

José De Gregorio: The tensions of the world economy

Speech by Mr José De Gregorio, Governor of the Central Bank of Chile, at the Seminar organized by students of the School of Business Administration of Pontificia Universidad Católica de Chile, and in the Manufacturers Association SOFOFA, Santiago, 24 September 2008.

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A natural thing to do is to program these presentations some time in advance, not being fully aware of the conditions we will be facing when the time comes. Needless to say, over the past few days I have had to edit many developments into my lecture, as the world economy is making history.

Thinking of the global economy's present situation leads us to focus almost exclusively on the financial crisis, but this is one aspect of more generalized problems and imbalances that have build up over the years. The global economy is going through a severe financial crisis, high inflation and unusual dispersion of growth around the world. Furthermore, this scenario is very uncertain, as we have stated in our last *Monetary Policy Report*.

Today I would like to address the current situation from a broader perspective, not only analyzing the financial crisis but digging more deeply into how we got to the present scenario, exploring its economic policy implications and finding the lessons to be learned from it. For a short presentation this could be too ambitious, so I will have to leave out some parts of the story. I will concentrate in some issues that I believe are essential for understanding the present state of affairs: global imbalances, the financial crisis, emerging economies' growth and globalization, with its inflationary effects and "decoupling" phenomenon. I will continue with some policy lessons and implications on the Chilean economy.

But first allow me to make some reflections on economic policy.

Entrepreneurial success and failure are inherent to market economies. This is also true in financial entities. We know that in the corporate world rotation is high, with firms coming in and going out, and jobs being created and destroyed. This is at the cornerstone of Schumpeter's *destructive creation*, and explains a substantial part of progress and productivity growth. However, there are negative externalities. Miscoordination and contagion problems, especially in the financial system, have the potential to amplify the cycles and transform destructive creation into *destructive destruction*.

A financial institution in distress does not make the headlines, but when complications become systemic, the consequences can be very disturbing. It is thus crucial to prevent problems in one specific sector from spreading across the whole economy, with costly consequences. Hence the importance of safeguarding the economy's financial stability.

Until a while ago, when I was asked to speak about financial stability I normally discussed evidence from developing economies. We have learned than exchange-rate crises are costly *per se*, but if accompanied by a financial breakdown the cost duplicates. Similarly, an economic slowdown cum banking crisis has severe effects on output and employment. But today we need not resort to those stories. The US has been accumulating a current-account deficit for quite some time that sooner or later would have to be corrected via deceleration and depreciation. But the financial crises that got in the picture will make adjustments much more expensive.

Global imbalances

By the late 1990s, the US current account deficit began to soar: From 140 billion dollars in 1997 – equivalent to 1.7% of GDP – it climbed to 739 billion dollars in 2007, that is, 5.3% of GDP (figure 1).

A first glance at the data requires screening the regional savings and investment balances to see how current-account deficits are distributed around the world. What we see is a dramatic fall in savings – both private and public – in the United States, but also a major increase in surpluses in Asia. This reflects increased savings in China, but also a post-crisis dramatic reduction in investment in the rest of Asia.¹ The recession of 2001 brought a slight relapse, but growth resumed briefly. Fiscal policy was of little help, although the fact that the international interest rate was so low – as opposed to the mid-1980s' twin deficits experience – is an indication that the cause of the deficit was not the drop in US saving, but rather Asia's surplus. Later on, this increase in Asia's net saving combined with significant terms of trade gains (figure 2). Thus, there was a large amount of funds looking for a place to invest. The United States had the capacity to produce profitable securities to absorb said savings (Caballero et al., 2008).

A different version of this story was that the deficit was simply mis-measured, owing to its many non-observable components, which led analysts to mistake foreign funding for foreign income (Hausmann & Sturzenegger, 2006). This is the case, for example, of seniorage.

Both stories help explain why the current-account deficit can persist in high levels for longer than usual. But domestic factors also played a part in the US. expansionary monetary and fiscal policies while a real-estate bubble was building up, put additional weight on the fall in savings.

The main question was if this process could be sustained, and the more benign visions thought it could last a long time. But the accumulation of imbalances at least had to moderate, which indicated that the dollar would weaken and output would slow down. Calculations performed a few years back indicate that a dollar depreciation of around 40% was necessary to reduce the current-account deficit by 3 percentage points of GDP.² According to estimates by Freund and Warnock (2007), such an adjustment would cause a GDP slowdown of around half a percentage point, much less than a financial crisis.

On the other hand, and as has been made apparent by the financial crisis, the world lent to the US, to a large extent to finance overvalued houses that were sold to families that could not afford them. Now we see confirmation that such an expansion was not a healthy one.

Real-estate boom and financial crisis

For several years, housing prices spiraled up in a number of developed economies (figure 3). There were lengthy debates whether a bubble was forming, that is, if prices were beyond what could be warranted by fundamentals (housing services provided by homes). For example, the *World Economic Outlook* of September 2004 (Terrones, 2004), analyzed what could happen if interest rates increased. This was three years before the collapse, which occurred within the context of a mild increase in US interest rates. First were subprime mortgages and banking losses, then the monoliners and Bear Sterns followed suit, as did mortgage credit providers (Freddie Mac and Fannie Mae), insurance companies, other

¹ This is Bernanke (2005)'s well-known *saving glut*, although it seems to apply mainly to China, because the fall in investment dominated in the rest of Asia (Laxton and Milesi-Ferretti, 2005).

² See De Gregorio (2007). The depreciation would be larger if it did not consider that, as the US liabilities are in dollars, the depreciation reduces its debt (valuation effect; see, for example, Gorurinchas and Rey, 2007). Calculations are similar to those in Obstfeld and Rogoff (2007).

investment banks, and so on. A problem that began with subprime mortgage loan delinquency has spread to the whole real-estate market (figure 4).

In analyzing the problem of housing prices, the first thing we should recognize is that in a first approach, housing price fluctuations should not result in significant fluctuations in consumption. A rise in the price of the home increases the household's asset value, but also increases the cost of living in it, so the net result should not be any material change in consumptions of goods different from housing.³ Therefore, a first effect of a real-estate crisis should be a drop in the construction sector, not a drastic fall in consumption. Nevertheless, there are a number of factors that help explain the increased sensitivity of consumption and output to housing prices, and top of the list is transmission via the financial system. When the higher value of the homes is not capitalized by the owners but is mortgaged in a fast, fragile credit expansion, the ensuing contraction can be extremely severe, as we can see now.

Despite the severity of the present crisis, so far its effects have been reined in by strong policy decisions oriented at warding off a financial implosion.

The immediate policy reaction when the crisis was unleashed was the provision of liquidity and an aggressive cut to the fed funds interest rate in the US (figure 5). New credit facilities were designed and huge amounts of liquidity were injected, but tensions in monetary markets persist. (figure 6). Even if liquidity abounds, it does not move from those who have it in excess to those in demand, because of the great uncertainty that exists and the decision of financial entities to hold on to their liquidity surpluses to cushion themselves against balance-sheet shocks (Allen and Carletti, 2008) or simply to benefit from buying assets at discount prices.

The financial crisis is the outcome of two key phenomena. On one side is a period of stability, low interest rates, abundant liquidity, fast economic growth and an asset price bubble (figure 7). This combination of aggregate factors gives way, as often occurs, to a phase of fast credit expansion. Actually, a financial crisis is much more likely to owe to a credit expansion, but not every credit boom ends up in a crisis⁴. At the same time, many countries have recorded a real-estate boom, but not all of them have found themselves in the extreme financial system breakdown as the United States. The problem is that this has occurred within a spiral of financial innovation in very poorly regulated market segments. One important task will be to figure out why the financial systems of different economies with similar credit growth rates and housing price behaviors have had so different outcomes.

The low interest rates prompted a search for better returns. Individuals with zero repayment capacity were provided loans, and to reduce the risk, said loans were securitized and often taken out of the banks' balance sheets (i.e. structured investment vehicles and conduits), so no further capital requirements were necessary for the banks. Credits were issued on the basis of ever-increasing housing prices, so the mortgage was backing enough to relax the lending standards. As often occurs when the storm hits, the situation reversed and a credit contraction followed (figure 8). Also, the real-estate bubble created a demand for homes as financial assets.

These loans were sold to agents that neglected the risk evaluation process, hence the contamination to the whole financial system. The "originate and distribute" model crashed, risk-rating institutions were unable to properly rate complex securities, while the executive compensation structure also encouraged the search for returns.

Lending to risky borrowers that fail to repay is certainly costly, but it can hardly unleash a crisis of the magnitude we are seeing today. The problem is aggravated by the way the

³ This point has been made more intensively in Buitert (2008). For a vision involving other mechanisms, see Muellbauer (2007).

⁴ According to Barajas et al. (2008) only 20% of the booms end in crisis.

banks got rid of these loans, how they were rated, the derivatives that were created to reduce the risk and pretend they had been transferred away. There are also doubts whether the derivatives markets' operation was as transparent as it should have been or if it was manipulated. The paradox of the present scenario is that the banking system, whose objectives should be to intermediate credits and hedge against risks, seemingly concealed the risks in a complex web of derivatives (and notes) thanks to regulations that didn't measure up to the challenge.

Another aggravating circumstance is the transition of the bank-based financial system to a system based on tradable, short-run-debt certificates. This scheme opens the door to a bank run that differs from the old ones where customers stood in line to withdraw their deposits. The recent incorporation of safety-net policies for institutions (Primary Dealer Lending and bankarization of investment banks) and securities (guarantees to Money Market Mutual Funds), are the offspring of this change in the financial system. The lessons learned in the 1920s, which led to the creation of the Fed is being "relearned" now. It is worth recalling that before the Fed came to life, the United States endured a major banking system crisis every three years (Gorton, 1988).

World inflation and growth

China's sustained growth for many years already has been at the core of the world economy's evolution. The Chinese incorporation to the global world was great news, because it brought with it economic growth and low prices. The continuous migration of millions of people from the countryside to the city boosted world output. They not only could produce at lower prices but they also were the cause of the increase in savings in that country.

China is maybe the most emblematic example, but growth has been present in the majority of emerging economies, in particular in Asia and Latin America.

One of the reasons why in the ten years before 2006 inflation was low, especially in developed economies, was the supply of goods from emerging markets.⁵ Inflation is dependent on the monetary policy decisions and in the extreme, under total inflation control, it could be pegged to the target regardless of the import prices of imports or other factors. However, what globalization permitted was a period of low inflation and high growth (table 1). There was a change in relative prices, with a significant drop in prices of goods from emerging economies going global and, as we see today, with an increase in the relative prices of foodstuff and energy.

It can be said, then, that globalization was a productivity shock that allowed for transitory reductions in inflation. However, the phenomenon could not last forever, and is now reversing.

The accelerated growth of the past several years finally showed on prices. This can be interpreted as we would analyze inflation in just any country. When potential GDP grows fast, inflation remains constant or may even fall. However, if actual GDP growth runs above its potential or trend, price pressures result. The world economy grew fast, and although China contributed to world potential output growth, inflationary pressures have emerged in those sectors where the demand grew faster than supply, namely oil and foods (figure 9). Inexpensive goods can still be produced, if capacity expands without generating price pressures. But the demand for oil, steel, minerals, etc., recorded strong increases, which pushed prices up. The supply has not responded to demand with the same vigor.

⁵ The empirical literature has been critical in this point, but a recent work by Auer and Fischer (2008) shows that the producer price index of the United States was two percentage points less due to cheap imports from developing economies.

A case worth highlighting is foods. Some of them absorbed the demand increase due to economic growth with supply increases, but then a new source of demand appeared: bio fuels, which have further strained the prices of grains.

Another factor that, according to some analysts, has been important in price hikes has been investor involvement, demanding commodities as another asset in their portfolios. But if investors were buying to resell with a margin, this would translate into an increase in inventories, which it has not.

Accordingly, the purchases of futures by some agents go hand in hand with the sale of futures by others, and are normally the counterpart of hedging operations. On the other hand, while investors' positions have risen substantially in the commodities markets, they still share but a small fraction of the market. Overall, one cannot rule out that investors' buy and sell strategies will have an effect on the high short-run volatility of prices, but it is difficult to blame on them the high and persistent levels we see today.

The worst nightmare in terms of high inflation and low output has been the price of oil, which has broken all the records. After standing at US\$12 per barrel in 1999 as a consequence of the Asian crisis, it started climbing throughout the 2000s in tandem with world growth. By mid-2006, when the oil price was approaching US\$70 per barrel, the question was why the world economy was so insensitive to it. Researchers tried to explain why such a heavy price increase had been so mild on inflation and output (De Gregorio et al., 2007; Blanchard and Galí, 2007). Fingers pointed at the usual suspects: good monetary policies and less intensive use of oil around the world.

In sum, the world economy was more insensitive to the oil price. However, if oil demand continued to rise without a corresponding increase in supply, a large enough price rise was necessary to begin having an effect on the demand. The levels of a couple of years ago were not enough to restrain the demand, and precisely because of that, researchers found little effects from the shock on output and inflation. Only when the price went beyond US\$100 per barrel did it truly begin to affect the demand, and from then on the reduced output prospects have continued to determine its price.

Inflation-wise, the international scenario is still delicate. After a shock of oil and foodstuff prices that had no parallel since the Great Inflation of the 1970s, inflation has risen everywhere (figure 10). Also, inflation expectations have increased accordingly (figures 11 and 12). In general terms, it has not yet become a generalized inflationary phenomenon but, inasmuch as it is transmitted to expectations and wages, it can be very persistent.

Monetary policy reactions to this phenomenon have been varied. In developed economies, where growth prospects are frail, interest rates have been lowered (figure 13). In general, the slowdown is expected to be sufficient to bring down high inflation. On the contrary, in developing economies monetary policy has been on average restrictive. Growth rates are still reasonable, so one cannot rely on a drop in inflation without having to raise the interest rate.

World growth is still strong. (figure 14). What is new is the decoupling of developed economies with the rest of the world. Not surprisingly, the entire world is decelerating, but the degree of expansion of output varies significantly. Never in the last half century did we see a period of such decoupling. The phenomenon is not exclusive to China, and has been present for several years already. The main doubts are how long will it last – which depends on the true decoupling capacity that emerging economies will display – and how long will developed economies' growth hold. Here, accumulating a current account surplus can help. For example, the high levels of reserves in China allow financing deficit for several years and thus weather the turbulences with domestic growth. Still, one cannot rule out a prolonged period of weak activity in developed countries that ends up seriously deteriorating growth in emerging economies, particularly those specializing in goods demanded in the former.

Globalization, where countries sell their products in global markets rather than in specific economies, certainly supports the aforementioned decoupling, but it also spreads the effects

of financial shocks around the world. We have seen international stock exchanges plummeting, and risk premiums of emerging economies rising (figures 15 and 16). Also, large foreign exchange fluctuations have occurred, but this is good news, because the exchange rates are helping the adjustment (figure 17). Asset prices show no decoupling but, as we well know, price corrections may limit the adjustments in quantities. The key to this is whether price corrections are helping to avoid fluctuations in output or are being conveyors of the problems.

The good performance of emerging economies should not lead to unfounded optimism or vanity, because this is largely the result of sound macroeconomic policies, and in such we must persevere.

Final remarks

I will finish with four points. First I will review the harmful effects that the ongoing crisis will have on the future development of financial markets. Next I will discuss financial bubbles and booms in monetary policymaking, and the nature of the present crisis and possible consequences, to wrap up with the implications of the world growth scenario on the Chilean monetary policy.

In the present turmoil, authorities have acted as lenders of last resort providing liquidity to ensure proper market functioning. Nonetheless, regarding financial bailouts two costs have to be balanced: averting a financial collapse with catastrophic consequences on the one hand, and the negative signals that come from said bailouts, on the other. Not only have the too-big-to-fail institutions been rescued, but also entities whose connections with the system are such that if they fail the whole financial system may be shaken.

Troubled companies' shareholders should not be bailed out, because it is important that risk evaluation is done more diligently in the future. Care must be taken in rescuing debtors of defaulted firms, because it may relax borrowing and repayment discipline, and punish good creditors by comparison. The tradeoff between these two objectives is clearly illustrated with the developments of the past week. Allowing the demise of Lehman Brothers was a sign that bailouts would not be up for grabs and even the downfall of a large investment bank would be accepted, but this may have accelerated the devastating chain of events that followed. Indeed, what is worrisome is that the dimensions of the crisis that follow the Lehman collapse were not anticipated by the authorities. With the benefits of hindsight, it would have been better to avoid the collapse, and its effects should have been foreseen by policymakers.

The consequences of the financial crisis will spread past the financial system, as is already perceived in recent discussions on privatization of earnings and socialization of losses. Hopefully this debate will soon focus on the important issues, but we must recognize that the excessive aggressiveness and ambition of some players in the international financial markets, the irresponsible behavior of operators unaware of what they were trading, and lax risk assessment and regulation, will penalize the innocent and the guilty alike.

A sound, competitive financial system is essential for economic development. The incentive structure is key for its smooth operation. If no credit exists, only those owning the resources could invest or buy durables. The financial markets allow the anticipation of consumption and invest. But its stability must be safeguarded to ensure efficient credit allocation and proper risk management.

One issue that has been discussed in monetary policy theory and practice is how to handle bubbles. The conventional view is that nothing can be done to prevent them; that they cannot be detected, that they must be a cause for concern only to the extent that they affect inflation, and that the only thing to do is to clean the mess after they burst.

This crisis, however, shows that this view is painfully wrong. In fact, a financial bubble and even a credit boom, can have little or no effect on inflation, but that is not the point.

Furthermore, an interest rate increase is probably unable to burst the bubble. But an excessive expansion of credit in the context of financial euphoria jeopardizes the other objective of central banks: financial stability.

One important lesson from the present crisis is that we cannot wait for the bubble to burst to correct its effects. This may have worked with the technological bubble of the early 2000s, but the real-estate boom is proof that the problem can be worse. The way to deal with financial and price instability is different. For the first, the focus is on risk regulation and evaluation by the authorities. Detected vulnerabilities must be flagged and, if necessary, new regulations must be adopted. For price stability, there is monetary policy.

It may well be the case that price stability and financial stability have different implications on interest rate management. The best example of this is the aggressive reduction of interest rates adopted by the Fed this year. Interest rate cuts were necessary to alleviate liquidity tensions in monetary markets and ensure the sound operation of the payments system. Failing to take these actions might have further exacerbated the financial crisis.

However, conflicts of this kind are faced in extreme situations and this must be clear when making monetary policy decisions. Three decisions of the Central Bank of Chile to intervene the foreign exchange market during this decade can be interpreted as decisions under extreme circumstances. They were associated to severe stress in foreign exchange markets or to the need to strengthen the international liquidity position. To avoid conflicts with price stability, the intervention that was begun in April has been implemented mechanically and transparently in order to orient monetary policy in consistency with the required convergence of inflation to the target.

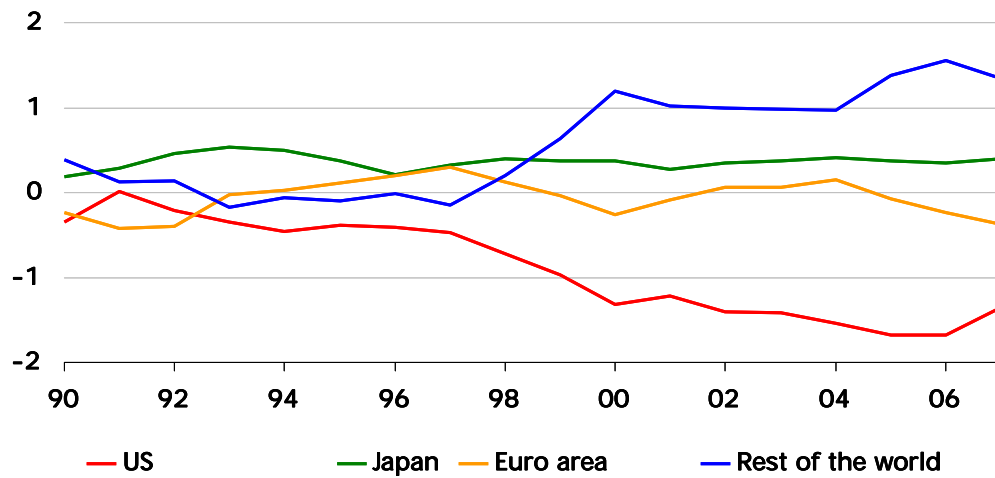
It is hard to find a financial crisis as severe as this one since the Great Depression. Still, its real consequences are still much milder than those of other episodes, including of course the Great Depression and even the Great Inflation of the 1970s. We have learned two lessons from these occurrences and which are clearly present in the acts and statements from central bankers around the world. One is that central banks are the lenders of last resort and must supply the necessary liquidity so that financial markets can operate, even in critical times. The other is that inflation must be fought with determination and letting it settle down and stay in the economy is very costly. Different perceptions and assessments can alter the short-term course of monetary policy, so flexibility and realism are necessary to timely correct the route, and this has been happening around the world and in Chile in particular. But not only have we learned from past errors, like the need to have good economic policies; the world is also better. The progress of the past few decades in technology, flexibility, international integration, transparency and accountability, among other factors, make this world a safer place. In Chile we have a policy framework that grants us a good position like no other before, to sail through troubled waters.

Regarding the world economy, there are big risks. The Chilean inflationary problem stems from international price rises, although recently we have seen the harmful effects of propagation. In the baseline scenario, the world will post strong growth in coming years, driven to a large extent by emerging economies, particularly China and India. One cannot rule out a deeper and longer lasting slowdown of industrialized countries than assumed in the baseline projection. In a weaker economic scenario, commodity prices should decline. A drop in the oil price would come as a relief for the world economy. Also, a weaker world economy could affect Chile's GDP growth directly. These forces would pull down inflation. However, the inflationary dynamics and the convergence of inflation to the target cannot be based on a weak world scenario. This is a possibility and, as we always do, we will act with sufficient flexibility and realism to incorporate international developments and prospects in the analysis that underlies our monetary policy decisions. In these moments, inflation risks and dynamics do not allow for excessive optimism.

References

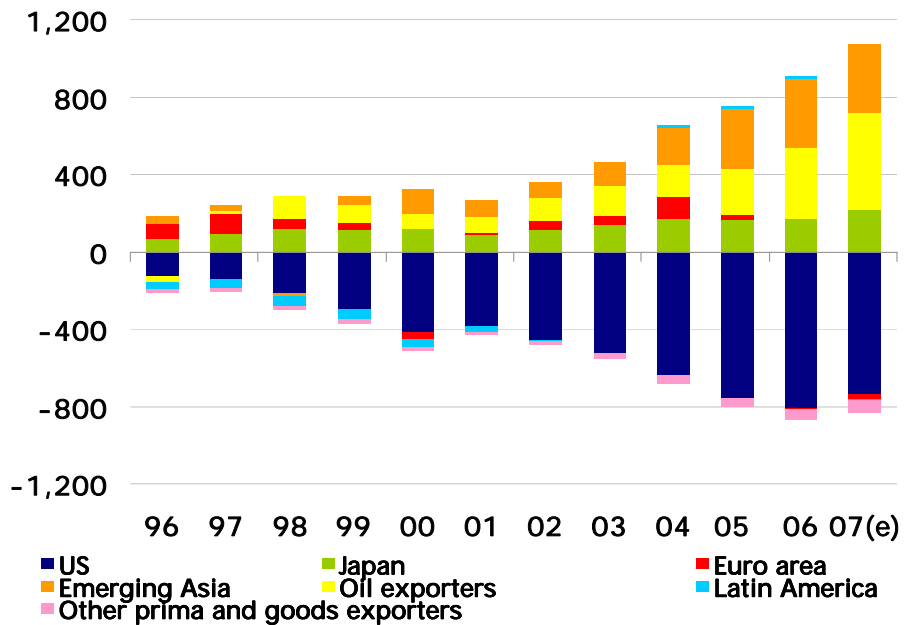
- Auer, R. and A. M. Fischer (2008), "The Effect of Trade with Low-Income Countries on US Industry", CEPR Discussion Paper 6819.
- Barajas, A., G. Dell'Ariccia and A. Levchenko (2008), "Credit Booms: The Good, the Bad and the Ugly", CEPR Discussion Paper No. 6683.
- Bernanke, B. (2005), "The Global Saving Glut and the U.S. Current Account Deficit", the Homer Jones Lecture, St. Louis, Missouri.
- Blanchard, O. and J. Galí (2007), "The Macroeconomic Effects of Oil Price Shocks: Why Are the 2000s So different from the 1970s?", NBER Working Paper N°13368.
- Buiter, W. (2008), "Housing Wealth Isn't Wealth", NBER Working Paper No. 14204.
- Caballero, J., E. Farhi, and P.O. Gourinchas (2008), "An Equilibrium Model of "Global Imbalances" and Low Interest Rates", *American Economic Review*, 98:1, pp. 358-393.
- Allen, F. and E. Carletti (2008), "The Role of Liquidity in Financial Crises", presented at *Maintaining Stability in a Changing Financial System*, organized by the Federal Reserve Bank of Kansas City, Jackson Hole, WY.
- De Gregorio, J. (2007), "Comments", en Clarida, R. (ed.) *G7 Current Account Imbalance, Sustainability and Adjustment*, NBER and Chicago University Press, also economic Policy Document No. 115, 2005, Central Bank of Chile.
- De Gregorio, J., O. Landerretche and C. Neilson (2007), "Another Pass-Through Bites the Dust? Oil Prices and Inflation", *Economía*, vol. 7, number 2, pp. 155-196.
- Freund, C. and F. Warnock (2007), "Current Account Deficits in Industrial Countries: The Bigger They Are, The Harder They Fall?," in Clarida, R. (ed.) *G7 Current Account Imbalance, Sustainability and Adjustment*, NBER y Chicago University Press.
- Gorton, G. (1988), "Banking Panics and Business Cycles", *Oxford Economic Papers*, 40, pp. 751-81.
- Gourinchas, O. and H. Rey (2007), "From World Banker to World Venture Capitalist: The US External Adjustment and the Exorbitant Privilege", in Clarida, R. (ed.) *G7 Current Account Imbalance, Sustainability and Adjustment*, NBER y Chicago University Press.
- Hausmann, R. and F. Sturzenegger (2006), "The Implications of Dark Matter for Assessing the US External Imbalance", CID Working Paper No. 137, Harvard University.
- Muellbauer, J. (2007), 'Housing, Credit and Consumer Expenditure', presented at *Housing, Housing Finance, and Monetary Policy*, organized by the Federal Reserve Bank of Kansas City, Jackson Hole, WY.
- Laxton, D. and G. M. Milesi-Ferretti (2005), "How Will Global Imbalances Adjust?", in *World Economic Outlook, Appendix 1.2*, International Monetary Fund.
- Obstfeld, M. and K. Rogoff (2007), "The Unsustainable Current Account Revisited", in Clarida, R. (ed.) *G7 Current Account Imbalance, Sustainability and Adjustment*, NBER and Chicago University Press.
- Terrones, M. (2004), "The Global House Price Boom", in *World Economic Outlook*, chapter II, International Monetary Fund.

Figure 1
Current Account by regions
 (% of world GDP)



Source: International Monetary Fund.

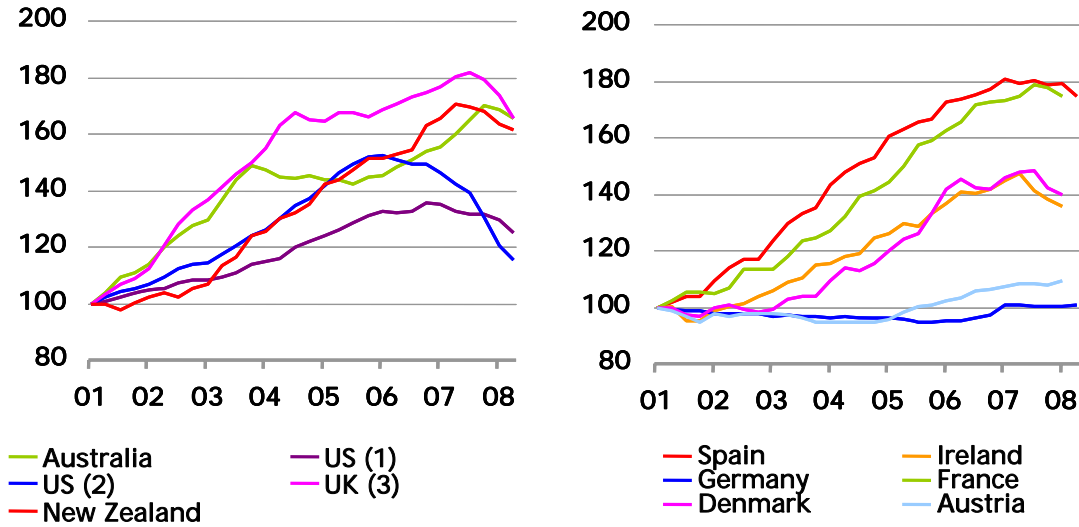
Figure 2
Global imbalances, current account balances
 (Billions of dollars)



(f) Forecast.

Source: International Monetary Fund.

Figure 3
Real price of housing (*)
 (IT01=100, index)



(*) Nominal index deflated by CP1. (1) OFHEO. (2) S&P/Case-Shiller. (3) Nationwide.
 Sources: BIS y CEIC Data.

Figure 4
Mortgage failure in U.S.

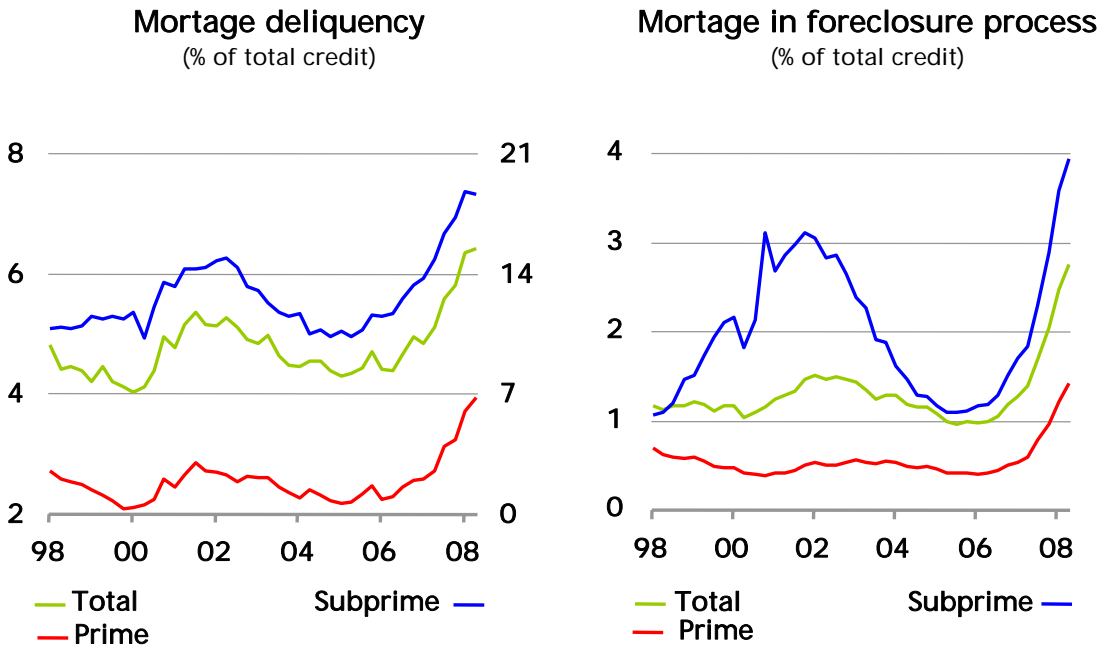
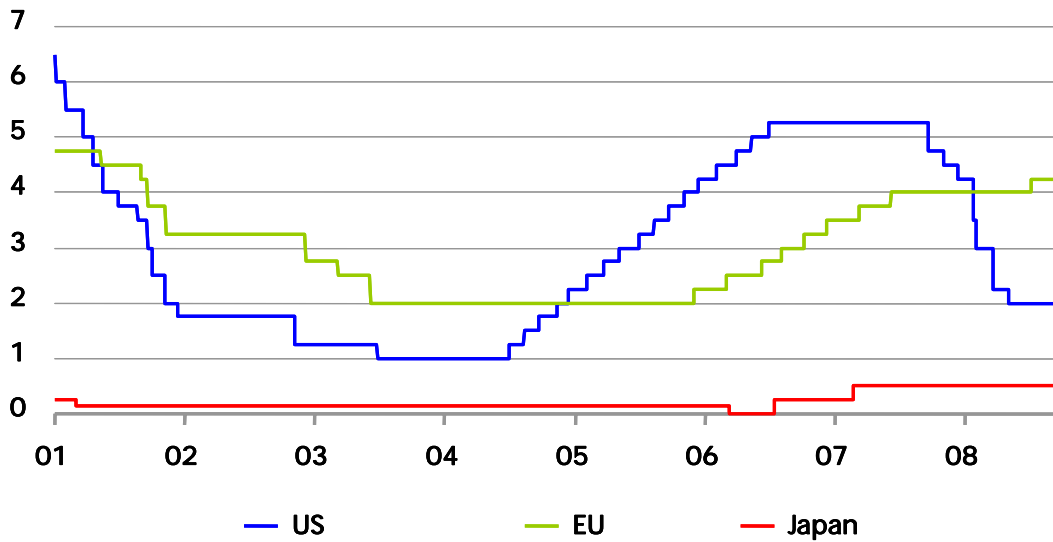
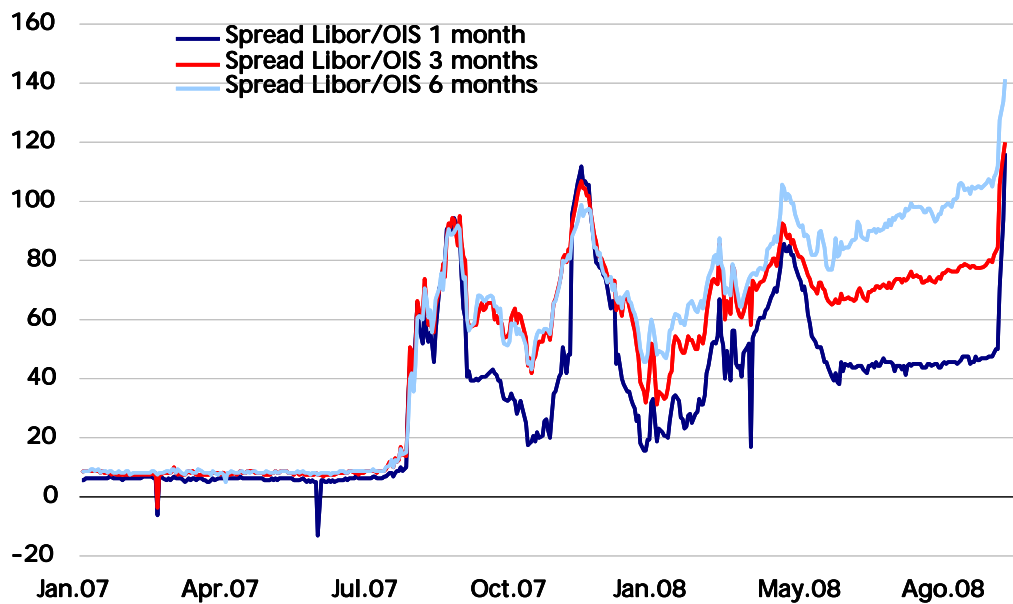


Figure 5
Monetary Policy rates in G3
 (percentage)



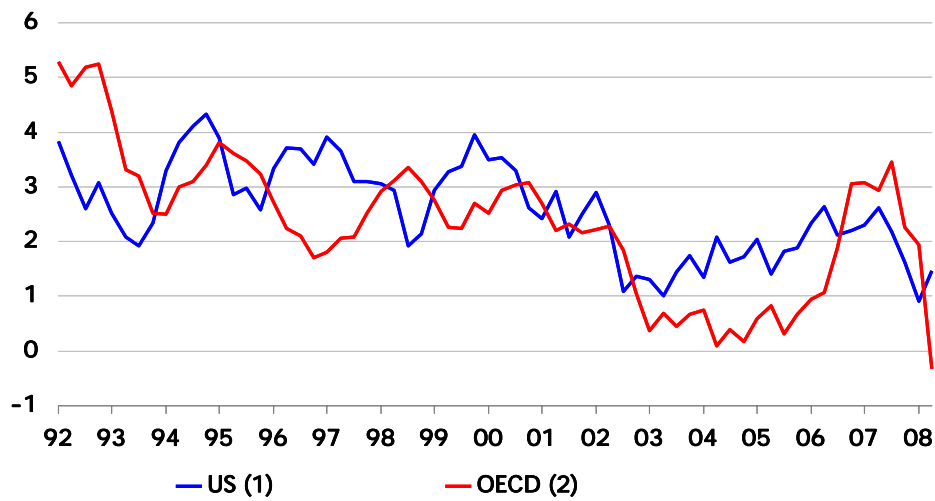
Source: *Bloomberg*.

Figure 6
Spreads between LIBOR and Overnight Index Swaps (OIS)
 (basis points)



Source: *Bloomberg*.

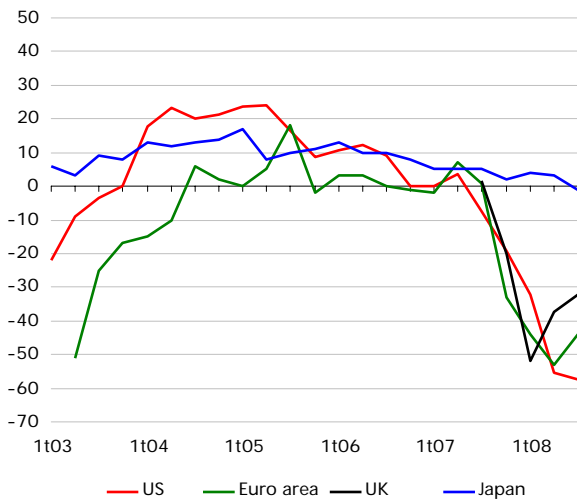
Figure 7
Real interest rates
 (percentage)



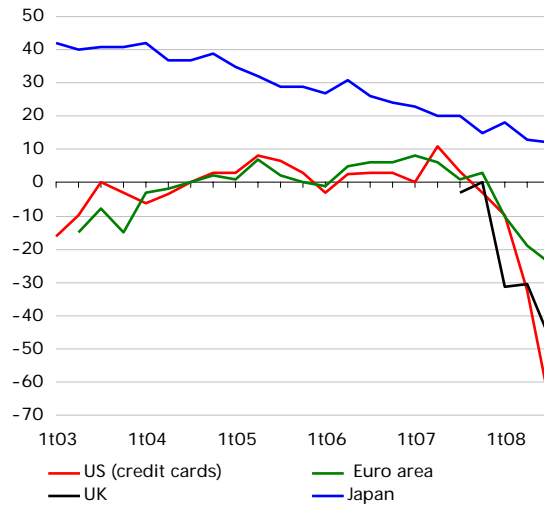
(1) 10 year nominal bond return, minus same period expected inflation. (2) Short term nominal interest rate minus CD.
 Sources: *Bloomberg*, OECD and Survey of Professional Forecasters.

Figure 8
Banking credit approval standards (*)

**Corporate credits
 (big and medium)**



Consumption credits



(*) Positive value is more flexibility in credit approval.
 Sources: ECB, Bank of Japan and Federal Reserve.

Figure 9
Oil WTI prices and GSCI grain and cereals and GSCI energy
 (dollars per barrel; index 01/01/2007=100)

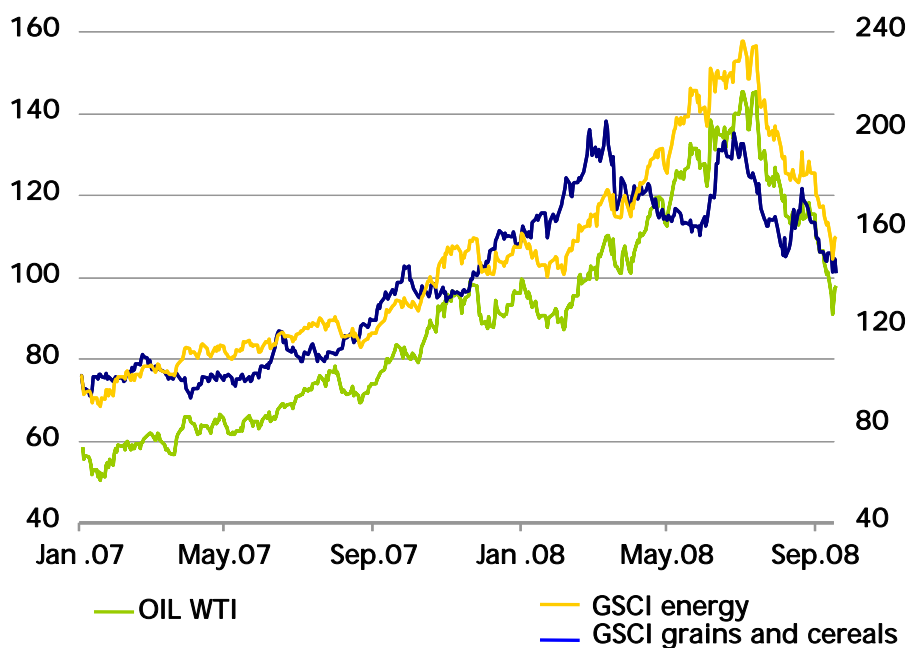
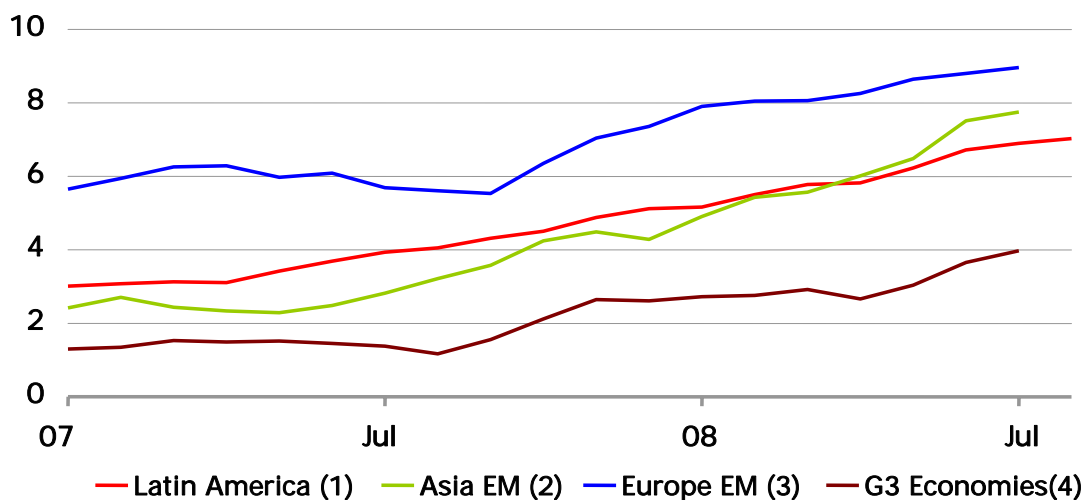
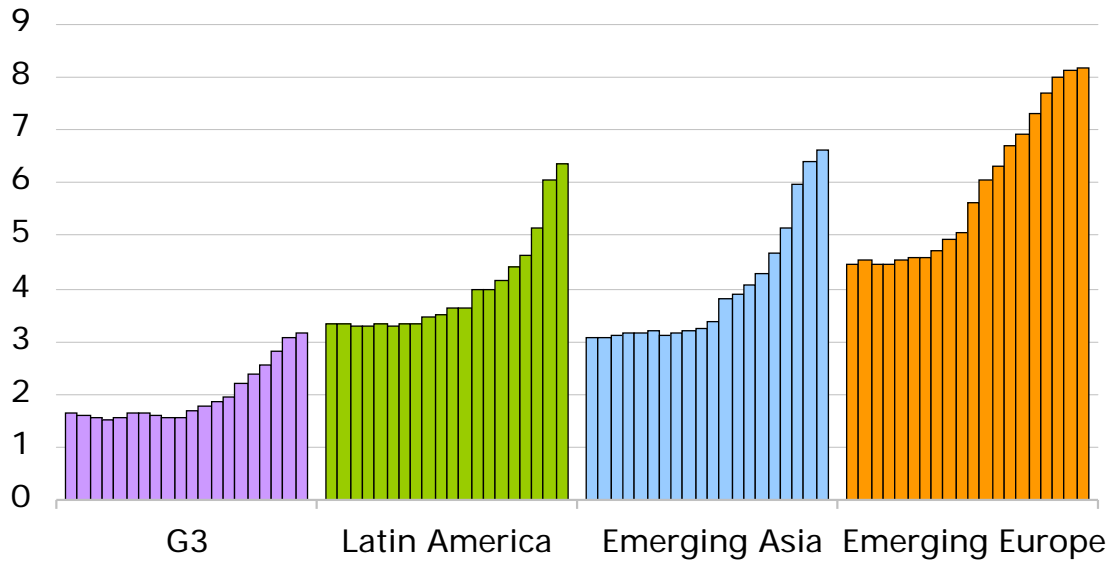


Figure 10
Annual inflation (*)
 (percentage)



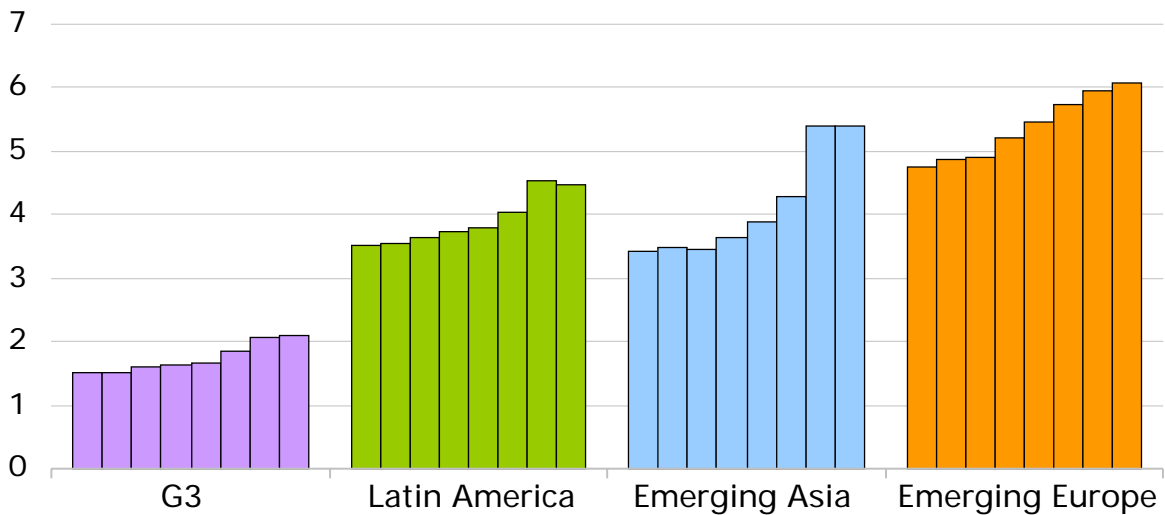
(*) Geometric average of countries each region.
 (1) Latin America: Brazil, Mexico, Chile, Colombia y Peru.
 (2) Asia EM: China, India, Indonesia, South Korea, Malaysia, Singapore, Taiwan and Thailand.
 (3) Europe EM: Czech Republic, Hungary, Poland, Russia and Turkey.
 (4) G3: US, Euro area and Japan.
 Source: CEIC Data.

Figure 11
Inflation forecast for 2008 (*)
 (percentage)



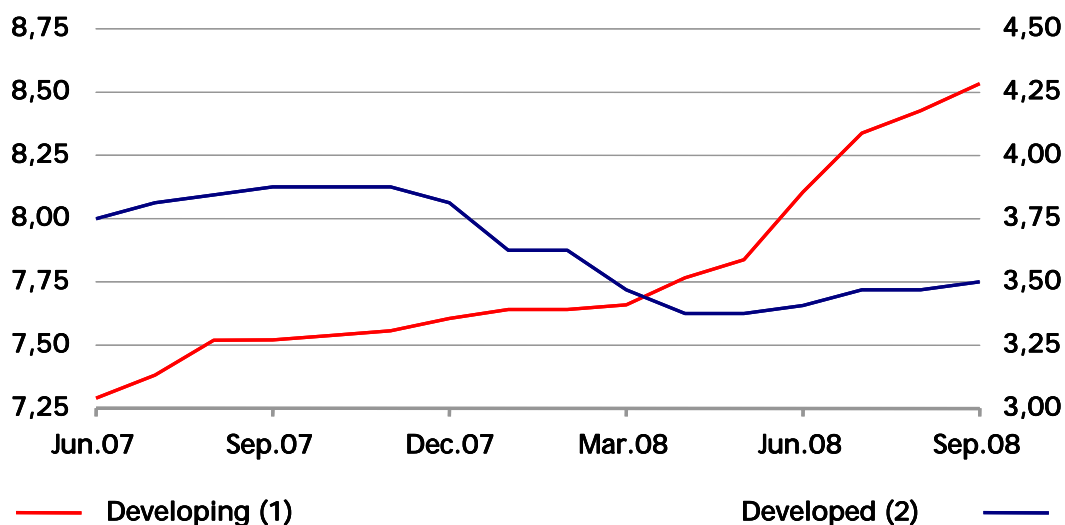
(*) Geometric average of inflation forecast. For Latin America and Russia, end of the year inflation data.
 Source: Consensus Forecasts.

Figure 12
Inflation forecast for 2009 (*)
 (percentage)



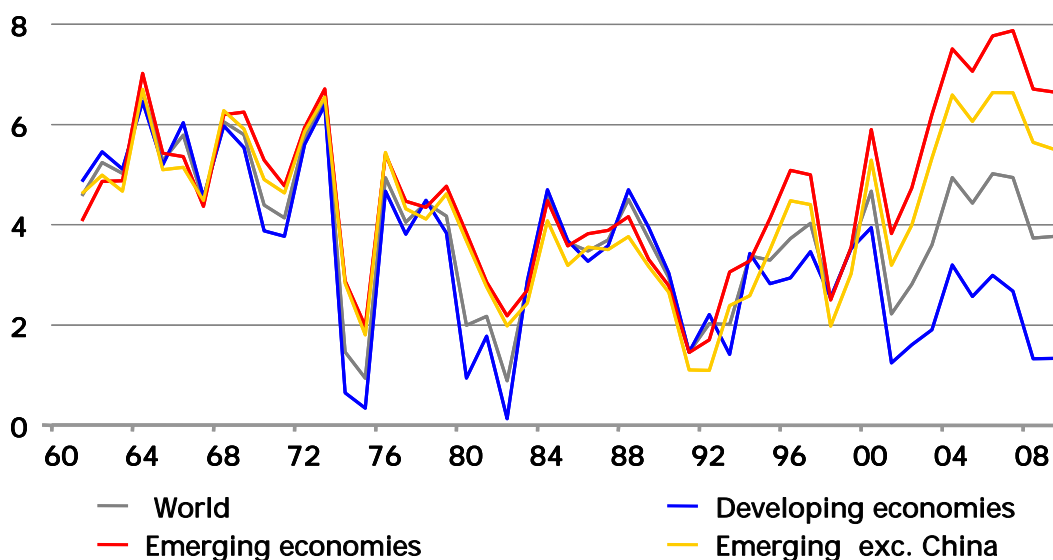
(*) Geometric average of inflation forecast. For Latin America and Russia, end of the year inflation data.
 Source: Consensus Forecasts.

Figure 13
Monetary policy rates in the world
 (percentage)



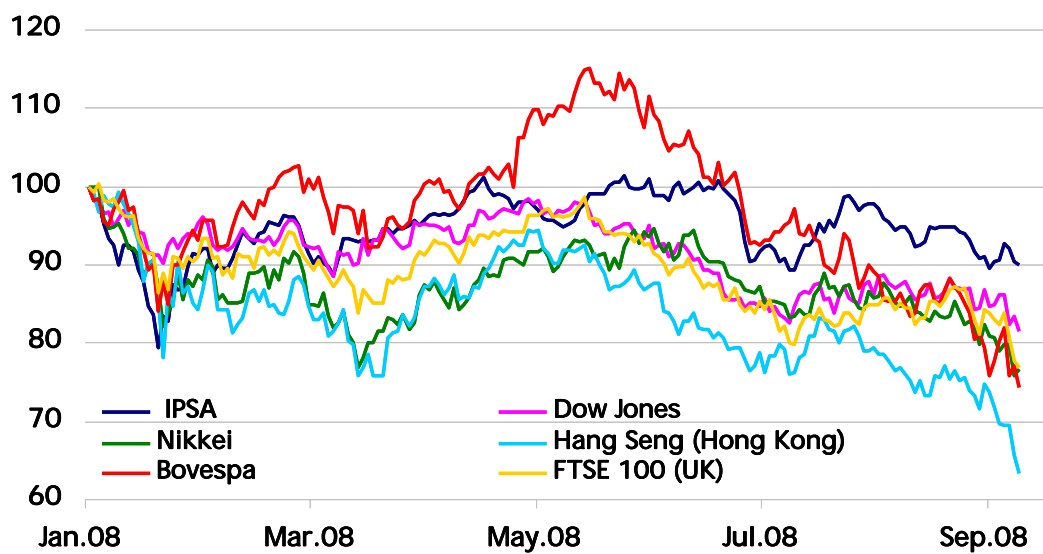
(1) Average of reference rates for: Brazil, Colombia, Korea, Chile, China, Hungary, India, Israel, Mexico, Peru, Poland, Czech Republic, South Africa and Turkey.
 (2) Average of reference rates for: Canada, US, Japan, Norway, UK, Switzerland, Sweden, Euro area.
 Source: Central Bank of Chile and *Bloomberg*.

Figure 14
World growth (*)
 (annual change, percentage)



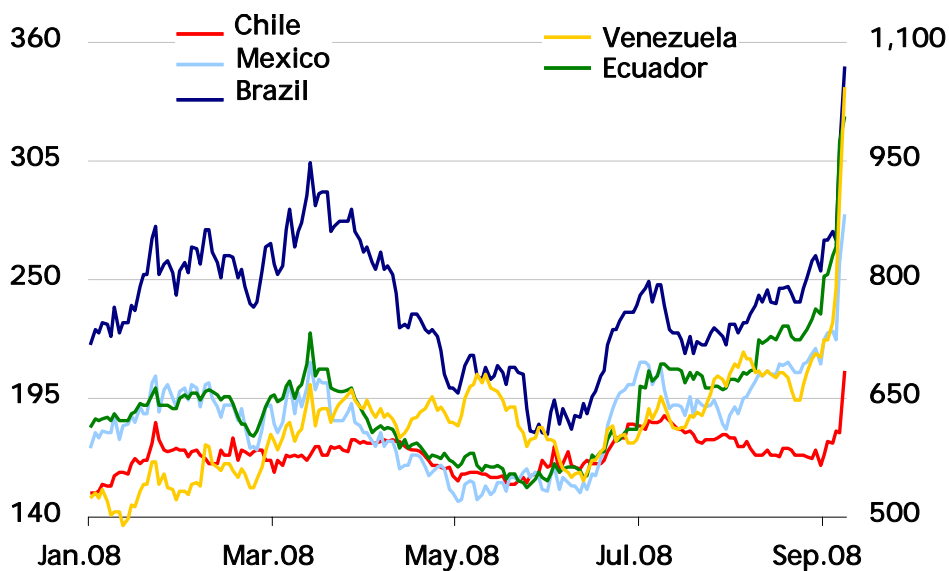
(*) 1961-1979 data from World Bank. Later data from IMF. Weighted by PPP.
 Sources: World Development Indicators (2008) and WEO April 2008.

Figure 15
Stock markets
(index, jan.08 = 100)



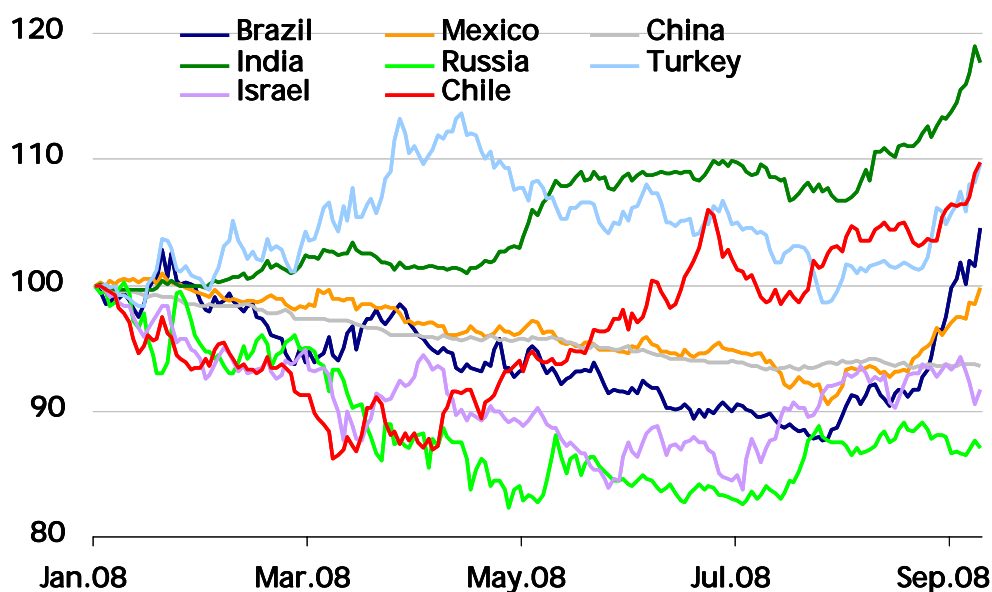
Source: *Bloomberg*.

Figure 16
EMBI
(basis points)



Source: *Bloomberg*.

Figure 17
Exchange rates in emerging economies
 (local currency per dollar, index jan.08 = 100)



Source: Bloomberg.

Table 1
World growth (*)
 (annual growth, percentage)

	Prom. 1990-99	Prom. 2000-05	2006	2007 (e)	2008 (f)		2009 (f)		2010 (f)
					May.	Sep.	May.	Sep.	
World	2,9	3,8	5,1	5,0	3,8 ▲	4,0	3,8 ▼	3,7	4,4
World at market ER	2,4	2,9	3,9	3,8	2,6 ▲	2,8	2,6 ▼	2,5	3,4
US	3,1	2,5	2,9	2,0	0,7 ▲	1,6	0,8 ▲	1,0	2,8
Euro area	2,2	1,9	2,8	2,6	1,4 ▼	1,2	1,2 ▼	0,4	1,9
Japan	1,5	1,6	2,4	2,1	1,4 ▼	0,8	1,5 ▼	0,8	2,0
China	10,0	9,4	11,6	11,9	9,3 ▲	9,9	9,5 ▼	9,0	8,9
Rest of Asia	5,5	4,8	5,5	5,8	4,7 ▼	4,6	5,0 =	5,0	5,2
Latin America	2,7	2,9	5,4	5,6	4,3 =	4,3	3,5 ▲	3,8	4,2
Commodity exporters	2,7	3,1	2,7	3,3	2,0 ▼	1,6	2,4 ▼	2,2	2,9
Trade partners	3,0	3,1	4,6	4,8	3,4 ▲	3,5	3,3 ▼	3,1	3,8

(*) Regional growth are weighted average by world GPP participation in IMF WEO (April 2008)
 (e) Estimated; (f) Forecasted.

Source: Central Bank of Chile base on investment bank data, Consensus Forecast and IMF.