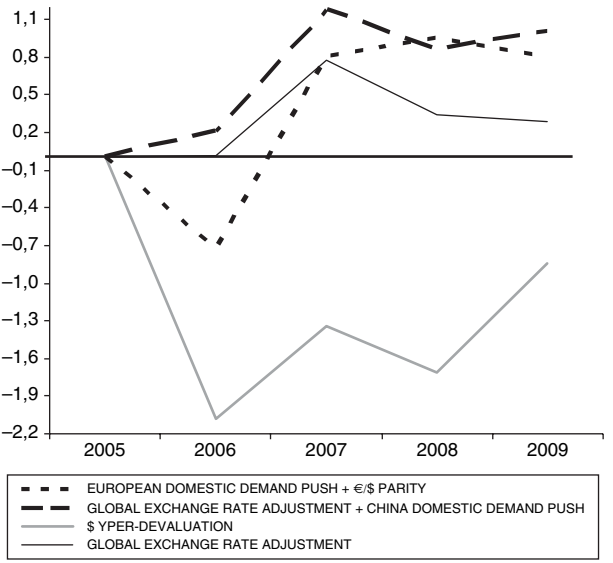

Figure 7.6.4 Africa, real GDP growth rate: differences with respect to base

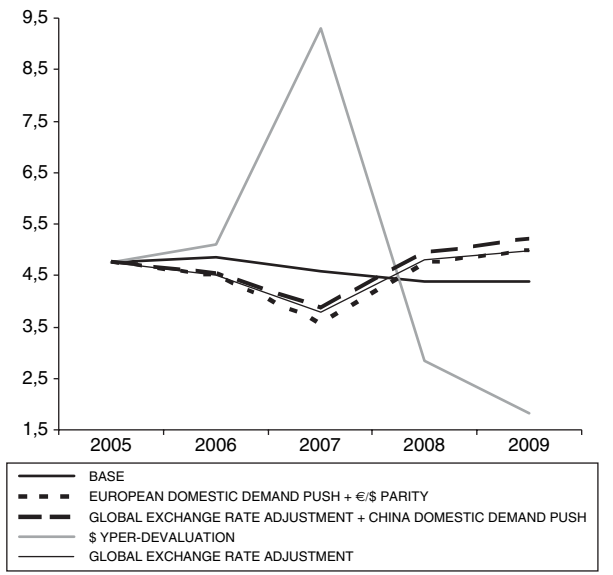

Figure 7.6.5 Africa, CPI

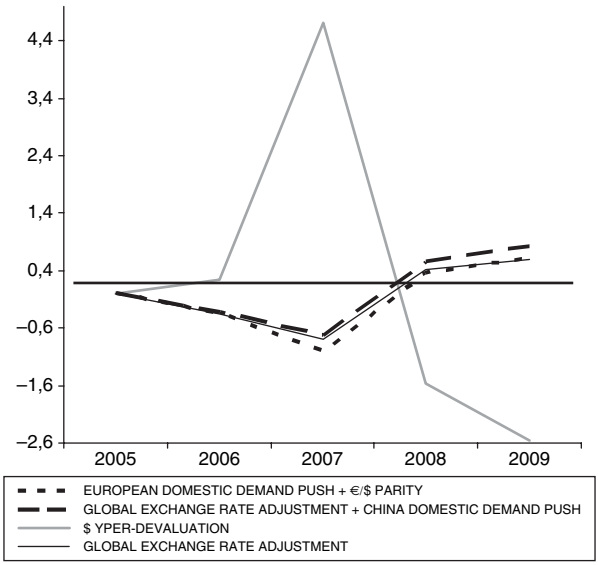

Figure 7.6.6 Africa, CPI: differences with respect to base

7.7 Japan

The Japanese economy would also be severely affected by a dollar hyper-devaluation while no significant effects would be induced by a European demand push.

In the first case, the Japanese rate of growth would be driven back again to 0%–0.5%, leading to a loss of more than 1 million jobs.

In the second case no significant differences would appear with respect to the BASE simulation.

As we can easily expect, the best growth perspectives for Japan would occur in the case of world exchange rate realignment (i.e. yuan appreciation) and China's domestic demand push. Indeed, the Japanese rate of growth could be two percentage points higher per year with a much more rapid reduction in unemployment, down below 2%. Higher foreign account surpluses of over 5% of GDP would be reached. Much better financial equilibrium conditions would be induced in the government budget which, from the current 7–8% deficit-to-GDP ratio, would go down to less than 5% with a perspective of a further decrease. See Figures 7.7.1–7.7.18.

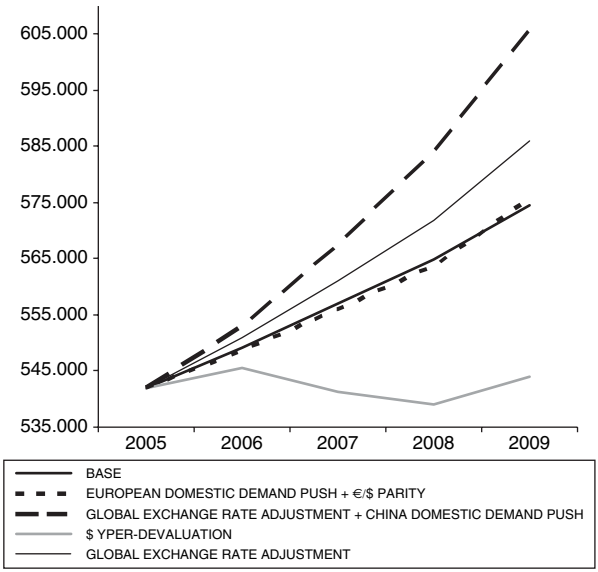

Figure 7.7.1 Japan, real GDP (2000 prices, Y BN)

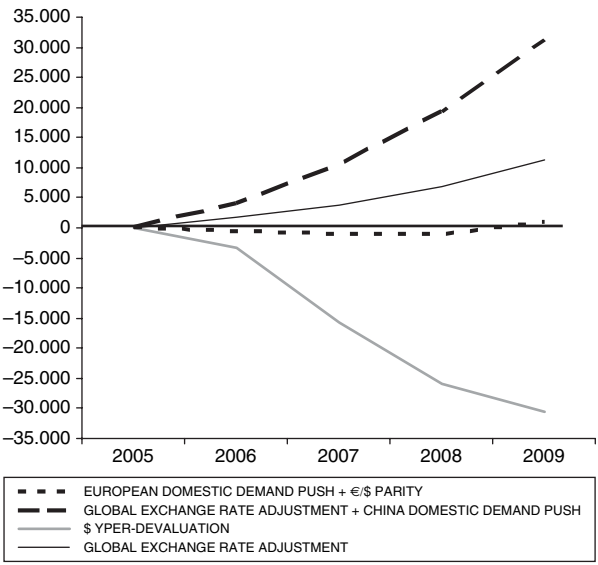

Figure 7.7.2 Japan, real GDP: absolute differences with respect to base (2000 prices, Y BN)

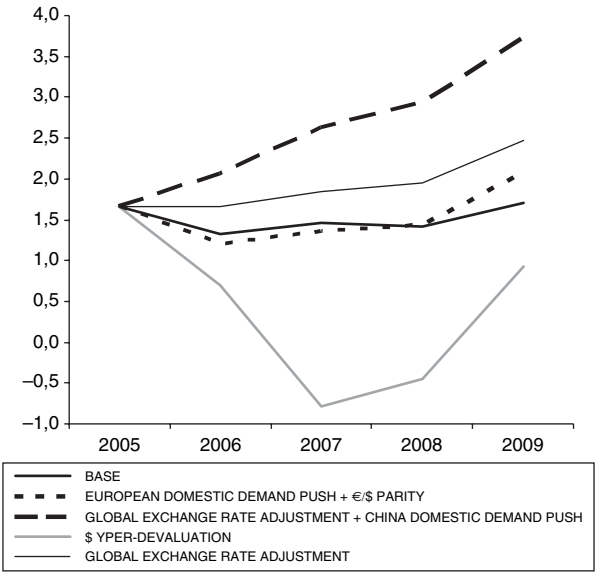

Figure 7.7.3 Japan, real GDP growth rate

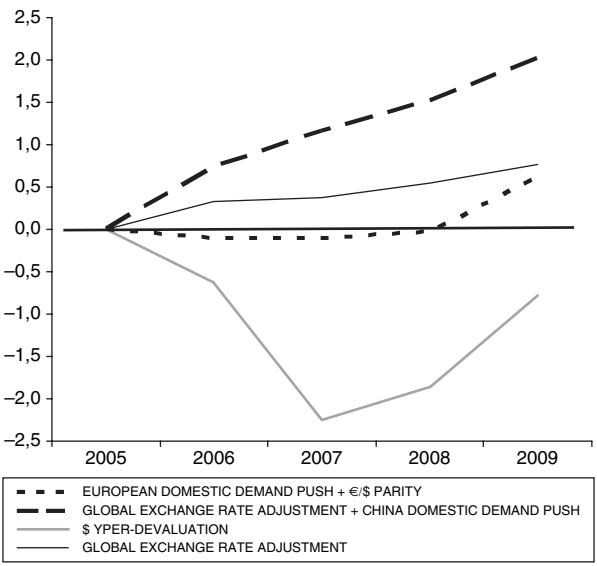

Figure 7.7.4 Japan, real GDP growth rate: differences with respect to base

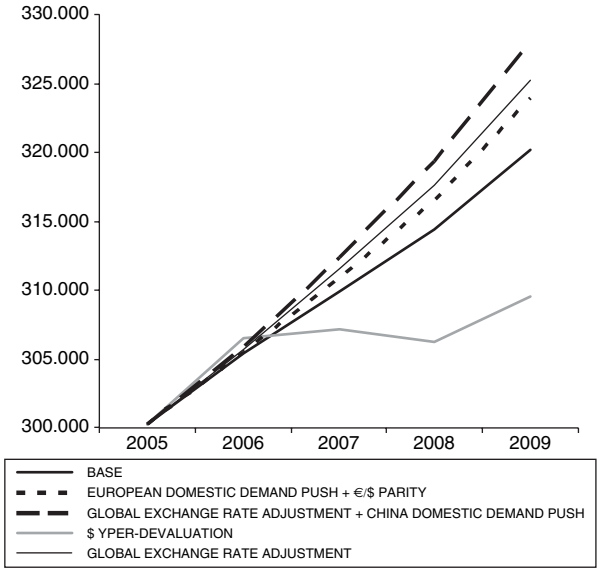

Figure 7.7.5 Japan, consumption (2000 prices, Y BN)

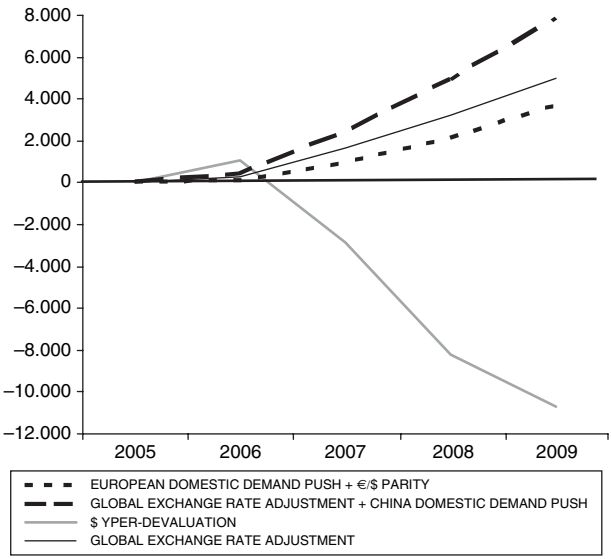

Figure 7.7.6 Japan, consumption: absolute differences with respect to base (2000 prices, Y BN)

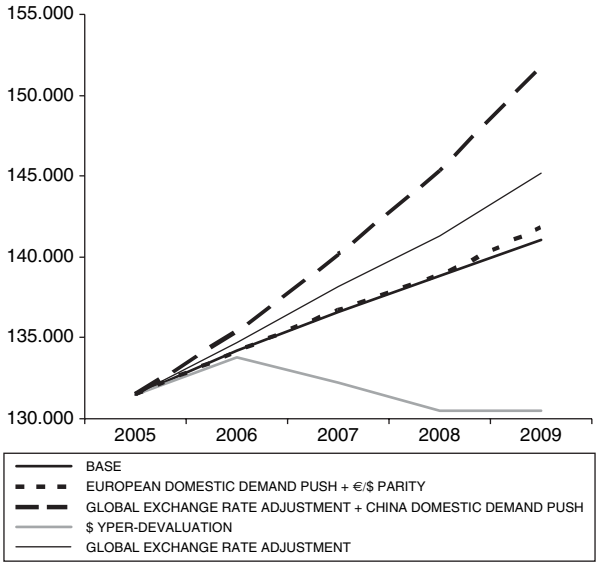

Figure 7.7.7 Japan, investment (2000 prices, Y BN)

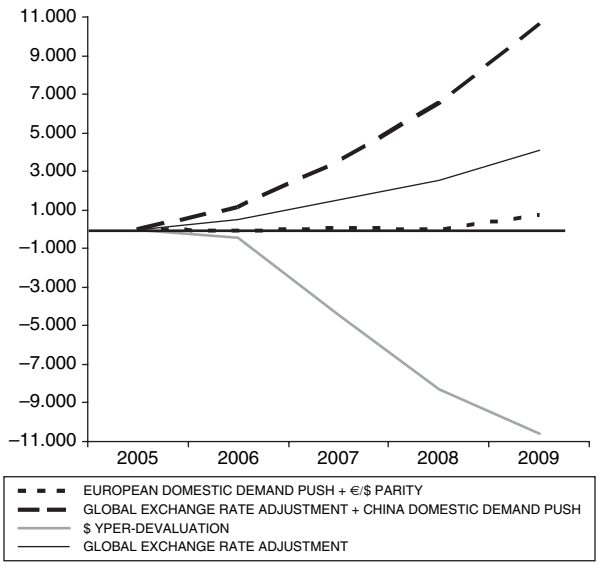

Figure 7.7.8 Japan, investment: absolute differences with respect to base (2000 prices, Y BN)

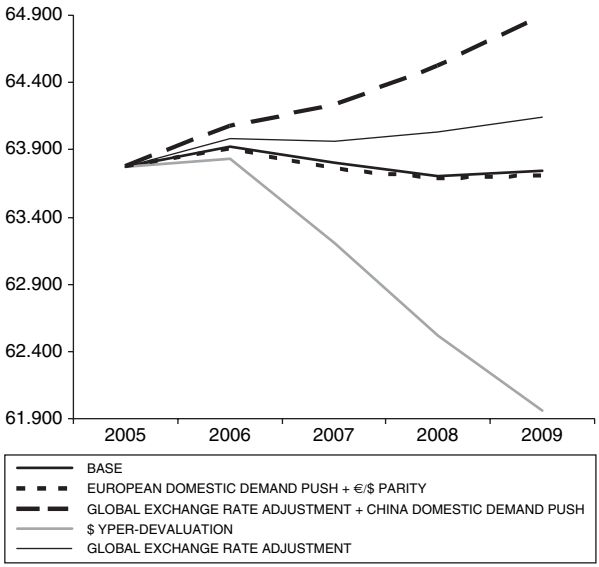

Figure 7.7.9 Japan, employment (000s)

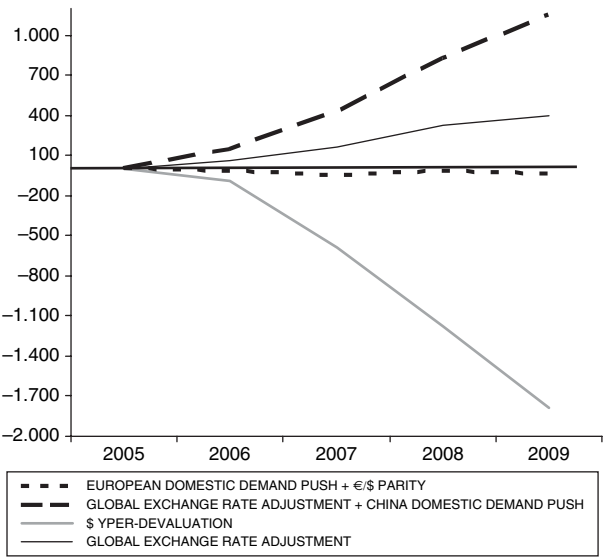

Figure 7.7.10 Japan, employment: absolute differences with respect to base (000s)

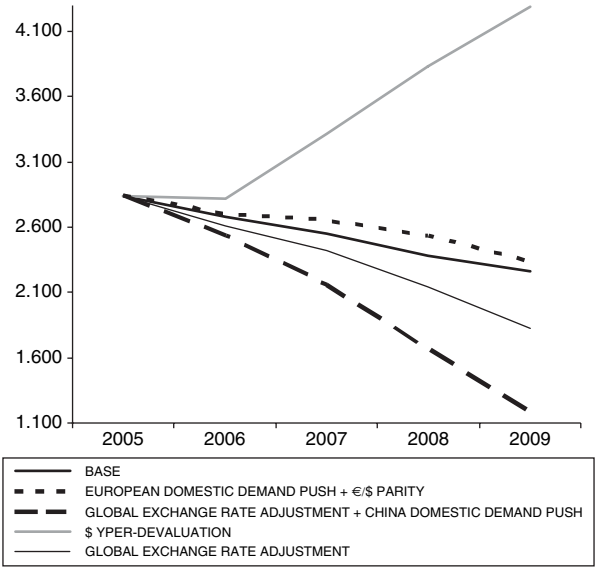

Figure 7.7.11 Japan, unemployment (000s)

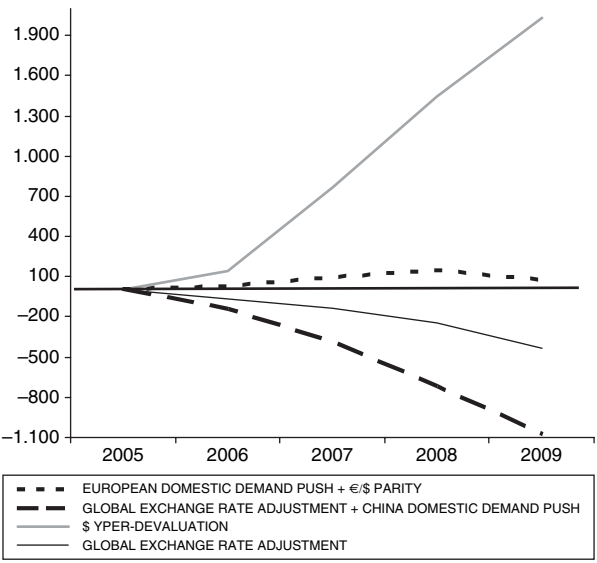

Figure 7.7.12 Japan, unemployment: absolute differences with respect to base (000s)

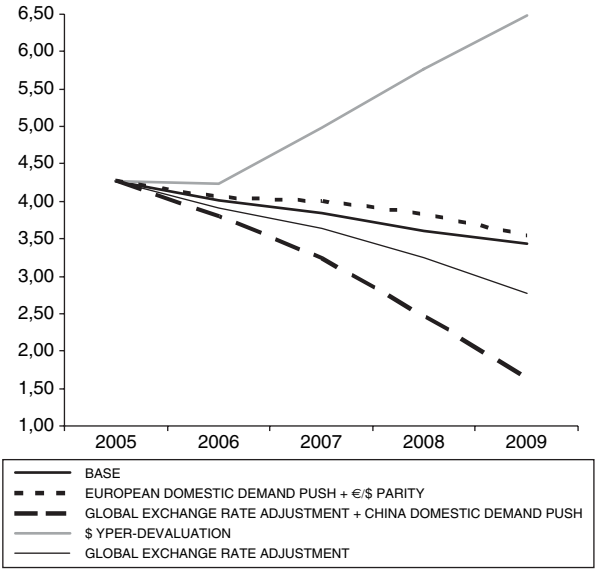

Figure 7.7.13 Japan, unemployment rate

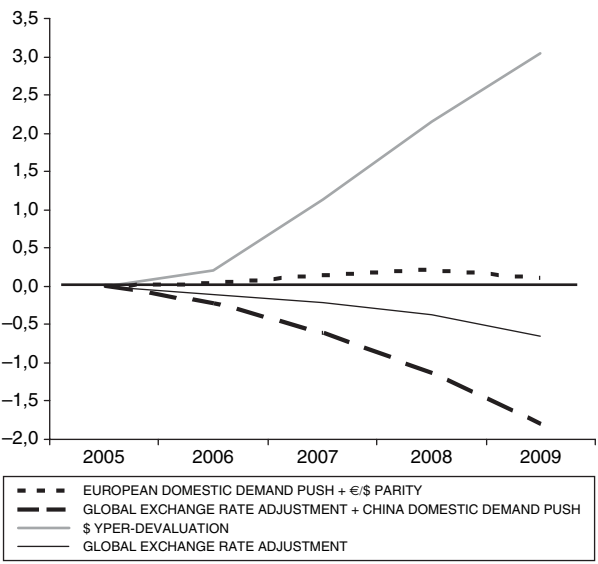

Figure 7.7.14 Japan, unemployment rate: differences with respect to base

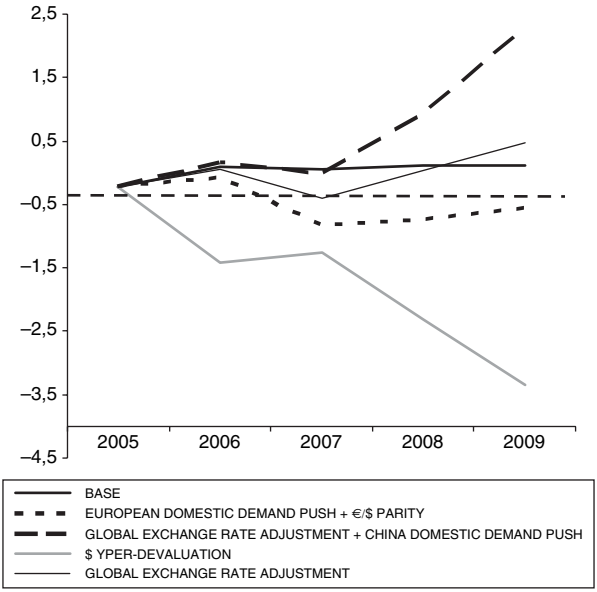

Figure 7.7.15 Japan, CPI

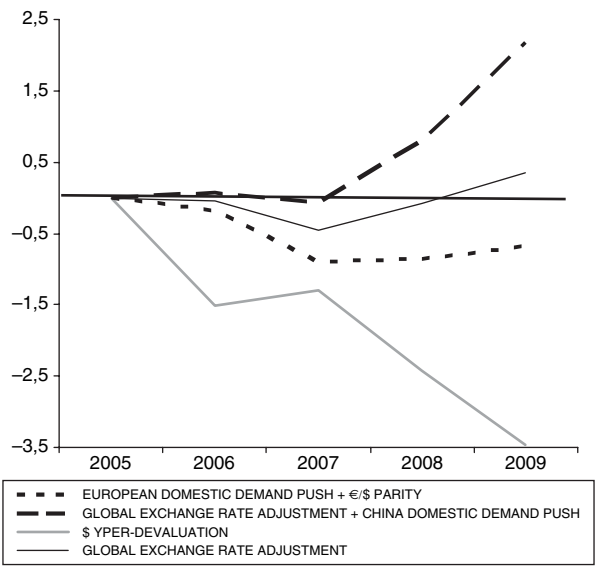

Figure 7.7.16 Japan, CPI: differences with respect to base

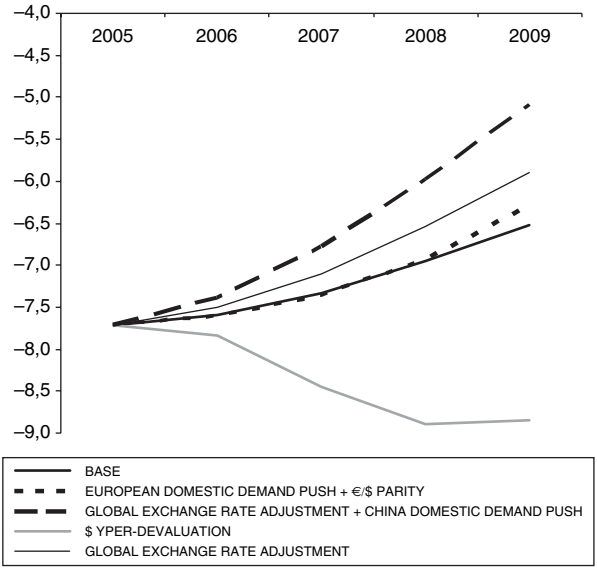

Figure 7.7.17 Japan, deficit/GDP

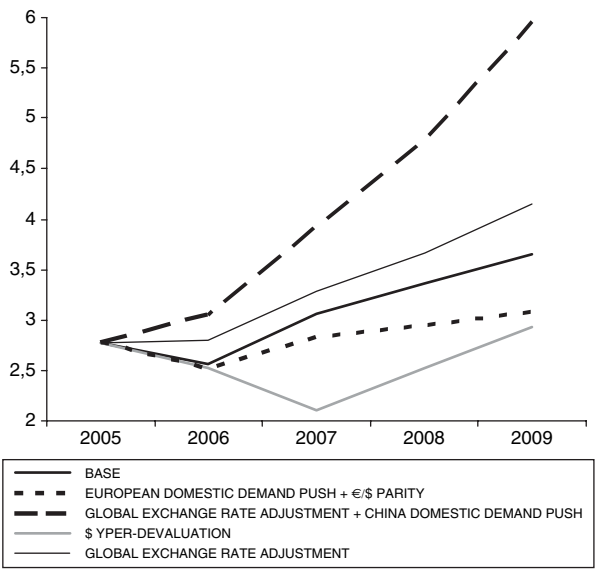

Figure 7.7.18 Japan, current account/GDP

7.8 China

With respect to the current situation, China could fear any kind of exchange rate movements involving its own currency. Indeed, a dollar hyper-devaluation with respect to any other currency would sharply decrease its rate of growth and even worse perspectives could be produced by a mere sharp yuan appreciation with respect to the dollar and the euro. Hence, a temptation could lead China to refuse any further responsibility after being accepted within the WTO. But in this case, world disequilibrium risks and mainly internal domestic risks would be strongly under-evaluated.

China cannot grow at 8–10% a year forever within a purely export-led model. She can't accumulate huge foreign surpluses much longer keeping down to very low levels domestic consumption and standards of living. China cannot continue to be an myopic and masochistic ant who never starts to eat the huge amount of food accumulated in its storeroom, worst if the food is accumulated merely as a huge amount of US green paper.

Clearly and correctly China wishes and needs to maintain high growth performances. But in order to maintain this very high rate of growth China has to move 300 to 400 million people from agriculture into industry and from the countryside into the cities. This process requires, better sooner than later, a switch in the Chinese growth model: from being purely export-led to being a consistently domestic demand model.

As our simulations prove, growth prospects for China are much better and more sustainable in the case of a world exchange rate realignment. In our hypothesis, China enters the IMF and the yuan enters the world market exchange rate system and appreciates by 40% to the dollar and 60% to the euro, accompanied by a programme of a Chinese domestic demand push. The Chinese people could have better perspectives and the world economy would have long-run sustainable equilibrium, which is the best pursuable road for China herself. See Figures 7.8.1–7.8.18.

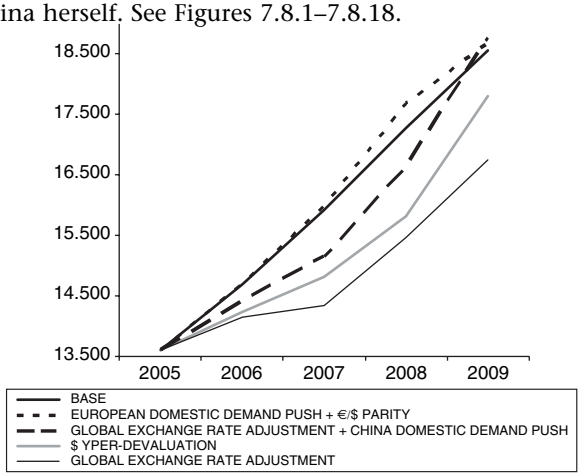

Figure 7.8.1 China, real GDP (2000 prices, Yuan BN)

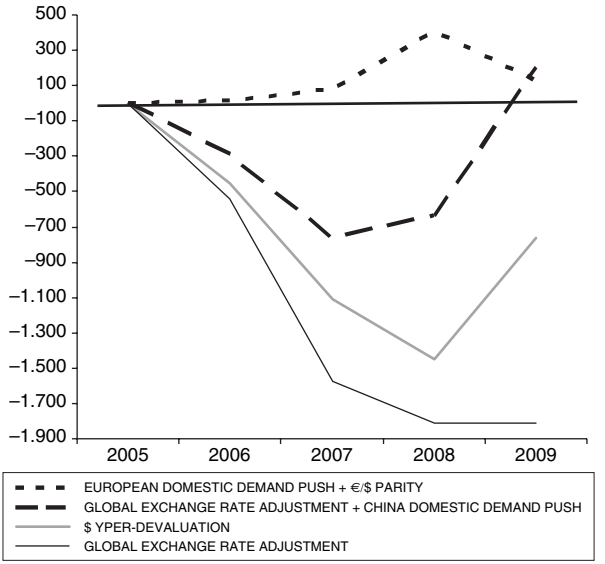

Figure 7.8.2 China, real GDP: absolute differences with respect to base (2000 prices, Yuan BN)

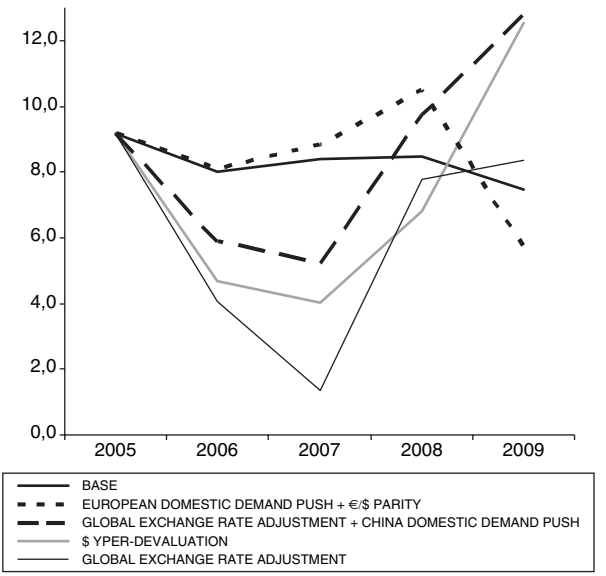

Figure 7.8.3 China, real GDP growth rate

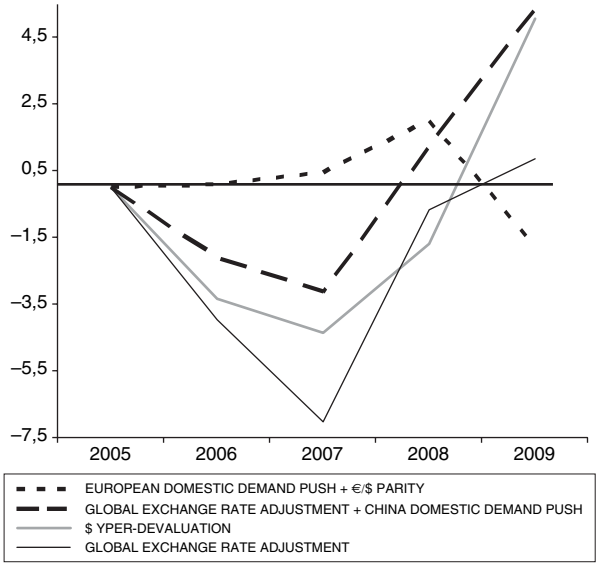

Figure 7.8.4 China, real GDP growth rate: differences with respect to base

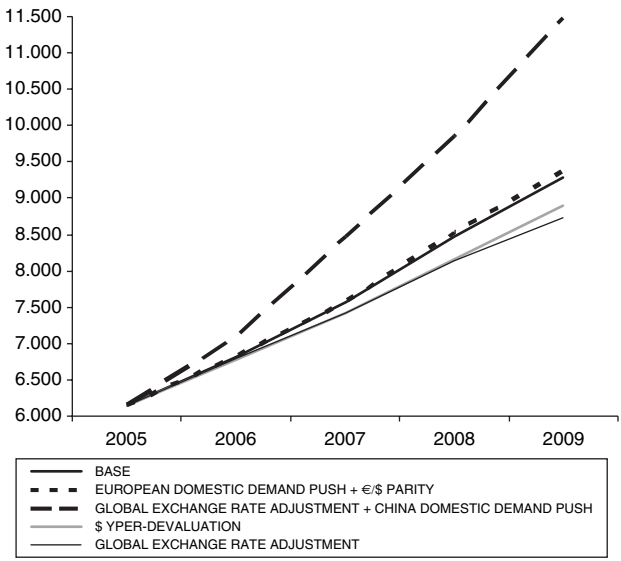

Figure 7.8.5 China, consumption (2000 prices, Yuan BN)

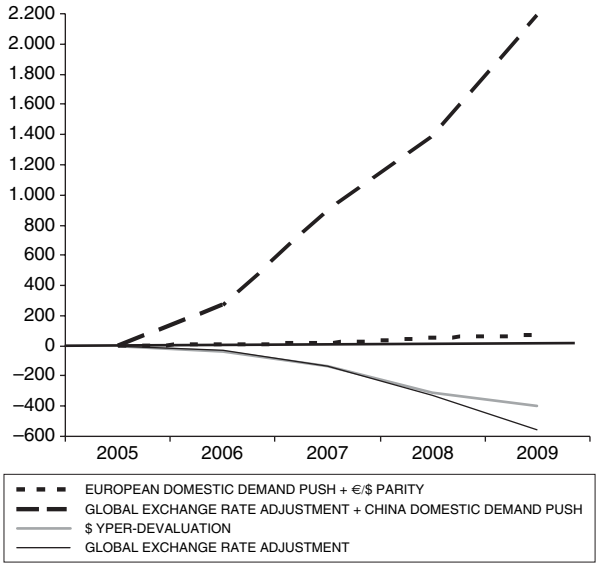

Figure 7.8.6 China, consumption: absolute differences with respect to base (2000 prices, Yuan BN)

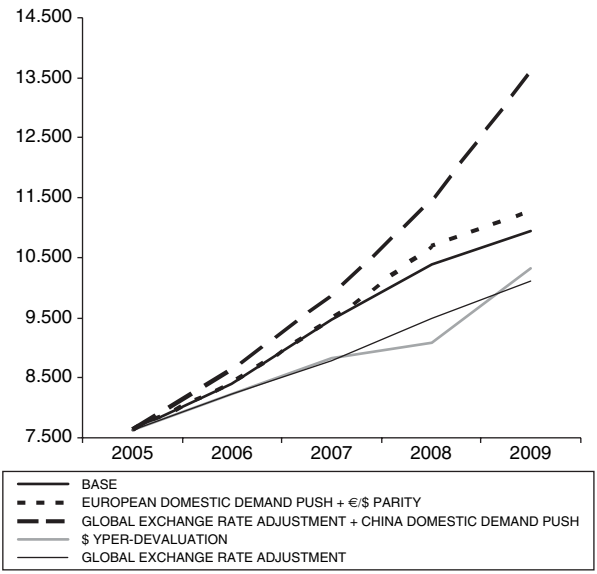

Figure 7.8.7 China, investment (2000 prices, Yuan BN)

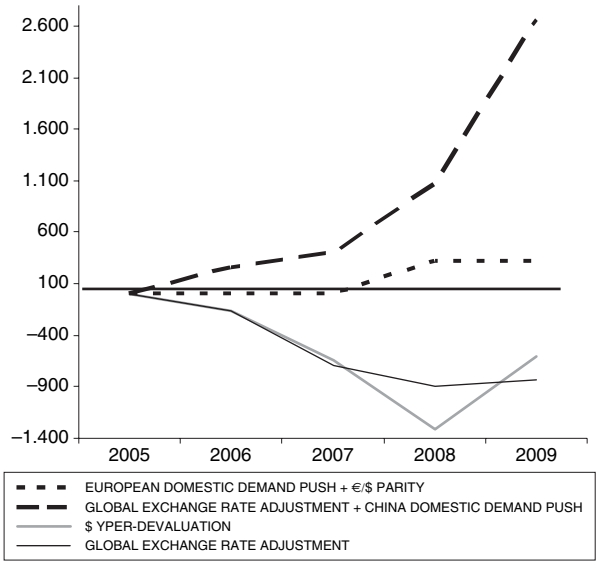

Figure 7.8.8 China, investment: absolute differences with respect to base (2000 prices, Yuan BN)

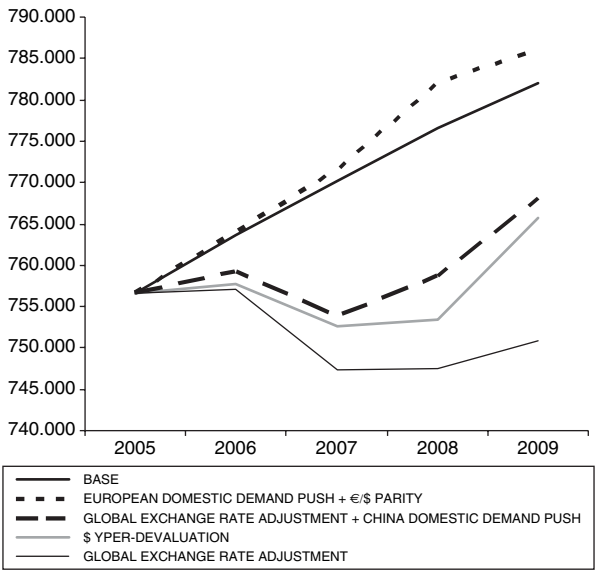

Figure 7.8.9 China, employment (000s)

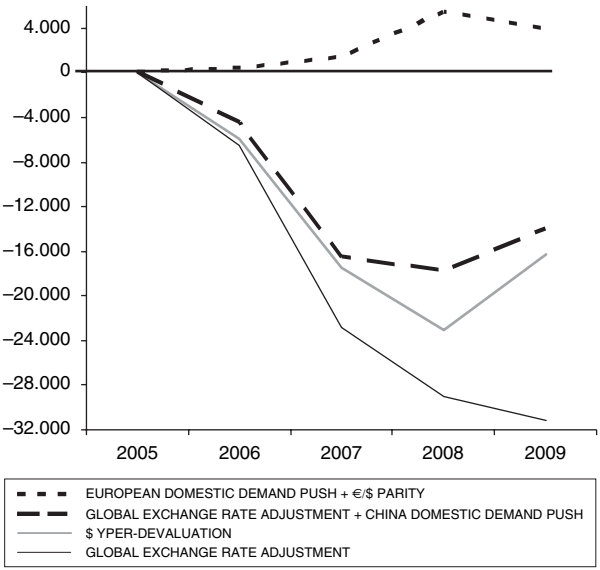

Figure 7.8.10 China, employment: absolute differences with respect to base (000s)

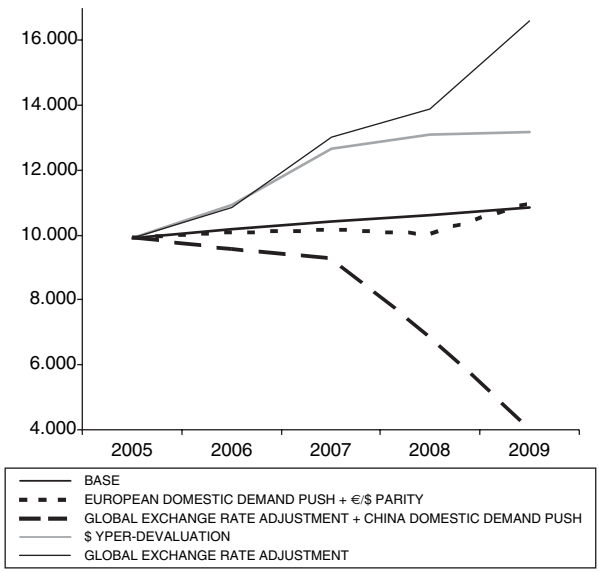

Figure 7.8.11 China, unemployment (000s)

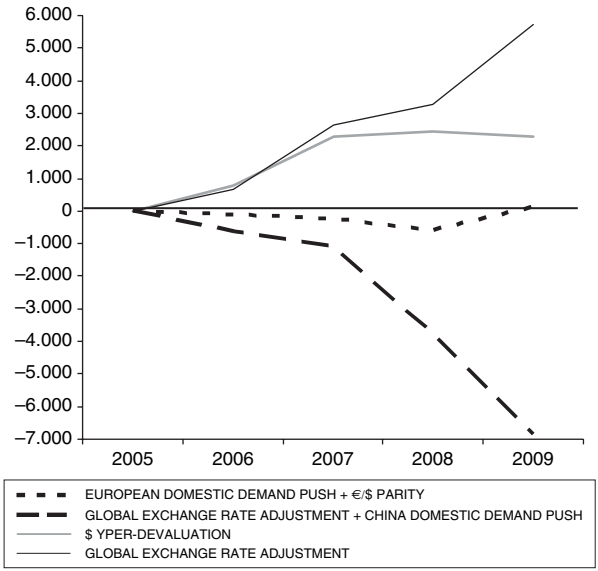

Figure 7.8.12 China, unemployment: absolute differences with respect to base (000s)

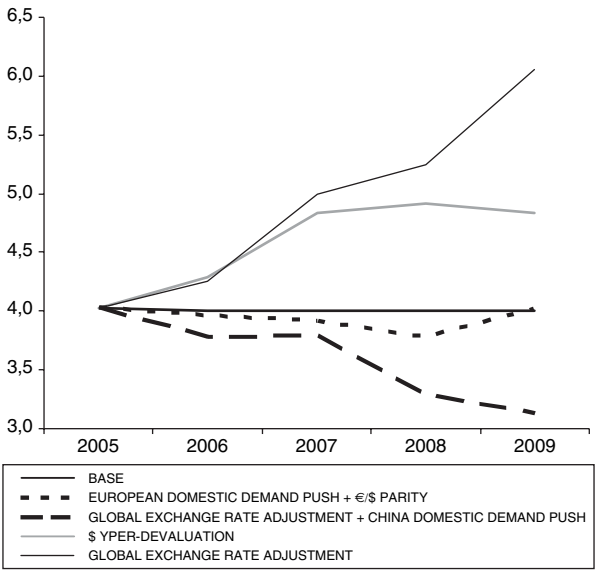

Figure 7.8.13 China, unemployment rate

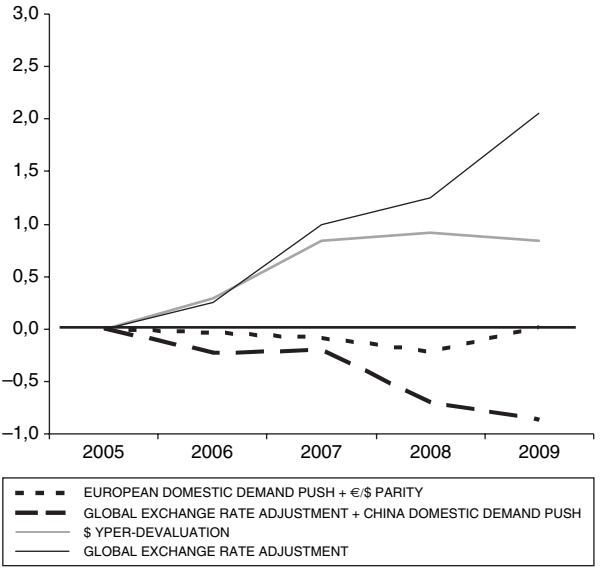

Figure 7.8.14 China, unemployment rate: differences with respect to base

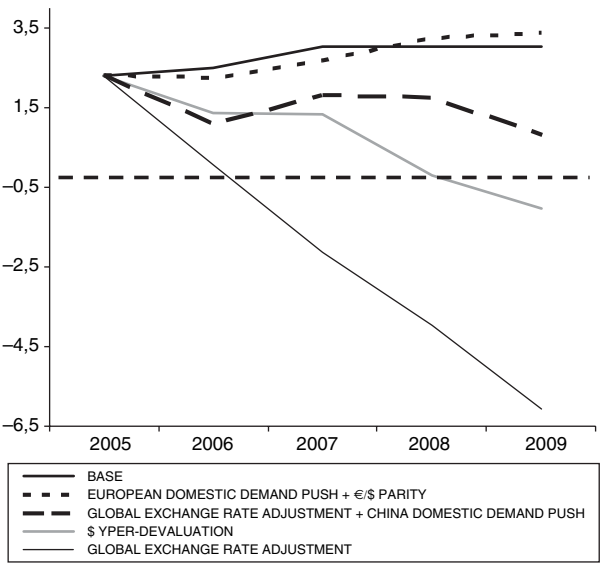

Figure 7.8.15 China, CPI

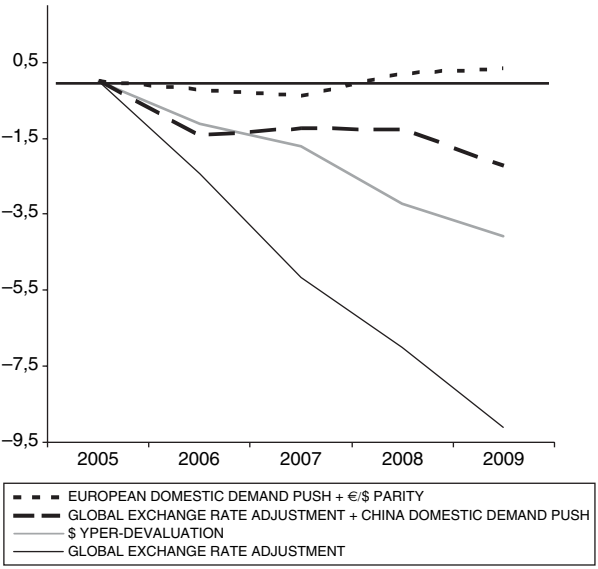

Figure 7.8.16 China, CPI: differences with respect to base

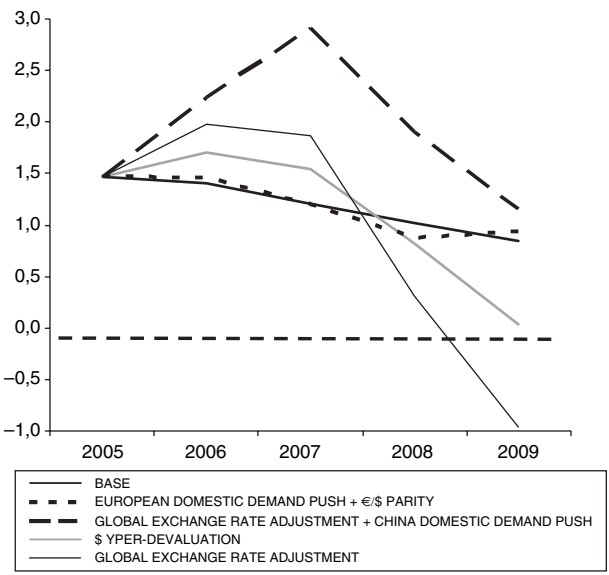

Figure 7.8.17 China, deficit/GDP

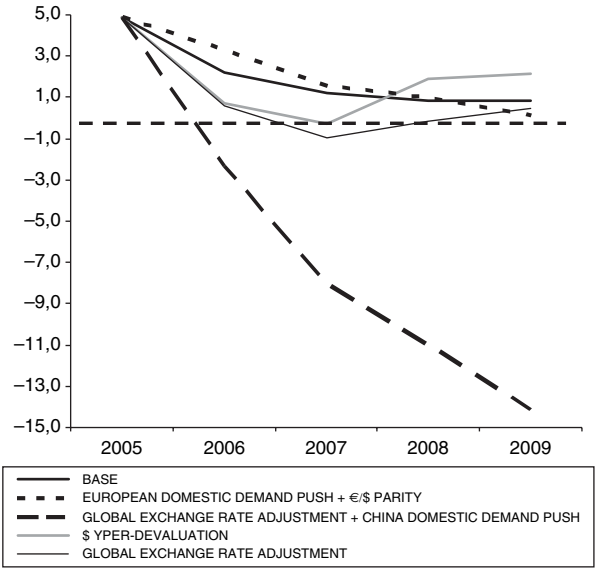

Figure 7.8.18 China, current account/GDP

Appendix to Chapter 7: Tables of Simulations

USA, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	11.152	11.152	11.152	11.152	11.152
2006	11.565	11.726	11.542	11.594	11.607
2007	11.995	12.375	11.871	12.126	12.168
2008	12.436	12.694	12.179	12.718	12.796
2009	12.892	12.859	12.545	13.324	13.454

USA, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	161,00	−23,00	29,00	42,41
2007	380,00	−124,00	131,00	173,05
2008	258,00	−257,00	282,00	359,92
2009	−33,00	−347,00	432,00	561,63
2009	1,30	3,01	4,76	5,14

USA, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	3,69	3,69	3,69	3,69	3,69
2006	3,70	5,14	3,49	3,96	4,08
2007	3,72	5,53	2,85	4,59	4,83
2008	3,68	2,58	2,59	4,88	5,16
2009	3,67	1,30	3,01	4,76	5,14

USA, GDP growth rate: annual differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	1,44	−0,21	0,26	0,38
2007	1,83	−0,85	0,89	1,13
2008	−1,12	−1,11	1,18	1,46
2009	−2,40	−0,69	1,07	1,44

USA, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	7.865	7.865	7.865	7.865	7.865
2006	8.137	8.132	8.138	8.146	8.147
2007	8.415	8.407	8.394	8.475	8.478
2008	8.701	8.567	8.624	8.841	8.842
2009	8.998	8.659	8.874	9.223	9.213

USA, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−5,00	1,00	9,00	9,57
2007	−8,00	−21,00	60,00	63,13
2008	−134,00	−77,00	140,00	140,84
2009	−339,00	−124,00	225,00	215,20

USA, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.240	2.240	2.240	2.240	2.240
2006	2.344	2.358	2.341	2.348	2.350
2007	2.443	2.489	2.412	2.477	2.481
2008	2.552	2.518	2.466	2.629	2.633
2009	2.685	2.548	2.547	2.806	2.804

USA, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	14,00	−3,00	4,00	5,54
2007	46,00	−31,00	34,00	37,88
2008	−34,00	−86,00	77,00	80,70
2009	−137,00	−138,00	121,00	119,36

USA, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	141.612	141.612	141.612	141.612	141.612
2006	144.330	145.167	144.217	144.480	144.557
2007	146.490	148.307	145.876	147.190	147.420
2008	148.325	149.235	147.123	149.808	150.206
2009	150.024	149.322	148.481	152.164	152.729

USA, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	836,50	−113,75	149,25	227,02
2007	1.817,00	−614,00	699,75	929,76
2008	910,00	−1.202,25	1.483,25	1.880,99
2009	−702,25	−1.543,25	2.140,25	2.705,19

USA, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	7.615	7.615	7.615	7.615	7.615
2006	7.596	6.730	7.723	7.467	7.497
2007	7.710	6.240	8.315	7.269	7.203
2008	7.806	7.613	8.712	6.970	6.802
2009	7.896	8.704	8.796	6.842	6.525

USA, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−866,25	126,75	−129,50	−99,01
2007	−1.470,00	605,50	−440,50	−506,40
2008	−192,75	906,00	−835,75	−1.003,88
2009	807,75	899,50	−1.054,50	−1.371,66

USA, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	5,1	5,1	5,1	5,1	5,1
2006	5,0	4,4	5,1	4,9	4,90
2007	5,0	4,0	5,4	4,7	4,60
2008	5,0	4,9	5,6	4,4	4,20
2009	5,0	5,5	5,6	4,3	4,10

USA, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,0	0,0	0,0	0,0
2006	−0,6	0,1	−0,1	−0,1
2007	−1,0	0,4	−0,3	−0,4
2008	−0,1	0,6	−0,6	−0,8
2009	0,5	0,6	−0,7	−0,9

USA, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	3,01	3,01	3,01	3,01	3,01
2006	2,13	2,93	1,95	2,00	2,02
2007	2,24	4,74	1,54	1,95	2,08
2008	2,28	6,06	1,00	2,61	2,97
2009	2,43	6,01	0,34	3,75	4,43

USA, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,80	−0,18	−0,13	−0,11
2007	2,50	−0,70	−0,29	−0,16
2008	3,78	−1,28	0,33	0,69
2009	3,58	−2,09	1,32	2,00

USA, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−2,65	−2,65	−2,65	−2,65	−2,65
2006	−2,79	−2,42	−2,84	−2,71	−2,68
2007	−2,65	−1,96	−2,91	−2,31	−2,22
2008	−2,61	−2,22	−3,18	−1,95	−1,79
2009	−2,52	−2,50	−3,37	−1,58	−1,33

USA, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−6,40	−6,4	−6,4	−6,4	−6,40
2006	−6,07	−5,4	−6,12	−5,85	−5,79
2007	−5,34	−3,67	−5,63	−4,84	−4,61
2008	−4,77	−2,44	−5,21	−4,01	−3,53
2009	−4,44	−1,83	−4,92	−3,46	−2,59

Latin America, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.807.184	1.807.184	1.807.184	1.807.184	1.807.184
2006	1.877.071	1.828.347	1.864.532	1.875.674	1.880.736
2007	1.945.714	1.802.421	1.934.943	1.949.035	1.963.301
2008	2.014.716	1.863.348	2.012.418	2.023.146	2.047.134
2009	2.084.266	1.948.161	2.079.236	2.086.969	2.122.468

Latin America, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−48724,00	−12539,00	−1397,00	3665,39
2007	−143293,00	−10771,00	3321,00	17586,72
2008	−151368,00	−2298,00	8430,00	32417,66
2009	−136105,00	−5030,00	2703,00	38202,18

Latin America, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,36	4,36	4,36	4,36	4,36
2006	3,87	1,17	3,17	3,79	4,07
2007	3,66	−1,42	3,78	3,91	4,39
2008	3,55	3,38	4,00	3,80	4,27
2009	3,45	4,55	3,32	3,15	3,68

Latin America, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,70	−0,69	−0,08	0,20
2007	−5,07	0,12	0,25	0,73
2008	−0,17	0,46	0,26	0,72
2009	1,10	−0,13	−0,30	0,23

Latin America, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	6,82	6,82	6,82	6,82	6,82
2006	5,76	1,66	5,69	5,70	5,7
2007	5,43	6,99	5,84	5,60	5,52
2008	5,07	4,15	7,03	6,35	6,05
2009	4,77	2,19	7,11	6,34	5,77

Latin America, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−4,10	−0,07	−0,06	−0,06
2007	1,56	0,41	0,17	0,09
2008	−0,92	1,96	1,28	0,98
2009	−2,58	2,34	1,57	1,00

Brazil, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	813.370	813.370	813.370	813.370	813.370
2006	844.929	810.035	839.642	845.823	848.345
2007	875.684	789.541	875.243	882.617	889.235
2008	906.771	813.149	916.554	919.951	930.318
2009	938.327	848.683	944.234	946.170	960.739

Brazil, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−34.893,57	−5.286,90	894,71	3.416,15
2007	−86.142,87	−441,50	6.932,62	13.550,97
2008	−93.622,37	9.783,17	13.180,52	23.546,85
2009	−89.643,41	5.907,47	7.843,51	22.412,61

Brazil, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	3,50	3,50	3,50	3,50	3,50
2006	3,88	−0,41	3,23	3,99	4,30
2007	3,64	−2,53	4,24	4,35	4,82
2008	3,55	2,99	4,72	4,23	4,62
2009	3,48	4,37	3,02	2,85	3,27

Brazil, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−4,29	−0,65	0,11	0,42
2007	−6,17	0,60	0,71	1,18
2008	−0,56	1,17	0,68	1,07
2009	0,89	−0,46	−0,63	−0,21

Brazil, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	493.926	493.926	493.926	493.926	493.926
2006	510.176	493.531	507.657	510.226	510.868
2007	526.502	469.101	517.709	525.787	528.288
2008	542.350	474.167	539.763	548.239	552.748
2009	559.108	487.729	553.851	562.602	568.170

Brazil, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−16.645,31	−2.519,02	49,39	691,50
2007	−57.400,72	−8.793,05	−714,37	1.786,45
2008	−68.182,13	−2.586,36	5.889,05	10.398,49
2009	−71.379,55	−5.257,14	3.494,30	9.061,56

Brazil, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	155.123	155.123	155.123	155.123	155.123
2006	168.107	157.558	167.719	168.619	169.193
2007	177.672	157.243	179.577	179.478	180.698
2008	184.886	172.307	189.669	188.164	189.425
2009	192.207	185.988	193.405	192.436	193.688

Brazil, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−10.548,36	−387,81	511,91	1.085,86
2007	−20.428,76	1.904,65	1.805,67	3.025,68
2008	−12.578,33	4.783,37	3.278,91	4.539,90
2009	−6.218,61	1.198,38	228,78	1.480,51

Brazil, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	6,99	6,99	6,99	6,99	6,99
2006	5,08	0,31	5,24	5,14	5,13
2007	5,36	5,57	6,42	5,85	5,7
2008	5,16	4,61	6,17	5,54	5,21
2009	4,91	1,77	5,17	4,7	4,3

Brazil, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−4,77	0,16	0,06	0,05
2007	0,21	1,06	0,49	0,34
2008	−0,55	1,01	0,38	0,05
2009	−3,14	0,26	−0,21	−0,61

Brazil, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−3,10	−3,10	−3,10	−3,10	−3,10
2006	−2,82	−5,87	−3,24	−2,82	−2,75
2007	−2,20	−9,83	−3,85	−2,59	−2,35
2008	−1,76	−11,26	−3,33	−1,65	−1,26
2009	−1,73	−13,14	−4,30	−2,12	−1,77

Brazil, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,03	1,03	1,03	1,03	1,03
2006	0,29	0,89	−0,23	0,21	0,33
2007	−0,07	0,77	−0,66	0,08	0,37
2008	−0,18	−0,42	−1,34	−0,23	0,26
2009	−0,39	−1,16	−1,76	−0,34	0,44

Argentina, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	297	297	297	297	297
2006	308	301	305	307	308
2007	318	312	308	314	317
2008	329	327	312	322	328
2009	340	343	325	335	344

Argentina, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−6,59	−2,82	−0,50	0,24
2007	−6,64	−10,24	−3,84	−0,99
2008	−1,47	−17,26	−6,92	−1,08
2009	2,81	−14,50	−4,80	4,42

Argentina, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	6,51	6,51	6,51	6,51	6,51
2006	3,61	1,39	2,66	3,44	3,69
2007	3,44	3,50	1,04	2,36	3,04
2008	3,31	5,04	1,14	2,37	3,29
2009	3,30	4,62	4,37	4,03	4,99

Argentina, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,22	−0,95	−0,17	0,08
2007	0,06	−2,40	−1,08	−0,40
2008	1,73	−2,17	−0,94	−0,02
2009	1,32	1,07	0,73	1,69

Argentina, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	192	192	192	192	192
2006	199	200	198	199	199
2007	205	202	197	202	203
2008	212	212	191	202	206
2009	218	222	190	204	212

Argentina, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,98	−1,32	−0,31	−0,12
2007	−3,05	−8,09	−3,28	−1,91
2008	0,59	−20,63	−9,71	−5,65
2009	3,99	−27,48	−13,68	−5,67

Argentina, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	56	56	56	56	56
2006	62	54	60	61	62
2007	66	64	59	64	65
2008	69	70	61	67	69
2009	72	76	68	73	76

Argentina, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−7,32	−2,01	−0,40	−0,14
2007	−2,10	−6,35	−2,06	−0,97
2008	1,12	−8,36	−2,13	−0,04
2009	3,94	−3,12	1,27	3,98

Argentina, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	9,21	9,21	9,21	9,21	9,21
2006	8,92	0,5	8,92	9,03	9,05
2007	7	7,69	8,3	7,96	7,83
2008	6	5,22	12,39	10,33	9,6
2009	5,35	4,66	14,64	12,07	10,09

Argentina, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−8,42	0,00	0,11	0,13
2007	0,69	1,30	0,96	0,83
2008	−0,78	6,39	4,33	3,60
2009	−0,69	9,29	6,72	4,74

Argentina, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,73	2,73	2,73	2,73	2,73
2006	1,80	2,89	1,55	1,73	1,75
2007	0,51	−0,15	−0,85	−0,03	0,14
2008	0,54	1,66	−2,67	−0,79	−0,26
2009	0,17	2,72	−4,04	−2,08	−1,01

Argentina, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,49	0,49	0,49	0,49	0,49
2006	−0,38	−1,05	0,05	−0,08	0,12
2007	−1,12	−2,17	1,52	−0,03	0,18
2008	−1,76	−2,92	7,22	2,24	2,02
2009	−1,97	−3,54	10,57	3,87	3,04

Chile, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	43.846	43.846	43.846	43.846	43.846
2006	46.104	43.767	46.065	46.201	46.547
2007	48.170	41.386	48.368	48.127	49.019
2008	50.279	41.895	51.173	50.558	52.004
2009	52.286	42.809	53.184	52.625	54.802

Chile, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2.336,99	−39,46	96,46	442,84
2007	−6.783,38	198,31	−42,44	849,02
2008	−8.384,16	893,82	278,15	1.724,43
2009	−9.476,99	898,78	339,81	2.516,09

Chile, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	5,84	5,84	5,84	5,84	5,84
2006	5,15	−0,18	5,06	5,37	6,16
2007	4,48	−5,44	5,00	4,17	5,31
2008	4,38	1,23	5,80	5,05	6,09
2009	3,99	2,18	3,93	4,09	5,38

Chile, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−5,33	−0,09	0,22	1,01
2007	−9,92	0,52	−0,31	0,83
2008	−3,15	1,42	0,67	1,71
2009	−1,81	−0,06	0,10	1,39

Chile, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	27.570	27.570	27.570	27.570	27.570
2006	28.849	27.716	28.772	28.833	28.940
2007	30.041	25.870	29.816	29.920	30.277
2008	31.200	25.619	31.364	31.281	31.927
2009	32.405	25.934	32.763	32.648	33.581

Chile, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1.133,13	−77,20	−16,54	90,98
2007	−4.170,49	−224,24	−121,02	236,55
2008	−5.581,01	163,66	80,75	727,08
2009	−6.470,22	358,16	243,40	1.176,59

Chile, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	11.901	11.901	11.901	11.901	11.901
2006	12.727	11.311	12.789	12.807	12.877
2007	13.393	9.922	13.502	13.484	13.657
2008	14.011	9.878	14.334	14.354	14.628
2009	14.647	9.561	14.926	15.076	15.420

Chile, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1.416,22	61,89	79,74	149,95
2007	−3.470,79	109,88	91,59	264,67
2008	−4.133,18	322,90	342,58	616,97
2009	−5.086,38	278,79	428,47	772,24

Chile, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,59	2,59	2,59	2,59	2,59
2006	2,76	−1,73	2,84	2,79	2,72
2007	2,74	2,79	3,39	3,21	2,9
2008	2,72	1,8	3,31	3,35	2,88
2009	2,72	−1,11	2,81	2,8	2,48

Chile, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−4,49	0,08	0,03	−0,04
2007	0,05	0,65	0,47	0,16
2008	−0,92	0,59	0,63	0,16
2009	−3,83	0,09	0,08	−0,24

Chile, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,30	1,30	1,30	1,30	1,30
2006	0,80	0,29	0,76	0,79	0,91
2007	0,32	−3,25	0,13	0,08	0,41
2008	0,34	−4,17	0,41	0,19	0,74
2009	0,32	−5,24	0,44	0,20	0,97

Chile, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,9	2,9	2,9	2,9	2,90
2006	0,02	0,41	0,1	0,21	0,59
2007	0,05	2.46	−0,21	−0,45	0,41
2008	−0,33	1.54	−0,53	−0,79	0,48
2009	−0,43	2.18	−0,82	−1,11	0,77

UK, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.131.306	1.131.306	1.131.306	1.131.306	1.131.306
2006	1.158.721	1.162.147	1.161.567	1.165.276	1.166.603
2007	1.191.226	1.187.252	1.206.090	1.221.269	1.224.466
2008	1.224.842	1.214.391	1.247.199	1.274.934	1.279.812
2009	1.256.897	1.246.375	1.275.243	1.296.804	1.305.280

UK, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	3.426	2.846	6.555	7.882
2007	−3.974	14.864	30.043	33.240
2008	−10.451	22.357	50.092	54.970
2009	−10.522	18.346	39.907	48.383

UK, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,96	1,96	1,96	1,96	1,96
2006	2,42	2,73	2,67	3,00	3,12
2007	2,81	2,16	3,83	4,81	4,96
2008	2,82	2,29	3,41	4,39	4,52
2009	2,62	2,63	2,25	1,72	1,99

UK, real GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,30	0,25	0,58	0,70
2007	−0,65	1,03	2,00	2,15
2008	−0,54	0,59	1,57	1,70
2009	0,02	−0,37	−0,90	−0,63

UK, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	722.974	722.974	722.974	722.974	722.974
2006	742.098	753.868	740.014	741.168	743.651
2007	763.894	779.397	765.755	733.789	773.992
2008	785.667	799.617	793.582	807.491	807.970
2009	805.772	820.248	813.968	814.714	834.956

UK, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	11.770,00	−2.084,00	−930,00	1.553,06
2007	15.503,00	1.861,00	−30.105	10.098,02
2008	13.950,00	7.915,00	21.824	22.303,27
2009	14.476,00	8.196,00	8.942	29.184,48

UK, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	185.969	185.969	185.969	185.969	185.969
2006	192.674	193.905	192.657	192.998	193.185
2007	199.189	199.912	201.261	203.703	204.235
2008	205.080	203.426	209.994	215.999	216.754
2009	210.585	208.741	214.928	218.408	219.507

UK, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	1.231,00	−17,00	324,00	510,60
2007	723,00	2.072,00	4.514,00	5.045,76
2008	−1.654,00	4.914,00	10.919,00	11.674,35
2009	−1.844,00	4.343,00	7.823,00	8.922,13

UK, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	30.641	30.641	30.641	30.641	30.641
2006	30.706	30.782	30.714	30.745	30.760
2007	30.944	30.966	31.115	31.294	31.336
2008	31.253	31.145	31.603	32.067	32.132
2009	31.485	31.349	31.830	32.188	32.292

UK, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	75,50	7,50	38,25	54,25
2007	22,00	170,25	349,25	391,47
2008	−108,00	350,00	814,50	878,90
2009	−135,50	344,75	703,50	807,56

UK, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	864	864	864	864	864
2006	902	826	892	864	849
2007	912	888	745	568	535
2008	912	1.015	568	112	92
2009	948	1.075	612	263	213

UK, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−76,00	−9,50	−37,50	−52,12
2007	−24,00	−167,25	−344,00	−377,56
2008	103,50	−343,50	−800,00	−819,84
2009	127,75	−335,75	−684,25	−734,78

UK, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,76	2,76	2,76	2,76	2,76
2006	2,85	2,61	2,83	2,73	2,69
2007	2,86	2,79	2,34	1,79	1,67
2008	2,84	3,16	1,77	0,35	0,15
2009	2,92	3,32	1,89	0,81	0,51

UK, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,24	−0,02	−0,12	−0,16
2007	−0,07	−0,52	−1,07	−1,19
2008	0,32	−1,07	−2,49	−2,69
2009	0,40	−1,03	−2,11	−2,41

UK, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,86	1,86	1,86	1,86	1,86
2006	1,78	−0,38	2,88	2,89	2,91
2007	1,79	1,47	2,44	2,61	2,71
2008	1,82	0,69	3,10	3,86	4,09
2009	1,87	0,47	3,02	4,45	4,79

UK, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,16	1,10	1,11	1,13
2007	−0,32	0,65	0,82	0,92
2008	−1,13	1,28	2,04	2,27
2009	−1,40	1,15	2,58	2,92

UK, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−3,47	−3,47	−3,47	−3,47	−3,47
2006	−2,89	−3,26	−2,55	−2,47	−2,45
2007	−2,82	−3,15	−2,07	−1,59	−1,54
2008	−2,65	−3,10	−1,52	0,47	0,50
2009	−2,55	−2,89	−1,60	−0,70	−0,67

UK, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−2,13	−2,13	−2,13	−2,13	−2,13
2006	−2,51	−2,94	−2,37	−2,27	−2,20
2007	−2,61	−4,08	−1,99	−1,83	−1,59
2008	−2,57	−4,08	−2,01	−1,72	−1,23
2009	−2,58	−4,02	−2,1	−1,07	−0,20

Euro Area, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	6.573	6.573	6.573	6.573	6.573
2006	6.682	6.656	6.758	6.804	6.814
2007	6.827	6.742	7.023	7.229	7.156
2008	6.968	6.854	7.276	7.416	7.463
2009	7.103	6.976	7.475	7.637	7.713

Euro Area, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−26,00	76,00	122,00	131,57
2007	−85,00	196,00	402,00	329,29
2008	−114,00	308,00	448,00	494,58
2009	−127,00	372,00	534,00	609,58

Euro Area, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,09	1,09	1,09	1,09	1,09
2006	1,66	1,26	2,81	3,51	3,66
2007	2,17	1,29	3,92	6,25	5,03
2008	2,07	1,66	3,60	2,59	4,28
2009	1,94	1,78	2,74	2,98	3,35

Euro Area, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,40	1,16	1,86	2,00
2007	−0,88	1,75	4,08	2,86
2008	−0,40	1,54	0,52	2,21
2009	−0,16	0,80	1,04	1,41

Euro Area, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	3.735	3.735	3.735	3.735	3.735
2006	3.799	3.825	3.829	3.835	3.834
2007	3.882	3.897	3.982	4.004	4.000
2008	3.966	3.969	4.150	4.194	4.186
2009	4.046	4.045	4.294	4.361	4.348

Euro Area, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	26,00	30,00	36,00	34,60
2007	15,00	100,00	122,00	118,37
2008	3,00	184,00	228,00	220,38
2009	−1,00	248,00	315,00	301,98

Euro Area, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.361	1.361	1.361	1.361	1.361
2006	1.396	1.397	1.435	1.444	1.445
2007	1.435	1.425	1.535	1.560	1.562
2008	1.471	1.455	1.636	1.673	1.674
2009	1.505	1.487	1.707	1.755	1.754

Euro Area, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	1,00	39,00	48,00	48,97
2007	−10,00	100,00	125,00	126,58
2008	−16,00	165,00	202,00	203,33
2009	−18,00	202,00	250,00	249,03

Euro Area, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	137.719	137.719	137.719	137.719	137.719
2006	138.415	138.310	138.830	139.096	139.151
2007	139.155	138.767	140.333	140.983	141.155
2008	139.986	139.379	141.956	142.765	143.046
2009	140.703	139.991	142.900	143.654	144.091

Euro Area, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−105,75	414,50	680,50	735,77
2007	−387,75	1.178,75	1.828,50	2.000,30
2008	−607,25	1.970,25	2.779,25	3.060,52
2009	−711,50	2.197,00	2.951,25	3.387,76

Euro Area, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	12.768	12.768	12.768	12.768	12.768
2006	12.451	12.567	12.035	11.770	11.715
2007	11.992	12.399	10.823	10.188	10.043
2008	11.451	12.058	9.597	8.789	8.565
2009	11.021	11.713	8.987	8.345	8.020

Euro Area, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	115,50	−416,50	−681,50	−736,61
2007	406,75	−1.169,25	−1.804,00	−1.949,29
2008	607,25	−1.853,75	−2.662,25	−2.886,36
2009	691,25	−2.034,75	−2.676,00	−3.001,32

Euro Area, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	8,76	8,76	8,76	8,76	8,76
2006	8,53	8,61	8,25	8,07	8,03
2007	8,21	8,48	7,42	6,99	6,88
2008	7,83	8,24	6,58	6,03	5,85
2009	7,53	7,99	6,15	5,71	5,44

Euro Area, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,08	−0,28	−0,46	−0,50
2007	0,27	−0,79	−1,22	−1,33
2008	0,41	−1,25	−1,80	−1,98
2009	0,46	−1,38	−1,82	−2,09

Euro Area, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,05	2,05	2,05	2,05	2,05
2006	1,70	0,44	2,34	2,46	2,49
2007	1,74	0,86	3,31	4,08	4,22
2008	1,76	0,34	4,47	6,16	6,48
2009	1,77	0,02	5,71	8,23	8,79

Euro Area, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1,26	0,64	0,76	0,79
2007	−0,88	1,57	2,34	2,48
2008	−1,42	2,71	4,40	4,72
2009	−1,75	3,94	6,46	7,02

Euro Area, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−2,85	−2,85	−2,85	−2,85	−2,85
2006	−2,55	−3,16	−2,12	−1,89	−1,87
2007	−2,09	−3,03	−0,97	−0,39	−0,34
2008	−1,77	−2,87	0,11	0,92	1,00
2009	−1,50	−2,65	−0,92	1,82	1,92

Euro Area, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,11	0,11	0,11	0,11	0,11
2006	0,24	0,56	−0,08	0,14	0,23
2007	0,35	−0,31	0,18	0,5	0,79
2008	0,34	−0,31	−0,02	0,25	0,81
2009	0,34	−0,43	−0,04	0,18	1,11

Germany, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.135	2.135	2.135	2.135	2.135
2006	2.155	2.149	2.180	2.194	2.199
2007	2.191	2.157	2.265	2.306	2.318
2008	2.226	2.170	2.352	2.418	2.441
2009	2.255	2.183	2.416	2.503	2.542

Germany, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−6,00	25,00	39,00	43,84
2007	−34,00	74,00	115,00	127,45
2008	−56,00	126,00	192,00	215,10
2009	−72,00	161,00	248,00	287,41

Germany, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,94	0,94	0,94	0,94	0,94
2006	0,94	0,66	2,11	2,76	2,99
2007	1,67	0,37	3,90	5,10	5,44
2008	1,60	0,60	3,84	4,86	5,29
2009	1,30	0,60	2,72	3,52	4,15

Germany, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,28	1,17	1,83	2,05
2007	−1,30	2,23	3,43	3,77
2008	−0,99	2,24	3,26	3,69
2009	−0,70	1,42	2,21	2,85

Germany, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.229	1.229	1.229	1.229	1.229
2006	1.241	1.254	1.254	1.257	1.256
2007	1.263	1.266	1.311	1.321	1.320
2008	1.284	1.277	1.369	1.391	1.390
2009	1.302	1.288	1.413	1.450	1.448

Germany, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	13,00	13,00	16,00	15,41
2007	3,00	48,00	58,00	57,23
2008	−7,00	85,00	107,00	105,54
2009	−14,00	111,00	148,00	146,18

Germany, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	388	388	388	388	388
2006	397	397	411	412	412
2007	407	402	445	452	452
2008	415	405	479	492	493
2009	421	408	496	515	517

Germany, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,00	14,00	15,00	15,29
2007	−5,00	38,00	45,00	45,16
2008	−10,00	64,00	77,00	78,26
2009	−13,00	75,00	94,00	96,23

Germany, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	38.999	38.999	38.999	38.999	38.999
2006	39.070	39.054	39.162	39.226	39.249
2007	39.211	39.054	39.604	39.823	39.893
2008	39.354	39.040	40.052	40.393	40.527
2009	39.407	38.823	40.232	40.516	40.725

Germany, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−16,25	91,25	156,00	178,60
2007	−156,75	393,00	612,25	681,78
2008	−313,75	698,00	1.039,75	1.173,32
2009	−584,50	824,50	1.109,00	1.318,40

Germany, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4.801	4.801	4.801	4.801	4.801
2006	4.548	4.572	4.455	4.391	4.391
2007	4.353	4.527	3.963	3.754	3.712
2008	4.167	4.485	3.509	3.204	3.119
2009	4.070	4.482	3.354	3.159	3.024

Germany, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	24,25	−93,25	−157,25	−156,75
2007	173,75	−389,75	−598,75	−640,83
2008	318,00	−657,75	−963,00	−1.047,62
2009	411,50	−716,25	−911,25	−1.046,26

Germany, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	11,57	11,57	11,57	11,57	11,57
2006	11,03	11,08	10,82	10,67	10,62
2007	10,59	10,99	9,70	9,22	9,08
2008	10,18	10,91	8,66	7,95	7,68
2009	9,96	10,92	8,30	7,84	7,42

Germany, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,05	−0,21	−0,36	−0,41
2007	0,40	−0,89	−1,37	−1,51
2008	0,73	−1,52	−2,23	−2,50
2009	0,96	−1,66	−2,12	−2,54

Germany, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,77	1,77	1,77	1,77	1,77
2006	1,04	0,21	1,47	1,52	1,08
2007	1,46	1,10	2,33	2,71	1,62
2008	1,70	0,77	3,55	4,67	2,14
2009	1,80	0,45	4,95	7,28	2,72

Germany, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,83	0,43	0,48	0,04
2007	−0,36	0,87	1,25	0,16
2008	−0,93	1,85	2,97	0,44
2009	−1,35	3,15	5,48	0,92

Germany, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−3, 84	−3, 84	−3,84	−3, 84	−3, 84
2006	−3, 40	−4, 95	−2,58	−2, 34	−2, 30
2007	−3, 14	−5, 10	−1,48	−0, 73	−0, 61
2008	−2, 99	−5, 45	0,06	1,40	1,65
2009	−2, 91	−5, 81	1,15	3,01	3,44

Germany, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,22	4,22	4,22	4,22	4,22
2006	4	3,31	4,18	4,63	4,78
2007	3,63	2,32	3,79	4,64	5,08
2008	3,42	1,89	3,59	4,71	5,58
2009	3,27	1,39	3,55	4,72	6,21

France, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.556	1.556	1.556	1.556	1.556
2006	1.587	1.582	1.600	1.606	1.607
2007	1.621	1.604	1.656	1.668	1.673
2008	1.653	1.631	1.709	1.727	1.734
2009	1.686	1.662	1.755	1.780	1.792

France, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−5,00	13,00	19,00	20,35
2007	−17,00	35,00	47,00	51,61
2008	−22,00	56,00	74,00	80,99
2009	−24,00	69,00	94,00	105,73

France, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,38	1,38	1,38	1,38	1,38
2006	1,99	1,67	2,83	3,21	3,30
2007	2,14	1,39	3,50	3,86	4,06
2008	1,97	1,68	3,20	3,54	3,67
2009	2,00	1,90	2,69	3,07	3,33

France, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,32	0,84	1,22	1,31
2007	−0,75	1,36	1,72	1,92
2008	−0,29	1,23	1,56	1,70
2009	−0,10	0,70	1,07	1,33

France, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	874	874	874	874	874
2006	891	894	898	899	899
2007	911	912	933	936	935
2008	931	928	971	976	974
2009	952	948	1003	1011	1.007

France, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	3,00	7,00	8,00	7,56
2007	1,00	22,00	25,00	23,50
2008	−3,00	40,00	45,00	42,75
2009	−4,00	51,00	59,00	55,44

France, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	306	306	306	306	306
2006	315	315	327	328	328
2007	323	320	350	354	354
2008	331	327	370	378	377
2009	340	335	386	392	391

France, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,00	12,00	13,00	13,12
2007	−3,00	27,00	31,00	30,88
2008	−4,00	39,00	47,00	46,41
2009	−5,00	46,00	52,00	51,49

France, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	24.268	24.268	24.268	24.268	24.268
2006	24.387	24.373	24.429	24.459	24.465
2007	24.588	24.531	24.728	24.780	24.795
2008	24.874	24.801	25.069	25.132	25.157
2009	25.177	25.105	25.385	25.448	25.486

France, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−14,00	41,75	71,75	77,82
2007	−57,75	140,00	191,25	206,59
2008	−73,75	195,00	257,25	282,60
2009	−72,50	207,75	270,50	309,15

France, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.486	2.486	2.486	2.486	2.486
2006	2.466	2.481	2.417	2.394	2.387
2007	2.367	2.427	2.226	2.175	2.157
2008	2.183	2.259	1.989	1.928	1.902
2009	1.982	2.056	1.778	1.718	1.681

France, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	15,00	−48,75	−71,75	−79,42
2007	60,00	−140,75	−191,50	−209,27
2008	75,75	−194,25	−255,25	−280,51
2009	74,00	−204,00	−264,50	−301,24

France, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	10,12	10,12	10,12	10,12	10,12
2006	10,03	10,09	9,85	9,77	9,75
2007	9,63	9,85	9,11	8,92	8,85
2008	8,92	9,20	8,20	7,97	7,87
2009	8,15	8,42	7,40	7,17	7,02

France, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,06	−0,18	−0,26	−0,28
2007	0,22	−0,52	−0,71	−0,78
2008	0,28	−0,72	−0,95	−1,05
2009	0,27	−0,75	−0,98	−1,13

France, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,69	1,69	1,69	1,69	1,69
2006	1,78	0,70	2,30	2,34	2,34
2007	1,82	1,49	2,63	2,86	2,90
2008	1,82	1,20	3,04	3,46	3,56
2009	1,80	1,11	3,24	3,84	4.00

France, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1,08	0,52	0,56	0,56
2007	−0,33	0,81	1,04	1,08
2008	−0,62	1,22	1,64	1,74
2009	−0,69	1,44	2,04	2,20

France, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−3,09	−3,09	−3,09	−3,09	−3,09
2006	−2,73	−3,51	−2,59	−2,47	−2,45
2007	−1,85	−2,89	−1,33	−1,06	−1,02
2008	−1,36	−2,56	−0,58	−0,19	−0,13
2009	−1,02	−2,32	0,27	0,78	0,89

France, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−1,28	−1,28	−1,28	−1,28	−1,28
2006	−0,65	−0,40	−1,07	−0,98	−0,90
2007	−0,35	−0,47	−1,04	−0,98	−0,75
2008	−0,28	−0,34	−1,34	−1,35	−0,91
2009	−0,28	−0,36	−1,39	−1,37	−0,61

Italy, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.044	1.044	1.044	1.044	1.044
2006	1.054	1.052	1.068	1.073	1.074
2007	1.074	1.066	1.104	1.113	1.116
2008	1.094	1.080	1.145	1.153	1.158
2009	1.114	1.098	1.177	1.185	1.193

Italy, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,00	14,00	19,00	20,07
2007	−8,00	30,00	39,00	42,50
2008	−14,00	51,00	59,00	64,38
2009	−16,00	63,00	71,00	79,10

Italy, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−0,59	−0,59	−0,59	−0,59	−0,59
2006	0,96	0,77	2,30	2,78	2,88
2007	1,90	1,33	3,37	3,73	3,95
2008	1,86	1,31	3,71	3,59	3,75
2009	1,83	1,67	2,79	2,78	3,00

Italy, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,19	1,34	1,82	1,92
2007	−0,57	1,47	1,83	2,05
2008	−0,55	1,85	1,73	1,89
2009	−0,16	0,97	0,95	1,17

Italy, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	638	638	638	638	638
2006	649	654	654	657	656
2007	660	665	682	685	683
2008	672	675	712	716	713
2009	683	686	736	742	737

Italy, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	5,00	5,00	8,00	7,25
2007	5,00	22,00	25,00	23,02
2008	3,00	40,00	44,00	41,01
2009	3,00	53,00	59,00	53,82

Italy, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	211	211	211	211	211
2006	215	215	223	225	225
2007	219	218	233	239	239
2008	223	221	252	253	253
2009	228	236	259	260	260

Italy, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,00	8,00	10,00	9,61
2007	−1,00	14,00	20,00	19,96
2008	−2,00	29,00	30,00	30,32
2009	8,00	31,00	32,00	32,34

Italy, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	(000s) GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	22.557	22.557	22.557	22.557	22.557
2006	22.580	22.568	22.680	22.726	22.735
2007	22.619	22.569	22.869	22.942	22.969
2008	22.665	22.557	23.057	23.100	23.143
2009	22.705	22.602	23.121	23.112	23.174

Italy, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−12,00	100,25	146,00	154,95
2007	−50,50	250,00	322,50	349,86
2008	−108,00	391,75	435,00	478,18
2009	−102,25	416,75	407,75	469,01

Italy, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.021	2.021	2.021	2.021	2.021
2006	2.082	2.095	1.981	1.936	1.927
2007	2.010	2.064	1.760	1.689	1.666
2008	1.930	2.025	1.542	1.501	1.467
2009	1.866	1.973	1.462	1.476	1.456

Italy, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	13,25	−113,75	−45,50	−9,13
2007	54,25	−304,00	−71,50	−22,94
2008	95,25	−483,00	−40,50	−33,89
2009	106,75	−511,25	14,50	−19,64

Italy, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	7,53	7,53	7,53	7,53	7,53
2006	7,74	7,79	7,33	7,15	7,12
2007	7,46	7,68	6,45	6,16	6,16
2008	7,15	7,53	5,57	5,40	5,23
2009	6,89	7,33	5,25	5,30	5,18

Italy, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,05	−0,41	−0,59	−0,62
2007	0,22	−1,01	−1,30	−1,30
2008	0,38	−1,58	−1,75	−1,92
2009	0,44	−1,64	−1,59	−1,71

Italy, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,97	1,97	1,97	1,97	1,97
2006	2,04	1,21	2,45	2,52	2,53
2007	1,82	1,26	2,94	3,34	3,41
2008	1,81	1,11	3,65	4,41	4,56
2009	1,80	1,82	4,77	5,76	6,04

Italy, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,83	0,41	0,48	0,49
2007	−0,56	1,12	1,52	1,59
2008	−0,70	1,84	2,60	2,75
2009	0,02	2,97	3,96	4,24

Italy, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−4,04	−4,04	−4,04	−4,04	−4,04
2006	−4,10	−3,94	−3,89	−3,70	−3,72
2007	−3,85	−3,92	−2,88	−2,53	−2,63
2008	−3,61	−3,72	−1,68	−1,32	−1,54
2009	−3,05	−3,10	−0,34	−0,04	−0,46

Italy, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−1,59	−1,59	−1,59	−1,59	−1,59
2006	−1,83	−1,22	−2,13	−1,91	−1,86
2007	−1,36	−1,46	−1,69	−1,52	−1,40
2008	−1,09	−1,21	−1,46	−1,53	−1,32
2009	−0,88	−0,93	−1,29	−1,49	−1,16

Russia, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.055	2.055	2.055	2.055	2.055
2006	2.152	2.046	2.151	2.151	2.160
2007	2.251	2.074	2.251	2.239	2.263
2008	2.351	2.128	2.366	2.340	2.382
2009	2.455	2.205	2.476	2.450	2.517

Russia, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−106,00	−1,00	−1,00	8,42
2007	−177,00	0,00	−12,00	11,83
2008	−223,00	15,00	−11,00	30,62
2009	−250,00	21,00	−5,00	62,38

Russia, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,94	4,94	4,94	4,94	4,94
2006	4,72	−0,44	4,67	4,67	5,13
2007	4,60	1,37	4,65	4,09	4,74
2008	4,44	2,60	5,11	4,51	5,25
2009	4,42	3,62	4,65	4,70	5,70

Russia, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−5,16	−0,05	−0,05	0,41
2007	−3,23	0,05	−0,51	0,14
2008	−1,84	0,67	0,07	0,81
2009	−0,81	0,23	0,28	1,28

Russia, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1.097	1.097	1.097	1.097	1.097
2006	1.152	1.076	1.155	1.154	1.157
2007	1.200	1.064	1.206	1.201	1.209
2008	1.251	1.080	1.264	1.250	1.267
2009	1.306	1.103	1.325	1.307	1.336

Russia, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−76,00	3,00	2,00	4,79
2007	−136,00	6,00	1,00	9,42
2008	−171,00	13,00	−1,00	15,63
2009	−203,00	19,00	1,00	30,04

Russia, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	370	370	370	370	370
2006	408	339	406	407	409
2007	452	376	452	449	454
2008	498	403	501	498	505
2009	548	442	550	552	563

Russia, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−69,00	−2,00	−1,00	1,07
2007	−76,00	0,00	−3,00	1,54
2008	−95,00	3,00	0,00	7,42
2009	−106,00	2,00	4,00	14,74

Russia, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	68.043	68.043	68.043	68.043	68.043
2006	68.661	67.711	68.660	68.667	68.308
2007	68.661	66.797	68.692	68.576	69.585
2008	68.661	66.251	68.836	68.549	71.353
2009	68.661	65.978	68.916	68.567	71.710

Russia, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−950,50	−1,00	5,25	−353,13
2007	−1.864,25	30,75	−85,75	924,23
2008	−2.409,75	175,25	−112,25	2.691,95
2009	−2.682,75	255,00	−94,25	3.048,96

Russia, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	5.557	5.557	5.557	5.557	5.557
2006	5.115	6.057	5.115	5.109	5.462
2007	4.938	6.722	4.903	5.020	3.438
2008	4.876	7.119	4.672	4.980	591
2009	4.833	7.256	4.583	4.917	1.368

Russia, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	942,50	0,75	−5,50	347,17
2007	1.784,50	−35,00	82,50	−1.499,63
2008	2.242,50	−203,75	103,75	−4.284,99
2009	2.423,00	−249,50	84,25	−3.464,91

Russia, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	7,68	7,68	7,68	7,68	7,68
2006	6,93	8,21	6,93	6,93	6,81
2007	6,71	9,15	6,66	6,82	6,49
2008	6,63	9,70	6,39	6,77	6,20
2009	6,58	9,91	6,24	6,69	5,78

Russia, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	1,28	0,00	0,00	−0,12
2007	2,44	−0,05	0,11	−0,22
2008	3,07	−0,24	0,14	−0,43
2009	3,33	−0,34	0,11	−0,80

Russia, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	13,54	13,54	13,54	13,54	13,54
2006	11,00	8,57	10,00	10,32	10,22
2007	10,74	10,15	9,74	10,36	9,98
2008	9,87	7,73	8,98	10,33	9,62
2009	8,96	6,44	7,95	9,63	8,56

Russia, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,43	−1,00	−0,68	−0,78
2007	−0,59	−1,00	−0,38	−0,76
2008	−2,14	−0,89	0,46	−0,25
2009	−2,52	−1,01	0,67	−0,40

Russia, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	5,85	5,85	5,85	5,85	5,85
2006	3,59	0,29	3,80	3,69	3,68
2007	2,05	−1,90	2,74	2,39	2,35
2008	1,67	−3,43	2,30	1,92	1,85
2009	1,62	−4,67	1,93	1,80	1,69

Russia, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	13	13	13	13	13,00
2006	8,98	5,99	10,31	9,93	10,06
2007	5,51	2,74	7,63	6,5	6,72
2008	4,29	1,6	7,14	5,32	5,49
2009	4,38	1,7	6,9	4,57	4,63

Africa, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	573.781	573.781	573.781	573.781	573.781
2006	599.451	587.491	595.311	599.518	600.691
2007	624.667	604.319	625.167	629.415	633.069
2008	650.469	618.923	656.907	657.534	664.659
2009	676.685	638.628	688.608	685.914	698.091

Africa, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	−11.960	−4.140	67	1.240
2007	−20.348	500	4.748	8.402
2008	−31.546	6.438	7.065	14.190
2009	−38.057	11.923	9.229	21.406

Africa, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,37	4,37	4,37	4,37	4,37
2006	4,47	2,39	3,75	4,49	4,69
2007	4,21	2,86	5,02	4,99	5,39
2008	4,13	2,42	5,08	4,47	4,99
2009	4,03	3,18	4,83	4,32	5,03

Africa, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−2,08	−0,72	0,01	0,22
2007	−1,34	0,81	0,78	1,18
2008	−1,71	0,95	0,34	0,86
2009	−0,85	0,80	0,29	1,00

Africa, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,76	4,76	4,76	4,76	4,76
2006	4,85	5,10	4,49	4,50	4,52
2007	4,58	9,29	3,57	3,78	3,86
2008	4,39	2,83	4,74	4,80	4,93
2009	4,38	1,83	4,99	4,98	5,19

Africa, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,25	−0,36	−0,35	−0,33
2007	4,71	−1,01	−0,80	−0,72
2008	−1,56	0,35	0,41	0,54
2009	−2,55	0,61	0,60	0,81

Japan, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	541.888	541.888	541.888	541.888	541.888
2006	549.053	545.656	548.435	550.850	553.051
2007	557.106	541.373	555.905	560.972	567.596
2008	564.961	538.977	563.844	571.909	584.227
2009	574.627	543.983	575.560	586.030	605.960

Japan, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	−3.397	−618	1.797	3.998
2007	−15.733	−1.201	3.866	10.490
2008	−25.984	−1.117	6.948	19.266
2009	−30.644	933	11.403	31.333

Japan, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,66	1,66	1,66	1,66	1,66
2006	1,32	0,70	1,21	1,65	2,06
2007	1,47	−0,78	1,36	1,84	2,63
2008	1,41	−0,44	1,43	1,95	2,93
2009	1,71	0,93	2,08	2,47	3,72

Japan, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−0,63	−0,11	0,33	0,74
2007	−2,25	−0,10	0,37	1,16
2008	−1,85	−0,04	0,54	1,52
2009	−0,78	0,61	0,76	2,01

Japan, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	300.241	300.241	300.241	300.241	300.241
2006	305.417	306.489	305.513	305.681	305.856
2007	309.946	307.120	310.900	311.598	312.370
2008	314.404	306.207	316.492	317.627	319.336
2009	320.216	309.547	323.923	325.215	328.086

Japan, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	1.072	96	264	439
2007	−2.826	954	1.652	2.424
2008	−8.197	2.088	3.223	4.932
2009	−10.669	3.707	4.999	7.870

Japan, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	131.471	131.471	131.471	131.471	131.471
2006	134.232	133.791	134.162	134.743	135.323
2007	136.637	132.194	136.681	138.169	140.154
2008	138.811	130.527	138.790	141.340	145.326
2009	141.087	130.463	141.773	145.163	151.764

Japan, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	−441	−70	511	1.091
2007	−4.443	44	1.532	3.517
2008	−8.284	−21	2.529	6.515
2009	−10.624	686	4.076	10.677

Japan, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	63.770	63.770	63.770	63.770	63.770
2006	63.924	63.835	63.905	63.987	64.069
2007	63.800	63.208	63.752	63.966	64.230
2008	63.703	62.522	63.687	64.033	64.525
2009	63.747	61.962	63.704	64.145	64.893

Japan, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	−89	−20	63	145
2007	−592	−48	166	430
2008	−1.181	−16	330	822
2009	−1.785	−43	398	1.146

Japan, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2.843	2.843	2.843	2.843	2.843
2006	2.676	2.819	2.698	2.613	2.531
2007	2.554	3.317	2.649	2.420	2.155
2008	2.386	3.830	2.528	2.142	1.665
2009	2.260	4.292	2.330	1.828	1.181

Japan, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0	0	0	0
2006	144	23	−62	−144
2007	764	96	−134	−398
2008	1.445	142	−244	−720
2009	2.032	70	−432	−1.079

Japan, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,27	4,27	4,27	4,27	4,27
2006	4,02	4,23	4,05	3,92	3,79
2007	3,85	4,99	3,99	3,64	3,23
2008	3,61	5,77	3,82	3,24	2,47
2009	3,43	6,48	3,53	2,77	1,63

Japan, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,21	0,03	−0,10	−0,23
2007	1,14	0,14	−0,21	−0,62
2008	2,16	0,21	−0,37	−1,14
2009	3,05	0,10	−0,66	−1,80

Japan, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−0,22	−0,22	−0,22	−0,22	−0,22
2006	0,10	−1,42	−0,09	0,05	0,16
2007	0,05	−1,25	−0,85	−0,40	−0,03
2008	0,12	−2,31	−0,74	0,04	0,92
2009	0,12	−3,35	−0,57	0,47	2,3

Japan, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1,52	−0,19	−0,05	0,06
2007	−1,30	−0,90	−0,45	−0,08
2008	−2,43	−0,86	−0,08	0,80
2009	−3,47	−0,69	0,35	2,18

Japan, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	−7,72	−7,72	−7,72	−7,72	−7,72
2006	−7,59	−7,84	−7,61	−7,50	−7,40
2007	−7,33	−8,45	−7,37	−7,10	−6,78
2008	−6,95	−8,90	−6,93	−6,54	−5,97
2009	−6,53	−8,84	−6,30	−5,89	−5,09

Japan, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,78	2,78	2,78	2,78	2,78
2006	2,57	2,53	2,51	2,8	3,05
2007	3,06	2,11	2,83	3,29	3,93
2008	3,36	2,52	2,94	3,67	4,78
2009	3,65	2,93	3,08	4,15	5,96

China, real GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	13.603	13.603	13.603	13.603	13.603
2006	14.693	14.241	14.704	14.154	14.406
2007	15.924	14.815	16.001	14.346	15.160
2008	17.273	15.822	17.680	15.463	16.637
2009	18.564	17.804	18.689	16.755	18.770

China, real GDP: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−452,00	11,00	−539,00	−287,42
2007	−1.109,00	77,00	−1.578,00	−763,57
2008	−1.451,00	407,00	−1.810,00	−635,94
2009	−760,00	125,00	−1.809,00	205,93

China, real GDP growth rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	9,16	9,16	9,16	9,16	9,16
2006	8,01	4,69	8,09	4,05	5,90
2007	8,38	4,03	8,82	1,36	5,24
2008	8,47	6,80	10,49	7,79	9,74
2009	7,47	12,53	5,71	8,36	12,82

China, GDP growth rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−3,32	0,08	−3,96	−2,11
2007	−4,35	0,44	−7,02	−3,14
2008	−1,67	2,02	−0,69	1,27
2009	5,05	−1,77	0,88	5,35

China, consumption

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	6.144	6.144	6.144	6.144	6.144
2006	6.818	6.783	6.820	6.790	7.091
2007	7.561	7.422	7.573	7.428	8.464
2008	8.470	8.156	8.522	8.145	9.862
2009	9.291	8.890	9.361	8.732	11.479

China, consumption: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−35,00	2,00	−28,00	272,79
2007	−139,00	12,00	−133,00	903,28
2008	−314,00	52,00	−325,00	1.391,73
2009	−401,00	70,00	−559,00	2.188,05

China, investment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	7.619	7.619	7.619	7.619	7.619
2006	8.394	8.233	8.391	8.233	8.642
2007	9.473	8.832	9.474	8.775	9.875
2008	10.387	9.081	10.700	9.492	11.460
2009	10.945	10.336	11.257	10.117	13.610

China, investment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−161,00	−3,00	−161,00	248,23
2007	−641,00	1,00	−698,00	401,61
2008	−1.306,00	313,00	−895,00	1.073,48
2009	−609,00	312,00	−828,00	2.665,46

China, employment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	756.647	756.647	756.647	756.647	756.647
2006	763.679	757.778	764.031	757.155	759.143
2007	770.164	752.644	771.557	747.305	753.678
2008	776.573	753.472	782.006	747.538	758.727
2009	782.054	765.771	785.957	750.894	768.060

China, employment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−5.900	353	−6.524	−4.535
2007	−17.520	1.393	−22.859	−16.486
2008	−23.101	5.433	−29.034	−17.846
2009	−16.283	3.903	−31.160	−13.994

China, unemployment

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	9.903	9.903	9.903	9.903	9.903
2006	10.173	10.948	10.065	10.836	9.538
2007	10.402	12.680	10.141	13.037	9.286
2008	10.636	13.086	10.029	13.907	6.888
2009	10.873	13.161	10.983	16.588	4.039

China, unemployment: absolute differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	775,00	−107,75	663,00	−635,18
2007	2.278,00	−261,75	2.634,25	−1.116, 23
2008	2.449,50	−607,00	3.271,00	−3.747, 63
2009	2.288,50	110,00	5.715,00	−6.833, 41

China, unemployment rate

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,03	4,03	4,03	4,03	4,03
2006	4,00	4,29	3,96	4,25	3,77
2007	4,00	4,84	3,91	4,99	3,79
2008	4,00	4,92	3,78	5,25	3,29
2009	4,00	4,84	4,01	6,05	3,13

China, unemployment rate: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	0,29	−0,04	0,25	−0,23
2007	0,84	−0,09	0,99	−0,21
2008	0,92	−0,22	1,25	−0,71
2009	0,84	0,01	2,05	−0,87

China, CPI

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	2,31	2,31	2,31	2,31	2,31
2006	2,50	1,37	2,25	0,08	1,06
2007	3,05	1,34	2,66	−2,12	1,81
2008	3,04	−0,20	3,24	−3,96	1,75
2009	3,04	−1,04	3,38	−6,07	0,8

China, CPI: differences with respect to base

	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	0,00	0,00	0,00	0,00
2006	−1,13	−0,25	−2,42	−1,44
2007	−1,71	−0,39	−5,17	−1,24
2008	−3,24	0,20	−7,00	−1,29
2009	−4,08	0,34	−9,11	−2,24

China, deficit/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	1,47	1,47	1,47	1,47	1,47
2006	1,41	1,71	1,46	1,98	2,24
2007	1,21	1,54	1,19	1,86	2,91
2008	1,02	0,82	0,87	0,31	1,90
2009	0,85	0,04	0,93	−0,96	1,15

China, current account/GDP

	BASE	$ YPER-DEVALUATION	EUROPEAN DOMESTIC DEMAND PUSH + €/$ PARITY	GLOBAL EXCHANGE RATE ADJUSTMENT	GLOBAL EXCHANGE RATE ADJUSTMENT + CHINA DOMESTIC DEMAND PUSH
2005	4,87	4,87	4,87	4,87	4,87
2006	2,21	0,74	3,23	0,56	−2,36
2007	1,21	−0,25	1,51	−0,99	−8,02
2008	0,81	1,92	0,96	−0,18	−11,02
2009	0,86	2,17	0,07	0,49	−14,16

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Part III

Italy as a Case Study for Europe: Growing More Is Possible, Growing More Is a Must

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8

Financial Equilibrium and Higher Growth: An Analysis of Expenditure Items with the Purpose of Appraising Where to Find and Where to Shift Resources

8.1 Introduction

The mainstays of a project to enhance development in Italy must be based on three themes: structural interventions and support to enterprises to ensure competitiveness and growth, safeguard and support household purchasing power, and provide a strong impulse to re-launching the Mezzogiorno.

It's not just a question of credibly and effectively defining some precise priorities. It's a question of including these priorities in a general and coherent set of decisions to take and times to respect which should be prolonged for an entire legislature.

In reality, the structural knots that hamper the Italian economy have been known for many years. In the current legislature, several of these knots have been tackled and many have been untied: the labour market, the pension, the school, the justice, the country's federal reform etc.

However, the work is certainly not finished.

It's also equally certain that the solutions to these problems have been known for a long time and that the correct choices are there to make for any government and any political coalition. What are needed, however, are courage and determination in making those choices.

In this sense, the analysis proposed here for the Italian economy can be a contribution to the domestic debate along the lines and choices of economic policy but can also represent a useful reference concerning the debate in Europe and in the rest of the world. It can, in fact, represent an interesting case study with the purpose of verifying "the unique agenda" which must coherently allocate national responsibilities, those of the European Union

and those of a new order and of a new world governance, able to direct the process of globalization so that everyone benefits, under conditions of greater growth, more diffused prosperity, more coherent monetary bases and more sustainable trends in public finances and the international financial system.

Financial equilibrium is necessary to build a growth-enhancing manoeuvre on solid grounds. Without it, i.e. widening government deficits with no limits, interest rate differentials would rapidly widen and, given the state of Italian public debt, would subtract further resources from any manoeuvre aimed at enhancing development. Therefore, in this case Italy too would act as a cat chasing its own tail.

The road towards financial equilibrium in accordance with the European Commission implies, therefore, a firm and effective action to bring the deficit/GDP ratio back to the limit set by the European Union in a specific and reasonable time.

But precisely because it is a ratio, it is, therefore, necessary to determine a double intervention that on one side contains the deficit (that is the numerator) and on the other raises GDP (that is the denominator, i.e. the economic growth).

The mainstay of the manoeuvre must, therefore, be the containment of the government's current expenditures. Resources obtained with this intervention for the containment of current expenditures are to be, then, partly used to reduce the deficit and partly to enhance development. Obviously, the more development is enhanced the more, automatically, the deficit is contained, transforming the previously-mentioned vicious circle into a virtuous propeller which, through greater economic growth, determines more solid prospects of financial equilibrium. Thus, part of the manoeuvre is quantifiable in terms of cuts in expected trend deficits, while the most noteworthy part is what doesn't directly and ex-ante regard the containment of the deficit but which, by "shifting" resources from current expenditures to more investments, acts as a propeller for economic recovery.

Let us, then, examine the trend in public expenditures in recent years by limiting our analysis to major aggregates in order to verify those that have increased the most, with the objective, therefore, of identifying the possibilities of containing their growth. We will apply, in the terms that are possible today and in a more rational and timely manner, the logic of zero-base budgeting (ZBB). In many countries this approach has led to structural improvements in public finance. Greater importance should, however, be given to its effectiveness in terms of stimulus and support to economic growth.

Tables 8.1 and 8.2 report the trend of the various General Government budget items based on official data from 2000 to 2004 and estimates for 2005/2006. As can be seen, total public expenditures jumped from 543 to 595 billion euro in the final year of the past legislature (i.e. from 2000 to

2001), posting an increase of 52 billion euro in a single year, with a huge increase of almost 10%. In the following three years, with an economic situation radically changed and much more difficult after September 11, the percentage increase has been strongly contained (1.8% in 2002, 5.6% in 2003 and 2.3% in 2004). In a single year, between 2000 and 2001, at the end of the centre-left government's legislature, the increase in public expenditures more or less equalled the total increment recorded in the three successive years of the current legislature.

In addition, between 2000 and 2001, total revenues (see Table 8.2) went from 534 to 556 billion euro with an increase of only 22 billion, as compared to the 52 billion euro increase in expenditures. The public deficit jumped, therefore, to almost 39 billion euro, a level three times higher than was officially published on April 5, 2001 in the Treasury Quarterly Report by the then government.

This is the negative inheritance that, especially in the last year of the last legislature was passed along to Italian public accounts.

However, this is, by now, a simple historical-statistical truth that doesn't preclude anyone from taking on the responsibilities of finding the necessary resources to re-launch the economy and maintain the equilibrium in public accounts. In order to do this, it is necessary to thoroughly examine the single financial components starting from the trend projections that can be estimated for 2006 now and comparing them with the 2001 data, in order to evaluate whether all those expenditure increases are necessary, useful and efficient. With regard to wages and pensions, projections incorporate contracts and agreements that cannot be ex-post modified. Interest spending can't be greatly affected considering that it depends on the stock of debt and developments in interest rates which indeed risk increasing as a result of the decisions of the European Central Bank (which one may fully agree with or not). It is true, however, that the other expenditure items can be strongly tackled, evaluating both the consistent increases that have taken place in these years and their content in terms of effectiveness and efficiency in supporting Italy's economic system.

Three large current expenditure items and two items of capital account expenditures can, then, be more closely looked at.

8.2 Current expenditure

- **Total government consumption (purchases of goods and services etc.)** The amount of this aggregate passed from 93 billion euro in 2001 to 105 billion in 2005, expected to reach 107 billion in 2006 and 113–114 billion in 2007. Since, in 2001, the operation activities of the Public Administration didn't seem to have been particularly hampered or stopped by a 93 billion euro overall spending and since, in the years that followed there were no wide-spread epidemics or other catastrophic events in Italy to

Table 8.1 Italy, General Government Economic Account – Expenditures

Expenditures	Historical data and projections for 2005/2006												
	2000	2001	2002	2003	2004	2005 (*)	2006 (*)	2001	2002	2003	2004	2005 (*)	2006 (*)
	Billions of euro							*% change*					
Compensation of employees	**123.480**	**131.083**	**136.423**	**143.871**	**148.248**	**152.500**	**161.650**	6,2	4,1	5,5	3,0	2,9	**6,0**
Total intermediate consumption	**85.726**	**93.637**	**96.495**	**100.888**	**103.057**	**105.000**	**107.100**	9,2	3,1	4,6	2,1	1,9	2,0
Purchase of market's goods and services	*27.512*	*31.299*	*33.084*	*33.909*	*36.303*	*36.750*	*37.485*	*13,8*	*5,7*	*2,5*	*7,1*	*1,2*	2,0
Intermediate consumption	*58.214*	*62.338*	*63.411*	*66.979*	*66.754*	*68.250*	*69.615*	*7,1*	*1,7*	*5,6*	−0,3	*2,2*	2,0
Subsidies to production	**13.903**	**14.670**	**13.641**	**14.194**	**14.471**	**14.332**	**14.619**	5,5	−7,0	4,1	2,0	−1,0	2,0
Social expenditure	**195.460**	**202.291**	**214.035**	**224.445**	**234.181**	**242.150**	**252.320**	3,5	5,8	4,9	4,3	3,4	**4,2**
Other current expenditure	**18.756**	**20.542**	**24.191**	**29.104**	**30.899**	**33.000**	**33.660**	9,5	17,8	20,3	6,2	6,8	2,0
Total current Expenditure Net Of Interest Payments	**437.325**	**462.223**	**484.785**	**512.502**	**530.856**	**546.982**	**569.349**	**5,7**	**4,9**	**5,7**	**3,6**	**3,0**	**4,1**
Interest payments	**75.333**	**79.570**	**72.547**	**69.275**	**68.434**	**69.500**	**70.000**	5,6	−8,8	−4,5	−1,2	1,6	0,7
Total Current Expenditure	**512.658**	**541.793**	**557.332**	**581.777**	**599.290**	**616.482**	**639.349**	**5,7**	**2,9**	**4,4**	**3,0**	**2,9**	**3,7**
Gross fixed investment	**15.281**	**32.459**	**35.052**	**36.910**	**39.382**	**35.078**	**35.780**	112,4	8,0	5,3	6,7	−10, 9	2,0
of which: revenues from securitizations and real estate sales (−)	*−1.029*	*−1.983*	*−11.003*	*−2.772*	−4.455	*−3.000*							
Subsidies to investments	**14.143**	**17.662**	**19.031**	**19.043**	**17.638**	**16.440**	**16.769**	24,9	7,8	0,1	−7,4	−6,8	2,0
Other capital spending	**2.147**	**5.302**	**5.571**	**5.239**	**2.997**	**(1)3.655**	**3.728**	146,9	5,1	−6,0	−42,8	22,0	2,0
Total Capital Spending	**30.542**	**53.440**	**48.651**	**58.420**	**55.562**	**55.173**	**56.276**	**75,0**	−9,0	**20,1**	−4,9	−0,7	**2,0**
Total Expenditure Net Of Interest Payments	**467.867**	**515.663**	**533.436**	**570.922**	**586.418**	**602.155**	**625.625**	**10,2**	**3,4**	**7,0**	**2,7**	**2,7**	**3,9**
Total Expenditure	**543.200**	**595.233**	**605.983**	**640.197**	**654.852**	**671.655**	**695.625**	**9,6**	**1,8**	**5,6**	**2,3**	**2,6**	**3,6**
Nominal GDP	*1.167.383*	*1.218.348*	*1.260.613*	*1.302.175*	*1.349.370*	*1.377.707*	*1.430.060*	**4,4**	**3,5**	**3,3**	**3,6**	**2,1**	**3,8**

Note: * provisional data.

Table 8.2 Italy, General Government Economic Account – Revenues

Revenues	Historical data and projections for 2005/2006										
	2000	2001	2002	2003	2004	2005 (*)	2001	2002	2003	2004	2005 (*)
	Billions of euro						*% change*				
Fiscal revenues	345.718	359.182	364.080	365.443	379.382	390.045	3,9	1,4	0,4	3,8	2,8
Direct taxes	170.547	182.690	178.964	178.098	184.175	187.605	7,1	−2, 0	−0, 5	3,4	1,9
Indirect taxes	175.171	176.492	185.116	187.345	195.207	202.440	0,8	4,9	1,2	4,2	3,7
Social contributions	148.083	153.819	161.241	168.899	174.756	181.132	3,9	4,8	4,7	3,5	3,6
Other current revenue	35.489	40.090	40.613	40.617	44.055	46.395	13,0	1,3	0,0	8,5	5,3
Total Current Revenue	**529.290**	**553.091**	**565.934**	**574.959**	**598.193**	**617.572**	**4,5**	**2,3**	**1,6**	**4,0**	**3,2**
Capital Account Revenue	**5.110**	**3.402**	**5.586**	**23.481**	**13.007**	**5.839**	**−33, 4**	**64,2**	**320,4**	**−44, 6**	**−55, 1**
of which: taxes in capital account	1.117	1.065	2.986	19.235	9.572	2.052	−4, 7	180,4	544,2	−50, 2	−78, 6
Total Revenues	**534.400**	**556.493**	**571.520**	**598.440**	**611.200**	**623.411**	**4,1**	**2,7**	**4,7**	**2,1**	**2,0**
Current Balance Net Of Interest	**91.965**	**90.868**	**81.149**	**62.457**	**67.337**	**70.590**					
Current Surplus (+) Deficit (−)	**16.632**	**11.298**	**8.602**	**−6.818**	**−1.097**	**1.090**					
Net Borrowing	**−8.800**	**−38.740**	**−34.463**	**−41.757**	**−43.652**	**−48.244**					
Primary Surplus	**66.533**	**40.830**	**38.084**	**27.518**	**24.782**	**21.256**					

Note: * Provisional data.

justify the above-mentioned increase, it's reasonable to believe that such expenditure items could be brought back to approximately the 2001 level, obviously taking into account inflation increases in order to guarantee, in real terms, the same amount spent in 2001. This would, in any case, consolidate the impressive increase that took place between 2000 and 2001, the final year of the last legislature when this aggregate jumped from 85 to 93 billion euro, with an increase of just below 10%. It's, then, safe to say that the availability of resources for intermediate consumption in 2006 could be limited to 103 billion euro with savings of 4 billion with respect to the 2006 expected expenditure and to 106 in 2007 with savings of 6–7 billion in 2007.

Moreover, if one wanted to return to the 2001 volume of expenditures, the government's efficiency in public purchases could be improved and inflation losses could be recovered through lower purchasing prices and more thorough controls on consumption: in this case, potential savings could even reach 14 billion euro in 2006 and approximately 20 billion in 2007. It's reasonable to expect that a responsible and shared choice in economic policy could lie between these two extreme values (4–7 billion in the least favourable hypothesis, 14–20 in the most advantageous one).

- **Current subsidies to production**

  This aggregate doesn't appear to have increased by a substantial amount but it represents, however, more than 14 billion euro a year.

  The details of this amount are presented in Table 8.3.

  This expenditure represents current subsidies to firms and is made up of 6 billion euro paid directly by the Central Government and almost 8 billion paid by Regions and other Local Governments.

  The 6 billion paid by the State is concentrated in two major items: 2 billion euro in subsidies go to firms and 3.2 billion to public service companies, more than half of which to State Railroads and Postal services. In substance, the citizen taxpayer is called upon to subsidize private and public productive activities in order to cover higher costs and/or allow consumers of the services to pay less. Are we really convinced that this redistribution of income has some social purpose? Why should a worker who earns 1000 euro net a month pay almost as much between taxes and contributions in order to subsidize the ticket of a person who rides the high-speed Eurostar train? Clearly, these transfers from the public budget do not concern investments in infrastructures but are simply subsidies to management costs.

  The 8 billion euro paid by regions and local governments go to subsidize (for approximately half the amount) local road, rail and sea transportation while the remaining half is indiscriminately spread out over a multitude of items. Here too, with regard to transport, one should ask himself whether or why it would be better to burden the contributor with taxes or let the consumer pay the ticket for the service that he utilizes.

The other major item of subsidies to production concerns agricultural subsidies. However, these, between the direct transfers from the State and those paid by regions and local governments have been notably reduced in recent years, dropping from approximately 1.6 billion to approximately 740 million euro. Nonetheless, sensible policies which have been enacted in Italian agricultural sector aimed at enhancing the value of Italian products, have defended the country legitimate national interests very well with respect to the European Union. They have championed Italian products, raising their quality and value added and have defended the national agricultural production so well that this sector has led the economy in the albeit modest economic growth Italy has recorded these years. And this has happened despite the reduction in subsidies, and thanks to more specifically aimed policies in terms of structural interventions and more well-defined in terms of objectives so that many more positive results have been achieved with fewer resources available.

In the other areas included in this aggregate, these savings in subsidies have not occurred and every year the same amount of resources have continued being provided. One can see, then, that if an analogous operation could be undertaken in the other areas as well, even if they are done gradually, the 14 billion euro in subsidies to production could be reduced. They could be more efficiently focused on, thus obtaining a reduction in spending, a greater contribution on the part of the people who directly use the services and, above all, through the direct stimulus of those who pay, a sharp improvement in the quantity and quality of the services all at the same time.

Just as an example, a 20% reduction in transfers would cut expenditures by almost *3 billion euro*. If the same effort as the one made in the agricultural compartment were made, expenditures could be reduced by 40% with savings of 6 billion euro.

- **Other current expenditures**

  It is not easy to understand what exactly is included in such an aggregated and generic expenditure item which, however, amounted to 31 billion euro in spending in 2004 and has increased by almost 13 billion since the year 2000 (see Table 8.4).

  Approximately 8 billion can be explained by various transfer accounts (+18 billion in amortizations, +16 in indirect taxes within the public administration, −26 in the production of marketable services) and more than 11 billion go to international aid, more than 4 billion to private social institutions and almost 6 billion to various transfers to, once again, families and firms. Now, since these items have increased by 88% from 2000 to 2005, one should conclude that it would be reasonable to maintain their level constant in the next years and avoid further increases. Additional savings could be obtained only if one brings these expenditures back to the 2001 values and increases them with

inflation: their amount would, thus, total 23 billion euro in 2006 with an additional further savings of 7 billion. For instance, even if one wants to maintain international aid unchanged, one would be able to reduce expenditures by between *3 and 5 billion euro*.

8.3 Expenditures in capital account

- **Subsidies (grants) to investments**

  In Italy, approximately 17 billion euro in subsidies are granted each year as sunk funds (see Table 8.6), half of which are directly paid by the State and half by Regions and Local Governments. Those paid by the Central Government are spread over various items, the largest of which are approximately 3 billion in tax credits, 1 billion in incentives to industrial firms, around 500 million to naval engineering and the shipping industry and a little less than 500 million for entrepreneurial activities by the young and Sviluppo Italia, a national state agency devoted to sustaining local growth.

  Of the approximately 5 billion euro of contributions to investments paid out by the regions, 1.8 billion are listed to promote the federal organization of the State, 1.2 billion go to depressed areas, 600 million for environmental clean-up and hydro-geological risks, 500 million for health facilities and 300 million to support public transport.

  Of the little less than 3 billion paid out by the other local government bodies, half is made up of funds for investments, around 500 million for the promotion of federalism and the rest goes to rapid mass transport, depressed areas etc.

  With regard to most of the items that make up this heavy spending flow one should ask how effective and efficient this form of contribution in sunk funds is in stimulating new investments and employment and, above all, in creating production activities which will last on the market, standing on their own feet.

  The partial transformation of these sunk funds into loans to be repaid even if at favourable rates is already underway. The introduction of fiscal incentives would allow immediate spending reductions, increasing the attractiveness of investments for those initiatives which are considered healthy and capable of staying on the market and making enough profits so that entrepreneurs can keep the incentives as reductions or total exemptions from taxes for a significant number of years. A gradual and partial application of this instrument could free *3 to 5 billion euro* in resources.

- **Other expenditures in capital account**

  As can be seen in Table 8.5, most of expenditures included under this heading refer to transfers granted to the State Railroads.

  Here we should recall that during the preceding legislature a consistent amount of resources, approximately 3–4 billion euro, granted to the State Railroads in capital account were used as a current account subsidy with the firm's commitment to find its own resources to devote to investments

in later years. The business results in those years should thus be seen in the prospective of this bookkeeping opportunity which was offered to the firm by previous governments. However, we should be expected to evaluate which industrial plan would be possible today in order to recover those sums and, accordingly, reduce the State subsidies or put the company in a position to be able to resort to the market for most of its financing. Here as well, the problem of the firm's efficiency should be dealt with and we should evaluate whether we should make the consumer or the taxpayer pay for the service.

In short, this analysis of the major expenditure items (excluding reductions in salaries, pensions and interest payments) could lead us to evaluate the resources spent in the past and those that are projected to be spent in the future according to today's trend projections. An evaluation of this kind could lead us to establish a range of hypotheses of containment going from a minimum of around 15 billion to a maximum of around 35 billion euro, i.e. from 1% to 3% of GDP. The savings that could thus be obtained could be used to contain the deficit and enhance growth by allocating the resources for investment spending and tax reductions for firms and households and become a powerful, more effective and efficient, growth propeller.

Table 8.3 Italy, Contributions to Production* (millions of euro)

	2001 14.670	**2002 13.641**	**2003 14.194**	**2004 14.471**
A) State Budget	**6.832**	**5.539**	**5.903**	**6.231**
Current transfers to firms	*1.610*	*1.657*	*2.345*	*2.004*
Transfers to public services companies	*4.328*	*3.247*	*2.423*	*3.251*
Transfers to AGEA	*1.099*	*301*	*791*	*278*
B) Regions and local Administrations	**7.429**	**7.746**	**7.874**	**7.935**
Regions	***5.757***	***6.003***	***6.045***	***6.053***
Education and the right to study	*129*	*148*	*116*	*116*
Professional training	*424*	*461*	*479*	*480*
Organization of the culture	*51*	*55*	*47*	*47*
Welfare	*83*	*82*	*95*	*95*
Health	*51*	*21*	*22*	*22*
Sport and leisure time	*2*	*50*	*61*	*61*
Agriculture and zootechny	*492*	*511*	*464*	*465*
Forests	*6*	*4*	*4*	*4*
Development of the mountain areas	*6*	*10*	*5*	*5*
Hunting and fishing	*11*	*18*	*14*	*14*
Public works	*1*	*3*	*2*	*2*
Aqueducts, sewerages etc.	*2*	*5*	*2*	*2*
Road network	*0*	*9*	*4*	*4*
Road transports	*2.029*	*2.024*	*2.297*	*2.300*
Railway transports	*1.619*	*1.558*	*1.622*	*1.624*

Table 8.3 (Continued)

	2001 **14.670**	**2002** **13.641**	**2003** **14.194**	**2004** **14.471**
Maritime transports	*323*	*422*	*288*	*288*
Air transports	*0*	*2*	*0*	*0*
Other transports	*34*	*121*	*132*	*132*
Craftsmanship	*38*	*36*	*31*	*31*
Tourism and hotel industry	*79*	*70*	*79*	*79*
Fairs, markets and domestic trade	*25*	*17*	*19*	*19*
Housing	*158*	*114*	*28*	*28*
Industry and sources of energy	*69*	*116*	*123*	*123*
Environmental protection	*81*	*81*	*85*	*85*
Scientific search	*6*	*1*	*1*	*1*
Other not attributed expenditures	*38*	*64*	*25*	*26*
Provinces	***500***	***476***	***519***	***522***
Agriculture	*21*	*22*	*17*	*17*
Industry, commerce and craftsmanship	*11*	*5*	*5*	*5*
Labour market	*21*	*14*	*18*	*18*
Education	*115*	*106*	*140*	*142*
Culture and cultural heritage	*9*	*6*	*4*	*4*
Tourism, sport and recreation	*30*	*33*	*38*	*38*
Transports	*271*	*264*	*259*	*260*
Management of the territory	*6*	*19*	*23*	*23*
Environmental protection	*10*	*6*	*9*	*9*
Social sector	*6*	*1*	*6*	*6*
Municipalities	***1.172***	***1.267***	***1.310***	***1.360***
Water sector	*58*	*37*	*24*	*43*
Transport sector	*839*	*949*	*956*	*976*
Electricity, gas and water	*43*	*43*	*51*	*53*
Milk production	*13*	*13*	*16*	*17*
Other sectors	*155*	*155*	*184*	*189*
Contribution to private schools	*64*	*70*	*79*	*82*

Note: * *The differences with respect to the total derive from a numerous series of micro contributions and compensations*

Table 8.4 Italy, Other Current Expenditures (millions of euro)

	2001 **20.542**	**2002** **24.191**	**2003** **29.104**	**2004** **30.899**
Amortizations	15.612	16.394	17.237	18.342
Indirect taxes	11.579	12.377	11.722	15.806
Gross operating surplus	146	81	239	172
Production of marketable services	−22.540	−22.849	−20.920	−25.562
Transfers to social private institutions	3.227	3.842	4.259	4.274
International aid	6.478	8.598	10.307	11.157
Various transfers to households and firms	5.435	5.080	5.506	5.844
Other current expenditures	605	668	754	866

Table 8.5 Italy, Other Expenditures in Capital Account (millions of euro)

	2001 5.302	2002 5.571	2003 5.239	2004 2.997
Of which: appropriation for State Railroads	3.615	4.078	3.934	2.665

Table 8.6 Italy, Contributions to Investments (millions of euro)

	2001 17.662	2002 19.031	2003 19.043	2004 17.638
Contributions to firms	**4.073**	**4.156**	**8.324**	**8.045**
Naval engineering and shipping industry	*779*	*629*	*557*	*469*
Contributions to transportation firms	*28*	*51*	*56*	*53*
Research development fund	*626*	*299*	*294*	*662*
IRI, ENI, EFIM for interest payments on EIB loans	*238*	*136*	*50*	*0*
Research development fund for depressed areas	*33*	*85*	*351*	*0*
Agricultural sector	*216*	*241*	*239*	*272*
FUS – cinematography and circus	*111*	*64*	*95*	*82*
Artigiancassa (the artisan's fund)	*98*	*100*	*15*	*150*
Firms operating in depressed areas	*377*	*64*	*98*	*174*
Incentives for industrial enterprises	*745*	*906*	*1.002*	*1.164*
Loans for the safeguard of Venice	*127*	*157*	*225*	*182*
Interventions for the freeway system	*0*	*0*	*256*	*189*
Loans for the railway systems	*23*	*48*	*228*	*169*
Youth entrepreneurship – Sviluppo Italia	*160*	*724*	*350*	*432*
Tax credits for investments and employment	*0*	*0*	*3.879*	*3.044*
Other	*510*	*653*	*629*	*1.003*
Public services companies	**501**	**595**	**699**	**660**
State Railroads under government licence	*327*	*294*	*438*	*345*
State Railroads	*4*	*3*	*12*	*71*
Enav (the civil air traffic control service)	*134*	*54*	*0*	*0*
Postal service	*1*	*241*	*241*	*241*
Management of lake navigation services	*34,6*	*3,7*	*8,43*	*2,65*
Regions	**6.365**	**5.791**	**5.892**	**4.984**
Health facilities	*198*	*341*	*611*	*509*
Upgrading health structures	*1*	*45*	*106*	*113*
Ordinary and special Statute regions: depressed areas	*1.548*	*732*	*636*	*1.233*
National Health fund	*54*	*0*	*77*	*70*
Environmental depollution plan and hydrogeological risks	*248*	*722*	*1.065*	*622*

Table 8.6 (Continued)

	2001 **17.662**	**2002** **19.031**	**2003** **19.043**	**2004** **17.638**
Free text books	*0*	*48*	*0*	*0*
Administrative federalism	*1.910*	*2.041*	*1.926*	*1.805*
Funds for regional development programs	*0*	*71*	*26*	*15*
Safeguard of Venice	*50*	*100*	*110*	*154*
Extraordinary contributions to Sicily and Calabria	*26*	*312*	*0*	*0*
Public transport contracts	*0*	*174*	*134*	*304*
Other regional transfers	*2.330*	*1.203*	*1.200*	*158*
Local administrations	**4.232**	**3.885**	**2.982**	**2.787**
Investment funds	*3.019*	*2.452*	*1.577*	*1.488*
Rapid mass transport	*91*	*117*	*204*	*158*
Funds for Rome the Capital	*35*	*57*	*59*	*87*
Local administrations: depressed areas	*137*	*307*	*329*	*168*
Naples and Palermo	*98*	*98*	*119*	*98*
Administrative federalism	*246*	*611*	*430*	*473*
Loans for sport credit	*0*	*94*	*90*	*148*
Fund for urban upgrading in municipalities	*0*	*0*	*0*	*7*
Other	*607*	*149*	*175*	*160*
Social security institutions	**1.862**	**1.115**	**968**	**1.066**
Employment fund – INPS	*1.405*	*1.115*	*788*	*1.052*
Fiscal relief for the Southern regions – INPS	*458*	*0*	*180*	*14*
Other	**628**	**3.489**	**178**	**96**

9

A Policy Mix to Re-Launch Growth under Conditions of Structural Equilibrium in Public Finance

The negative economic cycle that developed between 2004 and 2005 brought Italy down to a rate of growth of just above zero at the end of 2005. In the absence of economic policies, the Italian economy is expected to recover at rather moderate rates of growth during the next three years 2006–2008 (1.5% a year) and a bit faster (1.6%) in 2009. Under these conditions, with no interventions, net borrowing will settle well above 3% of GDP during the whole period. Other projections that were made during the second half of 2005 by several economic research institutes show an even more modest recovery with growth at approximately 1% in 2006. Accordingly, the outlook for the public deficit and the consequent financial imbalance will even be worse.

With regard to the financial adjustment process, a plan to be implemented in successive steps has already been defined with the European authorities to cut the trend-projected deficit by 0.8% of GDP in both 2006 and 2007 on the basis of a projected GDP growth rate of 1.5%. If we limit our efforts to mere cuts in expenditures or increases in taxes for such amounts, the depressive effect on the economy would be such that even the trend-projected 1.5% growth rate would be hampered. Interventions aimed at increasing investments by approximately 0.5% of GDP could, instead, offset the negative impact on the economy produced by the deficit cuts and allow the Italian economy to reach the same planned growth objective of 1.5%, with the advantage, however, of containing the deficit with respect to the projected trend.

This rate of growth would be, however, "programmed" to remain lower than the one expected, on average, for continental Europe (France and Germany), notably lower than the one expected for Atlantic Europe (near 3% in recent years and with the same perspectives for future years) and far away from the growth rates expected for the United States, let alone the stratospheric growth rates posted by the Asian countries.

This would be, therefore, an unbalanced policy that would be too much in line with the so-called "rigoristic" viewpoint which would provide only modest resources towards the objective of enhancing economic growth.

One should then ask whether there is enough room to provide greater support to economic recovery and if so, how to take advantage of it.

A hypothesis, which is objectively risky, would be to devote all our efforts to enhancing development and, then, appraise to which extent and how long it would take for a growth rate superior than the trend rate of 1.5% to positively affect the public deficit adjustment. A negative side effect of this hypothesis would be that an important sign showing that we are committed to controlling the public deficit would not be given either to the European Union or, above all, to financial markets. Therefore, there is the risk that European authorities would not agree with it and, above all, that interest rate differentials would emerge that could put an additional burden on the public budget and hamper the process of reviving the economy right from the start.

In contrast, a more reasonable hypothesis which aims at giving an important indication of the will to contain the deficit and make the effort to enhance development more vigorous would be based on a firm and courageous action aimed at containing current expenditures which would free resources of at least 25–30 billion euro. Five or six billion euro in investments by public companies financed through the market and, therefore, without any additional burden on the public budget should be added. In this case, a stronger impulse to recovery would indeed allow us to achieve an even more solid equilibrium in public accounts.

In the preceding chapter 7 an analysis of the major public expenditure items was briefly presented and an attempt was made to point out where room for containment could be found. It is evident that the greater the reductions in expenditures that one wishes to make, the greater the corporative and partisan resistances that one must face. But the potential to seriously revive the economy would also be greater: it should be expressed directly with supply-side policies and through greater investments and, from the demand side, by sustaining household consumption and business activities through well-aimed fiscal reductions which should, however, be macro economically effective and micro economically perceived by households and businesses.

Based on the analyses and policy lines indicated in previous chapters 1–5 and on the size of expenditure reductions singled out in chapter 7, it is possible to appraise through econometric simulations the impact on growth and financial equilibrium of a 25–30 billion euro manoeuvre of the kind previously indicated. It is a manoeuvre of about 2–2.5% of GDP, an amount which is, therefore, large in size but which is certainly feasible without inducing any biblical cataclysm.

Synthetically, the macroeconomic amounts of the overall manoeuvre to be implemented could be articulated in the followings terms:

- The containment of current expenditures (a ceiling on expenditure increases, cuts in the purchases of goods and services, the transformation of sunk funds into diversified tax reductions as previously indicated, etc.) for approximately 2–2.5 percentage points of GDP, one third of which is destined to go towards deficit reduction (0.8% of GDP) and two-thirds towards enhancing development.
- Two-thirds of the manoeuvre aimed at enhancing development could be articulated on two fronts:
  - 0.4% of GDP could be directed towards increasing investments (infrastructures, research, innovation, professional training) for about 6 billion euro. Another 6 billion euro of investments from public companies to be financed on the market (and, therefore, out of budget) could be added which would give new life to industrial, energy and infrastructural policies. The total push in investments could then approach one percentage point of GDP.
  - 1% of GDP could be destined for tax reductions divided between interventions on IRAP, the regional value-added tax and IRE, the personal income tax. With regard to IRAP, the exemption threshold could be raised to 15,000 euro which would mean that approximately 3 million additional firms would see their fiscal burden zeroed and the tax could be reduced as the ratio between exports and total gross sales increases in order to sustain competitiveness. With regard to IRE, the family coefficient and/or deductions for dependent family members could be introduced.

Under these conditions, as an indication and with the appropriate caution required when considering these kinds of econometric exercises, it can be estimated that:

- The manoeuvre would determine an increase in GDP growth of approximately 0.6–0.7% a year with respect to the trend estimate, with growth nearing 3% in the final year of the simulation period without any impact on inflation.
- The public deficit would be contained with respect to trend projections as arranged with our European partners, remaining just above 3% during the first two years but dropping below 3% in the third year. Moreover, the current surplus would definitely be better. The total deficit would be all due, therefore, to investments which, beginning from the third year, would, to a notable extent, be self-financed through higher revenues obtained from stronger growth.

- The suggested manoeuvre would take place, therefore, fully respecting the New Stability Pact (extra deficits would be contained in size and short in duration). Furthermore, Italian public finance would be in a more solid position than what the Golden Rule establishes (instead of a zero current account deficit, one would even have a surplus at the end of the period which would cover, to a large extent, investment spending).

There is no doubt that implementing a manoeuvre of this kind would mean taking coherent and courageous economic policy decisions.

In Table 9.1 and in Figures 9.1 and 9.2 different hypotheses are compared.

Once that national responsibilities are fulfilled, then, one could rightfully point out that, if this manoeuvre is accompanied by an euro-dollar exchange rate that goes from 1.30 at the beginning of the period to 1.00 from the third year on, through a wiser and more aware monetary policy on behalf of the ECB:

- The rate of growth could even be higher. Indeed, a domestic growth-enhancing manoeuvre accompanied by accommodating exchange rate policies could boost economic recovery by more than 1% a year during the whole period.
- The public deficit would remain above 3% only for one year and would drop below 3% as early as the second year. Moreover, a strongly virtuous situation would be determined in which the current surplus would even be higher so that it would allow us to permanently finance almost one third of total public investments: that is, the annual borrowing requirement would equal only two-thirds of the same total investments (the Italian economic system would be like a firm which finances one third of its investments with profits and the other two-thirds through borrowing).
- In this case, whereas a national virtuous manoeuvre was associated with virtuous European monetary and exchange rate policies, Italian public finance would not only respect the New Stability Pact (overshooting the 3% ceiling only in the first year), but it would even more structurally and permanently consolidate the conditions of its financial equilibrium with an even stronger current surplus and an even more solid primary surplus.

Table 9.1 Italy – simulation results

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Trend GDP	**1,8**	**0,4**	**0,3**	**1,2**	**0**	**1,5**	**1,5**	**1,5**	**1,6**
Planned GDP (with a €15 billion manoeuvre, 2/3 in deficit cuts,1/3 for growth-enhancing policies)	**1,8**	**0,4**	**0,3**	**1,2**	**0**	**1,5**	**1,5**	**1,7**	**1,8**
Planned GDP (with a €25/30 billion manoeuvre, 1/3 in deficit cuts, 2/3 for growth-enhancing policies)	**1,8**	**0,4**	**0,3**	**1,2**	**0**	**1,8**	**2,0**	**2,4**	**2,7**
Planned GDP (€/$ rate returning to parity in 2007, with a €25/30 billion manoeuvre, 1/3 in deficit cuts, 2/3 for growth-enhancing policies)	**1,8**	**0,4**	**0,3**	**1,2**	**0**	**2,1**	**2,4**	**2,7**	**3,0**
Deficit/GDP, trend	**3,2**	**2,7**	**3,2**	**3,2**	**4,3**	**4,6**	**3,6**	**3,7**	**3,1**
Planned deficit/GDP (with a €15 billion manoeuvre, 2/3 in deficit cuts,1/3 for growth-enhancing policies)	**3,2**	**2,7**	**3,2**	**3,2**	**4,3**	**3,8**	**2,8**	**2,1**	**1,5**
Planned deficit/GDP (with a €25/30 billion manoeuvre, 1/3 in deficit cuts, 2/3 for growth-enhancing policies)	**3,2**	**2,7**	**3,2**	**3,2**	**4,3**	**3,8**	**3,2**	**2,7**	**2,4**
Planned deficit/GDP (€/$ rate returning to parity in 2007, with a €25/30 billion manoeuvre, 1/3 in deficit cuts, 2/3 for growth-enhancing policies)	**3,2**	**2,7**	**3,2**	**3,2**	**4,3**	**3,6**	**2,9**	**2,3**	**1,8**

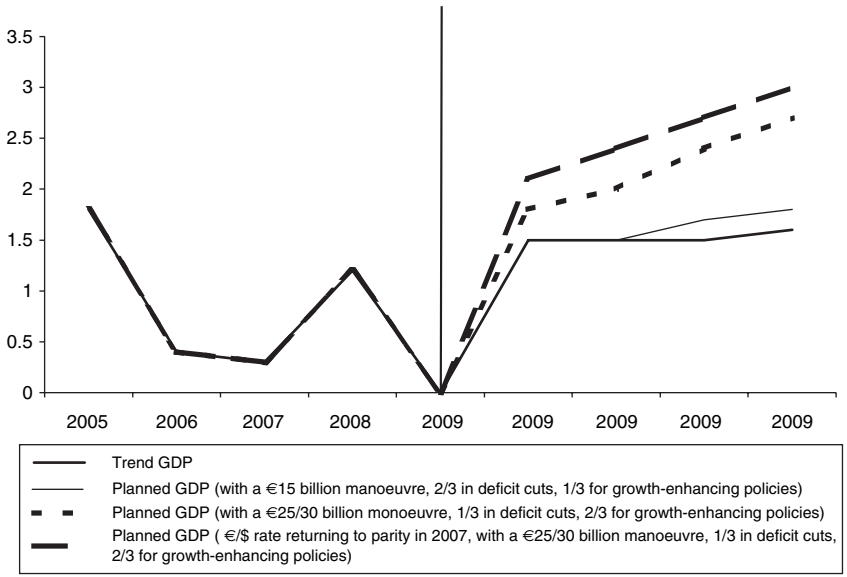

Figure 9.1 Italy, GDP growth rates

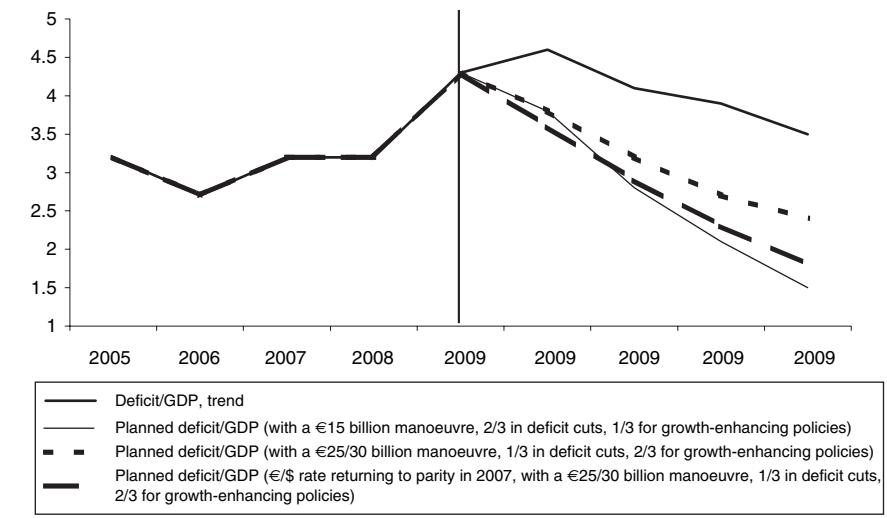

Figure 9.2 Italy, deficit/GDP(%)

10
A Strategy of Structural Policies for Competitiveness and Growth

The macroeconomic results obtained in the previous chapter show that more sustained growth is, certainly, not only desirable and necessary to keep pace with the most dynamic areas of Europe and, above all, the rest of the world, but is also possible. Moreover, biblical cataclysms in economic and social policies would not be called for. Instead, clear political choices would enable the country to increase growth through the most efficient and effective allocation of resources.

In this final chapter, therefore, we would like to make our contribution to the political and economic debate by formulating guidelines towards an economic-industrial policy strategy aimed at improving the supply side of the Italian economic system. These should permit the country as a whole and local individual economic and productive entities to improve medium-to-long-term competitiveness and growth potential.

As previously stated, in fact, macroeconomic policies and structural reforms, that is, microeconomic policies that affect supply's potential, are not an alternative, but are, instead, synergic. They must, in fact, be carried out together and nourish each other. Sustained macroeconomic growth would make important structural reforms possible while the removal of heavy structural constraints would contribute in sustaining and strengthening macroeconomic development.

With the issues and arguments raised in the sections that follow, we do not, certainly, intend to provide a complete and exhaustive picture of all the necessary structural reforms. We only wish to present these elements as points for analysis in this debate. We are convinced that a serious and sometimes strong confrontation would help in better understanding the problems and direct policy-makers, despite their different political positions, toward a common goal. Thus, a clear definition of choices could be made and, above all, reforms could be implemented which would avoid radical opposition based on merely ideological grounds which, although apparently enhancing people's identity and historical and cultural roots, don't help much to solve their daily problems and improve firms' growth prospects.

10.1 Infrastructures and industrial policies

10.1.1 Infrastructures

After the important works which made up "Legge obiettivo" were defined across the entire national territory, and in accordance with general guidelines agreed upon with all Italian regions, the concrete implementation of these guidelines began more than two years ago. The result was the strong growth in public investments which increased with respect to their historical low during the last legislatures when the realization of public works was compressed to as little as 2% of GDP.

Further commitment is now required to strengthen such efforts by selecting intervention priorities according to the following guidelines:

- A careful selection of projects (8–10) and the appropriation of resources for roads, highways, railroads, ports, airports, logistic platforms, water systems, telecommunication networks, electric energy and gas, guaranteeing access parity to all sector operators.
- Definition of investment operations for the great public companies or companies which are still under public control: ANAS, RFI, Trenitalia, Set, ENI, ENEL, Finmeccanica, etc.
- Since increasing emphasis on controlling public expenditures is forcing all governments to look for alternative financing options to public budget resources, at the international level, a gradual shift from public to private financing of infrastructures can be observed. An approach where "whoever uses it pays for it" is becoming increasingly accepted (as opposed to the previous "the community pays for it with taxes or by creating national debt"), and the role of the State is gradually evolving from being the direct provider of services to that of being the regulation authority.

  All this has brought about an increasing diffusion of the project financing instrument in Italy. However, instruments such as sectorial investment funds are still absent in Italy. These, in tandem with the *general contractors* (which themselves have the task of completing the work with the contribution of project financing), constitute a promotional group which is not only interested in the initial construction phase but is also interested in managing the project afterwards.
- Italy is strongly penalized for seriously lagging behind in the sector of integrated logistics, which, today, unfortunately, makes up only a small part of Italy's GDP. Moreover, the various "networks" don't cooperate with each other and, up to now, they lack coordination. A special Council on logistics has been established within the Infrastructures and Transport Ministry. To accomplish this need, the very important Pact for Logistics was signed in 2005 and approved by approximately 40 entrepreneurial

and social associations. It is now time to proceed with concrete implementation. The other significant needed intervention should be for "sea highways".

An important line of action can consist in strengthening the working group on Intermodal Centres, aimed at the development of a first integrated logistics company (FS, ANAS, Highways, etc.) which could also become the operational tool used to sustain a policy of promoting overall logistics in the whole country.

Another important project is the one aimed at connecting, through the implementation of an operations company, the Gioia Tauro and Taranto ports by railway, since these ports are the commercial gateways between Europe and Asia.

In this sector, an important idea would be to transform the working group on Intermodal Centers into the "CIPE Commission on Logistics", in order to implement logistics projects included in the decree on competitiveness, which would assign a decision-maker role to CIPE in this area in accordance with the Pact on Logistics.

By managing this instrument, and using the operational company, many occasions can be created for initiatives of great importance and innovation, creating industrial policy and contributing to improving the country/system's productivity.

10.1.2 A policy of public purchases and contracts aimed at creating quotas in favour of small and medium-sized firms

The European Directive on public contracts, soon to be integrated into Italian national laws, provides the possibility of creating centralized purchasing agencies for goods and services, in keeping with an already-existing institutional trend.

The adoption of data processing and communication technologies helps to develop such centralized agencies, the fixed costs of which are better amortized due to the large size of the departments themselves. This explains why such entities play a dominant role in intermediate purchases.

This is also the reason, however, why in the various European countries where centralized purchasing agencies have developed, small and medium-sized firms find it difficult to participate and compete in big tenders.

Although central contractors have equipped themselves with tools to facilitate small and medium-sized firms' access to purchasing (through the establishment of numerous lots, by RTI and by forbidding sub-contracts among large companies, through the establishment of a *market-place* for purchases below the required threshold by lowering the sales turnover threshold, etc.), the problem is still not sufficiently resolved so that it is politically accepted by small efficient firms. A possibility could be to create quotas for public purchases by small and medium-sized firms. Thanks to the *Small Business*

Administration Act (SBA Act), the United States follows such a policy by putting aside a minimum of 15% of purchases for small firms with an objective of reaching a 23% quota (40% if sub-contracts are taken into account).

Nevertheless, the European Directive, in keeping with the Treaty, does not agree to set aside quotas, replying that the principles of non-discrimination and equality in accessing public demand must have priority and rigorously follows the GPA (Government Procurement Agreement) regulations. These were signed by a limited number of countries belonging to the WTO, among them Canada, the United States, the European Union and Japan. It must be noticed, however, that the United States, although adhering to the international agreement on purchases by the public administration (GPA), doesn't allow this agreement to be applied to the quotas reserved for small firms as established by their Small Business Administration Act.

It is opportune, therefore, to take advantage of the ongoing current revision of the GPA by asking, under the reciprocity clause, that the European Union be exempted, which would allow for the adoption of quotas similar to those applied in America for the awarding of contracts to small firms.

The change of the GPA is underway and the decisions will be ratified by the European Parliament. The negotiating mandate sent to the competent European Commissioner should be, therefore, revised and finalized to this end.

Many member states, among them the new countries that recently entered the Union which are now strongly penalized in public purchases by competition from the great European and American firms, could be in favour of this position. More support would certainly come from the developing countries and the trade associations of the European Union.

It's not only a question of asking for reciprocity with respect to the United States, but it is, above all, sustaining the need for a Small Business Act similar to the American one within the European Union.

It is necessary to make Italy's adoption of the European directive efficient. In the first months of 2006, Italy will have to adopt regulations on public contracts consistent with the new European Directive. Denmark has already approved the new regulation and other countries are about to follow.

The Directive provides a number of instruments in order to make contracts in Europe more efficient and it is up to the State to integrate them into national regulations. It is necessary, in particular, to carefully verify the mechanisms that will eventually be adopted regarding centralized purchasing agencies.

10.1.3 Trade relations between Europe and China: a "give and take" policy

Access to public contracts by European Union businesses should become an integral part of our trade policy with China.

The tensions created by the opening of the European textile market to China frighten the Chinese themselves who must reply with well-aimed specific adjustments in order not to excessively irritate the Europeans.

Along with a correct negotiation on the textile issue, therefore, the Commission is continuing its discussions with the Chinese government regarding the opening of their market of public purchases and contracts to foreigners. At the moment, in fact, contracts in China are only awarded to Chinese firms and, only if Chinese contractors are not found, are foreign firms asked to come in, generally equally divided between the United States and Europe.

It is clear that asking to provide our firms with a greater quota of public contracts would surely have positive repercussions on our economic system.

10.1.4 Energy

Our country's strategic positioning on energy is strongly imbalanced in favour of hydrocarbons, with constraints regarding transport fixed infrastructures, nearly totally dependent on primary resources from abroad, as well as strongly dependent on electric energy production from abroad. All this determines higher costs with respect to other European countries and greater risks in terms of continuity for these provisions, not to mention the geo-political risks involved.

A strategic action for structural repositioning according to the guidelines described below is, therefore, urgently needed. The enormous change that has occurred in the international framework following Asia's strong entrance into the energy markets must be taken into consideration. China, in particular, has switched in a very short time from having been an oil exporting country to becoming a country whose current oil requirement is double its domestic production (8 million barrels a day of consumption as compared to 4 of production).

In order for Italy to have a more solid, certain and less costly energy position, a strategy must be undertaken which can be articulated in the following lines of action:

- The diversification of sources towards gas and coal in line with new international supply networks.
- Starting the construction of 6 or 7 new electric power plants for at least 8/10 thousand MWs (also taking into consideration the co-generation and thermo-exploitation of waste). In regulatory terms, it is necessary to quickly overcome the local conflicts that hinder the construction of new energy infrastructures and provide investors with certainties regarding all new public and private and works that must be built. The environmental compensation currently being provided does not seem sufficient to resolve local conflicts and vetoes. It may be worthwhile to introduce more stringent reward and sanction mechanisms on a regional level, in order to obtain more responsible choices at a local level.

- Again, with regard to regulation, it is opportune to remove the obstacles preventing the entry of new energy producers, favouring the creation of district networks fuelled by autonomous generators and connected to the national network. Such districts would allow firms and citizens of the interested areas to benefit from competitive tariffs since the latter would be released from the traditional production-transmission-distribution type mechanism, from which a situation of seemingly irremovable rents is created.
- Strengthening international networks aimed at quickly reducing transportation capacity constraints which, up to now, have prevented domestic liberalization to produce true competition. These constraints have translated into risks of blackouts and high costs per kilowatt/hour which heavily penalize the competitiveness of our production system.

  An independent operator could be created (it could even be the SNAM RETE Gas) which owns and manages the transport and stockage infrastructures and could be designated to perform, in the interest of the country, important infrastructural works for gas transport, even outside national boundaries (with a different temporal horizon than the single operators). This way, a competitive continental Mediterranean hub could be constituted, which could compete with the northern European ones.

  In the medium term, the creation of a plurality of import infrastructures as an alternative to the existing ones should be stimulated. Such infrastructures could take the form of downright alternative gas pipelines or re-gasification terminals (which would make supplies more flexible and less dependent on other countries' willingness and ability to furnish them once we allow the transport of raw materials by sea). The operators involved on this type of projects should be: the municipalized firms, large firms or the consortia of small and medium-sized firms and the big foreign operators (like, for instance, BP in Brindisi, Endesa and Amga at the Livorno offshore terminal).

  It is also opportune to introduce further measures favouring new investments in exploration, research and the safe exploitation of national resources, by, in particular, intervening to shorten the bureaucratic authorization process.
- What is stated above is necessary but not sufficient. Even if they are more efficient, thermoelectric power stations will continue to use fuels which, for the most part, will originate outside Italy. Thus, our energy deficit will continue to increase.

Italy's dependence on energy is steadily above 80% and increasing, as compared to a European average of 54%; among the largest countries France's is about 50%, Germany is 60% while the United Kingdom's net energy balance is positive by 10%.

A true reduction in energy costs could only be obtained by radically revising past energy policy choices and, therefore, by reconsidering the

decision on nuclear power. The authorization given to our producers to acquire foreign nuclear power plants goes in this direction. Confronting the nuclear issue without ideological prejudices would mean the reopening of existing nuclear power plants, obviously after having updated their technology, the construction of new plants by initially acquiring them from abroad and by, therefore, re-aggregating and developing national competences.

The creation of a nuclear pole is, therefore, needed (Ansaldo nucleare and Sogin) with the purpose of maintaining and strengthening important technical and scientific Italian know-how which should be directed at developing a strategic sector. This could be similar to the one on de-commissioning in Italy and abroad and would join ENEL in both the management and the modernization of foreign nuclear acquisitions and re-introduce nuclear energy as one of the energy options in our country.

10.1.5 Industrial policy and public companies

In order to consolidate the existing productive structure and develop innovative sectors we are obliged to:

- Pursue stricter services integration with the purpose of increasing total factor productivity.
- Consolidate and develop medium-sized firms by providing them with the necessary assistance in internationalization processes.
- In light of the strategic role that public companies (ENI, ENEL, Railroads, Postal services, Finmeccanica, etc.) play in determining industrial policy (energy, transports and logistics, defence, high technology) and which determines the basic conditions for the country's general growth, it is necessary that the Government takes its full responsibility in directing their strategies. To this aim, it is necessary to clearly define: *management*'s role and responsibilities, the forms of *governance* (with the purpose of guaranteeing their independence without overlapping or confusing of roles and responsibilities, but avoiding self-referential risks), the role and the responsibility of public administration managers in charge of their control.
- Introduce new incentives to favour the growth of small and medium-sized firms even with tax reductions which would favour international concentration and integration processes.
- Within the water sector, our modest cost recovery capability is not sufficient to attract private capital. Private companies' interests in these projects comes, therefore, after the investment, which completely depends on public finances, has already been made. The result is that even service management remains within the public sector and often requires even further current account transfers. The result of this is that project financing is currently under utilized. Therefore, even in this case it appears crucial to reorganize the system through a mechanism which,

fully respecting equity criteria, would define how much of the cost should be paid by the consumer and how much should be paid by the taxpayer.

Analogous evaluations should also be made with regard to the problem of waste disposal and local public transport. With regard to the latter, however, Law 211/92 should be adequately re-financed. It has provided an important push to structural investment to the advantage of local administrations.

10.1.6 Research, innovation, education and university

In order to promote and sustain research and technological innovation with the necessary synergies and with the school and university system it is necessary to:

- Make the two revolving funds quickly operational, one for technological innovation and the other for research.
- Introduce fiscal incentives for juridical subjects that participate in the risk capital of companies whose social objective is predominantly directed toward research activities, as well as remove taxes on patent-releasing procedures.
- Identify and finance postgraduate university high profile training programmes, by also introducing fiscal incentives for companies that contribute in financing the same institutions.
- Include the Italian Institute of Technology in the network of research centres coordinated by CNR and assign suitable resources to the CNR itself on the base of specific projects.
- Integrate the entire professional training network ranging from the technical-scientific faculty level to the level of secondary school technical institutes, as well as the part of the training to be held in the workplace with firms and category associations.
- Form experimental centers by creating a structure aimed at sustaining technological innovation and professional upgrading for small and medium-sized firms. The existing experimental centers which are present in certain industrial districts are no longer adequate to play a supporting role for small and medium-sized firms which are, instead, necessary supports in today's increasingly competitive international environment. Suitable structures endowed with the necessary flexibility must, therefore, be organized in order to answer the specific demands of every system of small and medium-sized firms in relation to the specific sector, with regard to both products and production processes. The structure's activities should be predominantly geared towards innovation, assure both the availability of certain technological services and the constant updating of knowledge regarding these professional areas (permanent formation). The goal of these activities should be to develop closer relationships between firms and the academic environment in order to define needs for the

solution of which research centres should, then, be involved, with regard to innovation, in particular.

10.1.7 Labour, unemployment subsidies and protections, pension funds

In order to implement effective support during the worker's active life and at the moment of his retirement, it is necessary to:

- Define measures that facilitate credit access for firms, after moving the TFR (severance pay or retirement bonus) into pension funds, and/or evaluation of the proposal that would allow the sale of one's credit for the utilization of the TFR transferred into the pension funds. These measures would prevent firms from being penalized with respect to the current situation and allow this provision to be extended to public employment as well.
- For employed workers that temporarily lose their job, the support provided should focus on training and should discourage prolonged unemployment. Unemployment subsidies should be, therefore, granted in exchange for a commitment to participate in re-training and re-qualification programmes.
- It is necessary to sustain the pension programmes of temporary and discontinuous workers. This intervention must be quickly made since it meets the urgent need of millions of people, above all the young, who are currently being deprived of social security. In the case of short periods of inactivity (up to 3 months), it is necessary to resort to notional contributions to cover such periods. These could be partly financed by general taxation and/or paid for by the worker himself (for instance, with a loan guaranteed by the state to be repaid, without interest, during his working life).
- In addition, it is necessary to facilitate the reunification of all contributions paid during different periods performing different jobs (self-employment, dependent employment, collaborations), in order to prevent flexibility from becoming precariousness.

10.2 Fiscal reform, households' purchasing power and firms' competitiveness

For too many decades, the Italian tax system has been strong with the weak and weak with the strong. For too many decades citizens have, in effect, seen themselves divided into "evaders or harassed taxpayers". Thus, a fiscal reform aimed at both re-launching development and becoming a primary and transparent instrument of income redistribution and social equity must be based on a structure capable of fighting evasion. To this aim, it is important to introduce into the fiscal system positive conflicts of interests between those

who pay and those who receive by allowing taxpayers to purchase goods and/or services through specifically-aimed deductibility schemes which, by taking advantage of those healthy conflicts of interest, would produce "fewer evaders and fewer harassed taxpayers". The positive example represented in recent years by the deductions for building renovation can and must be, therefore, extended to other areas and sectors.

At the macroeconomic level, fiscal reform must aim at reducing overall fiscal pressure which would follow the containment of current public expenditures. The purpose is to improve firms' budgets in order for them to use their additional resources in investments, innovation, internationalization and greater market competitiveness and improve household budgets to structurally sustain higher consumption, which would be further strengthened by higher participation rates and employment, above all among the young and the women.

In addition to the macroeconomic impact of re-launching development, the fiscal lever must aim at increasing social justice recognizing the family as a juridical entity and bearing this in mind in considering the entire taxation structure. Thus, the most numerous families could be favoured as well as the one-income ones, those in which children or elderly are present and those in which the disabled or the poor and needy are present.

Therefore, here are the elements to be considered in planning a coherent and general reform of the fiscal system:

- A decisive fight against tax evasion through the widespread introduction in all types of taxes of the conflict of interest principle between who buys and who sells. To achieve this, it is necessary to extend the fiscal deductions for costs and services, even by initially introducing overall annual ceilings.
- A reduction of IRAP (the regional tax on value added) until zeroing it to comply with the European Union's objections and have an immediate effect on firms' competitiveness. It should begin with the elimination of social contributions and TFR (severance and retirement pay) transfers from the taxable base linking reductions to a firm's share of exports to total sales.
- Supporting household consumption, with a socially-aimed objective. In order to achieve this goal, the so-called family quotient should be introduced into the fiscal system in order to determine a household's global income on which a reduced tax rate should be applied. In particular, overall family income should be divided by the number of its components and a progressive rate should then be applied to the obtained amount. Such a mechanism would produce positive effects especially on middle and middle-high income earners, since tax scaling would be limited. For this reason, the same effect must be obtained for low-income holders through deductions for both the number of family components and those

unable to pay, through direct transfers of the type provided as family allowance to be extended to all components. The norm should be implemented in accordance with available resources and priority should be given only to families with lower overall income or, alternatively, by increasing deductions for the number of family components.

10.3 The Mezzogiorno: old brake or new engine

The new strategy defined in most recent years for the development of the South includes specific policies aimed at increasing the infrastructural endowment and sustaining the creation and development of production systems and districts, also through the revision of the system of incentives for economic development.

Specific projects must, therefore, be selected and resources for infrastructures, water networks, energy networks must be allocated.

In addition, it is necessary to guarantee the attainment of the spending targets set by the government and the parliament by destining at least 30% of the expenditures in capital account for the South. The expenditures of the big public companies, first of all the railroads, ANAS and the Italian postal service should also be included.

Actions must be taken on both the national and the regional policy level.

At the national level, it is necessary to fully implement the policies provided by already approved legislative provisions and, in particular, it is necessary to:

- Accelerate and strengthen the effectiveness of the National Revolving Fund by activating the already established 6 billion financial appropriation.
- Guarantee an efficient application of the reform of the incentives also through publicizing Law 488.
- Start implementing research projects.
- Introduce diversified taxation by reducing tax rates (even zeroing it for a certain number of years) on IRE, IRES and social contributions and perhaps starting by zeroing IRAP. Reductions should obviously concern, in full respect for European Union's rules and, therefore, within the Equivalent Net Subsidy criteria, only income resulting from new investments and employment. In order to create jobs in the above-mentioned areas, a tax credit mechanism for new hires could be introduced aimed at increasing employment with respect to past years' averages.
- Define the work of the Committee for Development (Comitato per lo Sviluppo) set up by CIPE at the end of 2005 on the basis of the preceding budget law, according to specific and well-aimed strategic objectives, in order to finalize the interventions of southern districts and strategic productive sectors.

- Direct the work of the committee to promote the attractiveness of investments, which was also instituted by CIPE at the end of 2005, aiming also at implementing localized contracts.
- Guarantee the adequate financial resources to re-launch the programme aimed at accelerating infrastructural strategic works, by defining priority interventions which should also be based on their effective progress.
- Define Sviluppo Italia's role and task in implementing the South's industrial policy.

10.4 The efficiency of public administration and the valorization of public assets

The scarce efficiency of the Public Administration constitutes one of the country's structural limits. It is necessary, therefore, to modernize procedures, motivate, involve and enhance public employees responsibility for their on the job performance, introduce new technologies and the organizational structures best suited to exploit them.

The first objective is the possibility to have access, in real time, to the information relative to all public expenditure flows on both the central government and the local level. This can be done in a short time by immediately extending the SIOPE system to local government bodies, developed to monitor the general government's payments, which is now almost ready to cover all central government's operations. Along with this, the CUP (the system assigning a unique code for a project) must be generalized in order to monitor all investments by controlling them through the MIP (the system for monitoring public investments).

The exact knowledge of expenditure flows constitutes an element of clarity and transparency (it is, indeed, a "public good" for all without any political distinction) in addition of being the necessary foundation towards the proper functioning of a control authority on public expenditures. This should be linked to the objective of measuring productivity in the public administration. It would allow the concrete re-launching of efficiency objectives, innovation and productivity in the public administration, by establishing the specific annual improvement objectives to be pursued. Above all, it would provide the possibility of measuring their concrete implementation.

Computerization is obviously the fundamental factor in public administration innovation. In order to achieve it, some concrete objectives can be indicated:

- Eliminate, starting immediately, the obligation to produce certificates, by introducing the obligation for public offices to pass the relative information to one another. This provision alone, of great communicative impact, would give a strong boost to the reorganization of public bodies, forcing them to "talk to each other" and act as a system.

- Oblige the public administration to communicate, on request, with citizens and enterprises, by computerized communication systems, through the intermediation of the postal service. This as a first significant step toward the objective of completely eliminating the drafting and, especially, filing of documents. In order to achieve this, it is opportune that the postal service prepare a specific project for upgrading its services.
- Implement the merger between SOGEI and CONSIP (the data processing branch) and, thus, create a service-providing company which could become a highly-efficient agency providing services to the entire public administration (also in collaboration with the computerized services provided by INPS, INAIL and POSTE S.p.A.).
- Implement the generalized and computerized control of pharmaceutical consumption through the optical scanning of prescriptions, which would also provide notable financial savings in terms of fraud repression and prevention.

Finally, an impulse to the innovation and efficiency of the public administration could come from an extended utilization of public and private partnership in all fields: both in public works and services, as contractual partnerships (in particular, with reference to project financing to be preferred in financing operations) and institutional partnership (mixed management companies, urban development companies, companies for the exploitation of state properties and assets).

A further important objective to be pursued is the exploitation of the enormous Italian public assets in order to, on the one hand, increase its profitability even by resorting to private management and, on the other, to achieve the objective of accelerating the reduction of the national debt. For instance, the management of museum, archaeological and environmental sites could be either public or private or both; public concessions regarding the immense state-owned maritime assets could last a very long period of time rather than the short periods established today or property can even be transferred. Real estate sales must also be resumed through the utilization of the real estate fund which became operational with the approval of the relative law decree in 2004.

Appendix to Part III: The Italian Plan to Match the Lisbon Strategy

1. Lisbon Strategy

The Heads of State and Government of the European Union, meeting in March 2000 in Lisbon, launched the objective of making Europe "the most competitive and dynamic knowledge-based economy in the world" by 2010. Since then the various measures being implemented to achieve that objective have been called the "Lisbon Strategy". At the halfway point, the European economy has not progressed, but has actually deteriorated.

The difficulties – in terms of growth, jobs and innovation – are now blatantly obvious, particularly in the three main euro-zone economies: France, Germany and Italy. And this has been clearly evidenced in the opinion polls conducted in the last year by Eurobarometer. These polls have shown that there are two main issues heading the concerns of Europe's citizens: employment and the state of the economy. The widespread perception that there are no convincing responses to the economic difficulties and the well-founded related concerns in public opinion, are fuelling a lack of confidence in the Community institutions and in national governments. This lack of trust was clearly expressed in the French and the Netherlands referendums, which turned down the constitutional treaty. Europe is therefore caught in a twin crisis: economic and political. But since the former very largely determines the latter, relaunching economic growth and employment also means re-launching political integration.

2. The re-launching

Considering the disappointing performance since 2000, the Heads of State and Government of the European Union decided in 2005 to re-launch the Lisbon Strategy, focusing it around two key objectives: economic growth and employment.

At the 16–17 June 2005 European Council they approved the Integrated Guidelines for Growth and Jobs (2005–2008).

On the basis of these general guidelines each Member State was required to draw up a Three-year National Plan for Growth and Employment (2005–2008) by no later than 15 October 2005, setting out the reforms and the other measures of national competence to approach the Lisbon Strategy targets.

The European Commission submitted its own Community Plan for Growth and Employment on 20 July 2005, setting out the actions falling within the Union's competence, complementing those set out in the National Programmes, and converging on the same targets as the Lisbon Strategy.

As from 2006, the Member States will prepare an annual autumn progress report on implementing the National Growth and Jobs Plans. The European Commission will analyse them and summarize them in a Lisbon Strategy progress report on implementation throughout the European Union to be published a few months later in January the following year. On the basis of these reports the Commission can make proposals to the Council for any amendments needed to the Integrated Guidelines for Growth and Employment.

Because of the short time elapsing between the presentation of the national plans in October 2005 and the first European Union Lisbon Strategy Report in January 2006, the Commission merely commented on the reforms that had just been undertaken in the various Member States. The first real, substantial progress report on the implementation of the Lisbon Strategy in the European Union is scheduled for January 2007.

In 2008, the process will begin again from the beginning, with the presentation of new Integrated Guidelines, new National Plans, a new Community plan, followed by national and Community reports on progress implementing the reforms, but this time they will apply to the following three-year period.

The first six of the 24 guidelines relate to microeconomic policies to be pursued in the framework of the constraints imposed by the Monetary Union and the Stability Pact; a second group of 10 comprise the microeconomic measures to foster competitiveness, innovation and sustainable resource-use; a third group of eight measures are to foster full employment.

The guidelines provide the basic structure for the drafting of the National Growth and Employment Plans. But each Member State is completely free to set their own priorities, consistently with their national situations.

At all events, the national plans must be drawn up after wide-ranging consultations with their Parliaments, social partners and local and regional governments.

The European Commission are sending a high-level delegation to every Member State to assist with both the drafting and the consultations. The meetings in Italy took place on 19–21 July 2005.

Each Member State has been invited to appoint an official to take responsibility for their National Growth and Employment Plan.

3. Italy's plan to re-launch the European Lisbon Strategy (Plan for Innovation, Growth and Employment)

Introduction and peculiar features of the Italian economy

In 2000, the European Council of Lisbon identified as the basis for the European Union's growth strategy the need to build the most advanced

knowledge-based society, and gave its member states the task of implementing this target in full by the year 2010. Halfway through the process, the European Councils held in March and June 2005 expressed dissatisfaction with the results hitherto achieved, and decided to re-launch the Lisbon Strategy, finalizing procedures for its execution, and involving the European Commission more closely in pursuit of its goals. In the instructions provided by the Council, member states were asked to submit their own National Reform Programme, bearing in mind both the peculiar economic and social features of their nation and the 24 guidelines laid down by the EU governing bodies. Italy has drawn up its own programme on this basis, grafting new decisions capable of advancing the boundaries of knowledge and technology onto the work already carried out in implementation of the Lisbon Strategy.

The Italian economy reflects a high proportion of traditional manufacturing by small, family-run companies which are vulnerable to competition in terms of prices. Particularly high quality products, often referred to as "Made in Italy", are also vulnerable to unfair competition in the shape of imitations.

The country also reflects marked dualisms between regions and sectors.

Moreover, Italian civil society is distinguished by its methods of meeting social provision requirements, which impact significantly on the structure of the state's finances and the activity of private enterprise, the latter of which is already burdened by the cost involved in complying with excessive regulation currently in force.

3.1 The political, economic and social framework facing Italy in implementing the Lisbon Strategy

In drawing up the national action plan for Italy, we have taken as our starting-point the re-launch philosophy described in documents COM (2005) 160, 24, 193 and 622/2, issued successively in the period between January and April 2005. The aspects deemed to be essential are listed below as a kind of "decalogue", in order to facilitate comprehension of the method we have followed, the choices we have made in terms of priorities, and the initiatives proposed with regard to regulatory measures and investment projects:

1) The political nature of the national and Commission documents implementing re-launch of the Lisbon Strategy (COM 622/2, p. 3).
2) Clarification of the respective responsibilities of the member states and the Commission; establishing partnership between member states and the Commission; and confirmation of the Commission's role as programme facilitator (*ibid*., pp. 2 and 6).
3) Simplification of the European agenda, which is already overburdened with initiatives (COM 24, p. 4), and merging of the Cardiff agenda and the national employment action plan into the Lisbon Plan (COM 622/2, p. 4).

4) Making up for lost time by keeping the promises that have been made, building on the reforms already underway, launching new initiatives which facilitate the achievement of goals (e.g. 1% more GDP growth each year), and bringing together ambitions, resources and good ideas (COM 24, pp. 4, 5 and 6).
5) Description of the political and social-economic backdrop against which national strategy is located (COM 622/2, p. 3).
6) Raising awareness among citizens by opening up public debate (*ibid.*, p. 6).
7) Indication of the contribution to be made by social partners and their responsibilities (*ibid.*, p. 4).
8) Bringing together the interests of both the young and old populations (COM 24, p. 4).
9) Setting national goals for R&D and employment (COM 622/2, p. 7).
10) Compliance with macro-economic stability conditions (COM 24, p. 6).

Italy's response to re-launch of the Lisbon strategy originates from an awareness of the vital need to regain competitiveness through innovation, and also from the constraints brought about by the peculiar characteristics of the Italian economy and its socio-political organizational structure compared with those of other member states.

These characteristics have been identified as:

- The vulnerability to global price competition of traditional national products, such as textiles, clothing, footwear, wood/furniture/household products, light mechanical engineering, and agricultural/industrial products, which are manufactured by small, family-run companies, and the vulnerability of "Made in Italy" products to unfair competition, especially in the form of imitations.
- The marked disparities in terms of productivity, or dualisms, at the regional level, chiefly between Northern and Southern Italy, and between sectors, i.e. industry on the one hand and the primary and tertiary sectors on the other.
- The methods of meeting social provision requirements, which impact on the formation of state finances and the activity of private enterprise, the latter of which is already burdened by excessive regulation.

The *first characteristic* – the small size of family-run firms and "Made in Italy" products – raises the customary problems, familiar in both the literature on the subject and in practice, regarding the significance of applying the same indicators to profoundly different situations. A typical case in this regard involves the percentage of a country's GDP earmarked for R&D spending, one of the key indicators of the Lisbon Strategy. How meaningful this indicator is depends on the technological frontier on which the country in question is located or intends to locate itself. In this regard it is necessary to

avoid falling into one of the most typical "economic heresies", namely the fallacy of composition: what is good for one country is not necessarily good for all.

A country such as Italy, whose specialization in terms of production is as we have described, does not necessarily require R&D spending of the same magnitude as a country heavily committed to more advanced technological sectors. Rather, what it needs is an organizational structure, in terms of regulatory framework and corporate services, which is able to apply the new technologies to its own productive processes. To this end, the research carried out in respect of "technological" fabrics and materials, advanced light mechanical engineering applications, and improvements obtainable in the food and agricultural industries without jeopardizing quality, is highly significant. Innovation in these sectors may prove more expensive or less expensive: the knowledge we have acquired so far does not enable us to say one way or the other. Statistics show a wide range of percentages for such expenditure, which in technical terms leads to an abnormal distribution of frequencies, and makes averages less meaningful. The Italian Plan notes the desire expressed in official documents to seek to evaluate national proposals and results on the basis of indicators that take into account differences in the economic structure concerned.

The *second characteristic* – regional and sector dualisms – has been the subject of positive intervention from the European Union. However, Italian dualisms, understood in the orthodox sense of structural disparities in productivity terms, require not merely special treatment, but also careful attention from the Commission itself. For reasons of major political significance, a single currency has deliberately been instituted in an area which does not possess the optimal characteristics for such a currency. Accordingly, the dualisms tend to be accentuated by asymmetric effects of shocks deriving from a variety of causes. The numerous initiatives aimed at harmonizing common market regulatory treatment have proved useful, but not always effective in terms of their adaptability to different regions or sectors. Some community actions, such as the cohesion policies, were very important in removing the causes of dualisms and ought to be reinforced, whereas other actions do not go beyond compensating for the effects of such disparities, and hence in fact perpetuate inefficiencies.

The dualisms originate from the cultural and professional level of the workforce, from the backwardness of capital in terms of technology, from the inadequacy of tangible and intangible infrastructure, from regulation and administrative practices, and from economic dysfunction. To combat dualisms by seeking to compensate for the disadvantages merely encourages businessmen to devote themselves to political and administrative relations in order to go on receiving funding or to secure new funds, rather than specializing in new productive combinations and product innovations that would enable them to compete on the world market.

The *third characteristic* – the methods for meeting social provision requirements – involves greater difficulties in terms of introducing social reforms, especially to the healthcare and pension systems, and extending market competition. The European Union has played a positive role in raising awareness of the need to move towards reform, by pursuing from the outset an idea of the liberal state within the limits of social considerations summarized in economic terms as the "social market". Defence of the level of social provision hitherto achieved is possible only if there is a strong desire for joint action on the part of member states (which incidentally is one of the foundations of the Lisbon Strategy re-launch), with regard to the functioning of the market, by attributing increased importance to it, as required by the current process of globalization.

If this goal is to be met, it is necessary to work on the cultural and communications front too, rather than merely imposing external restrictions or assigning scores to the actions of individual member states. Such restrictions have had a positive impact on Italy, but the majority of the incentive to reform and economic growth which they can provide has now been exhausted.

In line with the report issued by the Commission to the European Parliament and European Council (COM (2005), pp. 330ff), the Plan assumes that the mission for re-launch of the Lisbon Strategy is to provide "a message of confidence and determination", i.e. regaining EU citizens' trust by presenting them with clear plans and demonstrating commitment to implement them.

The Italian Plan, named PICO after one of the most important protagonists of the Renaissance, the philosopher Pico della Mirandola, is an acronym for *Piano per l'Innovazione, la Crescita e l'Occupazione* (Plan for Innovation, Growth and Employment). It has been developed with the mission of rebuilding confidence and demonstrating determination in the pursuit of growth and employment, by bringing together ambitions, resources and good ideas as we were mandated to do, and making explicit appraisal of the progress deemed to be feasible.

PICO seeks to graft new measures and projects onto what has already been achieved or is currently being implemented, in order to stimulate competitiveness, research and innovation, education and training of human capital, regional and social cohesion, and protection of the environment. The choices that have been made in this regard are listed below.

Under the terms of the original Lisbon Agreement, responsibility for implementation of the Plan rested entirely with member states, while under the new "re-launch philosophy" the responsibility has in part shifted to the Union itself, against a backdrop of increased sharing. As has already proved to be the case with the single currency, and to a lesser extent with the member states' finances, the principle of "subsidiarity" has come into play with respect to policies for growth and employment. This principle was embraced in the European Treaties as the basis for sharing responsibilities

between member states and EU bodies. Member states have recognized that on their own, they are unable to reach the objective identified at Lisbon, and each of them has asked the others and the Commission to join with it in seeking to institute a new drive towards innovation, growth in real terms and employment, in order to benefit from the synergies created jointly.

3.2 Priorities chosen by Italy from among the 24 guidelines laid down by the European Council, and the mechanism for funding them

Extensive consultation with social partners and work carried out in preparation of the Plan have confirmed the need and desire to create a knowledge-based society. Five priorities have been highlighted, constituting a summarized version of the 24 guidelines assigned for the re-launch of the Lisbon Strategy:

- Extending the area of free choice for citizens and companies (GL 3, 10, 12, 13, 14, 15, 21, 22).
- Granting incentives for scientific research and technological innovation (GL 7, 8).
- Strengthening education and training of human capital, and extending the relative benefits thereof to the rest of the population, especially to young people (GL 9, 18, 19, 20, 23, 24).
- Upgrading tangible and intangible infrastructure (GL 16).
- Protecting the environment (GL 11).

The numbers of the guidelines summarized in each goal are given in brackets above, as instructed in the European Council Presidency Conclusions issued on 16–17 June 2005 (10255/05).

The above priorities will be pursued via action impacting on the economic system as a whole, on a number of sectors, and also on less developed regions.

Recovery of the Italian state's budget deficit and finances for the 2006–2008 three-year period, in accordance with the economic and financial planning document (DPEF, or "Documento di programmazione economica e finanziaria") submitted to the Italian parliament on 16 July 2005, is considered to be an integral part of implementing the Plan (GL 1, 2, 4, 5, 6), as is action to implement the European cohesion policy and the related regional domestic policy (GL 17).

Our document therefore fully incorporates the guidelines laid down when the Lisbon Strategy was re-launched.

Public funds made available for the purposes of the Plan have already in part been set aside in the budget until 2005 and the 2006–2008 period, which were subject to agreement at European level in order to bring the Italian deficit back within the Maastricht criteria. Some of the envisaged initiatives benefit from additional funding deriving from the Community cohesion

policy. For the additional part of the Plan, expenditure equivalent to approx. 1% of GDP for the three-year period is anticipated, which will derive from the disposal of state-owned real estate assets. Overall, then, a total of 46bn will be available for the 2005–2008 period under the PICO Plan.

3.3 Regulatory measures and investment projects to foster development of a knowledge-based society, via:

3.3.1 Extending the area of free choice for citizens and companies

Following extensive consultation and preparatory work by the Technical committee with the help of the special Task Force operating at the Presidency of the Council of Ministers, three main categories of action have been identified in pursuing the first priority, namely: extending the scope of market competition, strengthening the production base, and improving legislation.

Action to be taken via generally applicable measures:

To promote extension of the area of the competitive market and improve legislation consists of:

- Introducing more wide-ranging *deregulation of supply in the service sector*, in line with the principles and decisions currently being finalized at European level.
- Establishing transparent and objective *criteria for determining regulated prices*, and *extending the range of free prices* where the market is competitive.
- *Completing the liberalization of markets*, reflecting indications provided by the antitrust and sector authorities.
- *Placing citizens and companies at the centre of all public administration*, seeking to make the latter more "human" (human governance).
- *Introducing a policy to simplify and improve regulation ("better regulation") which*:
    - Draws on a political-level task-force to interface with the system of regions, autonomous bodies, and social partners, equipped with efficient technical support in order to strengthen the multi-disciplinarity of the competencies at work, by drawing on legal, economic and statistical methodologies to provide new momentum in implementing regulatory action proposed by sector authorities, and assessing the impact this will have on companies and citizens.
    - Sets as its objective to reduce the weight of existing regulation, by codifying laws and regulations according to organic sectors, and to simplify bureaucratic procedures in order to reduce the burden on companies and citizens, and to bring up to speed quality instruments for future regulation. A "law-cutting" decree will be approved, Regulatory Impact Analysis will be finalized, guidelines will be drawn up for consulting

with the targets of regulation, and surveys will be launched to improve the quality of regulation.

- *Improving the efficiency of the Italian public administration*, taking as a reference the Code for digital administration (Italian Legislative Decree 82/05) and the Public connectivity system (Italian Legislative Decree 42/05), via:
  - Reform of the administrative procedure, with particular reference to identification of "tacit assent" and "start of activity notification" mechanisms, strengthening "single counters", developing e-procurement and e-government systems, standardizing the most important national public databases and interoperability systems for citizens and companies, and outsourcing management of services that can be produced on the market (the "towards streamlined government" project).
  - Introducing reward mechanisms to improve spending capability and its quality in order to make use of the most updated practices to make the Italian public administration more efficient; sharing a culture of measurement, evaluation and appraisal; introduction of instruments of vertical cooperation between central and regional government administrations.
- *Introducing a law to prevent fraud* on European rules, reflecting indications from the Italian finance police ("Guardia di Finanza") based on experience gained in carrying out their activities.
- *Strengthening the office of High Commissioner in the fight against imitations*.
- Enabling *security action in the commercial sector* to be pursued, with regional investment programmes to upgrade and reinforce security systems and equipment in small and medium-size companies.

To strengthen the production base consists of:

- *Reforming the system of incentives* pursuant to Italian Law 80/05, with the transition from capital subsidies to a system which hinges on risk-taking by banks. This should make the incentives more effective, improve relations between banks and companies, and allow efforts to be concentrated on the sectors of research, innovation and environmental protection.
- Setting up an *enterprise relaunch fund* to promote new investment, and encourage e-commerce in the textiles, clothing, footwear and food/agriculture industries.
- Rationalizing, coordinating and updating market-oriented *venture capital* instruments.
- *Improving companies' patent capabilities and protection* via:
  - Strengthening the Italian Patents and brands Office, cancelling the patent concession tax, and transferring the activity of checking the degree of innovation involved in patents to the European patents' office.

  - Setting up a fund to cover patent expenditure in the individual countries in the event of the respective EU directive not being approved; provision for more rapid, incisive resolution clauses in the event of patent theft or counterfeit.
  - Unifying the revolving SIMEST funds, finalizing the range of subsidies available to small enterprises to encourage the planning, prototyping, engineering, testing and patenting of new products and models, earmarking a share of the funds to grant subsidiaries to companies in order to study and unlock value from patents commissioned from universities and non-profit making public and private research institutions.
  - Reform of the product labelling system.
- Reflecting new *EU regulations regarding aid to companies for innovation* (CE regulation 364/04).

These initiatives are in addition to measures which the Italian parliament has already approved and the Italian government has already launched or is in the process of enacting, such as:

- *Reform of Italian bankruptcy law*, seen by national and international players as a hindrance to the expansion of foreign investment in Italy. The framework legislative decree was approved by the Council of Ministers on 23 September 2005.
- *Reform of the labour market* (Italian Legislative Decree 276/03) to increase the employment rate, enacting proxy-law no. 30/03 (the so-called "Biagi Law") which instituted the National Labour Exchange, created the conditions for an effective system for bringing together supply and demand of labour, and introduced contractual instruments which can be adapted to meet the needs of both workers and companies.
- Measures aimed at *simplifying regulations*:
  - Action regarding the quality of regulation, regulatory re-organization and codification (Italian law 299/03); updating and streamlining measures in connection with company registers (Italian Presidential Decree 581/95).
  - Reform of the institutions of "tacit assent" and "start of activity notification" (Italian Law 15/05).
  - Action aimed at streamlining regulation in the energy sector (L. 239/04).
  - Introducing stable co-ordination of responsibilities in the area of tourism (Italian Law 80/05) and reform of national tourist legislation (Italian Law 135/01), containing *inter alia* measures regarding the development of local tourism systems on an inter- or supra-regional scale.

- Drawing up consolidated laws or special codes in the areas of dispossession orders for reasons of public utility (Italian Presidential Decree 327/01), construction (Italian Presidential Decree 380/01), industrial property (Italian Legislative Decree 30/05), electronic communications (Italian Legislative Decree 259/03) and insurance (as approved by the Council of Ministers in September 2005), with the introduction of direct indemnities in the area of third party liability.
- Various forms of action aimed at reforming the administrative procedure and streamlining the public administration (Italian Laws 15/05, 145/02, 137/02, 76/00, 241/90, Italian Legislative Decrees 165/01 and 56/00).

Under the terms of the Plan, such action is to be complemented by projects which, according to the criteria indicated, are deemed to be able to create external economies for consumers of intermediate and final goods, such as:

- *A special task force for the training of civil servants*, with the aim of implementing all action required to achieve reform consistent with the objectives of Lisbon, and relaunch the Italian public administration's potential in terms of competitiveness. The purpose is creating a coherent system of training, giving priority to: modernization of the public administration, and simplifying bureaucracy in line with the principles of human governance; defining and managing local development policies; developing public communication units and services; broadening the range of instruments and technologies applied to growth of human resources.
- A *programme to strengthen public administration training* in Southern Italy (CIPE resolution 36/02).
- Approval of a *single incentives code*.
- Definition and introduction of mechanisms to *strengthen citizens' and companies' security* in the fight against crime.
- *Creation of digital districts in Southern Italy* in the textile and agricultural/food industries.
- *Development, consolidation and networking of the 24 technological districts already launched or about to be launched*, thus extending the experience of Italian industrial districts to sectors with high-tech content or potentially innovative sectors, involving regional authorities, local bodies, firms, universities and research centres.
- *The ICT project to foster regional excellence*, which is subdivided into 10 regional plans to make the fabric of local production more competitive internationally.
- *Setting up of an orientation and legal aid desk* to protect "Made in Italy" products.
- Incentives towards *integrated water resource management in Southern Italy* (AS 3533 Senate).

Amounts to be set aside to implement measures and projects come to 2, 139.8m, 817m of which has already been provided in the budget, and 1, 322.8m of which is to be charged to the new method of funding identified, without impacting on the state's finances in 2006–2008 as agreed at European level.

3.3.2 Incentives for scientific research and technological innovation

Technology transfer is one of the most important tools for achieving economic growth in the long term. The basis for achieving this is increasing awareness of the importance of digital technologies and their use for innovation in terms of process and product. This is particularly true for the Italian economy, given its productive structure, and more specifically for smaller-sized companies.

Despite the fact that it is one of the fundamental aspects of innovation, research on its own is not sufficient if the networks of relations and cooperation between universities, laboratories and companies are not also renewed.

To address these needs, the 2005–2007 National Research Programme (NRP) has been drawn up and will act as the point of reference for all initiatives to be promoted. General measures reflected in the Plan consist of:

Reorganizing the national research system:

- *Adapting the mission and organizational structure of the public research system* to the new European context, in order to help it take its place on the world stage.
- *Redefining the system whereby ordinary university funding is allocated*, basing it on results achieved in terms of teaching assessment and research activity.
- *Implementing the National Space Programme* drawn up by the Italian Space Agency ASI ("Agenzia spaziale italiana"), aimed at advancing knowledge, developing technologies and building the innovation capacity of SMEs operating in the environmental, telecoms, transport and healthcare sectors.

Granting research and development spending incentives via:

- *Extension of subsidies in respect of R&D spending* (Italian Law 326/03), by deducting a share of such expenditure from corporate income tax.
- *Introducing measures to reverse the brain drain*, e.g.:
    - Granting tax breaks for researchers returning to Italy, abolishing IRAP, or Italian regional production tax, on costs incurred by companies for this purpose, and limiting IRPEF to 10% of income.

  - Part of the provision for universities' ordinary funding will be earmarked for executing contracts with foreigners or Italians abroad, with a view to bringing specific research projects to Italy (Italian Ministerial Decree 18/05).

- *Bringing forward the pay increase for university researchers* (Italian Law 43/05).
- *Granting tax breaks for labour costs in respect of staff involved in R&D*, abolishing IRAP entirely and definitively (2005 budget law).
- *Mobilizing reduced rate loans granted by the EIB in support of large-scale R&D projects*. Italy was the recipient of the first EIB loan, which was granted for the purpose of developing the Trieste synchrotron.

Encouraging innovation and technology transfer via:

- *Strengthening Industrial liaison offices (ILOs)* as interconnecting structures between universities and the productive system in respect of research and innovation requirements, in order to facilitate the transfer of technology.
- *Refinancing and rationalizing the Technological Innovation Fund*, and setting up a *Fund for investment in risk capital of high-tech enterprises*.
- Action to *support industrial innovation* aimed at facilitating the development of smaller-sized companies towards becoming high value-added organizations, via the strengthening of the network of technological transfer to companies involved in RIDITT ("Rete per la Diffusione dell'Innovazione e il Trasferimento Tecnologico alle imprese", the Italian network for innovation and transfer of technology to companies) and industrial districts, *inter alia* by involving regional governments.
- *Developing a methodology for technology ratings* which is shared by companies, the research world, and banking and financial institutions, for the purpose of evaluating the creditworthiness of intangible assets with technological content.
- *Strengthening the Italian Institute of Technology* (IIT) in order to develop research projects able to produce technological innovation. Scientific programmes have already been launched in the neuroscience, nanobiotechnologies and robotics segments.
- *Establishing an innovation forum* between the main ICT industries operating in Italy, with the aim of facilitating the incorporation of ICT technologies into the country's production and consumption processes.
- Setting up a *single certification body* of laboratories and companies to replace the three currently in existence.

These measures would complement others such as:

- *Implementation of European sector-wide technology platforms (ETPs)*, the objective of which is to create partnerships between the worlds of research

and finance/business, institutions and civil society at sector level (e.g. for the textiles, clothing, footwear, electronics, logistics, shipbuilding, precision mechanical engineering, nanotechnologies and automotive industries), with a view to reducing the technology gap between Europe and its main world competitors.
- *Implementation of Italian initiative technology platforms*. These are private organizations, which draw on the economic support of the Italian national and European Community public authorities to identify R&D programmes to support improving competition in different sectors, encouraging cooperation between the various public and private players at different geographical levels.
- *Memoranda of understanding* for research programmes with non-Italian partners of particular strategic or political importance, which provide for reciprocal commitments, including of a financial nature.

Alongside these general measures, the Plan provides for the following projects:

- *Twelve strategic research programmes* (ten of which were identified by the 2005–2007 National Research Programme, and two of which were added under CIPE resolution approved on 15 July 2005), which make provision for coordinated initiatives between the public and industrial systems, *inter alia* in conjunction with industrially-advanced countries, and targeting specific strategic areas. Under Italian Ministerial Decree 1621/05, applications are invited for ideas and projects in respect of twelve different areas: 1) healthcare; 2) pharmaceutical; 3) biomedical; 4) advanced manufacturing systems; 5) automotive; 6) shipbuilding and aeronautics; 7) advanced materials (ceramics); 8) telecommunications; 9) food and agriculture; 10) transport and advanced logistics; 11) ICT and electronic components; 12) energy saving and micro-generation.
- *Twelve "dedicated" laboratories for Southern Italy*, to create synergies between universities and companies in promoting innovation and technological transfer in: 1) advanced medical diagnostics; 2) high-temperature thermal solar energy; 3) advanced production systems; 4) e-business, with applications in the food and agriculture, tourism, cultural heritage and new product segments; 5) bio-technologies, to identify new anti-infection drugs; 6) genomics applied to improving and certifying vegetal species of specific, major economic interest; 7) polymer-based materials of interest to the electronics industry with a view to production of new chips; 8) bio-informatics applied to genomics; 9) new materials and new planning methods for the railway sector and medium-sized carriers; 10) effectiveness of drugs on humans and on animals; 11) open source of software; 12) analysis of the terrestrial crust with a view to mitigating seismic risks and exploiting subterranean fluids.

- *Strengthening the public-private laboratories already operating in Central and Northern Italy*, in sectors such as defence, advanced materials, tissue engineering and bio-informatics.
- *Advanced ophthalmological research* for the application of a substance defined as the "growth factor for nerve cells" in illnesses involving the ophthalmic apparatus. Italian researchers have a leading role in the international working group already active in this area.
- *Initiatives of strategic relevance having technological or social implications*:
  - Implementation of high technology security systems for improved control of Italian national airspace and updating surveillance systems.
  - Activity in the aerospace sector, the refinancing of Italian Laws 808/85, 140/99 and 388/00 to promote implementation of investment projects with extensive ability to cross-fertilize throughout the economic system.
  - Taking part in the FREMM frigate project, a joint Italian-French programme to build new multi-use anti-submarine frigates.
  - Taking part in the Eurofighter helicopter project, a joint Italian/UK/German/Spanish programme to build and produce advance specification fighter aircraft.
  - Support for the development plan in the naval/mechanical engineering sector to renew the industry on a technological, organizational, and equipment level.
- *Basic research* on healthcare, ICT and nano-sciences and other subjects proposed by companies pursuant to CIPE resolution dated 27 May 2005.

Amounts set aside to implement the above measures and projects total 9, 324.9m, 5, 236.6m of which has already been provided in the budget, and 4, 088.3m of which is to be charged to the method of financing previously identified, without impacting on the state's finances for the 2006–2008 period as agreed at a European level.

3.3.3 Strengthening education and training of human capital and extending its benefits to the rest of the population, with particular reference to young people

The importance of empowering human capital via education and training, widely advocated *inter alia* by experts and social partners, finds ample expression in the Plan. Initiatives already launched which can legitimately be linked entirely to the Lisbon Strategy, and new initiatives more directly the result thereof, aim to train citizens so they can take their place in a knowledge-based society.

The reform of school and university cycles is to be distinguished above all by the quality of training offered, the flexibility and degree of choice available in study programmes, the ability to adapt to changing socio-economic requirements, a major recovery of values, and greater openness

to the country's needs. The reform also offers support for ongoing teacher training and improvement of the technological facilities available for schools and universities.

- *Reform of the education and vocational training system* (Italian Law 53/03) has been completed in so far as regards infant school and first-grade primary and secondary education, whereas the process of approving reform at second-grade secondary school level is still underway.

The reform aims to:

  - Improve the quality of the school system by overhauling *curricula*, instituting a programme for teacher training, and introducing a national assessment system.
  - Enhance inclusion by recognizing a minimum of twelve years' schooling as a right and duty for all, rather than ten years, as is currently the case.
  - Provide better guidance for young people in their cultural and educational choices, give them the best chance of success in academic and vocational terms and encourage their integration into society by 1) introducing new teaching methods (in view of the school-work arrangement) and new courses of educational and vocational training; and 2) preventing disturbance factors and early school-leaving.
  - Improve relations with the workplace through innovation in the secondary education cycles and by creating two different options of equal value and standing: high schools (*licei*), with revised areas of specialization, and vocational training, with the possibility of transfer.

- *Reform of the university system* (Italian Ministerial Decree 509/99) with a view to:

  - Making the system more productive, increasing the ratio between those who enrol at university and those who graduate, and reducing the length of degree courses and drop-out rates.
  - Tailoring higher education more closely to the needs and requirements of the labour market.

  In line with the inter-governmental commitments included in the Bologna process, the reform provides for university courses to be subdivided into single-cycle specialist degree courses and three-year degree courses plus two-year specialist degrees, and PhD programmes. Figures for 2004 already show a 33% increase in the number of students graduating compared with 2001; and the drop-out rate had fallen by 6% after the first year. The average time taken for graduates to find their first job has also been cut.

A wide-ranging action plan has been devised to support these reforms' objectives. For the education and professional training systems, this will involve:

- *Improving the quality of teacher training*, by updating programmes involving new technologies, organizational innovation contemplated by the reform, scientific culture, foreign languages and preferential rates for buying PCs.
- Funding *school training projects in areas with high risk of dispersion and strong immigration processes*.
- Introduce *innovative teaching methods* into schools and universities, featuring digital content and technology platforms (e-inclusion project).
- *Activating inclusion and integration projects* in respect of education, training and employment for the weakest individuals in society.
- Implementing a *national school and training orientation system*, and in general to implement support action to complement the pursuit of quality in different training options.
- Improving *teaching* vis-à-vis *students with disabilities*, making it easier for them to gain access to IT resources (Italian Law 4/04).
- *Guaranteeing lifelong learning* in order to develop core skills and promote social inclusion, *inter alia* for immigrants: over 23,000 courses were launched in 2004/2005 (including online) via permanent adult education local centres, in which 450,000 students took part, 116,000 of whom were not of Italian origin. Action already implemented in this regard will be complemented by one-off measures to empower the network of services between local centres and secondary schools.
- *Guaranteeing adult education* between the ages of 20 and 29 years (EDA 2010 project).
- *Creating technology training poles* aimed at relaunching competitiveness in sectors undergoing crisis and at encouraging technology transfer, based at multi-functional centres bringing together schools and training institutions, local entities, the local productive system and centres for scientific and technological research.
- *Reducing the digital divide* by implementing an IT literacy plan via the media and an internet training course programme for regions in Southern Italy.

For the university system, action envisaged comprises:

- *Strengthening the network of top-level training*, PhD programmes at high-class scientific research poles, and experimental senior school initiatives launched at university level.
- *Action in support of science degrees* (Italian Law 170/03 and Interministerial Decree 262/04), with a view to increasing the numbers of students enrolling and graduating in science subjects, via redefinition of classes of science degree, and planning new first-level courses closely related to the requirements of the labour market.

- *Empowering the right to study*, by building accommodation for 16,000 students and increasing the guarantee fund for trustee loans and loans for deserving students from less well-off backgrounds.
- Empowering *support activities for guidance, tutoring and integrated training* to improve students' chances of success both in educational terms and of finding employment, reducing the length of degree courses and cutting the drop-out rate.
- Action to set up a *Euro-Mediterranean Higher Education Area* (the so-called "Catania process"), by developing centres of excellence for teaching and research, the Euro-Mediterranean university distance-learning system, and promoting mobility of teachers and students throughout the Mediterranean region.
- Empowering support for *university internationalization programmes*, which contemplate mobility of students, teachers, Ph.D candidates and research grant-holders.
- Overhauling the mechanisms for *recruiting teaching and research staff*, to make selection more rigorous and recruitment more flexible, to reduce the average age of teaching staff and to hire more teachers for priority areas for the growth of the country, e.g. ICT, bio-engineering, robotics, nano-technologies, and bio-sciences.

Amounts set aside to implement the measures and projects described above total 1, 557m, 1, 149.8m of which has already been provided in the budget, and 407.2m of which is to be charged to the method of financing previously identified without impacting on the state finances for the 2006–2008 period as agreed at European level.

3.3.4 Upgrading tangible and intangible infrastructure

Considerable progress has been made in upgrading the network of tangible and intangible infrastructure in Italy over the entire period in which the Lisbon Strategy has been implemented. Action already undertaken and that which has already been decided on in order to re-launch the strategy may be grouped together in the following two categories:

Tangible and intangible infrastructure with system impact:

- *Construction of TEN-T networks in Italy*, which comprises the following projects:
  - Railway corridor no. 1 Berlin–Palermo.
  - Railway corridor no. 5 Lisbon-Budapest.
  - "Two seas" railway corridor Genoa-Rotterdam.
  - "Motorways of the sea", in respect of which two areas of action are envisaged:

  - Action to re-launch intermodal transport: support of shipping companies and short sea shipping (Italian Laws 166/02 and 413/98) and incentives to road transport to transfer traffic from all-road to combined road-sea, i.e. the so-called "ecobonus" (Italian Law 265/02); empowering port equipment and logistics platforms (Italian Law 443/01), and setting up a new company, RAM S.p.A., aimed at promoting and coordinating action at European level for purposes connected with the drawing up of a Mediterranean master plan for the "Highways of the sea".
  - Action targeting logistics in Southern Italy: setting up clusters of ports, such as those in Campania (Naples-Salerno) and Calabria (Gioia Tauro, Crotone/Corigliano); transforming these port clusters into regional interport logistics platforms which are able to facilitate intermodal transport.

- Upgrading other strategic infrastructure, such as the *Salerno-Reggio Calabria motorway*.
- Measures aimed at *strengthening IT provision in quantitative and qualitative terms for both schools and households*, including:

  - Incentives to help less well-off families and young people buy PCs and educational software; incentives to promote acquisition of new digital communication technologies.
  - Setting up a broadband network for schools to provide an adequate technological connection both for educational and administrative activities.
  - The CIPE-school project, aimed at upgrading IT provision in schools in Southern Italy.

- *Energy sector measures*, including:

  - Defining a national 2005–2030 energy programme.
  - Adopting simplified procedures to facilitate and set up a new unit for authorizations in respect of investment in energy infrastructure with a view bringing down the cost of energy *vis-à-vis* the EU average.
  - Updating the safety and emergency plan for the electricity system ("Piano di Emergenza e Sicurezza del Sistema Elettrico", or PESSE), in order to ensure that national demand for energy is met.
  - Implementing energy technology co-operation and development programmes.
  - Setting up of pilot energy districts for use of renewable energy sources.
  - The ongoing programme to increase use of methane gas in Southern Italy.

These new measures are complemented by others that have already been approved:

- *Building infrastructure to bridge the digital divide*; granting bonuses to households to encourage uptake of broadband services; setting up of public access centres for digital services, and advanced social connectivity centres.
- *Development of digital signatures, electronic ID cards, and the national service charter*.
- *Implementation of a supporting infrastructure to enhance the level of Italian companies' international operations* (Italian Law 56/05), through development of foreign "single counters", reorganization of provisions in respect of companies' non-Italian activities, including redefinition and reorganization of entities operating in this area, and enactment of the Framework Agreement signed by the Italian Ministry of Productive Activities, ICE ("Istituto nazionale per il commercio estero", National institute for foreign trade) and the council of rectors of Italian universities.

Tangible and intangible infrastructure with microeconomic or sector impact:

- *The Galileo project*: this is the first localization and navigation system in the world designed to meet civic needs. Galileo brings together many high value-added project initiatives, such as control of fleets on road and rail networks and shipping lines, with possible developments in the area of research to promote the "Highways of the sea". Linked to this is the implementation of the EGNOS project, already funded by the European Commission, aimed at applying satellite-based air traffic control techniques over Mediterranean air space.
- *The SESAME project*: a new-generation system for air traffic management. This Community project aims to modernize the current European ATM system so as to make it more economic, secure and efficient, and better able to handle the ever-increasing volumes of traffic.
- Implementation of *IT platforms in strategic sectors*:
  - Healthcare IT platform aimed at standardizing and sharing healthcare information between all parties involved in the national healthcare system.
  - Tourism IT platform, to be achieved via implementation of the "Scegli Italia" (Choose Italy) project, which comprises a variety of measures aimed at re-launching "brand Italy", to promote the nation's heritage in terms of culture, environment and food/agriculture, and improve the Italian tourism industry's product offering, including via creation of digital tourism districts;
  - Integrated infomobility platform, to create a new system for handling mobility of passengers and merchandise.

  - Project for making available public databases, to improve their quality and accessibility for citizens and companies.
  - National infrastructure for accessing and exchanging regional data, with the aim of standardizing such information and making it more accessible.

- *National Logistics Pact*, which consists of an agreement between the Italian government and various stakeholders to provide an answer to the challenges posed by intermodal transport and to provide companies with high value-added, lower-cost logistics services, optimizing the entire production cycle at the manufacturing, distribution and consumption stages.
- *Secure interoperability for national citizen identification systems project*: this is a supporting infrastructure for the introduction of electronic ID cards.

Amounts set aside to implement the above measures and projects total approximately 31, 384.5m, 26, 148.4m of which has already been provided in the budget, and 5, 236.1m of which is to be charged to the method of financing identified above, without impacting on the state's finances for the 2006–2008 period, as agreed at European level.

3.3.5 Protecting the environment

The "Gothenburg pillar" has been fully reflected in PICO as an integral and essential part of the Lisbon Strategy. Measures adopted so far in this direction refer to two CIPE resolutions (including in so far as regards funding):

- Resolution no. 57/02 on the *Environmental action strategy for sustainable development in Italy*, implementing directives issued at the Gothenburg European Council in 2001.
- Resolution no. 120/02, approving the *National plan to reduce greenhouse gas emissions*, which will allow Italy to comply with the commitments of the Kyoto protocol in a manner consistent with the aim of modernizing and increasing the efficiency of the Italian economy.

Included among the system-impacting measures it is proposed to initiate and complete are:

- Implementation of the government mandate provided for under Italian Law 308/04 to reorganize, coordinate and complete *environmental legislation*.
- Approval of a framework law being approved by the Italian Senate (*Atto del Senato* no. 188) to *make environmental accountability part of national accountability*.

- Implementation of *urban mobility plans* (Italian Law 340/00) which consist of an organic body of tangible and intangible measures to abate atmospheric and noise pollution levels, increase transport and traffic safety levels, minimize use of cars and increase use of collective transport systems in order to reduce congestion in urban areas.
- *Follow-up to local Agenda 21 processes* and other pilot measures to increase sensitivity to environmental issues (CIPE resolution 27/04).
- Introduction of *tax incentives to encourage energy saving* by facilitating market penetration for reduced CO2 emission and low-consumption motor vehicles.
- *Promoting public and private contract tender procedures based on environmental services* ("green contracts").

Alongside measures to be implemented in 2006–08, Italy has already taken action and launched initiatives to promote eco-compatible growth. These include:

- *Introduction of a Fund to promote sustainable development* (Italian Laws 338/00 and 448/01), for use in respect of measures to encourage sustainable production and consumption. In particular, the Fund aims to promote environmental management systems for SMEs, to foster technological innovation for sustainable use of water and irrigation resources, and encourage pilot measures in respect of environmental sustainability.
- The obligation incumbent upon the Italian public administration to ensure that at least 30% of its own supplies come from *products obtained from recycled materials* (Italian Ministerial Decree 30/03) with a view to promoting the growth of a management culture that is based on respect for the environment ("greening").

In addition to the above, system-impacting measures, the Plan includes projects to achieve areas of excellence in the field of environmental technologies, promoting innovation and encouraging respect for the environment. These are:

- Development and distribution of *high efficiency industrial motors*. Increasing energy efficiency in the industrial sector represents a key tool for reducing greenhouse gas emissions. Implementing this project will lead to energy savings of 7.2 TWh, with corresponding CO2 emission abatement of up to 3.6 Mt, providing extra momentum for technological renewal and encouraging exports by the Italian electrical/mechanical engineering sectors.
- Production of electricity, heat and air-cooling via *distributed high-yield small scale cogeneration*. This has the dual aim of reducing CO2 emissions by approx. 8 Mt per annum, and reaching approx. 20% of Italian national

electricity demand by 2012, in this way helping to bridge the gap between domestic demand and supply.

- *Developing methods for using hydrogen as an alternative energy source*. This will involve supporting research and development programmes at national and Community levels and scientific and technological cooperation between Italy and the US to produce, store and use hydrogen, via joint subsidies disbursed by the public administration, scientific institutions and business. It is envisaged that a European pole of excellence will be set up in the Veneto region.
- Developing alternative technologies *for use of solar power*; this consists of two pilot projects to focus the results of highly innovative research which originated from and was developed at Italian scientific institutions: 1) production of high-efficiency, thin-film photovoltaic solar panels, 2) production and storage at high temperatures of heat from the capture of solar energy (the "Archimedes project").
- Promotion of *use of alternative automotive fuels* (LPG, methane gas, bio-combustible fuels) via incentives, and revision of regulations governing installation and use of LPG and methane gas storage and distribution equipment.
- Planning and building a district with *decentralized production and distribution of electricity*, with a view to developing new technologies and organizational forms to manage the distribution network transferable *inter alia* to other contexts, which will make the structure of the Italian national electricity system more flexible and environment-friendly.

The foregoing projects are in addition to the following measures already implemented:

- *Development of a bio-mass research centre*, which was set up in 2003 with the aim of unifying action initiated at national and regional levels in respect of use of bio-masses for energy generation, and increasing its effectiveness.
- Granting certain categories of SMEs *incentives to develop environmental management systems*, with the objective of giving impetus to environmental certification in Italy, especially in the manufacturing sector and for activities impacting most on the environment.
- Developing and completing the *risk prevention programme* (seismic, vulcanic and hydro-geological risks).

Amounts set aside to implement the measures and projects outlined above total 2, 086.4m, 369.4m of which has already been provided in the budget and 1, 717m of which is to be charged to the method of financing previously identified, without impacting on the public finances for the 2006–2008 period as agreed at European level.

Table III.1 below provides a summary of the priorities and funding amounts described hitherto:

Table III.1 Cost of and funding for action contemplated under PICO

Priority	Amounts Provided in 2005 (€m)	Amounts Provided for 2006–2008 (€m)	Amounts Charged to PICO Fund (€m)	Total Cost (€m)
1 Extending area of free choice for citizens and companies	599.6	217.4	1,322.8	2,139.8
2 Promoting research and innovation	4,333.6	903.0	4,088.3	9,324.9
3 Strengthening training of human capital	956.4	193.4	407.2	1,557.0
4 Upgrading tangible and intangible infrastructure	23,645.4	2,503.0	5,236.1	31,384.5
5 Protecting the environment	352.9	16.5	1,717.0	2,086.4
Total	29,887.9	3,833.3	12,771.4	46,492.6

3.4 Regional cohesion policy

Action in respect of the regional cohesion policy aimed at re-establishing economic and social equilibrium as dictated by the EU Treaty (Articles 158 and 159) and the Italian Constitution (Article 119, paragraph 5), has made and will continue to make a significant contribution to reducing regional dualisms and increasing competitiveness, due to the strengthening of the public administration and rules of assessment applied before, during and after such action has been implemented. The positive gap in terms of growth in Southern Italy, driven by net exports and private investments, can be further broadened to the stage where the growth rate for this area is higher than that of the European average on a stable basis. Such action also helps Central and Northern Italy to recover competitiveness.

Financial resources, both at the Community and national levels, have been programmed for the 2006–2008 period for additional expenditure in Southern Italy of up to €15bn per annum, of which €7bn relates to the Fund for underused areas. Such figures reflect, *inter alia*, approval of the 2007–2013 community cohesion programme as envisaged by the Luxembourg Presidency in June 2005. The main measures contemplated for Italy

in connection with the regional cohesion policy are listed below according to the objectives chosen for PICO:

Extending the scope of free choice for citizens and companies
Over the three years of the Plan, the effects of the regional cohesion initiatives aimed at improving the efficiency and transparency of Italian public administration will certainly be seen. Especially worthy of note among such initiatives are the following:

- Reward mechanisms to improve the capacity and quality of expenditure, concerning the implementation of the most up-to-date practices in order for the Public Administration to work efficiently (operational control has been initiated in all six of the regions covered by "Objective 1", managerial staff have been appointed and results-based reward systems put in place in five out of the six regions); sharing a culture of measurement, evaluation and assessment, including with the help of the newly-set up assessment unit network (32 units in central and regional administrations, with the involvement of over 350 experts); instruments of vertical cooperation between central and regional administrations, in particular the 350 Programme Framework Agreements executed between states and regional authorities.
- Major sector reforms, such as the integrated water service, are now active in all six of the regions covered by "Objective 1".
- Reform of the incentives system (Italian Law 80/05), with the transition from capital subsidies to a system which hinges on risk-taking by banks. This will help make the incentives themselves more effective and improve relations between banks and companies.

Incentives to strengthen scientific research and technological innovation
Some 5% of total community funds for the 2000–2006 period (approx. €3bn), and 4.6% of the national regional funds for Southern and Central-Northern Italy allocated between 2000 and 2004 were (over €3bn) have been ring-fenced for research and innovation.

The following in particular are currently being implemented:

- Financing R&D investment projects in under-used areas, from the revolving enterprise support fund set up under the 2005 Italian budget law.
- Coordinated joint ventures between the public system and the Italian industrial system.
- Establishment of high-tech districts.
- Support for projects submitted by industrial companies, including in conjunction with public entities, for product and process innovation and for developing digital technologies.
- R-elaunching basic strategic research at universities and public research institutes.

Action to improve education and training
The gap in certain key human capital indicators shown by the regions in Southern Italy has reduced in recent years, such as average number of years' school attendance, percentage of population involved in studying, etc. However, other indicators (e.g. skills) are still worryingly high. The gap can be further closed by implementation of the following projects:

- Action forming part of the Community "School" project aimed at reducing drop-out rates and improving teacher training.
- A total of 111 measures initiated via the national-regional Programme Framework Agreements (PFAs) in favour of education and professional training.
- Action aimed at mitigating social exclusion, promoting adult education and combating crime.
- Action aimed at students and teachers to improve pupils' core skills.

Action to complete tangible and intangible infrastructure:

- Around 15% of the Community's 2000–2006 and national resources are earmarked for improving the provision of infrastructure: some of the main projects in this area include: improving the Salerno-Reggio Calabria motorway, laying a second track on the Patti-Messina railway, modernizing the Jonica no. 106 main road, and implementing the Campania underground railway system. Others we would highlight include: rebalancing modal transport in favour of railways; upgrading the port network; a logistics base for sorting merchandise linked to East/West trade; and increased attention to air transport, the airport system and fast airport-city links.

Action to protect the environment
Under regional policy in recent years, 13% of the 2000–2006 structural funds for Southern Italy have been ring-fenced for projects to safeguard and enhance the value of the country's cultural and environmental heritage. This sector includes initiatives relating to:

- Reduction of polluting emissions and the greenhouse effect.
- Increasing production of alternative energy.
- Development and completion of the risk prevention programme (seismic, vulcanic and hydro-geological risks).
- Creation of value from Italy's natural and cultural heritage to be used in local sustainable development.
- The water and waste sector, e.g. modernizing the sewerage system and water purification equipment. Implementation of such projects may be speeded up by setting minimum performance targets.

Full implementation of the action outlined in the Plan should help bring about growth in the area over the 2006–2008 three-year period which the 2005 DPEF puts in the region of 6%. According to an estimate of the mid/long-term impact carried out via a simulation model for action policies in Southern Italy contained in a 2004 report by the Department for Development Policies of the Italian Ministry of Economy and Finance, this could rise by as much as a further 1% in the presence of positive externalities linked to improvements in operators' expectations regarding the effectiveness of such action and if these are translated to the total factor productivity.

3.5 Reconciling the regulatory framework, priorities chosen and action to be implemented

In describing the political, economic and social framework forming the basis of PICO, we have focused on the premises for European action as expressed in the official documents, and the interpretations of the economic and social features peculiar to Italy reflected in the Plan.

General measures and specific projects to be implemented have been presented according to the priority objectives chosen. Now it is necessary to show how the stated aims of the European Union in relaunching the Lisbon Strategy are consistent with the instruments identified to pursue it and the characteristics of the country concerned.

It should be emphasized first of all that implementing some of the measures referred to herein assumes simultaneous action on the part of both the Commission and the member states of the Union. PICO will be more or less effective according to the degree to which the Action plan which the Commission will submit to the European Council in Spring 2006 and the other 24 member states' action plans are consistent with their objectives, incisive in their action and substantial in terms of the results they deliver. One of the most significant foundations of relaunch of the Lisbon Strategy is the sharing of responsibilities and the capability of the proposed initiatives to put the European economy back on the path to higher and more stable growth. In so far as Italy's individual responsibilities are concerned, the pursuit of sizes and structures better suited to developments on global markets and technological innovations has been entrusted to the combined effect of market stimuli and direct public incentives/action.

The following in particular have been targeted:

- *Liberalization of supply*, with particular attention to the service sector which accounts for 70% of GDP.
- *Liberalization of prices*, exposing them to objective rules where the market form requires it.
- *Liberalization of markets*, reflecting indications given in this connection by antitrust and sector authorities.

A further series of measures is envisaged, which aims at:

- *Reducing and streamlining economic legislation* in order to cut costs burdening the country's productive system.
- *Improving the efficiency and effectiveness of public administration action*.
- *Increasing the size of companies, sharing the IT culture, promoting the introduction of innovation and strengthening of productive districts*, with a view to increasing productivity and hence also competitiveness.
- *Helping small businesses* in their activity to penetrate non-Italian markets on both the export and investment sides.

As a support for these goals, measures have also been decided to improve:

- *The education base and vocational training in the public and private sectors*.
- *The institutional set-up for research and development*.

The anticipated progress in the areas of education and training, like the changes envisaged to the R&D environment, will take time to become fully effective, but will nonetheless make an effective contribution to releasing the restrictions on growth that derive from the peculiar characteristics of the Italian economy and society which we have highlighted in this document. The way to reduce pressure on the state's and companies finances, deriving from wrong choices with regard to the forms of assistance used to meet the needs of the social provision culture so deeply embedded in Italy, has been identified in improved education and vocational training, which can put young people on the path of career progression on the basis of merit as opposed to belonging, and more generally, can help citizens become more aware of the need for fiscal and monetary stability as the foundation for distributive justice and social welfare, modernization of bureaucratic structures and market efficiency.

Competitive disadvantages for companies, especially small firms or companies operating in Southern Italy will be removed *inter alia* by:

- *Enhancing provision of tangible and intangible infrastructure*.
- *Advancing the frontier of technology* and the technological implications to be obtained through implementation of major investment projects, some of which are to be decided in the light of:
    - *better environmental protection*, to complement firmer implementation of the "Gothenburg pillar" and the "Kyoto protocol".

To conclude, as invited in the Commission's report to the European Council, we have thought what Europe could be, and have sought to provide an answer, finding that the 24 guidelines for re-launching the Lisbon Strategy are entirely consistent with the removal of the restrictions on growth for

Italy which derive from the nation's peculiar economic and social features. Although the policies we have proposed should yield immediate results, in terms of higher income and employment levels, their effectiveness will only become fully clear in their application over the long term, to bring about the requisite changes in knowledge and resources for the Italian economy and society.

Popular wisdom teaches us that a long journey begins with a single step. Many steps have already followed the first in this particular instance, and many others will come to as the initiatives put forward in this document are implemented. However, to anticipate the effects on the expectations of producers, investors and consumers, much can be achieved by:

- the *European and national communication strategy*.

This is to be developed in Italy when the Plan is unveiled; and this will be all the more effective, the more it is accompanied by coherent implementation of national and European measures and projects.

4 Assessment of the European Commission on the Italian Plan

Introduction

Italy's GDP per capita in 2004 was 103% of the EU average. Between 1995 and 2004, Italian GDP grew by 1.6% per year on average, compared to 2% for the euro area. During that period the growth of productivity per person employed was also below the euro area average. In spite of low growth, robust job creation in recent years has contributed to a fall in the unemployment rate to 8% in 2004, below the EU average. At the same time, the employment rate, at 57.6% (2004) remains far below the Lisbon target. Italy has faced a reduction of its international competitiveness and has a very large public debt.

4.1 General Assessment

Italy's National Reform Programme (NRP) highlights five priorities to boost output growth and employment: extending the area of free choice for citizens and companies (by opening up energy and services markets); granting incentives for scientific research and technological innovation; strengthening education and training; upgrading infrastructure; protecting the environment. A sixth priority, long-term fiscal sustainability, is addressed in a separate document (see paragraphs 5 and 6 below). The Commission shares this analysis but also sees general enhancement of competition in all markets, including through deepening the internal market, as a major challenge for Italy. Furthermore, the Commission believes that the challenge

of increasing employment rates and reducing regional employment disparities will indeed benefit from reforms to strengthen education and training, but additional initiatives should be considered as well. These measures were presented to the Commission in a separate document.

The Italian programme contains many realistic and valuable measures, most of which are already planned or on-going. However, the main steps for 2005–2008 are not always accompanied by timetables or information on monitoring and evaluation procedures. There is recognition in the NRP of the importance of integration between microeconomic, macroeconomic and employment policies. The programme focuses largely on the microeconomic area, while macroeconomic and employment policies are largely covered in the annexes. The estimated total cost of the programme is €46.5 billion, most of which was already included in the 2005 budget. The remaining part (€13 billion) is conditional on expected revenues deriving from sales of public sector real assets in 2006–2008. Seventy per cent of the overall funding is allocated to infrastructure. The Programme is to some extent coordinated with other policies, partly covered by the annexed background material. No targets are set for R&D spending. Cohesion policy, expected to provide a large contribution to achieving the aims of the Programme, is discussed mainly in relation to the current implementing period. General references to the possible use of financial resources from the Structural Funds 2007–2013 are made.

Consultation and efforts to develop ownership of the Italian NRP at government, administrative and expert level have been substantial. A new internal governance structure (Comitato Tecnico) was charged of inter-ministerial coordination. The results of a survey of 120 economists were taken into account. Regional authorities and social partners had the opportunity to express their views both formally and informally. The NRP was presented to the parliament after its adoption.

4.2 Assessment by policy area

Macroeconomic policies

The NRP's five priorities for action relate mainly micro rather than to macroeconomic policies. However, the programme states that the consolidation of public finances according to the plans in the economic and financial planning document for the years 2006–2009 (DPEF) is to be considered an integral part of the Programme.

Those plans identify long-term sustainability of public finance as a priority, to be achieved based on the recovery of economic growth, the budgetary effects of the 2004 pension reform and medium-term fiscal consolidation. The DPEF aims to reduce the general government deficit to below 3% of GDP by 2007 (from 4.3% in 2005) and to reduce the debt-to-GDP ratio from 108% in 2005 to 101% in 2009. This is primarily thanks to an increase in the primary surplus from 0.6% to 3% of GDP over the same period.

However, the Commission's analysis is that long-term fiscal sustainability in Italy would require maintaining a minimum primary surplus of around 4% of GDP, underpinned by reforms to permanently restrain public spending. The Italian NRP does not cover pensions in detail but reforms since the early-1990s have sought to address long-term sustainability by reducing future pension liabilities. In particular, the 2004 reform, to take effect from 2008, raises the retirement age, and foresees the development of the "second pillar" (funded pensions). Full implementation of that reform together with raising employment rates, in particular of women and older workers, will be important for the pensions system to combine social adequacy and financial sustainability in future.

In the light of Italy's high public debt, low potential GDP growth rate and the expected increase in ageing-related expenditure, the macroeconomic strategy and targets might not prove sufficiently ambitious. In particular, the planning document does not adequately address the continuing increases in healthcare expenditure. However, the approval of the 2006 "Legge Finanziaria" represents, if fully implemented a further step towards the goals of consolidation of public finances as stated in the DPEF.

Microeconomic policies

The Italian NRP highlights four microeconomic priorities: R&D, "free choice for citizens and companies", infrastructure and environment. It includes various initiatives to improve the business environment, including better regulation. However, the programme does not address in full challenges such as strengthening competition and deepening of the internal market.

The proposed action to boost R&D includes interesting elements, for example fiscal measures to make undertaking R&D more attractive for companies. The proposed Documento di Programmazione Economico-Finanziaria per gli anni 2006–2009 submitted by the government to parliament on 15 July 2005.

Reorganization of the national research system should also over time help to improve R&D performance, despite limited detail in the programme on cooperation between Ministries and the regions and on fostering links between SMEs and between business and the public sector. Research and innovation resources tend to be concentrated on specific sectoral projects rather than on structural measures with a potentially broader economic impact. The programme states that the combination of measures and projects in research and innovation should enable Italy to approach the 3% of GDP goal for R&D spending. A strong commitment to achieving that objective and the 66% target for the private contribution to R&D expenditure will be necessary. The programme tackles the most important issues in ICT but without prioritising fully the measures proposed.

Under the theme of "free choice for citizens and companies" the Italian NRP aims to increase competition, especially through more open utilities

markets (including energy) and in services, but does not give full details on how these goals will be achieved. The removal of barriers restricting competition in professional services is envisaged, even though specific implementation measures are not mentioned in detail. The programme proposes a series of specific measures to improve the business environment by improving regulation and public sector efficiency, such as simplification of existing legislation, a project on the application of the Standard Cost Model for measuring administrative costs, guidelines for consultation exercises and increasing the use of impact assessments. These initiatives are likely to contribute to reducing the burden on businesses. The newly approved framework law reforming bankruptcy legislation should also encourage entrepreneurs. Provisions for speeding up and improving the implementation of EU legislation should be specified in the NRP.

The NRP sets out plans for investment in upgrading road, sea and rail infrastructure by completing major projects. There are also interesting initiatives to introduce or improve IT infrastructure in schools, healthcare, tourism and public administration. The programme would benefit largely from a detailed reference to the regional dimension. The Trans-European Transport Network projects are at the centre of the strategic framework for transport policy. Little reference is however made to the railway network outside TENs, which merits improvements especially in the Southern Italy.

The fairly strong emphasis on environmental protection in the NRP is not reflected in the budgetary allocation for 2006–2008. The proposed measures to promote research and innovation in renewable energy would need to be specified.

The microeconomic chapter of the Italian NRP contains important elements, notably on boosting research and making the business environment more attractive, which have the potential to contribute effectively to growth and jobs. The infrastructure investment set out in the programme should also help the economy to function better. Overall the aim of the measures proposed constitutes the type of microeconomic reforms which, in synergy with macroeconomic stability and labour market reform, could reduce Italy's dependence on traditional sectors, help SMEs to grow and new businesses to emerge and thus help to tackle the reduction of international competitiveness which Italy is facing. Their effective, full and timely implementation will be crucial to attain such goals.

Employment policies

The Italian programme cites strengthening of education and training as its main employment priority. Employment is considered as "endogenous" to all the other priorities in the NRP. Other significant employment-related challenges such as employment rates significantly below the EU averages and the sharpest regional employment disparities in the EU are addressed in the annex.

Most of the education and training measures mentioned are already in place. The NRP covers the 2003 education and training reform (operational as from 2007–2008) and university reform. There are useful initiatives to support higher education – particularly in scientific subjects – to ease the school-to-work transition, to reduce early school leaving and to train civil servants. Further substantial information on the evaluation and monitoring of reforms, on quality assurance mechanisms to ensure common standards across regions or on training measures for low-skilled and older workers should be provided. The overall funding included in the NRP for education and training is very limited. The key role in employment policy of regions and social partners could have been better highlighted.

Given its approach (with employment as an endogenous element) the Italian NRP does not address directly the issue of attracting and retaining more people in employment. The focus on youth employment, female participation, childcare, active ageing, integration into work of people with disabilities or active labour market policies is addressed in the annex, as are certain specific aspects important for Italy such as flexibility and security, wage developments, geographical productivity differentials, undeclared work and non-wage labour costs.

As far as employment policy is concerned, the Italian NRP devotes its attention to education and training. There is cause for optimism over some of the individual measures proposed, such as the reform in the educational system. However, significantly more efforts would be certainly needed to boost educational and training levels up to the EU average, despite some positive trends. As stated, more information on other employment policies is available in other documents but the provision of some details in the NRP itself would have allowed a more coherent analysis of the links and synergies with other policy areas.

4.3 Conclusions

In line with the Integrated Guidelines, the Italian National Reform Programme identifies and responds to many of the main challenges facing Italy, namely extending the area of free choice for citizens and companies (by opening up energy and services markets); granting incentives for scientific research and technological innovation; strengthening education and training; upgrading infrastructure; protecting the environment. A sixth priority, long-term fiscal sustainability, is addressed in a separate document. However, a wider coverage in the NRP of the approach to increasing employment rates and reducing regional employment disparities would have allowed it to present a clearer strategy covering all policy areas and the links between them. Competition and regional issues are major challenges for Italy but are addressed only in a limited way in the NRP.

Targets, timetables and details on monitoring and evaluation procedures are often not provided in the NRP. The distribution of implementing

responsibilities between different Ministries and between central government and regional and local authorities is not always clear.

The programme's strengths include:

- Measures to improve the regulatory environment for business, notably reducing administrative costs and reform of bankruptcy legislation.
- Certain measures aimed at improving educational performance, in particular in higher education.

Among the points requiring further attention are:

- Further efforts to achieve fiscal sustainability.
- Stronger and more specific measures to boost competition, particularly in network industries and services.
- Increasing labour supply and raising employment rates, including tackling regional disparities.

Taking due account of the above, Italy is invited to implement its NRP with vigour. The 2006 progress report on the implementation of the NRP should cover in particular the way Italy has dealt with the issues mentioned in paragraph 21. In this context, the Commission looks forward to discussions with the Italian authorities as part of the new partnership for growth.

4.4 Statistical Graphs and Data

Table III.2 Italy

	IT							EU-25						
	1999	2000	2001	2002	2003	2004	2010 National target	1999	2000	2001	2002	2003	2004	2010 EU target
GDP per capita in PPS	111.0	110.0	109.7e	107.6e	105.5f	103.4f		100.0	100.0	100.0	100.0	100.0	100.0	
Labour productivity per person employed	119.8	118.4	115.5	111.7	108.9	107.0		100.0	100.0	100.0	100.0	100.0	100.0	
Employment rate	52.7	53.7	54.8	55.5	56.1	57.6b	:	61.9	62.4	62.8	62.8	62.9	63.3	70.0
Employment rate of older workers	27.6	27.7	28.0	28.9	30.3	30.5b		36.2	36.6	37.5	38.7	40.2	41.0	
Gross domestic expenditure on R&D	1.04	1.07	1.11	1.16	1.14	:	:	1.87e	1.89e	1.93e	1.93e	1.92e	1.90pe	3.0
Youth education attainment level	66.3	68.8	67.0	69.1	69.9	72.9		74.8	76.3	76.1	76.5	76.5	76.6	
Comparative price levels	94.6	94.0	95.5	97.9	102.3	102.7p		100.0	100.0	100.0	100.0	100.0	100.0p	
Business investment	16.6	17.4	17.3	17.9	16.6	16.9		17.9	18.3	17.7	17.1	16.7	16.9	

At-risk-of-poverty rate after social transfers	18.0	18.0	19.0	:	:	19.0b	:	16.0	15.0	15.0	15.0	16.0
Dispersion of regional employment rates	17.4	17.5	17.1	16.7	17.0	15.6	13.3	13.4	13.5	13.3	12.9	12.2
Long-term unemployment rate	6.7	6.3	5.7	5.1	4.9	4.0	4.1	3.9	3.8	3.9	4.0	4.1
Total greenhouse gas emissions	106.5	108.0	109.0	108.7	111.6	:	90.6	90.5	91.4	90.7	92.0	:
Energy intensity of the economy	190.9	186.9	184.0	184.1	192.6	:	214.9	208.8	209.7	206.5	209.5	:
Volume of freight transport relative to GDP	100.9	102.1	100.9e	102.6e	93.4e	104.4be	100.7e	100.4e	99.4e	100.3e	99.7e	104.7e

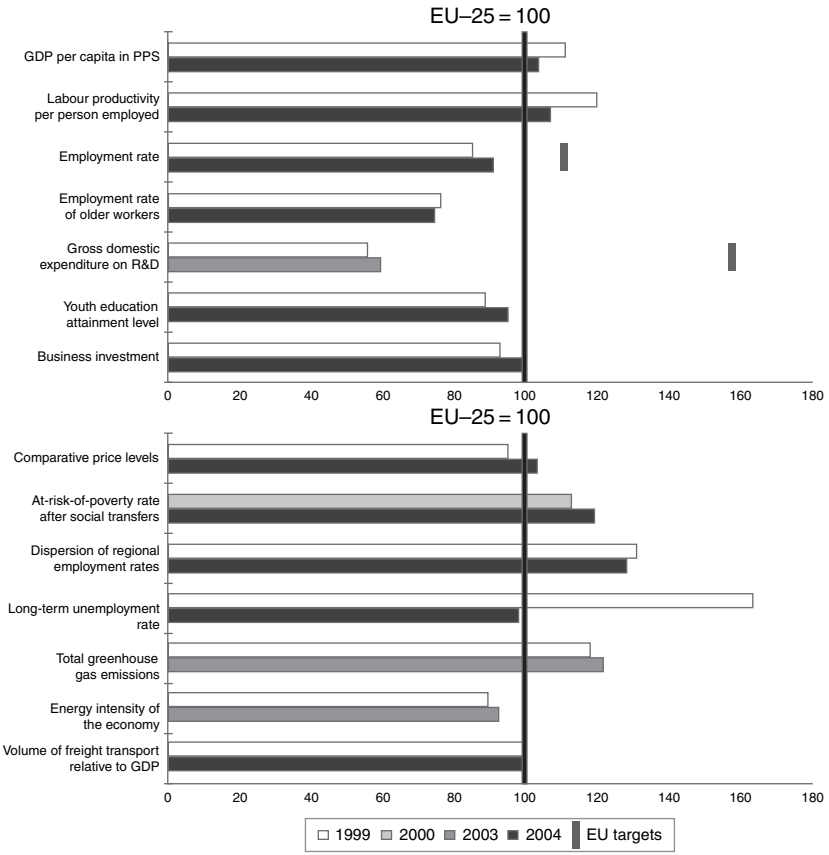

Figure III.1 Italy

Index

Note: Page numbers in *italics* refer to tables and figures.