

Globalization, Emerging Markets, and the Savings Glut

The purpose of this book is to explain the financial crisis from a banking point of view, and to offer solutions for improvement such that the financial industry is better placed to withstand the impact of future crises. Surprising as it may seem, the topics of globalization, emerging markets, and the savings glut cannot be excluded from this book. Often in the search for the causes of the financial crash of 2007–2009, globalization and the role of the Asian and oil-exporting countries are underestimated. In many analyses of the crisis, the successive emerging-market crises over the past decade and the undervalued currency of emerging-market economies gets credited with, at best, only a secondary role in the crisis.

This is to miss a fundamental aspect and causal factor of the crash, and one that had been building up for over a decade. We want to phrase it even more strongly. One of the biggest challenges that world political leaders will be facing in the next decade is to address the global imbalances that have been created over the previous decade. If they do not succeed in this, then even the most robust banking regulation will not be sufficient to protect the financial industry from another financial crisis, the effects of which could be even worse than the one just experienced. In saying this, we recognize the role emerging markets played and are still playing as pivotal to the crash.

GLOBALIZATION

In identifying the responsibility of these emerging-market economies we need to go back to the very beginning of globalization. As we illustrate, the impact of globalization was detrimental in the way it drastically changed the landscape of financial markets. The seeds of globalization were planted at the end of the 1970s. Prior to this the United States possessed something more akin to an autarkic economy than a truly integrated open economy

(the United Kingdom, for example, has always been more of an open trading economy than the United States). Apart from dependence, to some extent, on imported oil, the U.S. economy was financed by its own pool of money.

The collapse of the Bretton Woods currency arrangement and the oil shock of 1973–1974 were the first steps leading to an integrated global economy. A major event in the opening up of financial markets in the United States was the broadening of the investment guidelines of pension funds. These were allowed to invest in smaller mid-cap companies, which was the spark for the growth of venture capitalism. The introduction of 401(k) pension schemes freed up more capital and by the mid-1980s, during the Reagan administration, cross-border capital flows started to accelerate. The fall of the Berlin Wall and the collapse of communism in general opened up trade opportunities across the globe, and companies and banks started to operate more internationally. The impact of the implosion of communism was significant, as it released a *peace dividend* as capital previously allocated to defense spending during the Cold War was now able to be invested in free markets. This peace dividend contributed to a liberalization of international trade and increased productivity.

The banking industry recognized the opportunity of this new environment and started setting up branches and subsidiaries in foreign markets. U.S. and European banks were particularly welcome in emerging economies because in many cases a developed banking infrastructure was not in place in these countries, and Western banks were welcomed as a source of expertise. This state of affairs continues to this day, as evidenced by the numbers of expatriate bankers moving from the city of London and Wall Street to banks in the Middle East and Asia. The expansion of Western banks was also facilitated by the development of technology and the use of advanced information technology (IT) infrastructure. For instance, electronic money transference enabled almost instant funding and created a market of inter-bank liquidity.

During the Clinton administration globalization spread further and deeper as free trade was enhanced by removing many protectionist barriers. Globalization flourished as markets opened up; new capital was made available to do business with Latin America, Asia, and Central and Eastern Europe.¹

A paradox of this development was that, by opening their borders to free trade with the rest of the world, these countries created potential vulnerabilities. They embraced the free market principle as it gave them a way to get out of isolation and poverty by accepting the money that came from international lenders. However, simultaneously they built up a substantial amount of foreign debt. Governments were not ready to enter what David Smick has called this “ocean of liquidity.”²

A SERIES OF EMERGING-MARKET CRISES

Free capital flows set the stage for various emerging-market crises such as the Asian currency crisis of 1997–1998. Each crisis was faintly similar: The emerging economy suffered either a full-scale banking crisis or a currency crisis or both. The reasons behind these crises are described most accurately by Frederic Mishkin³ and Martin Wolf.⁴

First of all, as mentioned earlier, governments were unprepared for the impact of the liberalization of free markets and made clear policy mistakes. Opening up one's borders while one's local banking system is still undeveloped results in a highly leveraged debt buildup as well as a deterioration of loan origination standards. A surfeit of money tends to produce this situation. Many of the loans originated in the local banking systems defaulted. In any situation, as banks start experiencing a rise in bad loans, they increase write-downs and loan loss provisions, and withdraw from lending. This then has a knock-on effect on the economy, and leads to a slowdown in the economic growth process. This is the second phase described in Frederic Mishkin's scenario, the buildup toward a currency crisis. During this phase the government has to step in and come to the rescue. However, for emerging economies their financial strength as a lender of last resort (LOLR) is limited, and often such governments undertake the process with help from the International Monetary Fund (IMF). A drop in public spending is the inevitable result of this process.

Investor confidence (by local residents and foreign investors) disappears rapidly at this point, and this triggers the third phase: the currency crisis, once most investors withdraw their money from the country. The central banks of these emerging countries are then faced with a stark choice. Either they have to raise interest rates sharply to support their currency, which will push most people who are in debt into default, or they have to stop intervening and allow their currency to devalue, which will produce inflation and ultimately also cause defaults where much of the borrowed money is in foreign currency. The final phase is the result of the choices to be made in phase three: an unavoidable deep economic recession.

Crises like this have occurred on a regular basis over the past three decades. A study from Hutchison and Neuberger (2002) showed that between 1975 and 1997, 33 bank crises, 51 currency crises, and 20 "twin crises" took place in emerging economies.⁵

A look at the crisis in Thailand in 1997 confirms that events here followed almost exactly the path described by Mishkin. Paul Krugman provides an in-depth analysis of the Asian crisis in his book, which we summarize here.⁶

In the first instance, foreign investors were tending to avoid Latin America after the so-called Tequila Crisis of 1994. This was the series of events in which Mexico suffered a severe currency crisis that year, in part arising from policy mistakes made by President Carlos Salinas de Gortari's government. They focused instead on Asia, and Thailand in particular, which was in the process of converting from an agricultural into an industrial economy. The industrial sector was expanding rapidly, financed by foreign money, to the point where Thailand became an "Asian tiger" with almost double-digit economic growth rates year on year. Foreign banks were feeding this expansion with foreign currencies that were converted immediately into Thai baht (THB), necessary because local entrepreneurs could not use Japanese yen (JPY), U.S. dollars (USD), or German deutsche marks (DEM) to pay workers or buy property.

Due to this increased demand the THB started to appreciate in value. But the Thai central bank wanted to prevent this and keep the THB stable against other currencies. In fact this turned out to be a significant mistake because it stimulated credit growth. In order to keep the THB stable the Thai central bank constantly had to sell its own currency and buy foreign currencies, generally USD. As a result the money supply in THB increased but also the foreign currency reserves of the central bank started rising. A speculative bubble was building up, but instead of halting the support of its own currency the central bank of Thailand (as did all central banks in the region) began to limit the capital inflow. This was done by buying back in the market the THB that they had just sold. In essence the central bank was turning on the money printing press. This acceleration in the money supply, M2, created higher interest rates and rising inflation, which was an incentive for local companies to start borrowing even more in foreign currency, which was much cheaper. The equation⁷ $GDP = M2 \times V$ was in full force and the central bank was not wise to the fact that the economy was overheating rapidly.

This development could have been prevented if the currency support had been wound down in time. This did not happen. As inflation rose wages also rose, which lowered productivity and also made exports more expensive. Consequently, exports fell, and a current account deficit was created.

An important element in this lending process was the existence of a middle man between the foreign lender and the local borrower, in the form of a so-called finance company. This was not a local bank but a facilitator that converted the foreign loan into the local currency and determined the interest rate to the borrower. Such firms dominated the lending business. As these finance companies did not operate like a classic bank, where the lending is backed by deposits, they were less disciplined

in their loan origination processes. They also expected loan defaults to be covered by the government and ultimately the taxpayer. This moral hazard itself breeds a dangerous complacency, as we explain in a later chapter.

At a certain point, as is the case with all bubbles, investors started losing confidence and withdrew. The borrowing from abroad decreased rapidly and created an additional problem for the central bank. Due to the drop in foreign lending the demand for THB fell. The current account deficit intensified this drop further as imports outpaced exports, which put extra selling pressure on the THB. The central bank had to do the opposite to what it had been doing for a while, meaning buying THB and selling foreign currencies. However, this operation is more difficult than the first one, because while a central bank can print an unlimited amount of its own currency, it certainly cannot do this with foreign currencies.

A policy alternative for the central bank could have been to raise interest rates in order to reduce the money supply, but this was not an easy solution as the economy was struggling and to do this would discourage economic activity still further. It was also too late to withdraw support for the THB as this would trigger a devaluation of the currency, which would have driven many borrowers into insolvency as they had liabilities in a foreign currency. In fact the Thai central bank postponed either decision in the hope that it could buy time, but ultimately this led to a currency crisis and an effective devaluation of the currency in any case.

The Thai story is similar to a number of other emerging-market crises over the past three decades. The common thread for many of them is an artificially low exchange rate for the local currency, which amounts to currency manipulation, and which is not reversed in time to prevent recession. And as many of the economies in the region follow the same policies, the contagion effect of any crisis is high.

The best example of this is what occurred in Argentina at the turn of the century. From the point of view of productivity and exports, Argentina became uncompetitive after its neighbor Brazil decided to devalue its own currency. The Argentinean peso remained pegged against the U.S. dollar, which at that time (only one or two years into its introduction) was strong against the euro. The euro reached a low against the U.S. dollar at around 0.82 and this negatively impacted export opportunities to the eurozone.⁸

The list of countries affected in similar ways is a long one, and includes Mexico, Brazil, Argentina, Thailand, Vietnam, and Indonesia. In every case the cost to the economy was high. Public debt as a percentage of GDP went over 10 percent more than half of the time in these cases, as shown in Figure 1.1. Furthermore the drop in output was also significant, and it took an

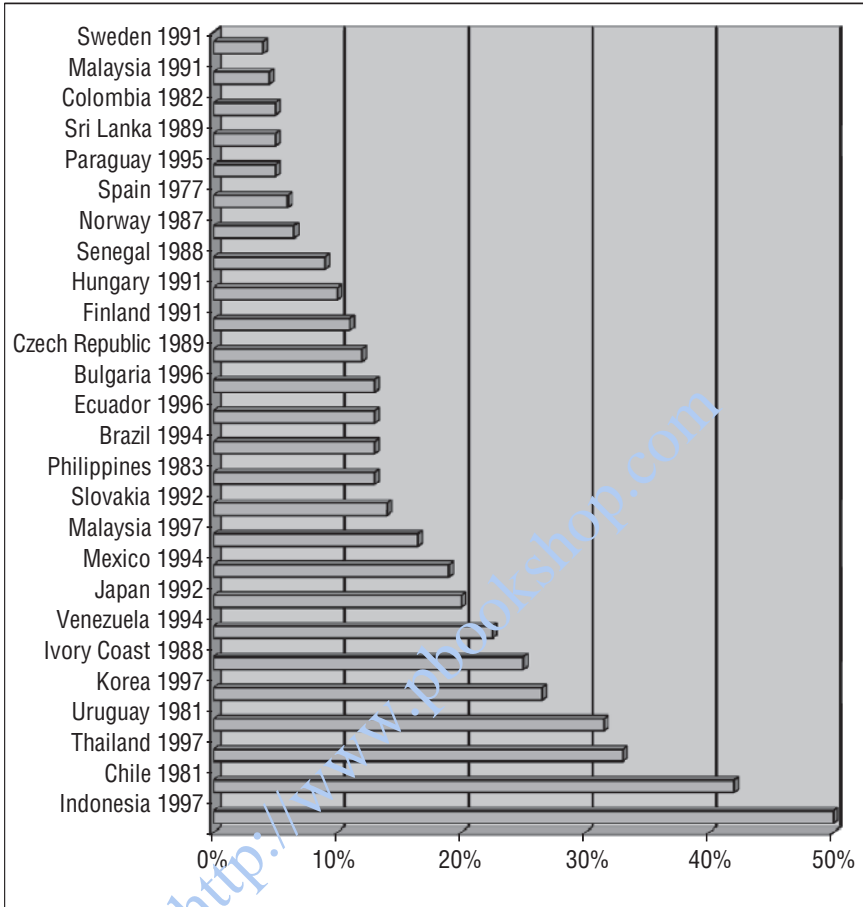


FIGURE 1.1 Fiscal Cost of Financial Crisis as Percentage of GDP

Source: Caprio et al. (2003).⁹

average of over three years for each country to return to positive growth. This is shown in Table 1.1 and Figure 1.2.

LOW-YIELD ENVIRONMENT DUE TO NEW PLAYERS IN THE FINANCIAL MARKETS

The countries experiencing this sort of crisis learned their lessons and implemented a more stable export-driven growth model, one in which their

TABLE 1.1 Drop in Output as Percentage of GDP

Country	% of GDP
Japan	48%
Chile	46%
Thailand	40%
Indonesia	39%
Malaysia	33%
Philippines	26%
South Korea	17%

Source: IMF and World Bank.

reserves were immediately converted into U.S. dollars and other foreign currencies such as euros and Swiss francs. So the experience of the currency crises of the 1980s and 1990s were one of the reasons leading to a savings glut in U.S. dollars, and one of the core roots of the crisis we would experience from 2007 onward.

Over time these rising global flows of trade and capital also caused financial imbalances. The U.S. economy started to build up a substantial current-account deficit, as it increased its imports. Developing countries such as China and India liberalized their economies and entered the international scene to participate in this commercial expansion, and after a while Southeast Asian emerging-market economies and oil-exporting countries were funding the U.S. current-account deficit. The United States would act under all this as consumer of last resort, and the current account balance sheets of these countries made a sudden and drastic reverse. This is illustrated in Figures 1.3 and 1.4.

As these Asian and oil-exporting countries were accumulating ever more reserves, a significant new player emerged in the form of the sovereign wealth fund (SWF). SWFs are state-owned investment vehicles which invest their surpluses in global financial assets. Unlike central bank reserves, their portfolio is diversified across a wide range of assets such as equity, real estate, fixed income, hedge funds, and private equity. Together with the hedge funds, Asian central banks and the private equity firms became in effect the new power brokers of the financial markets.¹⁰ By 2006 the SWFs, together with the Asian central banks, became the biggest asset managers in the world, as shown in Figures 1.5 and 1.6.

These new players added new liquidity to the global markets and by 2006 they represented (including the leverage part of hedge funds¹¹) roughly

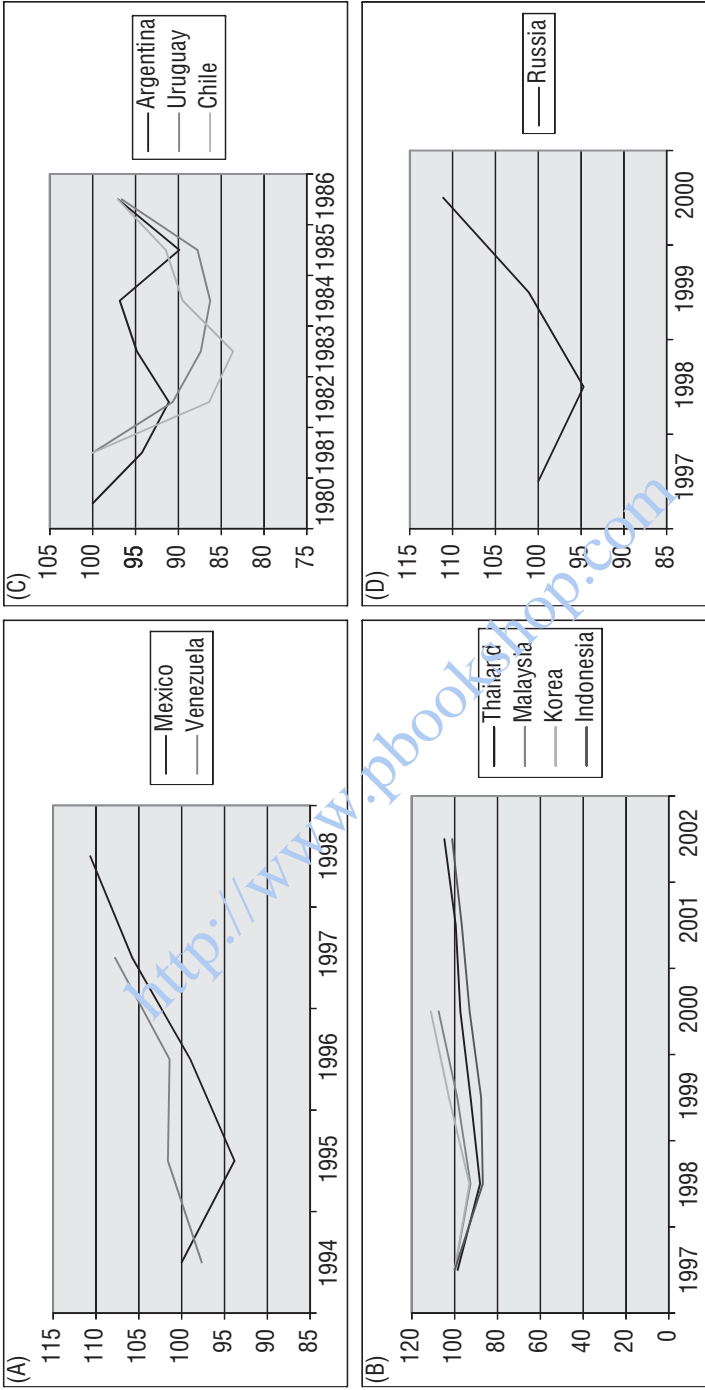


FIGURE 1.2 Loss of GDP During Four Major Emerging-Market Crises
 Source: IMF.

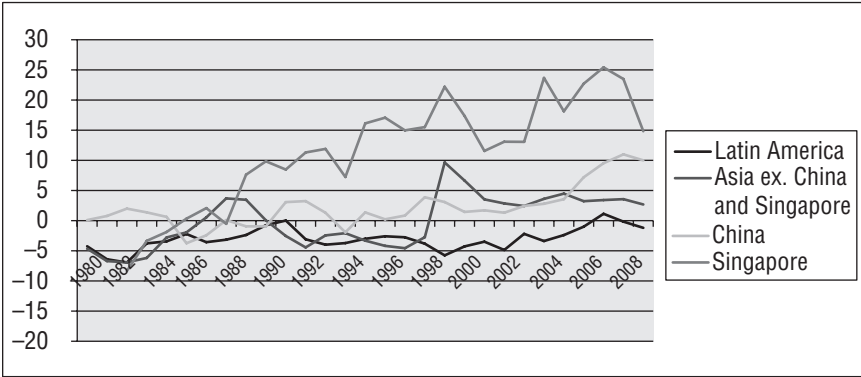


FIGURE 1.3 Evolution of Current Account Balances of Major Emerging-Market Regions, 1980–2008

Source: Institute for International Finance.

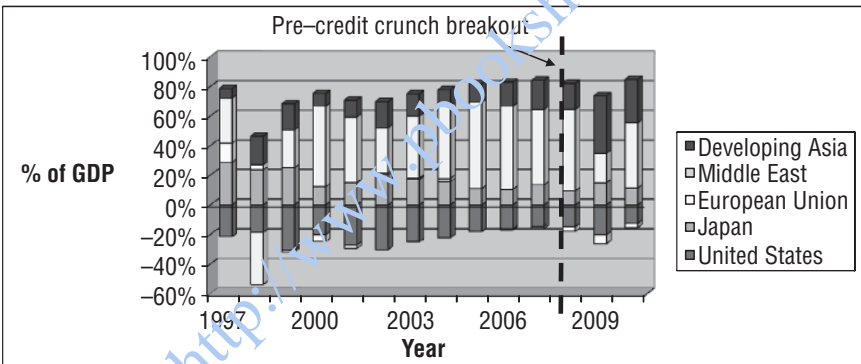


FIGURE 1.4 Development in U.S. Current Accounts Balance as a Percentage of GDP

Source: IMF.

\$13.6 trillion. Apart from the Asian central banks, the petrodollar countries were initially investing their reserves in U.S. and European government bonds. This extra liquidity depressed long-term interest rates. According to a McKinsey study, in the U.S. bond market long-term interest rates were pushed down by an estimated 130 basis points.¹²

At first this phenomenon was called an “interest rate conundrum” by the chairman of the U.S. Federal Reserve, Alan Greenspan, in June 2005. The Federal Reserve started raising U.S. interest rates from 2004 onward. However, despite hiking short-term rates aggressively, the long end of the

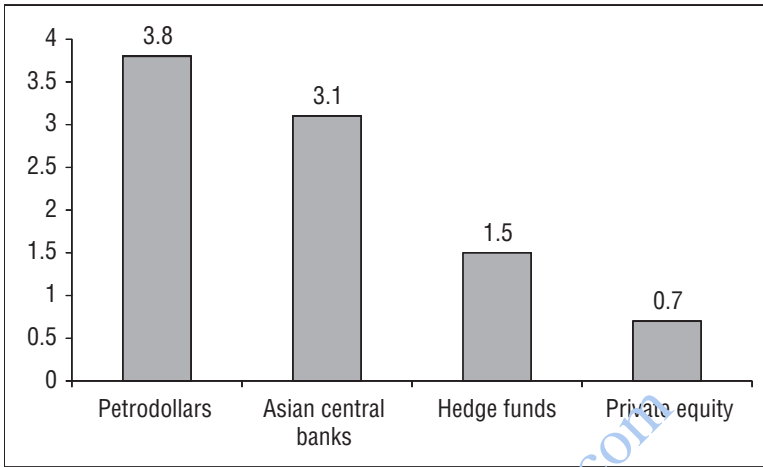


FIGURE 1.5 The New Power Brokers’ Assets under Management in \$ Trillions (2006)

Note: \$1.5 trillion of hedge funds are assets under management. Their real exposure is estimated to be leveraged up to \$6 trillion.

Source: McKinsey Global Institute, 2006.

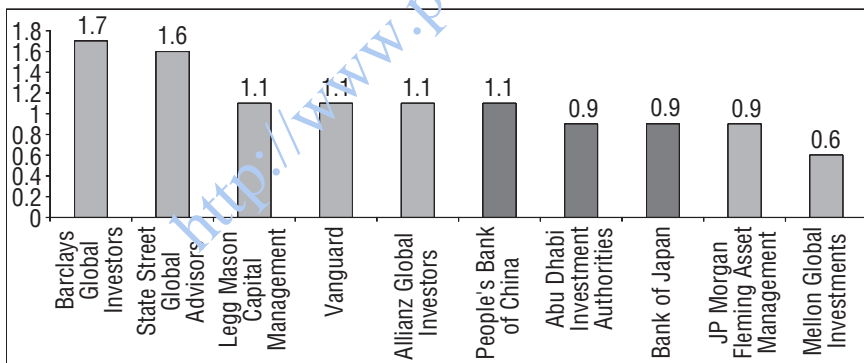


FIGURE 1.6 Top Ten Asset Managers in \$ Trillions (2006)

Source: McKinsey Global Institute, 2006.

U.S. Treasury curve continued to drop. This was not limited to the United States but was a worldwide phenomenon. From June 2004 to June 2005 the U.S. central bank raised the Fed funds rate eight times, from 1 percent up to 3 percent. Over that same period the yield on the U.S. Treasury’s benchmark 10-year note fell from around 4.8 percent to around 4 percent, as shown in Figure 1.7.

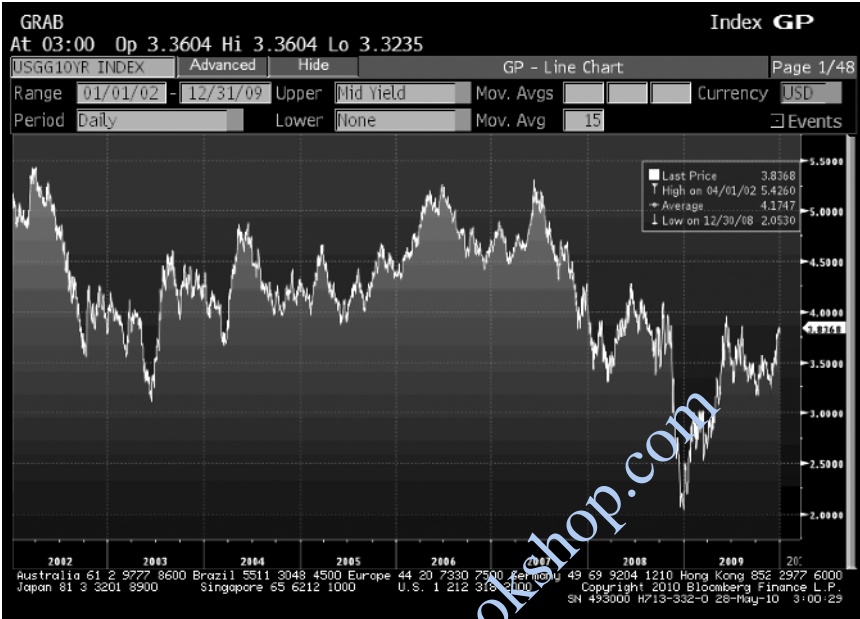


FIGURE 1.7 U.S. 10-year Treasury Note 2000–2009

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At the time, Mr. Greenspan did not believe that this was due to large flows of foreign capital from emerging-market countries running large surpluses against the United States. Of course, now we know that this was indeed the case. As the price of oil almost doubled from 2002 to 2006, the petrodollar exporting countries became one of the most important suppliers of capital, as shown in Figure 1.8.

As the inflow of new money was continuous during this period, this depressed credit spreads and so investors became less risk-averse and extended along the credit curve in their search for yield. Also, among these SWFs and Asian central banks there was a shift in risk appetite. The consequence of all this was something Professor Milton Friedman had predicted along general lines many years before: the danger of too much money chasing too few goods, which creates inflationary assets and fuels an asset price bubble. Private equity was boosted due to excess cheap credit being available. Cheap credit also boosted the hedge fund industry using leverage. Finally, credit spreads were structurally pushed lower due to supply- and demand-driven synthetic CDO structures which were issued on a monthly basis. The Asian and oil-exporting countries' investment

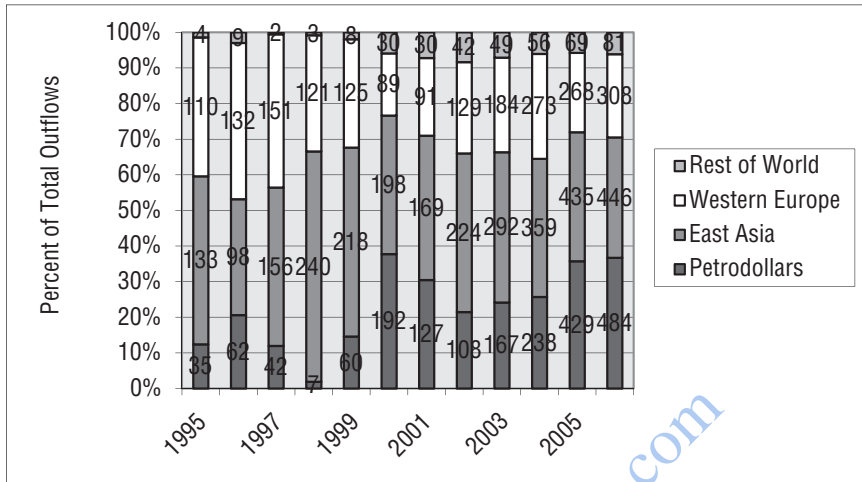


FIGURE 1.8 Net Capital Outflows from Countries with Current Account Surpluses in \$ Billions

Source: IMF; McKinsey Global Institute.

policies played an important role in the dynamics of this seemingly prosperous environment.

Greenspan's successor, Chairman Ben Bernanke, came closer to explaining the interest rate conundrum. He referred to it as the savings glut. The United States was acting as a kind of "spender of last resort" by creating a huge current account deficit that was fueling a housing market boom. However, at the time he detected the problem, he downplayed its risks. In 2009, though, the Federal Reserve chairman delivered a *mea culpa*, pinpointing the large capital inflows as a force lifting the U.S. economy, but failing to stop Americans from going on a destructive spending spree.

*The global imbalances were the joint responsibility of the United States and our trading partners, and although the topic was a perennial one at international conferences, we collectively did not do enough to reduce those imbalances. However, the responsibility to use the resulting capital inflows effectively fell primarily on the receiving countries, particularly the United States.*¹³

Concern over the deficit in the U.S. current account—a broad trade measure that includes investment flows—and its flip side, a massive Chinese

surplus, would dominate meetings of the Group of Seven (G7) nations, before a credit crisis and global recession gave policy makers something else to worry about. U.S. officials did not realize that their country being the destination of choice for world lenders was a problem. Mr. Bernanke has said that he now knows otherwise. The flood of cheap (foreign) money fueled a housing boom that ended up being a bubble. As he stated,

The risk-management systems of the private sector and government oversight of the financial sector in the United States and some other industrial countries failed to ensure that the influx of capital was prudently invested.

As a result, that failure has destroyed investor confidence and frozen credit markets worldwide since the summer of 2007 when the bubble burst. One could compare the position of the United States with that of Latin American or Asian countries during their crises. However, there is one major difference, which is the strength and status of the U.S. dollar. During every emerging-market crisis foreign investors fled out of the local market. In this case, however, it was the contrary. Investors considered U.S. government bonds to be a safe haven, which supported the dollar.

ARTIFICIALLY LOW EXCHANGE RATES

Nevertheless, emerging-market crises only partially describe this savings glut. Martin Wolf describes this accurately in his book.¹⁴ It is the result of a mix of policy decisions and private behavior. The decision from emerging-market countries to run current account surpluses and reinvest their savings mainly in U.S. dollar assets is a clear policy decision. This is done via exchange rate protectionism, by keeping their local currencies artificially undervalued against their major trading partners. As we noted, this decision was partly inspired by the experience in these countries during previous crises. The rise in demand for oil and consequently the higher oil price gave the Middle Eastern countries a boost in savings which were not reinvested in their own country but repatriated to the United States. This is a pure policy intervention.

Then there was the aftermath of the dot-com bubble, where investors but also companies in the developed world became much more cautious in their investment decisions, which increased the saving rate as well. This is a behavioral response.

Last but not least, there was a shift of income from labor to capital, especially in Europe and Japan, which was not offset by an increase in investments, which automatically raised the saving surplus. As far as Europe and Japan are concerned, this shift is also mainly driven by demographics. Typically, in an aging society there is less need for investments. Here the balance flips more toward behavioral reactions than a policy response.

RECOMMENDATIONS AND SOLUTIONS FOR GLOBAL IMBALANCES

In this chapter we highlighted the problems created by global currency reserve imbalances, created in turn by current account surpluses in emerging countries, which were a result of lessons learned from previous emerging-market crises. As a result of policy, emerging-market countries kept their currencies artificially low via systematic intervention in the currency market. The ultimate goal was and is to prevent (speculative) capital flowing into the country. This strategy created, and still creates, excess foreign exchange reserves which are reinvested abroad, predominantly in the United States.

At the time of this writing, these imbalances were still in place. One of the main challenges for policy makers will be to convince these emerging economies to boost their internal demand instead of repatriating all their savings to the West. Figure 1.9 highlights where the problems are located.

Figure 1.9 also shows the worrisome situation for a country like the United States where one-third of its investments are funded from abroad. This makes it highly dependent on such flows. This is not a problem as long as the U.S. retains its status as a top-quality borrower. But in situations where the U.S. public debt is reaching astronomical levels, as a result of the bailouts of the banking sector and other economic stimulus packages, this might become an issue.

On April 1, 2009, the G7 and G20 met in London to take joint measures against the crisis. During that meeting world leaders addressed only briefly the global imbalances that were created over time. Unfortunately, the discussion was focused on the wrong parameters. The debate centered around the question of whether there was a need to replace the U.S. dollar as a reserve currency. Not surprisingly, China was the leading voice in this debate, as the country held in December 2009 approximately 24.30 percent of U.S. Treasuries, or USD 894.8 billion in nominal value.

However, this is diverting attention from the real problem. The focus should be on reducing these current account surpluses, and that of China in particular as it has the largest reserves of all emerging markets and it is still growing. This is easier said than done, as at this moment the U.S.

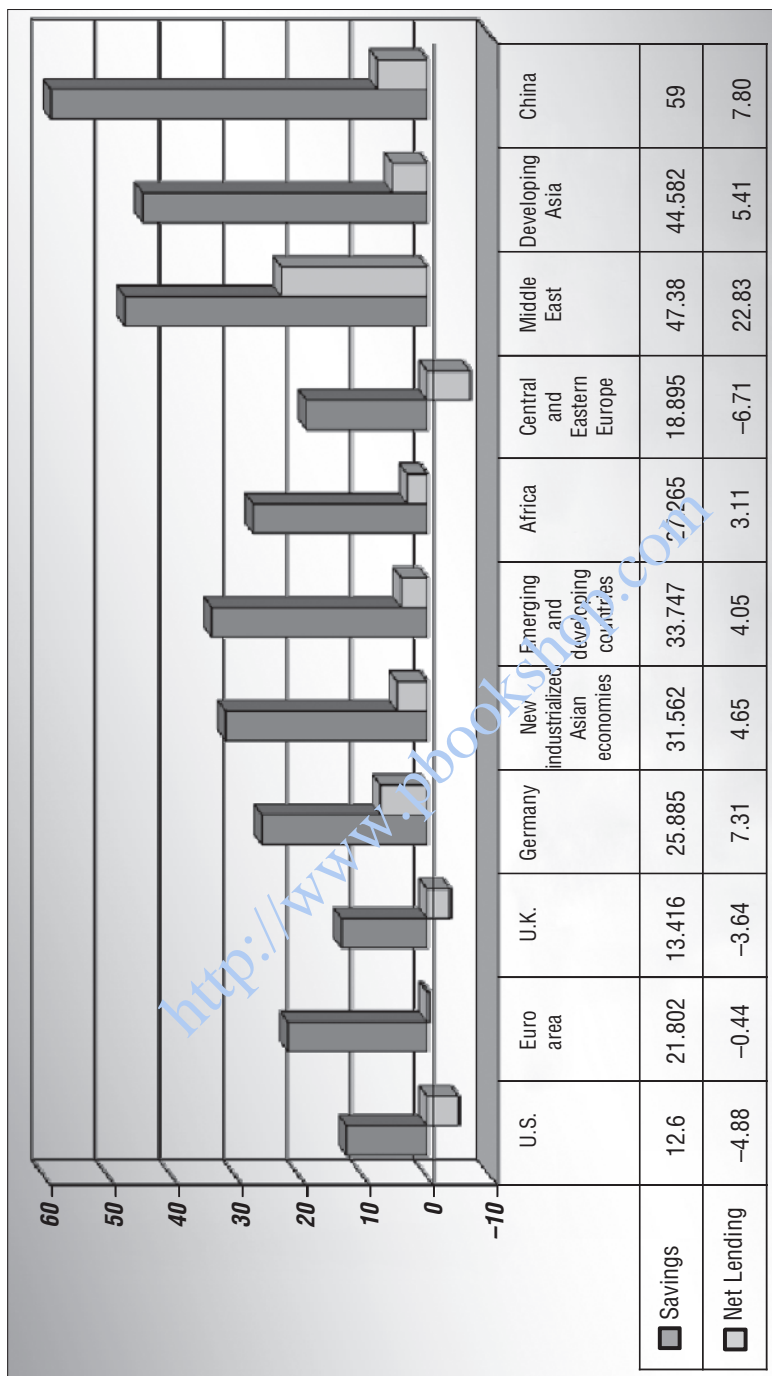


FIGURE 1.9 Gross Savings versus Net Lending in Percentage of GDP
 Source: IMF, *World Economic Outlook*, October 2008.

TABLE 1.2 Overview of MENA Currency and Interest Rate Market

	Saudi Arabia	Kuwaiti Dinar	UAE Dirham	Bahraini Dinar	Qatari Rial	Omani Rial	Moroccan Dirham
	SAR	KWD	AED	BHD	QAR	OMR	MAD
Fully convertible	Yes	Yes	Yes	Yes	Yes	Yes	No
Liquid	Yes	Yes	Yes	Yes	No	No	No
FWD	Up to 2 years	Up to 2 years	Up to 2 years Only commercial	Up to 1 year Only commercial	Up to 6 months Only commercial	No	No
Longer FWDS	Upon request	Upon request	Upon request	Upon request	Upon request	No	No
Options	No	No	No	No	No	No	No
IRS	Up to 2 years	No	No	No	No	No	No
Fra's	Up to 2 years	No	No	No	No	No	No
Offshore deposit lending	Yes	Yes	No due to withholding tax	No	Yes	No	10% tax on local deposits
Pegged at	3.75	Pegged to the USD against an undisclosed basket of currencies. Current midpoint 0.27200	1\$/3.6725 AED	0.376	1\$/3.64 QAR	1\$/0.3845 OMR	Basket
Since	1986	20/05/2007	2002	1980	1980	1986	1980

Algerian Dinar	Tunisian Dinar	Egyptian Pound	Jordanian Dinar	Lebanese Pound	Libyan Dinar	Syrian Pound
DZD	TND	EGP	JOD	LBP	LYD	SYP
No	Yes	Yes	Yes	No	No	No
Buy spot only			0.1% commission		Cash market	
Sell on firm order only			Buying \$		In Tunis	
No	No	Reasonably	No	No	No	No
No	Up to 9–12 months	Only commercial L/C reference	Only commercial	No	No	No
					Only commercial Case by case	
No	Upon request	Upon request	Upon request	No	No	No
No	No	No	No	No	No	No
No	No	No	No	No	No	No
No	No	No	No	No	No	No
No	10% tax on local deposits	No	No	No	No	No
1\$/72.647 DZD	Managed floating	Free floating	Basket	1\$/1,507.50 LBP	1\$/1.3108 LYD	To the EUR daily
1980	1980	1980	1982	1980	1985	14/02/2006

government will need the rest of the world more than ever with a runaway public deficit of over \$3 trillion just for the fiscal year 2009. And the fiscal cost of reducing the debt of the credit bubble will be higher in the years ahead.

Any abrupt change in policy would lead to a sudden collapse of the U.S. dollar and a rapid rise in interest rates. These are two things that the Chinese government, as a large investor in U.S. dollar assets, would want to avoid as the mark-to-market of its USD bond portfolio would be heavily and negatively affected. But a first step in the right direction would be reducing the pace of the current account surplus rise. Wolf (2009) calculated that by 2012 the current account surplus could grow from USD 449 billion at the end of 2008 to USD 700 billion. Simultaneously, China's foreign exchange reserves could almost double to USD 4 trillion. We draw similar conclusions to those of Wolf.¹⁵

The only way to slow this rapid rise is by stimulating internal demand. A rise in internal demand should come from both the private and public sectors. The latter is already taking place as the Chinese government increased spending in order to deal with the fallout of the global recession. In fact, the first signs of economic recovery across the globe during 2009 were related to the increase in Chinese public spending. In order to improve private demand, special attention should be paid from the government toward education and a basic health care system.

Then ideally taxes would be raised on Chinese companies as they show a high savings rate. A rise in corporate taxes would help the development of the corporate bond market to finance part of their investments and simultaneously force these companies into more discipline. This in turn would improve the condition of the loan portfolios of the local banks. The extra income from these taxes could be used to create a so-called Silver Fund, which could serve as a pension fund to deal with the aging of their population.

A next vital step would be to revalue the Chinese currency against the U.S. dollar (USD). Although a de-pegging of the yuan was announced in June 2010, the currency is still a long way from being free floating. The latter is something that should be promoted among all emerging-market countries whose currencies are still pegged to the USD.

Currency revaluation would go hand in hand with general financial reforms such as the opening up of financial markets and free entry of foreign direct investments into the country. As mentioned earlier with respect to China, emerging markets need to develop an in-depth bond market in their local currency with long maturities. Bond markets in domestic emerging markets have expanded, but the maturities are still short. For example, most of the maturities in the emerging-market bonds are issued at between three

and five years. There are longer maturities available but these are generally illiquid.

As an example, Table 1.2 gives an overview of the limitations in the Middle Eastern and North African (MENA) currency and interest rate markets. The situation is not any better in the Chinese currency and bond market. The Chinese renminbi, for example, is still nonconvertible and hedges need to be made by foreign companies via the nondeliverable forward market.

Of course, certain conditions need to be fulfilled to establish a more robust financial infrastructure.

First, the governments of these countries need to build up credibility among their own citizens in order to convince them to start investing in their country's own debt. Fiscal discipline will be an important factor. Furthermore, the establishment of a legal platform is needed where respect toward property rights is guaranteed. Also, there needs to be secure bankruptcy legislation structure in place, and the installment of independent regulators. The regulator must ensure strict guidelines regarding deposit guarantees in case of bank runs.

Second, it is important to give foreign investors free access to their markets.

Third, special focus should go toward the establishment of a pension fund and insurance industry. These will automatically be important participants in the growing local bond market. This does not necessarily mean that they have to buy all the domestic debt, but they will give added value toward stability and create a base for long-term investors that tries to match long-term assets versus long-term liabilities. When this financial infrastructure is in place and has become less fragile, a final step can be made to make the local currency fully floating. This will enable banks and companies to lend and borrow in the local currency and reduce currency mismatches.

As with the bank regulation proposals that we state elsewhere in this book, the preceding recommendations will not guarantee a crisis-free global economy. Crises are inherent to the capitalistic system, but of course what is important is that the markets work to mitigate their impact.