DOCUMENTOS DE POLÍTICA ECONÓMICA BANCO CENTRAL DE CHILE



The Tensions of the World Economy

José De Gregorio Governor Central Bank of Chile

N.° 27 - October 2008

ECONOMIC POLICY PAPERS CENTRAL BANK OF CHILE



BANCO CENTRAL DE CHILE CENTRAL BANK OF CHILE

La Serie de Documentos de Política Económica, del Banco Central de Chile, divulga el pensamiento de las autoridades de la institución sobre la economía chilena y la conducción de la política monetaria. Esta Serie es una instancia de difusión y discusión de tópicos relevantes para los objetivos y el accionar del Banco Central, dirigida a un público más amplio que el de los especialistas.

The Series of Economic Policy Papers of the Central Bank of Chile presents views and analyses of the Chilean economy and the conduct of monetary policy prepared by Bank authorities. This series, aimed at the general public, disseminates and discusses topics that are relevant to the goals and operations of the Central Bank.

Documentos de Política Económica del Banco Central de Chile Economic Policy Papers of the Central Bank of Chile ISSN 0717 - 7151

> Agustinas 1180 - Santiago, Chile Teléfono: (56-2) 6702475; Fax: (56-2) 6702231

THE TENSIONS OF THE WORLD ECONOMY

José De Gregorio^{*} Governor Central Bank of Chile September 2008

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

Thinking of the global econom y's present situation leads us to focus almost exclusively on the financial crisis, but this is one aspect of m ore generalized problem s and imbalances that have build up over the y ears. The global econom y is going through a severe financial crisis, high inflation and unusual dispersion of growth around the world. Furthermore, this scen ario is ve ry uncer tain, as we have st ated in our last *Monetary Policy Report*.

Today I would like to address the current situation from a broader perspective, not only analyzing the financial cris is but digging m ore 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 pr esentation this could be to o ambitious, so I will ha ve to leave out some parts of the story. I will concentra te in so me issues that I believe are essen tial for understanding the present state of affairs: global im balances, the financial crisis, emerging econom ies' growth and globalizati on, with its inflati onary 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. W e know that in the corporate world rotation is high, with firm s coming in and going out, and jobs being created and destroyed. This is at the cornerstone of Schum peter's *destructive creation*, and explains a substant ial part of progress and productivity growth. However, there are ne gative externalities. Miscoordination and contagion problems, especially in the financ ial system, have the poten tial to amplify the cycles and transform destructive creation into *destructive destruction*.

A financial institution in distress does not make the h eadlines, but wh en complications become systemic, the consequences can be very disturbing. It is thus crucial to prevent

^{*} Prepared to be presented at the Seminar organized by students of the School of Business Administration of Pontificia Universidad Católica de Chile, and in the Manufacturers Association SOFOF A, in Sa ntiago, 24th September. I am thankful to Kevin Cowan, Pablo García and Andrea Tokman for valuable comments.

problems in one specific sector from spreading across the whole econ omy, with costly consequences. Hence the importance of safeguarding the economy's financial stability.

Until a while ago, when I was a sked to speak about financial stab ility I normally discussed evidence from developing econom ies. We have learned than exchange-rate crises are costly *per se*, but if accompanied by a financial b reakdown the cost duplicates. Similarly, an econom ic slowdown cum banking cr isis has severe e ffects on output and employment. But today we need not resort to those stories. The US has been accumulating a cu rrent-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 defi cit began to soar: From 140 billion dollars in 1997—equivalent to 1.7% of GDP— it clim bed to 739 billion dollars in 2007, that is, 5.3% of GDP (figure 1).

A first glance at the d ata requires screening the regional savings and investment balances to see how current-account deficits are dist ributed around the world. What we se e is a dramatic fall in savings—both private and public—in the United States, but also a major increase in surpluse s in Asia. This ref lects 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 re sumed briefly. Fiscal policy was of little help, although the fact that the international interest rate was so low—as opposed to the m id-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, th is increase in Asia's net saving combined with significant terms of trade gains (figure 2). T hus, 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 m is-measured, owing to its many non-observable components, which led analysts to m istake foreign funding for foreign income (Haus mann & Sturzenegger, 2 006). This is the case, for exam ple, of seniorage.

Both stories help explain why the current-acc ount deficit can persis t in high leve ls for longer than usual. But dom estic factors also played a part in the U S. expansionary monetary and fiscal policies while a real-e state bubble was building up, put additional weight on the fall in savings.

The main question was if this p rocess could be sustained, and the more benign visions thought it could last a long time. But the a ccumulation of imbalances at least had to moderate, which indicated that the dollar we ould weaken and output would slow down.

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).

Calculations perform ed a few years back in dicate 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 W arnock (2007), such an adjustm ent 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 overval ued houses that were sold to families that could not afford the m. 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 w ere lengthy debates whether a bubble e was form ing, that is, if prices were beyond what could be warranted by funda mentals (housing services provided by homes). For exam ple, the *World Economic Outlook* of Septe mber 2004 (T errones, 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 S terns followed suit, as did mortgage credit providers (Freddie Mac and Fannie Mae), insurance companies, other investment banks, and so on. A proble m 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 shou ld not result in signifi cant fluctuations in consumption. A rise in the price of the hom e 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 on sector, not a drastic fall in consumption. Nevertheless, there are a num ber 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 expans ion, the ensuing contraction can be extrem ely severe, as we can see now.

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

The imm ediate policy reaction when the cris is was unleashed was the provis ion of liquidity and an aggressive cut to the fed f unds interest rate in the US (f igure 5). New credit facilities were designed and huge am ounts of liquidity were injected, but tensions in monetary markets persist. (figure 6). Even if liquidity abounds, it does not move from

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).

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

those who have it in excess to tho se in de mand, because of the gr eat uncertain ty that exists and the decis ion of fi nancial entities to hold on to their liqu idity surp luses to cushion themselves against balance-sheet sho cks (Allen and Carletti, 2008) or sim ply to benefit from buying assets at discount prices.

The financial crisis is the outcom e of two key phenomena. On one side is a period of stability, low interest rates, abundant liquidi ty, fast economic growth and an asset price bubble (figure 7). This com bination 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 crisis ⁴. At the same time, many countries have recorded a real estate boom, but not all of them have found them selves 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 sim ilar credit growth rates and housin g price behaviors have had so different outcomes.

The low in terest rates prom pted a search for bett er returns. Individuals with zero repayment capacity were prov ided loans, an d to redu ce the r isk, said lo ans were securitized and often taken out of the banks' balance sheets (i.e. structured investm ent vehicles and conduits), so no further capital requirements were nece ssary for the banks. Credits were issued on the ba sis of ever-increasing housing prices, so the m ortgage was backing enough to relax the lending standards. As often oc curs when the storm hits, the situation reversed and a credit co ntraction followed (figure 8). Also, the real-estate bubble created a demand for homes as financial assets.

These loans were sold to agents the at 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 banks got rid of these loans, how they were rated, the derivatives that were cr eated 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 m anipulated. The paradox of the present scenario is that the banking system, whose objectives should be to intermediate credits and hedge against risks, seement ingly 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 trans ition of the bank-based financial system to a system based on tradable, short-run-debt ce rtificates. This scheme opens the door to a bank run that differs from the old ones where custom ers stood in line to withdraw their deposits. The recent in corporation of safety-net policies for institutions (Prim ary Dealer

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

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 Fe d came to life, the United States endured a major banking system crisis every three years (Gorton, 1988).

World inflation and growth

China's sustained grow th for m any years alre ady has been at the core of the world economy's evolution. The Chinese incorporatio n 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 coun tryside to the city boos ted world output. They not only could produce at lower prices but they also were the caus e of the increase in sav ings in that country.

China is maybe the most em blematic exam ple, 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 be fore 2006 inflation was low, especially in developed econom ies, was the supply of goods from e merging m arkets.⁵ Inf lation is dependent on the m onetary policy decisions and in the extrem e, under total inflation control, it could be pegged to the target regardless of the import prices of imports or other factors. However, what globalization n permitted was a period of low inflation and h igh growth (table 1). There was a chang e in relative prices, with a significant drop in pr ices 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 phenom enon could not last forever, and is now reversing.

The accelerated growth of the past several years finally sh owed on prices. This can be interpreted as we would analyze inflation in just any country. When potential GDP grows fast, inflation rem ains constant or m ay even fall. However, if actual GDP growth runs above its potential or trend, price pressure s result. The world economy grew fast, and although China contributed to world potential ou tput growth, inflationary pressures have emerged in those sectors where the demand grew faster than supply, namely oil and foods (figure 9). Inexpensive e goods can still be performed on the price pressures. But the dem and for oil, steel, minerals, etc., recorded strong increases, which pushed prices up. The supple y has not responded to dem and 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. Som e of them absorbed the dem and increase due to economic growth with supply increases, but then a new source of de mand appeared: bio fuels, which have further strained the prices of grains.

Another factor that, according to som e 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 som e agents go hand in hand with the sale of futures by others, and are norm ally the count erpart of hedging operations. On the other hand, while investors' positions have risen substantially in the commodities markets, they still share but a sm all 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 st anding at US\$12 per barrel in 1999 as a consequence of the Asian crisis, it starte d climbing throughout the 2000s in tandem with world growth. By m id-2006, when the oil pr ice was approaching US\$70 per barrel, the question was why the world econom y was so insensitive to it. Res earchers tried to explain why such a heavy price increase had been so m ild on inf lation and output (De Gregorio et al., 2007; Blanchar d and Galí, 2007). Fingers point ed 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 dem and, and precisely because of that, researchers found little effects from the shock on output a nd 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 in ternational sc enario is still de licate. Af ter a shock of oil and foodstuff prices that had no parallel since the Great Inflation of the 1970s, inflation has risen every where (figu re 10). Als o, inflation expectations have increased accordingly (figures 11 and 12). In general term s, 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 phenom enon have b een 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 econom ies m onetary 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 s trong. (figure 14). W hat is new is the decoupling of developed economies with the rest of the world. Not surp risingly, the entire world is decelerating, but the degree of expansion of output varies si gnificantly. 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 decoup ling capacity that em erging economies will d isplay and how long will dev eloped econ omies' gro wth hold. Here, accu mulating a curren t account surplus can help. For example, the financing deficit for several years and thus growth. Still, one cannot rule out a prolonge d 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 afore mentioned 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 oc curred, but this is good news, because the exchange rates are helping the adjust tment (figure 17). Asset prices show no decoupling but, as we well know, price corr ections 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 f uture development of financial markets. Next I will discuss f inancial bubbles and boom s in monetary policym aking, and the nature of the present crisis and possible consequences, to wrap up with the im plications of the world growth scenario on the Chilean monetary policy.

In the present turmoil, authorities have acted as lenders of last reso rt providing liquidity to ensure proper market functioning. Nonetheless, regarding financial bail outs two costs have to be balanced: averting a financial co llapse with catastrophic consequences on the one hand, and the negative signals that com e from said bailouts, on the other. Not only have the too-big-to-fail inst itutions 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 im portant 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 com parison. The tr adeoff between these two objectives is clearly illus trated with the dev elopments of the past week. Allowing the dem ise 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 f ollowed. Indeed, w hat is wor risome is that th e dimensions of the crisis that follow th e Lehm an collap se were no anticipated by the authorities. W ith the benef its of hindsight, it would have been better to avoid the collapse, and its effects should have been foreseen by policymakers.

The consequences of the f inancial crisis will spread pas t the f inancial system, as is already perceived in recent discussions on pr ivatization of earnings and socialization of losses. Hopefully this debate will soon fo cus on the important issues, but we must recognize that the excessive aggressivene ss and a mbition of some players in the international financial m arkets, the irresponsible behavior of operators unaware of what they were trading, and lax risk asses sment and regulation, will p enalize the innocent and the guilty alike.

A sound, com petitive financial sy stem is essential for econom ic developm ent. The incentive structure is key for its smooth opera tion. 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 m onetary 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 e ffect on inflation, but that is not the point. Furthermore, an interest rate increase is probably unable to bur st 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 m ay have work ed 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 m ust be flagged and, if necessary, new regulations must be adopted. For price stability, there is monetary policy.

It m ay well be the case th at p rice stabil ity and financial stab ility have different implications on interest rate m anagement. The best exam ple of th is is the aggressive reduction of interest rates adopted by the Fed th is year. Interest rate cuts were necessary to alleviate liquidity tensions in m onetary markets and ensure the sound operation of the

payments system. Failing to take these act ions m ight have further exacerb ated 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 con sequences are still m uch milder than those of other episodes, including of course the Great Depression and even the Gr eat Inflation of the 1970s. We have learned two lesson s from these occurrences and wh ich are clearly presen t in the acts and statements from central bankers around the w orld. 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 tim es. The othe r is that inflation must be fought with determination and letting it settle down and stay in the econom y is very costly. Different perceptions and ass essments can alter the short-term course of monetary policy, so flexibility a nd realism are nec essary to tim ely correct the route, and this h as 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 p ast few decades in technol ogy, flexibility, in ternational in tegration, transparency and account ability, among other fact ors, make this world a safer place. In Chile we have a policy fra mework that grants us a good position like n o other before, to sail through troubled waters.

Regarding the world econom y, there are big risks. The Chilean inflationary prob lem 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 com ing years, driven to a large extent by em erging economies, particularly China and India. One longer lasting slowdown of i ndustrialized countries than cannot rule out a deeper and assumed in the baseline projection. In a w eaker economic scenario, commodity prices should decline. A drop in the oil price woul d come as a relief for the world economy. Also, a weaker world econom y could affect Ch ile's GDP growth directly. These forces would pull down inflation. However, the infl ationary 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 sufficien t flexibility and realism to in corporate international developm ents and prospects in the analysis that underlies our m onetary policy decisions. In these m oments, infl ation risks and dynam ics do not allow for excessive optimism.

References

- Auer, R. and A. M. Fischer (2008), "The Eff ect of Trade with Low-Income Countries on US Industry", CEPR Discussion Paper 6819.
- Barajas, A., G. Dell'Aricci a and A. Levchenko (2008), "C redit 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. Farh i, 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 Mantaining Stability in a Changing Financial System, organized by the Federal Reserve Bank of Kansas City, Jackson Hole, WY.
- De Gregorio, J. (2007), "Comme nts", 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. W arnock (2007), "Current A ccount 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 Adjustm ent and the Exorbi tant Privilege", in Clarida, R. (ed.) *G7 Current Account Imbalance, Sustainability and Adjustment*, NBER y Chicago University Press.

- Hausmann, R. and F. Sturzenegger (2006), "T he Im plications of Dark Matter for Assessing the US External Im balance", CID Working Paper No. 137, Harvard University.
- Muellbauer, J. (2007), 'Housing, Credit an d Consum er Expenditu re', 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. Miles i-Ferretti (2005), "How Will Global Imbalances Adjust?", in *World Economic Outlook, Appendix 1.2*, International Monetary Fund.
- Obstfeld, M. and K. Rogoff (2007), "The Unsu stainable 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 P rice Boom", in W orld Econom ic 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)



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.



06

08

Figure 5 Monetary Policy rates in G3 (percentage)



Source: Bloomberg.

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



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 (*)



1t08

(*) 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)







(*) 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)



Average of reference rates for: Brazil, Colombia, Korea, Chile, China, Hungary, India, Israel, Mexico, Peru, Poland, Czech Republic, South Africa and Turkey.
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)



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

	Prom. 1990-99	Prom. 2000-05	2006	2007 (e)	200 May.	98 (f) Sep.	2009 (f) May. Sep	. 2010 (f)
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	4 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	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.