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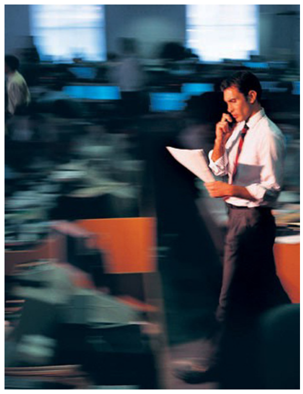

September 2009

Global capital markets: Entering a new era

McKinsey Global Institute

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Preface

Global capital markets: Entering a new era is the latest research by the McKinsey Global Institute (MGI) on the evolution of the world's financial markets. This report is based in large part on findings from three proprietary databases that document the financial assets, capital inflows and outflows, and cross-border investments of more than 100 countries around the world since 1990. In this report, we assess the effects and implications of the current financial crisis and economic downturn through the lens of global financial assets and capital flows. Although the crisis will take years to play out fully, we detail how the financial landscape has already shifted in several important ways. We also analyze the future growth prospects for financial assets in mature and emerging markets.

Susan Lund, MGI Director of Research, and Charles Roxburgh, MGI Director, led this project. The project team comprised the following MGI fellows: Charles Atkins, Stanislas Belot, Wayne W. Hu, and Moira S. Pierce. The team benefited from the contributions of Paul Arnold and Nidhi Sand. Nell Henderson provided editorial support.

This report would not have been possible without the thoughtful input and expertise of numerous McKinsey colleagues around the world. The authors particularly wish to thank Martin N. Baily, a senior adviser to McKinsey & Company and to MGI, and Lowell Bryan, a director of McKinsey & Company in the New York office.

Our aspiration is to provide business leaders and policy makers around the world with a fact base to better understand some of the most important trends shaping global financial markets today. As with all MGI projects, this research has not been commissioned or sponsored in any way by any business, government, or other institution.

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September 2009

Global capital markets: Entering a new era

The current financial crisis and worldwide recession have abruptly halted a nearly three-decade-long expansion of global capital markets. From 1980 through 2007, the world's financial assets—including equities, private and public debt, and bank deposits—nearly quadrupled in size relative to global GDP. Global capital flows similarly surged. This growth reflected numerous interrelated trends, including advances in information and communication technology, financial market liberalization, and innovations in financial products and services. The result was financial globalization.

But the upheaval in financial markets in late 2008 marked a break in this trend. The total value of the world's financial assets fell by $16 trillion last year to $178 trillion, the largest setback on record. At this writing in September 2009, equity markets have bounced back from their recent lows but remain well below their peaks. Credit markets have healed somewhat but are still impaired.

Going forward, our research suggests that global capital markets are entering a new era in which the forces fueling growth have changed. For the past 30 years, most of the overall increase in financial depth—the ratio of assets to GDP—was driven by the rapid growth of equities and private debt in mature markets. Looking ahead, these asset classes in mature markets are likely to grow more slowly, more in line with GDP, while government debt will rise sharply. An increasing share of global asset growth will occur in emerging markets, where GDP is rising faster and all asset classes have abundant room to expand.

In this report, we assess the effects and implications of the crisis through the lens of global financial assets and capital flows.[1] Although the full ramifications of the crisis will take years to play out, it is already clear that the financial landscape has shifted in several ways. Most notably, we find that:

- Declines in equity and real estate values wiped out $28.8 trillion of global wealth in 2008 and the first half of 2009. Replacing this wealth will require more saving and less consumption, which may dampen global economic growth and necessitate significant adjustments by the banking business.

- Financial globalization has reversed, with capital flows falling by more than 80 percent. This has created turmoil for multinational financial institutions, caused currency volatility to soar, and sharply raised the cost of capital in some countries. It is unclear how quickly capital flows will revive, or whether financial markets will become less globally integrated.

- Some global imbalances may be receding. The US current account deficit has narrowed, as have the surpluses in China, Germany, and Japan that helped fund it. However, this may be a temporary effect of the crisis rather than a long-term structural shift.

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1 For previous research, see *Mapping global capital markets: Fifth annual report*, McKinsey Global Institute, October 2008 (available at www.mckinsey.com/mgi/) or "Long-term trends in the global capital markets," *The McKinsey Quarterly*, February 2008 (available at www.mckinseyquarterly.com/home.aspx).

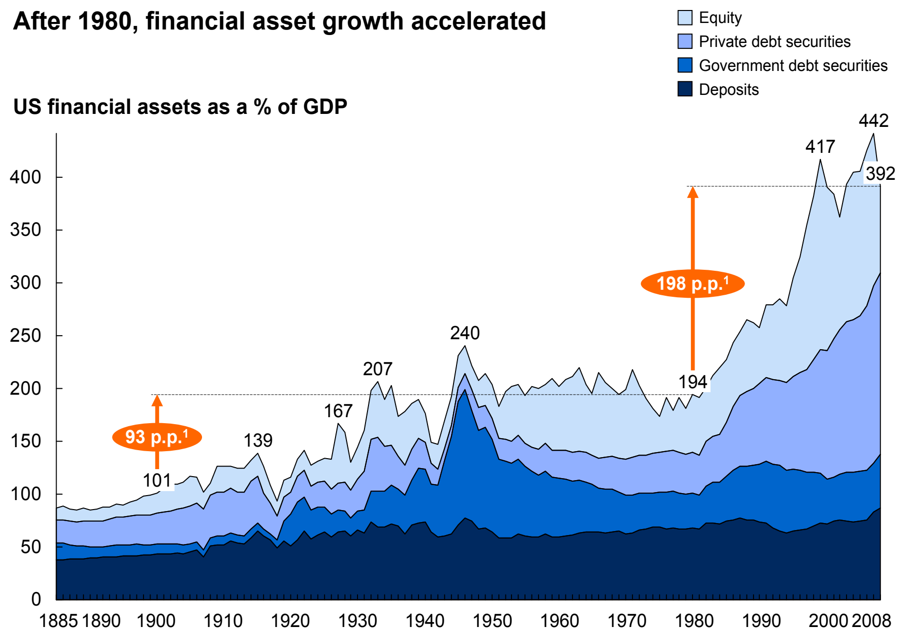
- Mature financial markets may be headed for slower growth in the years to come. Private debt and equity are likely to grow more slowly as households and businesses reduce their debt burdens and as corporate earnings fall back to long-term trends. In contrast, large fiscal deficits in many mature markets will cause government debt to soar.

- For emerging markets, the current crisis is likely to be no more than a temporary interruption in their financial market development, since the underlying sources of growth remain strong. For investors and financial intermediaries alike, emerging markets will become more important as their share of global capital markets continues to expand.

GLOBAL FINANCIAL ASSETS DECLINED BY $16 TRILLION IN 2008, THE LARGEST SETBACK ON RECORD

For most of the first eight decades of the 20th century, financial assets grew at about the same pace as GDP. The exceptions were times of war, when government debt rose much more rapidly. But after 1980, financial asset growth raced ahead. In the United States, for example, the total value of financial assets as a percentage of GDP has grown more than twice as much since 1980 as it had in the previous 80 years (Exhibit 1). Worldwide, equities and private debt accounted for most of the increase in financial assets since 1980, as companies and financial institutions turned increasingly to capital markets for financing. By 2007, the total value of global financial assets reached a peak of $194 trillion, equal to 343 percent of GDP.[2]

Exhibit 1

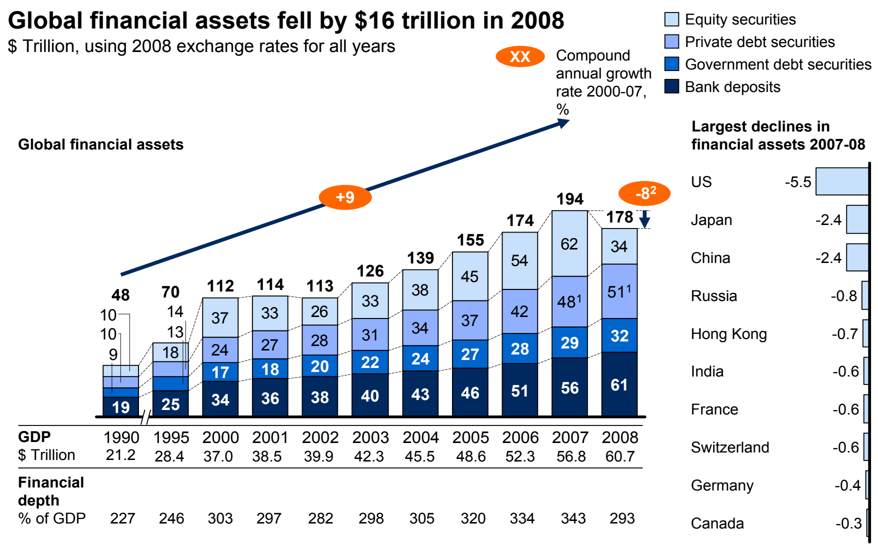


[1] Percentage points of GDP.
SOURCE: Federal Reserve; National Bureau of Economic Research; Robert Shiller; McKinsey Global Institute analysis

But the financial crisis interrupted this process. The value of the world's financial assets fell to $178 trillion by the end of 2008 (Exhibit 2). This 8 percent decline was the largest since our data series began in 1990, and in some countries, the drop was far worse.

2 Unless noted otherwise, all financial figures in this report are stated at 2008 exchange rates. This allows us to compare growth over time, excluding the effects of currency movements. Figures are not adjusted for inflation. Based on the latest available data, this report also updates figures published in our earlier reports.

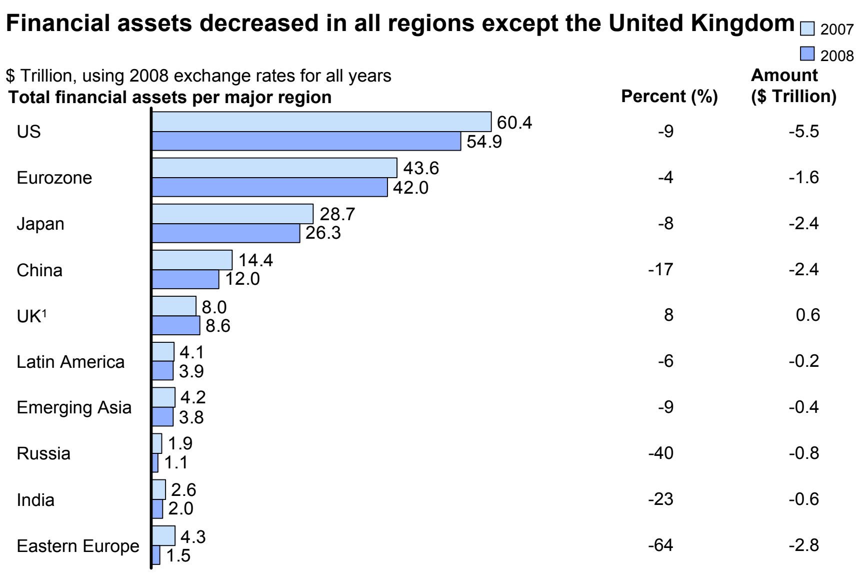
Exhibit 2



1 Excludes debt write-downs of $0.28 trillion in 2007 and $0.98 trillion in 2008.
2 In current exchange rate terms the drop in global financial assets would have been $22 trillion in 2008, or 11 percent of global financial assets.
Note: Figures may not sum due to rounding.
SOURCE: McKinsey Global Institute Global Financial Assets database; Bloomberg

The damage has been widespread, with financial assets declining in nearly every country (Exhibit 3). Only a handful of economies, of which the United Kingdom is most notable, had a commensurate increase in 2008. The UK gain, however, was itself a by-product of the crisis: a UK government program to recapitalize troubled banks triggered a rise in private debt issuance that more than offset the decline in equities.[3]

Exhibit 3



1 Assets increase primarily due to an increase in international financial institution debt, reflecting a surge of securitization activity in response to the Bank of England's accepting securitized assets as collateral for repurchase agreements.
Note: Figures may not sum due to rounding.
SOURCE: McKinsey Global Institute Global Financial Assets database

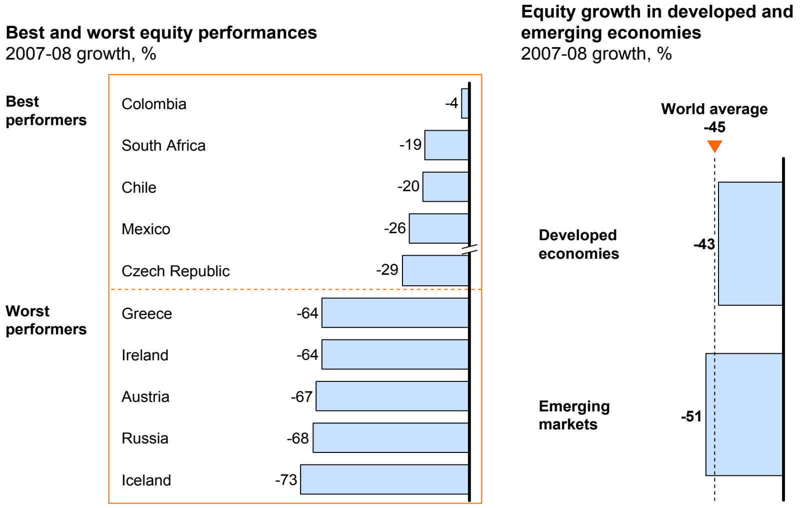
3 The European Central Bank and the Bank of England announced in April 2008 they would accept securitized assets as collateral for repurchase agreements, or repos. This triggered a surge in securitization. Such repo market transactions with these two central banks accounted for more than 95 percent of all UK securitized asset issuance in 2008.

Equities declined sharply

Falling equities accounted for virtually all of the drop in global financial assets. The world's equities lost almost half their value in 2008, declining by $28 trillion. The damage was widespread, with equity markets declining in every one of the 112 countries in our sample (Exhibit 4)—producing the most severe crash since the Great Depression (Exhibit 5). Markets have regained some ground in recent months, replacing $4.6 trillion in value between December 2008 and the end of July 2009. But as of August 31, 2009, the S&P 500 index, for instance, remained 34 percent below its peak.

Exhibit 4

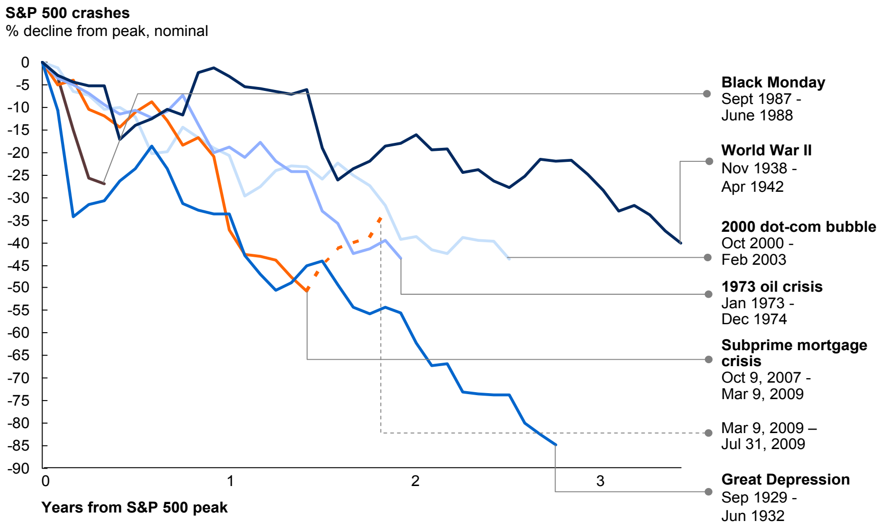
Every equity market in the world lost value in 2008
% of GDP



SOURCE: McKinsey Global Institute Global Financial Assets database

Exhibit 5

The 2008 stock market crash was the most severe since the Great Depression



SOURCE: Datastream; Robert Shiller; McKinsey Global Institute analysis

In addition, we estimate that global residential real estate values fell by $3.4 trillion in 2008 and nearly $2 trillion more in the first quarter of 2009.[4] (See sidebar, *A look at global housing wealth*) Together with equity losses, this has erased $28.8 trillion of household and investor wealth as of the middle of 2009. Replacing this wealth will require a long period of higher saving. To put this in perspective, the world's households saved about 5 percent of their disposable income in 2008, or $1.6 trillion: they would have to save that amount for 18 consecutive years to amass $28.8 trillion. Of course the actual time it will take is unknowable at this point, since it will depend on many factors, including household saving behavior, income growth, and asset appreciation.

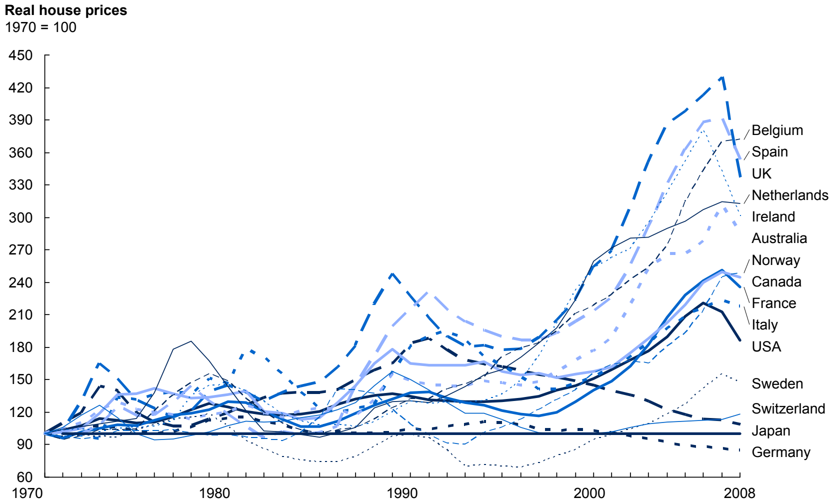
A look at global housing wealth

Although the current financial crisis started with the bursting of the US housing bubble, other economies around the world are feeling the effects of their own real estate booms and busts. From 2000 through 2007, a remarkable run-up in global home prices occurred (Exhibit A). US housing prices appreciated significantly—and still were surpassed by values of those in at least half a dozen European countries. Residential real estate prices soared in emerging markets, too: for instance, the value of South Africa's homes rose by two and a half times over that period. No publicly available data source on global home prices exists, but we estimate that the total value of all the world's residential real estate more than doubled during this period, to exceed $90 trillion (Exhibit B).

Since 2007, however, home prices have fallen sharply in some countries, erasing more than $3.4 trillion of household wealth in 2008. And the effects have been uneven, with the worst-hit countries—such as Estonia—suffering real housing price declines of 20 percent or more, and many countries—such as Russia—recording increases in 2008. This suggests potential declines ahead for some countries. And because home prices are slow to correct, the current slide may persist for some time. This could depress global consumption and contribute to mortgage defaults, which continue to plague the financial sector.

Exhibit A

Housing price indices in many countries soared from the mid-1990s through 2007

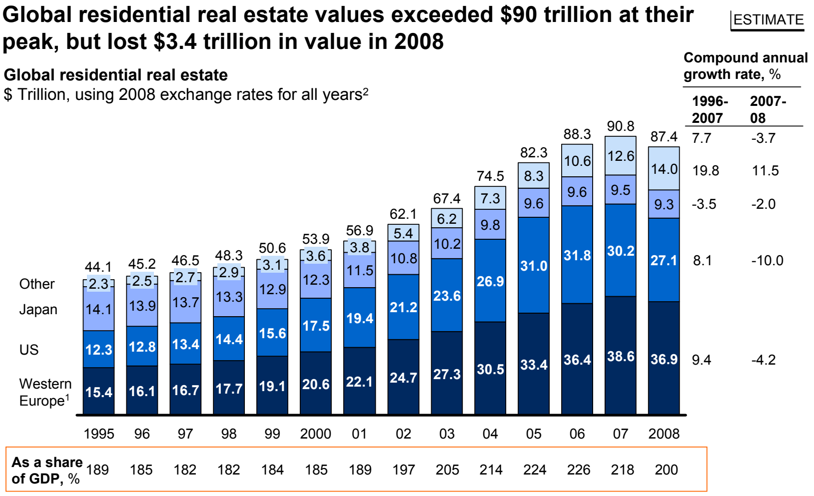


SOURCE: Bank of International Settlements, per national sources; Haver Analytics; McKinsey Global Institute analysis

4 There is no comprehensive database of global real estate values. Our sample includes Australia, Europe, Japan, the United Kingdom, the United States, and some emerging markets. See sidebar, *A look at global housing wealth*, for more detail.

Exhibit B

Global residential real estate values exceeded $90 trillion at their peak, but lost $3.4 trillion in value in 2008



1 Includes Belgium, Denmark, France, Germany, Italy, Netherlands, Norway, Spain, and the United Kingdom. Data were not available for Ireland and Switzerland.
2 This data is presented in nominal terms. In real terms (as in exhibit A), the price declines in 2008 would be greater
Note: Figures may not sum due to rounding.
SOURCE: Organization for Economic Co-operation and Development; Haver Analytics; McKinsey Global Institute

Private debt remained flat while government debt grew

In contrast to the sharp decline in equities and real estate, the total value of all private debt—including corporate bonds, financial institution bonds, and asset-backed securities—rose to $51 trillion by the end of 2008. However, this apparent growth occurs because our database reports the face value of debt securities, not the market value. We estimate that applying current market valuations would reduce current private debt outstanding by $2.4 trillion to $3.2 trillion, leaving its value roughly the same as a year earlier.[5] Although corporate bond issuance reached a record $1.1 trillion in the first eight months of 2009, the issuance of asset-backed securities and financial institution debt—far larger components of total private debt assets—has fallen sharply.[6]

Government debt also grew in 2008, rising 9 percent to $31.7 trillion. This growth was faster than its previous trend, and it will accelerate further in 2009 and 2010 as many countries boost borrowing to pay for planned fiscal stimulus spending.

Given the decline in asset values and growth in debt, we see that leverage in the global economy has increased during the financial crisis rather than declined. This is true for many households, governments, banks, and some segments of the corporate sector. In aggregate, the global debt-to-equity ratio nearly doubled, jumping from 124 percent in 2007 to 244 percent by the end of 2008. This raises the vulnerability of the global economy to further shocks. It also indicates that the long process of deleveraging in the private sector has at best only just begun, and in the public sector has yet to begin.

Bank deposits reached $61 trillion in 2008

Global bank deposits[7] grew by $5 trillion, or about 9 percent, in 2008 (Exhibit 6). Deposit growth accelerated in developed economies, reflecting both a flight to safety

5 This calculation is in line with other estimates. The Bank of England's Financial Stability Report in June 2009, for instance, reported marked-to-market losses of $2.7 trillion on debt securities.

6 Even the rise in corporate bond issuance was a by-product of the crisis, occurring because other means of debt financing remained so hobbled.

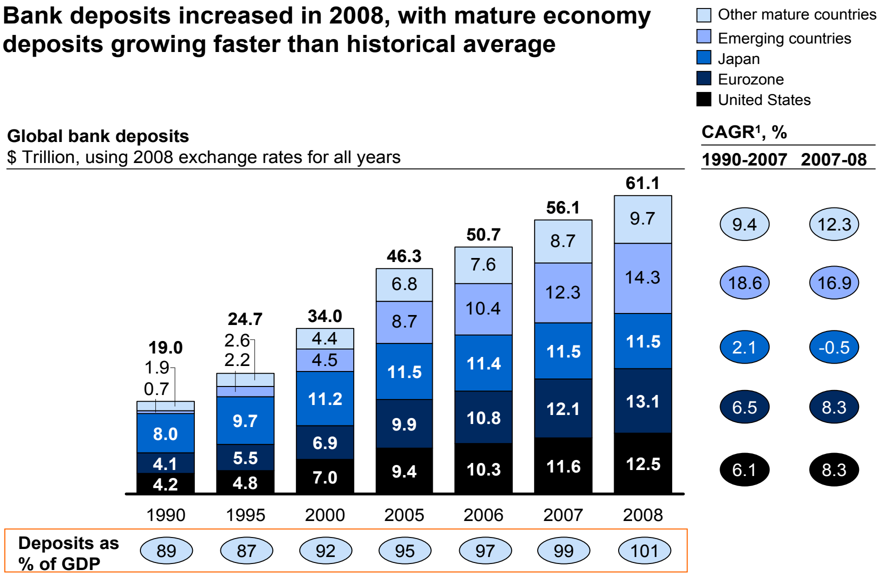
7 Demand deposits, time deposits, money market accounts, and currency.

by depositors and aggressive efforts by banks to attract deposits. Collectively, mature economy deposits grew by $2.8 trillion in 2008, reaching $45.3 trillion. These figures marked a departure from recent trends, in which deposits in mature economies grew roughly in line with GDP. In the short term, higher growth in deposits may continue if investors remain risk averse and banks continue to compete aggressively for deposits .

In emerging markets, deposits grew much faster, increasing by $2.1 trillion. However, they remain just one-quarter the size of deposits in mature economies.

Exhibit 6

Bank deposits increased in 2008, with mature economy deposits growing faster than historical average



[1] Compound annual growth rate.
Note: Figures may not sum due to rounding.
SOURCE: McKinsey Global Institute Cross-Border Investments database

FINANCIAL GLOBALIZATION WENT INTO REVERSE, WITH CAPITAL FLOWS FALLING BY 82 PERCENT

One of the most striking consequences of the financial crisis was a steep drop-off in cross-border capital flows, which include foreign direct investment (FDI), purchases and sales of foreign equities and debt securities, and cross-border lending and deposits. These capital flows fell 82 percent in 2008, to just $1.9 trillion from $10.5 trillion in 2007 (Exhibit 7). Relative to GDP, the 2008 level of cross-border capital flows was the lowest since 1991. This created turmoil in the global banking system, causing severe liquidity crises and hurting borrowers dependent on foreign loans. It is unclear at this writing how quickly these flows will recover.

Reversal of bank lending flows led the decline

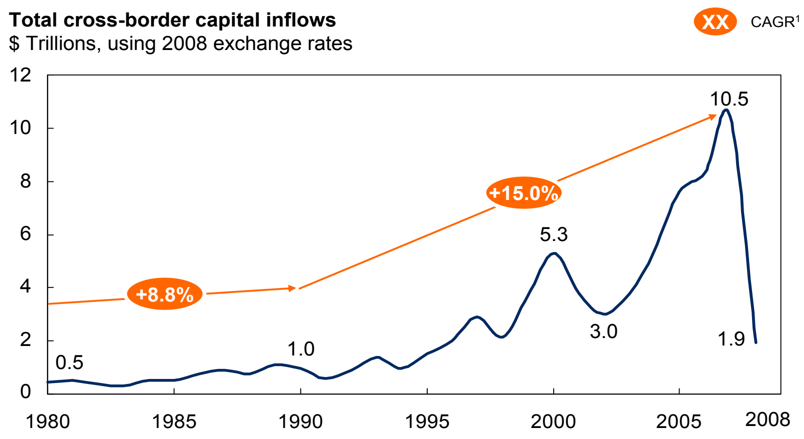
Capital flows not only fell, but most types went into reverse as investors, companies, and banks and other financial institutions sold foreign assets and brought their money back to their home countries. As in past financial crises, cross-border lending accounted for much of the overall decline.[8] It fell from $4.9 trillion in 2007 to minus $1.3 trillion in 2008 (Exhibit 8). This indicates that lenders withdrew more cross-border loans—canceling or not renewing lines of credit, not rolling over loans, and so on—than they made. About 40 percent of this decline was due to the drying up of interbank lending after the collapse of Lehman Brothers

8 In the 1997 Asian financial crisis and the 1998 Russian crisis, bank lending was also the most volatile type of capital flow. See Martin N. Baily, Diana Farrell, and Susan Lund, "The color of hot money," *Foreign Affairs*, March/April 2000.

in September 2008. But the majority reflects the withdrawal of foreign lending to nonbank borrowers, particularly in emerging markets. In the worst-hit countries, foreign bank credit contracted by as much as 67 percent. Flows of foreign deposits also reversed course, as investors withdrew $400 billion of deposits from foreign financial centers in 2008.

Exhibit 7

Cross-border capital flows have reversed, falling by 82 percent

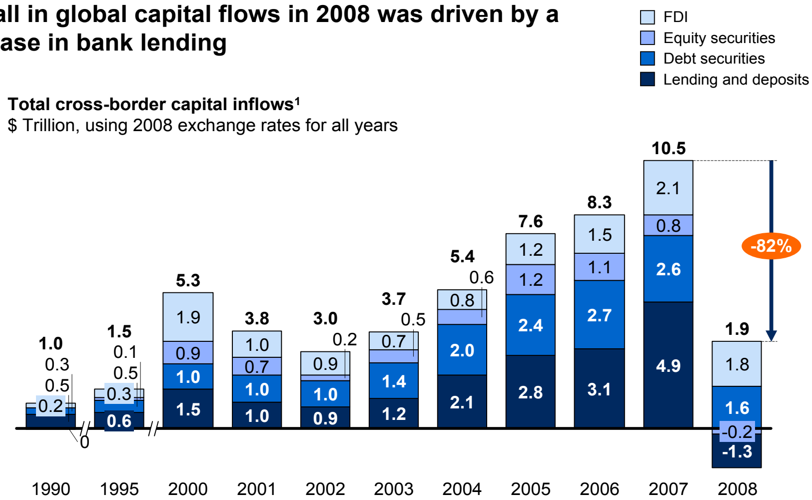


% of global GDP	4.5	3.7	4.5	3.6	6.5	11.9	3.2

1 Compound annual growth rate.
SOURCE: McKinsey Global Institute Cross-Border Capital Flows database

Exhibit 8

The fall in global capital flows in 2008 was driven by a decrease in bank lending



% of global GDP	4.7	5.4	13.5	9.4	7.8	9.9	13.3	15.9	17.3	20.7	3.1

¹ Capital inflows represent net purchases by foreigners of FDI, equity, and debt securities, as well as deposits and loans to local banks.
Note: Figures may not sum due to rounding.
SOURCE: McKinsey Global Institute Cross-Border Capital Flows database

This fall-off in cross-border lending flows during a recession fits the historical pattern, as we anticipated in our report last year.[9] Cross-border lending had experienced

9 *Mapping global capital markets: Fifth annual report*, p.12, McKinsey Global Institute, October 2008 (available at www.mckinsey.com/mgi/).

three prior boom-and-bust cycles since 1990, with sharp declines following the economic and financial turmoil in 1990–91, 1997–98, and 2000–02.

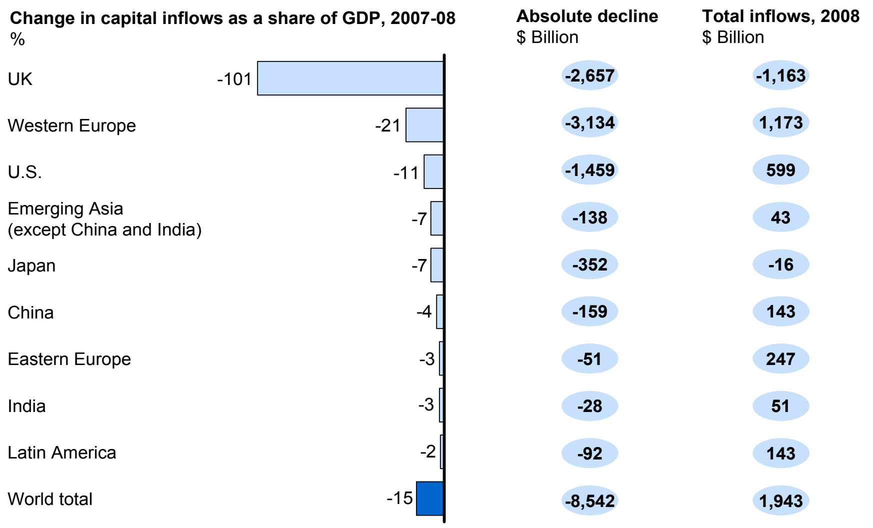
Similarly, global purchases of foreign equities and debt securities tumbled. Cross-border flows into equities turned negative, falling from $800 billion in 2007 to minus $200 billion as investors sold foreign equities and repatriated their funds. Purchases of foreign debt securities slowed sharply nearly everywhere. The exception was the United States, where government debt inflows skyrocketed as investors sought safety in US Treasuries.

Foreign direct investment historically has been the least volatile type of capital flow, as it reflects long-term corporate investment plans and purchases of less liquid assets, such as factories and office buildings. Last year was no exception: although FDI fell from the peak level of 2007 to $1.8 trillion in 2008, it remained higher than its 2006 level.

Across geographies, the largest declines in cross-border capital flows were in the United Kingdom and Western Europe (Exhibit 9). Total capital flows to the United Kingdom were negative for the year, reflecting that foreign investors withdrew more money from the United Kingdom than they put in. The fall-off in capital flows in Western Europe—equivalent to 21 percent of collective GDP—reflected the reversal of lending flows between the United Kingdom and the eurozone, a decline in flows between individual eurozone countries, and the plunge of flows between European countries and the United States.

Exhibit 9

Capital flows fell most sharply in the United Kingdom and Western Europe



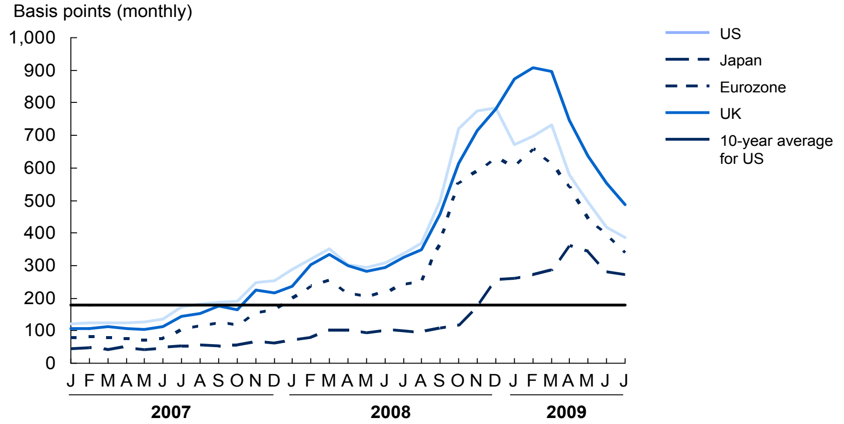
SOURCE: McKinsey Global Institute analysis

Falling capital flows contributed to higher credit spreads and currency volatility

The drying up of cross-border capital flows has had several ramifications. It has contributed to the increase in the cost of capital and curtailed fund-raising by companies around the world (Exhibit 10). Credit spreads have widened substantially since the US subprime mortgage crisis began in early 2007. For several years before the current crisis began, spreads had lingered below their historic average, fueling the global credit boom and prompting some observers to worry that investors were dangerously underpricing risk. By the middle of 2008, after the US subprime debacle had mushroomed into a broader financial market crisis, spreads had tripled for riskier borrowers, and spreads soared even more after Lehman's collapse in September. Since peaking in the last months of 2008, credit spreads have eased, but at this writing they remain higher than they were before the crisis and are likely to remain higher for many years.

Exhibit 10

Credit spreads[1] widened dramatically but now have declined



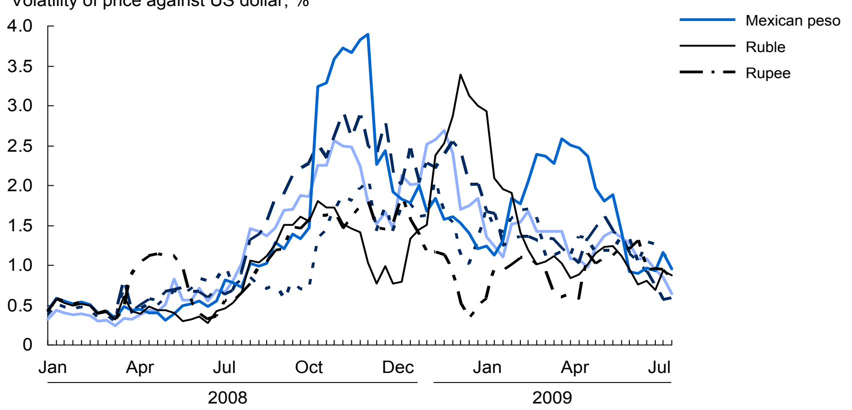
[1] The difference between yields of five-year bonds issued by BBB-rated finance companies and yields of sovereign benchmark bonds of the same maturity.
Note: Most firms must borrow at the BBB level, so BBB spreads are viewed as a good proxy for overall corporate borrowing conditions.
SOURCE: Bloomberg; McKinsey Current Crisis Intelligence Desk analysis

The disruptions in international capital flows also caused a spike in short-term exchange rate volatility (Exhibit 11). For instance, in just one week in October 2008, the value of the Korean won depreciated by more than 20 percent against the Japanese yen, boosting the competitiveness of Korean manufacturers compared with their Japanese counterparts. Similarly, the Mexican peso depreciated by 19 percent against the US dollar in the same month. In Russia, government officials saw their foreign reserves rise by record amounts in the first half of the year because of strong trade surpluses but then had to sell several hundred billion dollars of reserves in the second half to defend their pegged currency value.

Exhibit 11

As capital flows dried up in the second half of 2008, currency volatility surged

Volatility[1] in currency exchange rates
Volatility of price against US dollar, %



[1] As measured by absolute value of ten-day rolling average standard deviation.
SOURCE: Bloomberg

Crisis has raised questions about the future of globalized finance

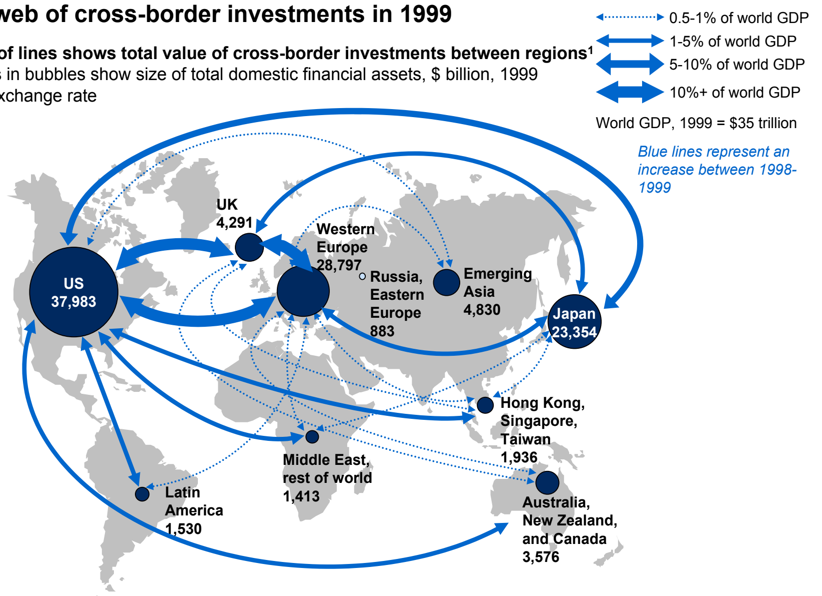
Over the past ten years, the web of cross-border investments has grown dramatically as financial globalization has taken off (Exhibits 12 and 13). However, these links weakened slightly in 2008 as the value of cross-border investments declined in most of the world. The cross-border investments between the United States and Japan, and between the United States and United Kingdom, fell particularly sharply. And the recent large reversals in capital flows raise questions about whether financial globalization will continue. The plunge in cross-border lending, for instance, is causing many governments to reconsider the advisability of allowing foreign banks to dominate the local economy. Particularly in Eastern Europe and in Latin America, the crisis forced local subsidiaries of foreign banks to withdraw credit as the capital adequacy of the home bank came into question. This reaction partly reflects the well-known "home bias" in the investments of both investors and bankers, who tend to give more weight to local investments than foreign ones. However, the withdrawals also resulted from political pressures on banks to maintain or even increase domestic lending in return for government support. Policy makers are now weighing the benefits of foreign banks—that they increase competition and provide more efficient financial intermediation—against the costs of abrupt declines in funding.

It is unclear whether and when global capital flows will rebound after this recession. Recent evidence suggests that some types of flows, such as interbank lending and investment in emerging markets, are recovering. For instance, net new flows into emerging market mutual fund portfolios rose in 2009. But the largest component of cross-border capital flows has been lending, and it is uncertain when banks will repair their balance sheets and when they will regain an appetite for cross-border expansion, or whether government policies will pressure them to prioritize home market lending. The 30-year rise of financial globalization may now stall.

Exhibit 12

The web of cross-border investments in 1999

Width of lines shows total value of cross-border investments between regions[1]
Figures in bubbles show size of total domestic financial assets, $ billion, 1999
2008 exchange rate

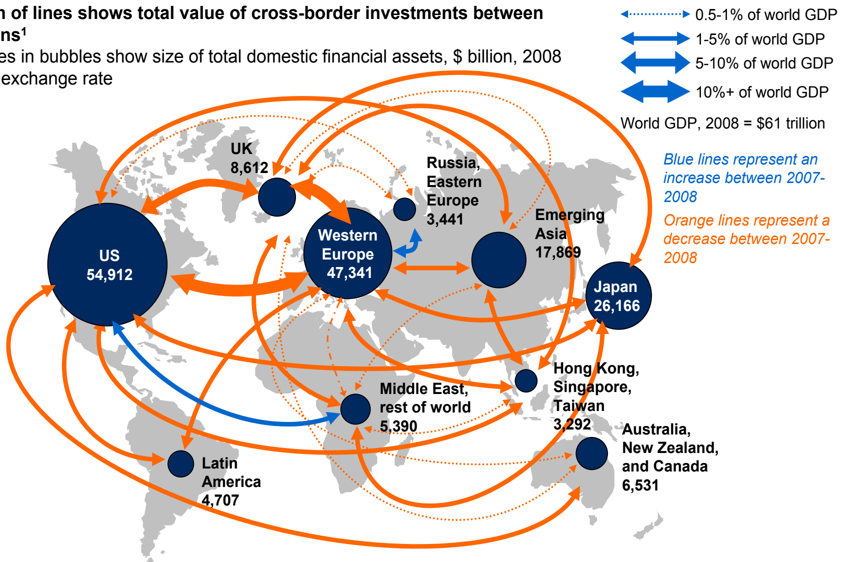


1 Includes total value of cross-border investments in equity and debt securities, lending and deposits, and foreign direct investment.
SOURCE: McKinsey Global Institute Cross-Border Investments database

Exhibit 13

The web of cross-border investments weakened slightly in 2008

Width of lines shows total value of cross-border investments between regions[1]
Figures in bubbles show size of total domestic financial assets, $ billion, 2008
2008 exchange rate



1 Includes total value of cross-border investments in equity and debt securities, lending and deposits, and foreign direct investment.

SOURCE: McKinsey Global Institute Cross-Border Investments database

GLOBAL FINANCIAL IMBALANCES HAVE RECEDED, BUT THIS MAY BE A TEMPORARY REVERSAL IN TREND

After 2000, many countries around the world began to run increasingly large current account deficits and surpluses, resulting in a buildup of global financial imbalances. Economists have worried for years about the potentially damaging economic effects of a sudden correction, in which an abrupt change in investor sentiment triggers steep currency depreciation in the deficit countries, sending interest rates higher and GDP lower. During the current crisis, this scenario has played out in only a few countries, such as Iceland. But the broader reversal of capital flows and fall-off in global trade has begun to diminish some imbalances.

The US economy has been one major source of global financial imbalances, with a current account deficit that grew to $804 billion, or more than 6 percent of GDP, at its peak in 2006. As the financial crisis intensified and the global economy worsened, several factors caused this gap to narrow to 3 percent of GDP in the first quarter of 2009 (Exhibit 14).

The US current account deficit shrunk primarily because of an increase in net exports. Although US imports and exports have both fallen, imports have dropped more than exports, as US consumers have pulled back sharply on spending. The shrinking deficit also reflects a narrowing difference between US saving and investment. For many years, US investment has far exceeded US saving. Both have fallen during the crisis,[10] but investment has dropped more, reducing the gap between the two.

Meanwhile, current account surpluses in China, Germany, and Japan—the countries with the largest such surpluses—have declined as the global recession has dampened trade (Exhibit 15). Although China's current account surplus reached a record $426 billion in 2008, its trade surplus declined in the first half of 2009 by

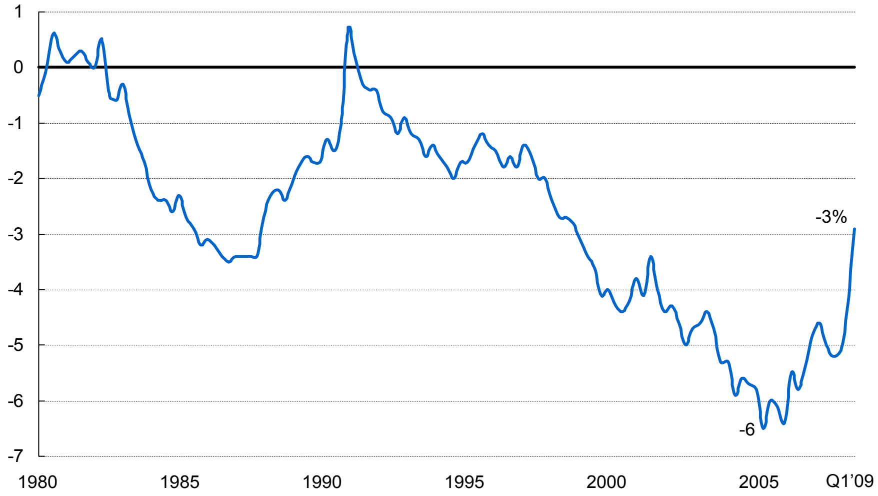
10 The US national saving rate—the rate of saving by households, government, and business combined—declined at the end of 2008 and the beginning of 2009 to 11.8 percent. Although US households are saving more, that increase is more than offset by the sharp rise in the government deficit and lower corporate saving.

31 percent.[11] The current account surplus in both Germany and Japan declined in 2008 and in the first half of 2009. Outside of China, Asian countries' current account surpluses shrunk dramatically in late 2008 and early 2009 as exports fell.

Exhibit 14

The United States current account deficit has narrowed to 3 percent

US current account balance
% of GDP, seasonally adjusted annual rate

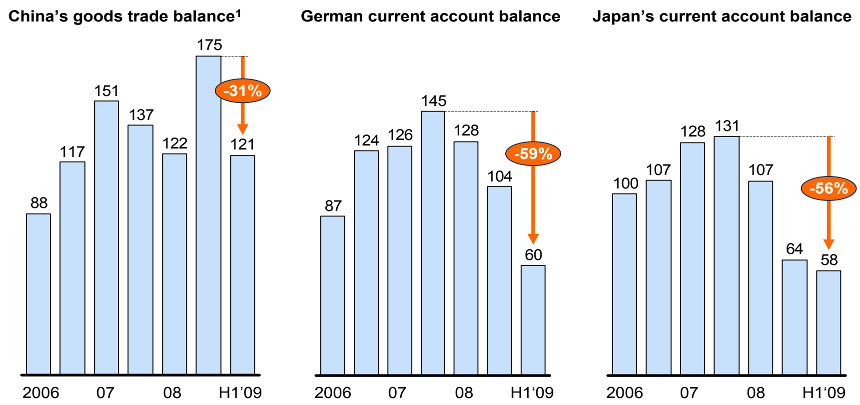


SOURCE: Bureau of Economic Analysis; McKinsey Global Institute analysis

Exhibit 15

China, Germany, and Japan have experienced sharp declines in their current account surpluses

$ Billion, half-yearly, using 2008 exchange rates



[1] China does not publish quarterly current account statistics; however, the monthly goods trade statistics have historically accounted for about 70% of China's current account surplus.
SOURCE: Haver Analytics; McKinsey Global Institute analysis

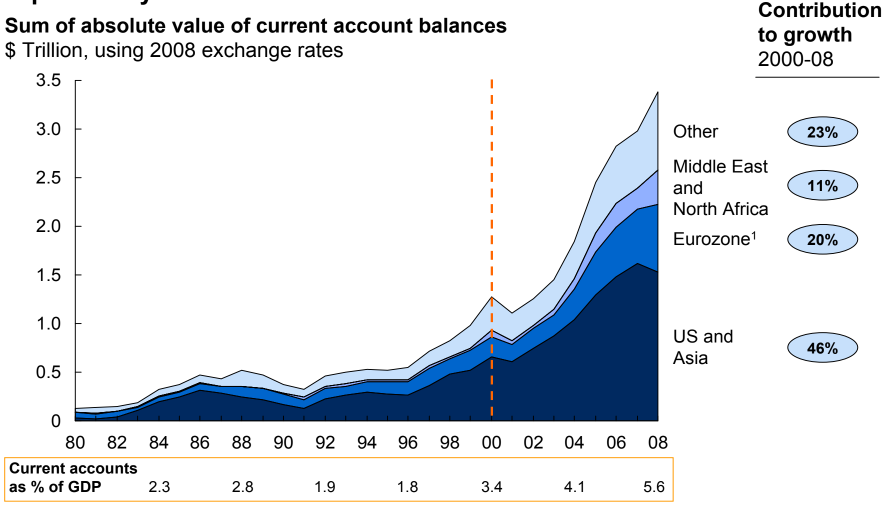
As a result of these developments, the sum of the absolute values of surpluses and deficits in the United States and Asia declined in 2008 for the first time since 2001. However, imbalances grew in many other parts of the world (Exhibit 16). For example, current account imbalances increased among individual eurozone countries in 2008,

11 See *The new power brokers: How oil, Asia, hedge funds, and private equity are faring in the financial crisis*, McKinsey Global Institute, July 2009. Available at www.mckinsey.com/mgi.

as they have since the adoption of the euro as a common currency in 1999.[12] And soaring commodity prices in the first half of 2008 caused mounting surpluses for exporters of oil, natural gas, minerals, and other raw materials. So, by the end of the year, the total of all the current account balances in the world had grown.

Exhibit 16

Global imbalances soared after 2000, although only half of the rise is explained by the United States and Asia



1 The growth in eurozone imbalances reflects a rise in current account surpluses in Germany and the Netherlands, as well as increased deficits in Italy, France, and Spain. The magnitude of these of these imbalances accelerated after the adoption of the euro in 1999.
SOURCE: International Monetary Fund; McKinsey Global Institute analysis

If the trends of early 2009 were to continue, total global financial imbalances would likely decline this year. However, they may swell again once global trade and capital flows rebound and GDP starts growing again. Indeed, energy prices may rise when the economy gains steam, generating trade surpluses for many oil and natural gas exporters.[13] US investment is likely to pick up as companies proceed with investments postponed during the recession. And we don't know yet whether US households will continue to save more after the recession ends, or whether China's households will consume more.[14] All of these factors will influence the direction of the world's current account balances.[15]

12 The absolute sum of current account balances among eurozone countries grew at a 6.7 percent annual rate in the 1990s—and then accelerated to a rate of 16.3 percent after 2000. This may be the result of a common currency shared by countries with different levels of development. Germany has consistently run a surplus, while Spain, Italy, and Greece have run deficits.

13 See *Averting the next energy crisis: The demand challenge*, McKinsey Global Institute, March 2009. Available at www.mckinsey.com/mgi.

14 See *If you've got it, spend it: Unleashing the Chinese consumer,* McKinsey Global Institute, August 2009. Available at www.mckinsey.com/mgi.

15 One uncertainty is whether increased consumption by countries with surpluses will be sufficient to offset decreased US consumption. In 2008, the combined consumption of Germany, Japan, and China totaled about $6.5 trillion, compared with US consumption of about $10 trillion. Clearly, no other single country is able to fill in for US consumers.

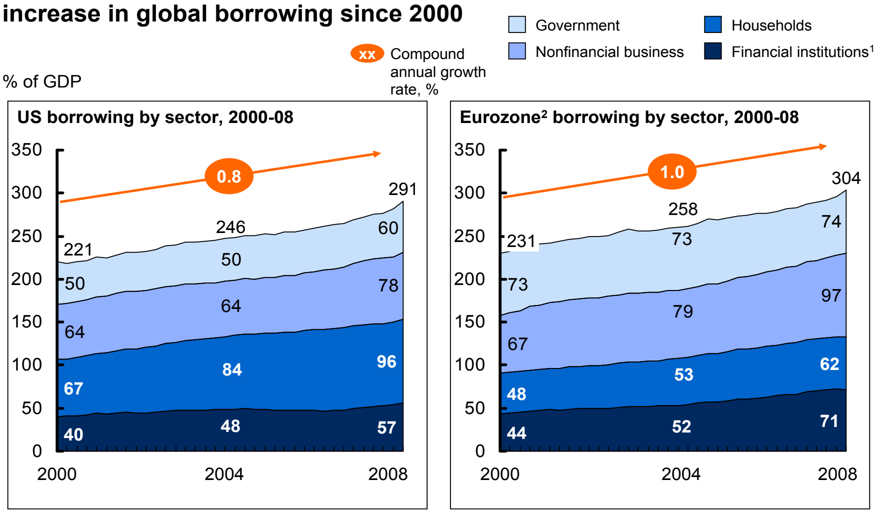
CREDIT BUBBLES GREW IN BOTH THE UNITED STATES AND EUROPE PRIOR TO THE CRISIS

Although the crisis started in the United States, it followed multiyear borrowing expansions in many other countries as well. Total global borrowing—comprising all loans, forms of credit, and debt securities—rose by 70 percent from 2000 through 2008, to $131 trillion. Not only has the recent credit market turmoil nearly stopped this growth, but it has set the stage for a long process of debt reduction going forward.

The United States, the eurozone, and the United Kingdom accounted for most of the growth in credit from 2000 through 2008. Although borrowing in emerging markets, also grew during this period, it mainly reflected GDP growth.[16] In contrast, total US credit outstanding rose from 221 percent of GDP in 2000 to 291 percent in 2008, reaching $42 trillion (Exhibit 17). Households accounted for 41 percent of the increase, a bigger share than any other group, and mortgages accounted for most of the growth in household credit. US financial institutions also boosted their borrowing significantly, accounting for 24 percent of the total increase.

Exhibit 17

The United States and the eurozone explain most of the increase in global borrowing since 2000



¹ Financial debt includes commercial paper, bonds, and interbank borrowing. It does not include securitized assets or deposits.
² Euro area 15 (fixed composition): Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Spain.
SOURCE: Federal Reserve; European Central Bank; European securitization forum

However, contrary to popular misconception, total US debt outstanding is lower relative to GDP than that of the eurozone or the United Kingdom, and has grown more slowly.

Eurozone indebtedness rose to 304 percent of GDP by the end of 2008. This was 73 percentage points more than borrowing in 2000. But in contrast to the US experience, eurozone household borrowing played a relatively modest role. Instead, nonfinancial institutions accounted for the biggest share of growth. Eurozone financial institutions also boosted their borrowing significantly, driven by their growing use of short-term debt to fund lending, and accounted for nearly as much of the overall growth.

16 In a sample of the 15 largest emerging markets, we find that credit has grown rapidly in absolute terms, from $7.0 trillion in 2000 to $21.0 trillion in 2008. But this mainly reflects GDP growth: as a percent of GDP, it has increased from 105 percent to just 113 percent.

Meanwhile, UK borrowing climbed even higher, to 320 percent of GDP by 2008, a gain of 71 percentage points since 2000. In the United Kingdom, as in the United States, households were the biggest drivers of debt growth, accounting for 43 percent of the increase.

No one knows what the optimal or sustainable level of borrowing is for a country. But it is clear that the recent debt surges in the United States, the eurozone, and the United Kingdom were not sustainable and will likely reverse. This may mean less consumption and investment—and possibly more sluggish growth—for some time.

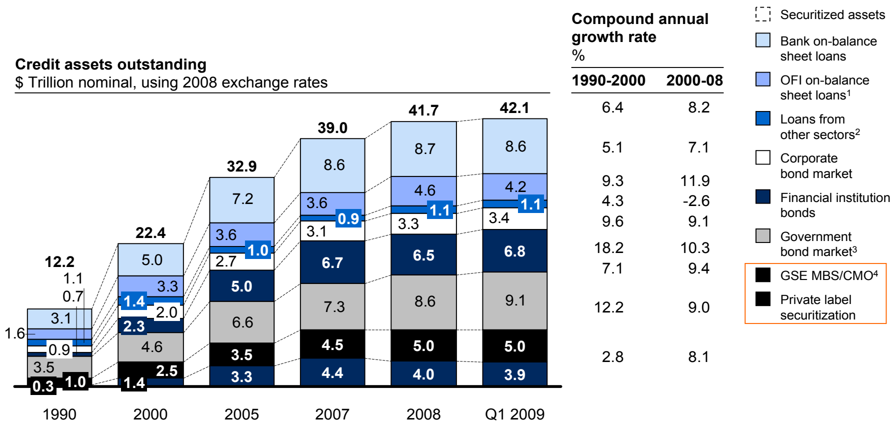
When we look at the types of credit that grew, and financial intermediaries that provided the credit, we see other differences across regions.

In the United States, the bond market plays a bigger role than the traditional banking sector. Loans held on bank balance sheets in the United States account for just 20 percent of total credit outstanding (Exhibit 18). The rest comprises multiple other forms of credit. Thus, the assets of traditional, deposit-taking banks in the United States have been surpassed in size by those of other institutions we refer to collectively as the "nonbank financial system" (Exhibit 19). Restoring health to US credit markets, therefore, will require more than boosting bank lending; also essential will be reviving securitization and other forms of credit.

In the eurozone and the United Kingdom, in contrast, traditional banks played a much larger role than nonbanks in the borrowing boom. On-balance sheet loans by banks account for 44 percent of credit outstanding in the eurozone and 46 percent in the United Kingdom (Exhibit 20). The securitization markets in the eurozone and UK have grown rapidly, but each is the source of less than $1 trillion in outstanding credit—and therefore remains much smaller than the $9 trillion US market. Thus, for Western Europe in the short term, restoring the health of the banking sector is critical to repairing the financial system. In the longer term, it may also help to foster the growth of bond markets and securitization markets as alternative sources of financing.

Exhibit 18

The rise in US borrowing was funded by nonbank channels

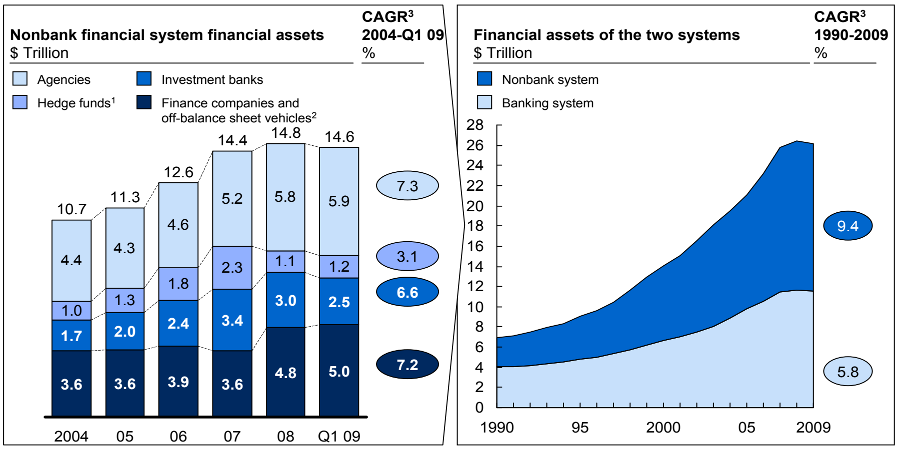


¹ Other financial institutions include finance companies, broker-dealers, funding corporations, REITs, insurers, and pension/retirement funds.
² Includes loans from households, nonfinancial corporations, and foreign institutions.
³ Includes US Treasuries and municipal/local government bonds.
⁴ Government-sponsored enterprise issued mortgage-backed securities and collateralized mortgage obligations.
Note: Figures may not sum due to rounding.
SOURCE: US Federal Reserve; Securities Industry and Financial Market Association; Federal Deposit Insurance Corporation; McKinsey Global Institute analysis

Exhibit 19

The US nonbank financial system has surpassed the banking system in size

Size of components of US leveraged financial institutions

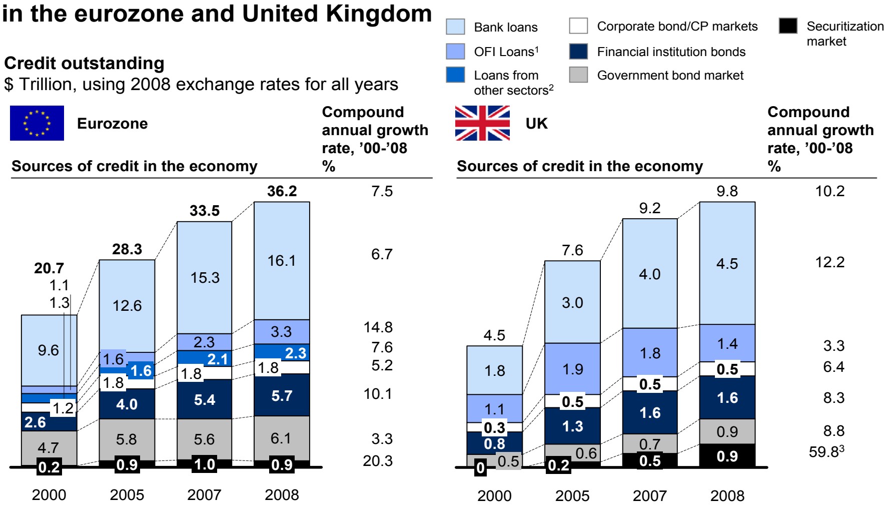


¹ IFSL estimates (assets under management, unleveraged) from hedge fund industry report, Q2 2009.
² Calculated as the difference between the total size of the "nonbank" financial system (via fed funds) and agency, broker-dealer, hedge fund estimates.
³ Compound annual growth rate.
Note: Figures may not sum due to rounding.
SOURCE: Federal Reserve; International Monetary Fund; International Financial Services London; McKinsey Global Institute

Exhibit 20

In contrast, banks have provided the majority of the credit in the eurozone and United Kingdom

Credit outstanding
$ Trillion, using 2008 exchange rates for all years



¹ Other financial institutions include finance companies, broker-dealers, funding corporations, REITs, insurers, and pension/retirement funds.
² Includes loans from households, nonfinancial corporations, and foreign institutions.
³ Computed over 2005-2008 since data is unavailable for 2000.
Note: Figures may not sum due to rounding.
SOURCE: Haver analytics; Securities Industry and Financial Market Association; McKinsey Global Institute analysis

MATURE FINANCIAL MARKETS MAY BE AT AN INFLECTION POINT WITH SLOWER GROWTH AHEAD

Last year may have marked an inflection point in the growth trajectory of financial markets in North America, Europe, and Japan. Financial assets in those regions more than tripled from 1990 through 2007, to $158 trillion, or 403 percent of GDP. But the circumstances that fueled the rapid increases of past years, particularly in equities and private debt, have changed, making it likely that total financial assets will grow more in line with GDP in coming years.

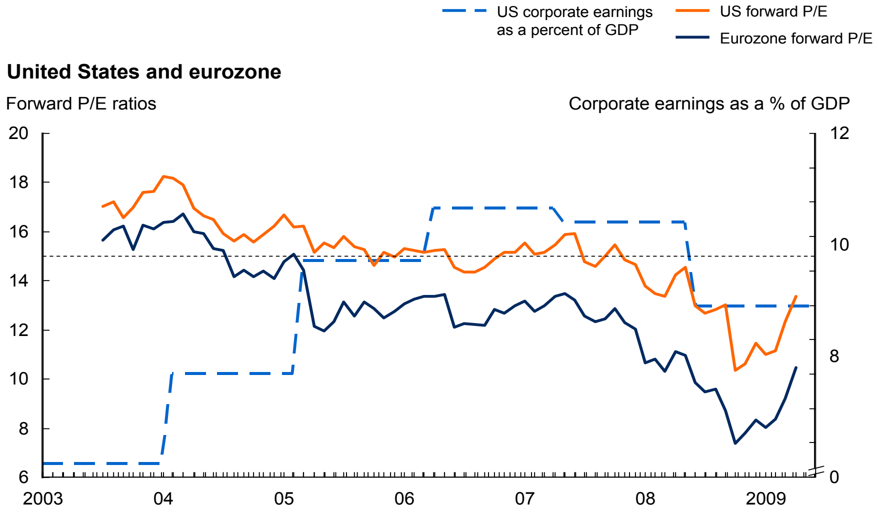
Growth in equity markets may revert to GDP trend

Equities were the fastest-growing asset class in mature markets from 1990 through 2007 because of two main factors: rapid growth in corporate earnings and rising equity valuations (reflected in P/E ratios). New IPOs were a small and relatively immaterial contributor.

Going forward, each of these sources of growth may be diminished. Both corporate earnings as a share of GDP and P/E ratios had risen well above their long-term averages in mature economies. Now, earnings growth has slowed and valuations have reverted to their mean. Meanwhile, external analysts forecast GDP growth in developed economies to be more modest in coming decades than in recent years as their populations age and government debt grows. These projections give little support to the hope that corporate earnings and valuations will rise again to significantly and sustainably higher levels in mature markets (Exhibit 21).

Exhibit 21

In the United States and Europe, equity valuations as of June 2009 are close to their historical average



SOURCE: Bloomberg; Datastream; J. P. Morgan; Institute of International Finance; McKinsey Global Institute analysis

New equity issuance is another, albeit much smaller, source of overall growth in equity market capitalization, and it has picked up in the first half of 2009. Some argue it may remain high in the short term as companies review their capital structure in light of the crisis. However, net new equity issuance in mature markets has been negligible compared with overall market capitalization in recent years.[17] So while mature equities markets may rise further in the short term as financial markets return to health and the global economy recovers, the trends we've cited mean it is unlikely that equities will grow much faster than GDP in the long term.

Private debt outstanding is likely to grow much more slowly than in recent years

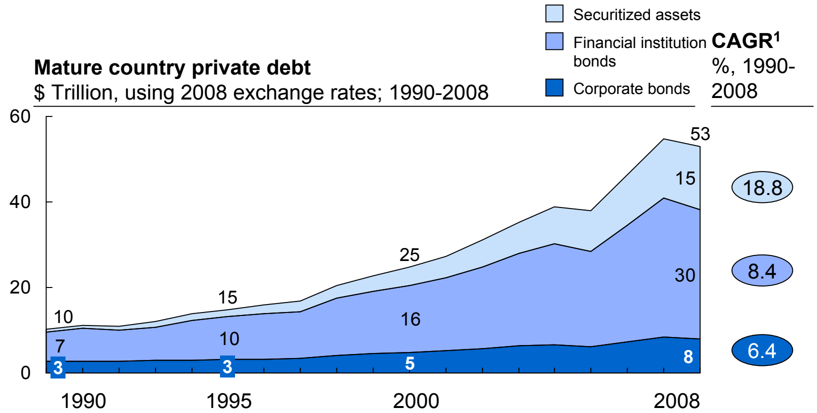
Similarly, the forces that drove rapid increases in private debt securities in mature markets over the past two decade have stalled, at least for now. Almost all the private

17 In the United States, new equity issuance has actually been negative for domestic companies in recent years, as the value of share buybacks has exceeded new issues. In the United Kingdom, new issuance has accounted for less than 1 percent of equity market capitalization growth.

debt growth since 1990 has occurred in two categories: debt issued by financial institutions, which accounted for 49 percent of the total, and asset-backed securities, at 43 percent (Exhibit 22). The value of outstanding corporate bonds, in contrast, has grown steadily, but at a rate that was only marginally faster than GDP growth.

Exhibit 22

Financial institution bonds and securitized assets drove past growth in private debt



Private debt % of GDP	54	61	84	131

[1] Compound annual growth rate.
SOURCE: McKinsey Global Institute Global Financial Assets database; McKinsey Global Institute analysis

Going forward, these dynamics may be reversed. Corporate bond issuance has surged in 2009 because banks have cut back their lending as they repair balance sheets. Corporate bond issuance levels may well remain high for several years until the banking sector returns to health. But corporate bonds account for only 15 percent of outstanding private debt, so they cannot contribute significantly to growth in the overall stock of private debt.

Issuance of debt by financial institutions declined 11 percent overall in 2008 in mature markets, with the sharpest fall-off in the United States.[18] Over the next two years, in the United States alone, $1.5 trillion of financial institution debt will roll over. Banks will face higher interest costs, partly because they are likely to replace some short-term debt with debt of longer maturities. Still, despite the large volume of issuance, the outstanding stock of financial institution debt is unlikely to grow much, and may decline.

Likewise, the issuance of securitized assets has plummeted and is negligible outside of government programs in the United States and the United Kingdom (Exhibit 23).[19] Securitization will most likely revive over time, with low-risk, plain-vanilla securities (such as assets backed by prime mortgages) coming back first. Still, the very high pace of new issuance in the years before the crisis—reflecting in part the mortgage boom in the United States and other countries—is unlikely to be repeated. The total outstanding stock of securitized debt could decline in coming years.

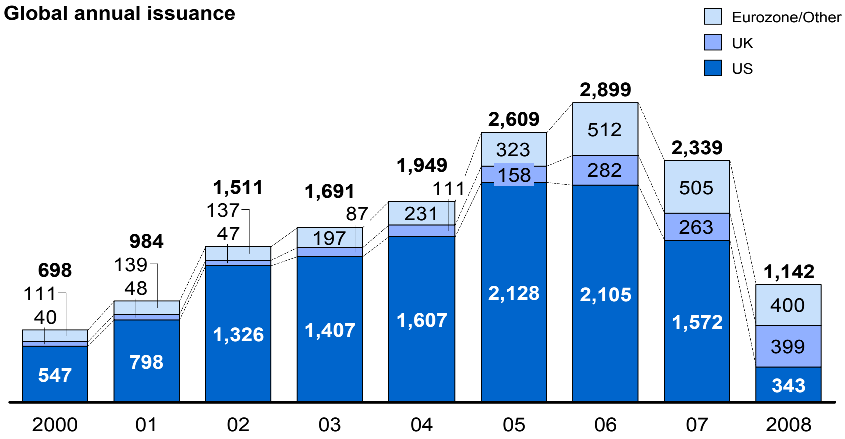
18 The decline in bond issuance varied significantly between regions. US financial bond issuance decreased by 29 percent, while European financial bond issuance increased by 10 percent, mostly because of the issuance of covered bonds.

19 In the United States, asset-backed securities now are issued almost solely by government-sponsored enterprises such as Fannie Mae and Freddie Mac, or through government programs such as the Federal Reserve's Term Asset-Backed Securities Loan Facility. In the United Kingdom, securitization has increased in response to the bank recapitalization programs of the European Central Bank and Bank of England.

Exhibit 23

Global securitized asset issuance has dropped precipitously in 2008

$ Billion, using 2008 exchange rates



Note: Figures may not sum due to rounding.
SOURCE: Dealogic; Securities Industry and Financial Markets Association; McKinsey Global Institute analysis

Government debt is set to expand rapidly

In contrast to equities and private debt, government debt is set to expand rapidly and account for a larger share of financial asset growth across mature markets. We are already seeing increased government borrowing to pay for new programs to recapitalize the financial system and stimulate economic growth. The International Monetary Fund has projected that such efforts will cause the combined government budget deficits of advanced economies to balloon from 75.2 percent of GDP in 2007 to 93.6 percent in 2009. In some countries, the level will go much higher. US government debt is projected to grow from 63 percent of GDP in 2007 to 100 percent by the end of 2010.[20] Japan's government debt, already at 188 percent of GDP after more than a decade of fiscal stimulus efforts, is projected to increase to 226 percent by the end of 2010.

Government debt issuance will create new opportunities for financial intermediaries. But these large debts represent a significant transfer of wealth from future generations to today's populations and will be a drag on growth as they are paid down in the future. And as governments pump massive amounts of new money into the world's economies—through both monetary and fiscal policies—they run the risk of inflating prices for consumer goods, commodities, and assets, which could create new financial bubbles in the future.

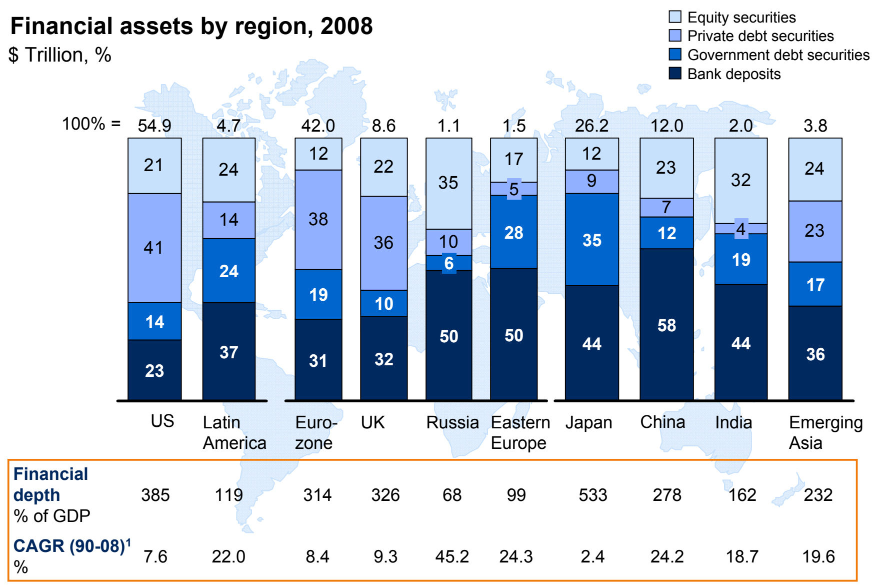
Bank deposit growth has picked up for now

Bank deposits increased in 2008 because of heightened risk aversion among retail investors and efforts by banks to attract new deposits. Over the next several years, deposits could continue to grow faster than GDP if these trends hold. Retail investors, burned by lost savings in stocks and other financial assets, may remain cautious. And banks, now facing higher costs for issuing their own debt, may offer higher interest rates on deposits. In the long term, however, rapid growth in bank deposits is unlikely in most mature markets, where retail investors have opportunities to achieve higher returns through equity and fixed-income mutual funds. The exception is

20 See Mark Horton, Manmohan Kumar, and Paolo Mauro, "The State of Public Finances: A Cross-Country Fiscal Monitor," IMF staff position note, July 30, 2009.

Japan, where bank deposits account for 44 percent of total financial assets, a share comparable to that in emerging markets (Exhibit 24).

Exhibit 24

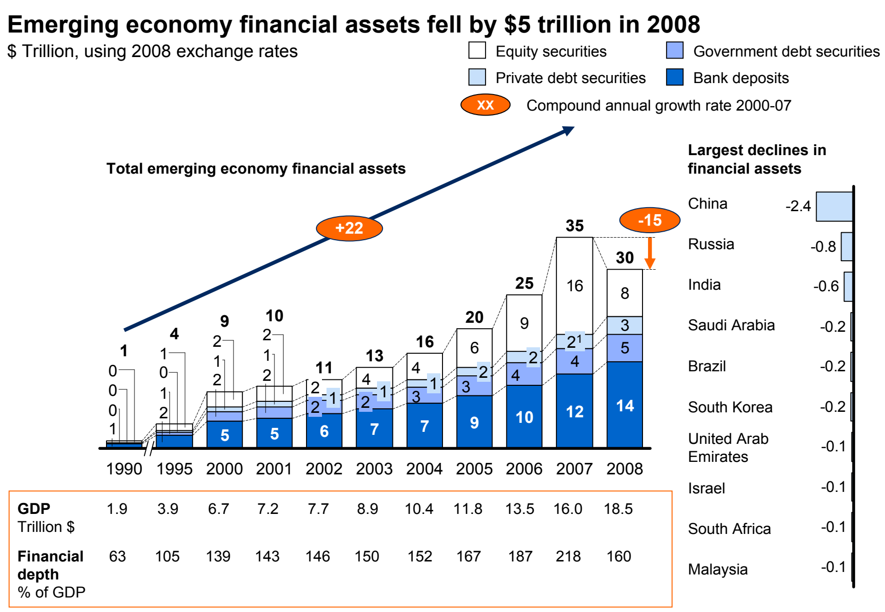


1 Compound annual growth rate using 2008 exchange rates.
Note: Some numbers do not sum due to rounding.
Source: McKinsey Global Institute Global Financial Stock database

EMERGING FINANCIAL MARKETS COULD REBOUND MORE QUICKLY

The 2008 crisis originated in mature markets, and the effects spread quickly around the world. In emerging markets, the total value of financial assets fell $5.2 trillion in 2008, a loss of 15 percent (Exhibit 25). Capital flows to developing countries plunged 39 percent (Exhibit 26). The cost of fund-raising has skyrocketed in many emerging economies as foreign lending flows have reversed, while debt and equity capital flows have dropped sharply.

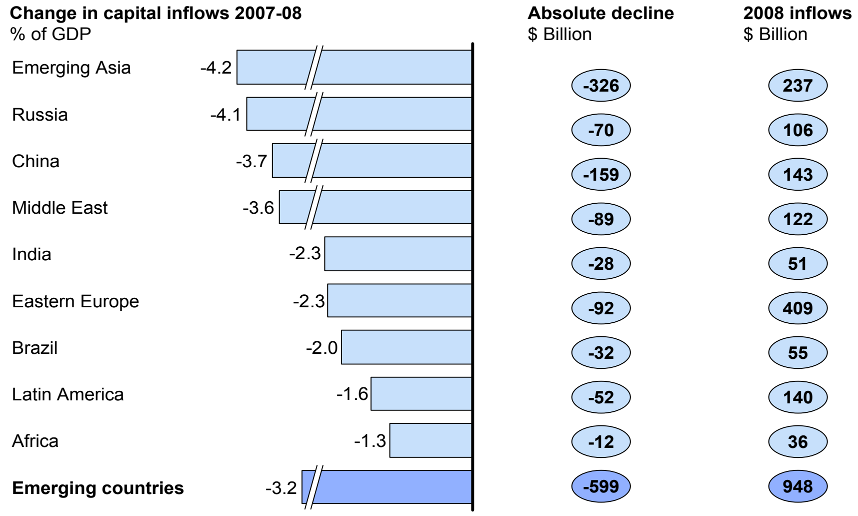
Exhibit 25



Note: Figures may not sum due to rounding.
SOURCE: McKinsey Global Institute Global Financial Assets database

Exhibit 26

Foreign capitals flows to emerging markets fell by $600 billion in 2008



SOURCE: McKinsey Global Institute Cross-Border Capital Flows database

For many reasons, however, we believe the current crisis will cause no more than a pause in the development of emerging market financial systems. Indeed, some indicators suggest that emerging markets may already be rebounding. Equity markets in emerging Asia, for instance, have gained more than 30 percent since the end of 2008, while those in Latin America have climbed more than 40 percent. Both represent a far stronger comeback than in mature economies and one that reflects stronger GDP growth. In China, Indonesia, South Korea, and Singapore, GDP grew at an average annual rate of more than 10 percent in the second quarter of this year.[21] And while debt issuance by emerging market governments and corporations declined in the second half of 2008, it rebounded in the first half of 2009.

Beyond the short-term recovery, the long-term fundamental drivers of financial market growth remain strong in developing economies. Many have high national saving rates, creating large sources of capital to invest. They typically have very large infrastructure investment needs that require financing. And their financial markets today are much smaller relative to GDP than those in mature markets, suggesting ample room for growth (Exhibit 27). The total value of all emerging market financial assets is equal to just 165 percent of GDP—145 percent if we exclude China—well below the financial depth of mature economies.

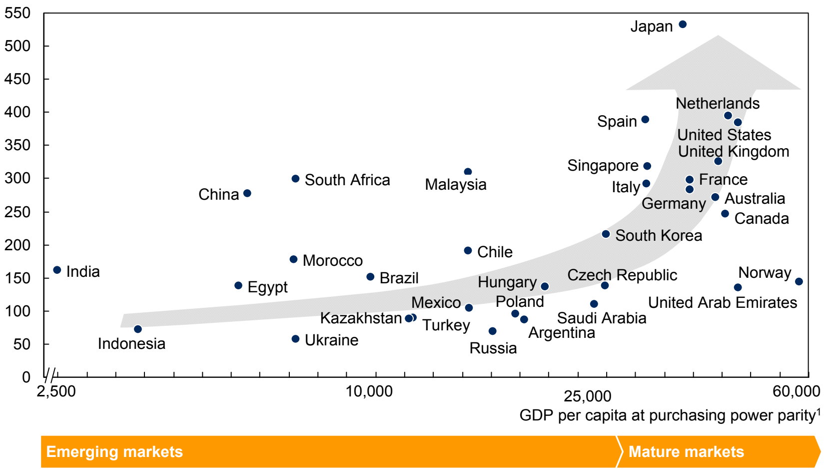
More specifically, we see the potential for growth by looking at individual asset classes. Equities, for example, are the second-largest asset class after bank deposits in virtually all emerging markets (Exhibit 28). Yet they still have ample room to grow as more state-owned enterprises are privatized and as existing companies expand. For instance, we estimate that just a quarter of the value of Chinese corporations is listed on public equity markets, compared with more than 70 percent of US corporations.

21 "An astonishing rebound," *The Economist*, August 15, 2009

Exhibit 27

Financial markets in most emerging economies have significant room for growth

Financial depth: Value of bank deposits, bonds, and equity as a percentage of GDP, 2008
%

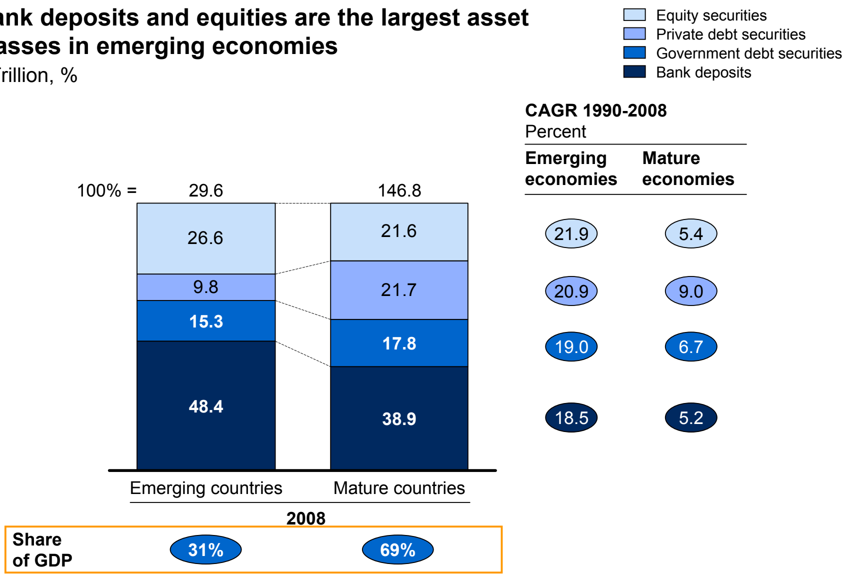


[1] Log scale.
SOURCE: McKinsey Global Institute Global Financial Assets database

Exhibit 28

Bank deposits and equities are the largest asset classes in emerging economies

$ Trillion, %



* Compound annual growth rate using 2008 exchange rates for all years.
Note: Some numbers do not add to 100% due to rounding.
Source: McKinsey Global Institute Global Financial Stock database

Likewise, markets for corporate bonds and other private debt securities have substantial room for growth. The value of private debt assets is equal to just 15 percent of GDP in emerging markets, compared with 119 percent in Europe and 160 percent in the United States. Corporate bond markets are unlikely to flourish in emerging markets without significant legal and financial reforms.[22] But with the appropriate regulatory changes, corporate bond markets could provide an alternative to bank financing, and some of the plain-vanilla forms of securitization (such as those backed by low-risk prime mortgages) could develop.

Bank deposits also constitute an asset class with enormous growth potential in the developing world, where large swaths of the population have no bank accounts. McKinsey estimates that in emerging markets, there are 2.8 billion adults with discretionary income who are not part of the formal financial system. Bank deposits will swell as household incomes rise and individuals open savings accounts.

Further financial market development in emerging markets is not guaranteed, however. One uncertainty is whether policy makers will undertake the financial market reforms necessary to enable capital market development. In the wake of the financial meltdown, many are questioning the desirability of rapid financial asset growth (see sidebar *Reinterpreting financial deepening)*. The crisis underscored the dangers of the kind of unhealthy financial deepening that results from asset and credit bubbles. Nonetheless, financial market development can be beneficial if it enables capital to be allocated more efficiently and allows greater opportunities for risk diversification. If the right reforms enable this kind of deepening to occur, emerging market economies, which are projected to account for half of global GDP by 2035, will be the main beneficiaries.

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22 See "Emerging markets' new financial development path," p. 18, *Mapping global capital markets: Fifth annual report, October 2008*, McKinsey Global Institute (available at www.mckinsey.com/mgi/).

Reinterpreting financial deepening

Over the past two decades, the total value of the world's financial assets grew faster than global GDP, from 227 percent in 1990 to 343 percent in 2007. Many analysts, including those at MGI, viewed this development mainly with optimism. Securitization was thought to enable investors to diversify their risk and reduce the need for expensive bank capital. More efficient intermediation lowered borrowing costs. Indeed, academic research has found some evidence that financial deepening is associated with higher economic growth.[23]

Now the crisis has called some of this conventional wisdom into question. Much of the rise in assets in mature markets did not reflect capital being channeled into economically productive activities; rather, it reflected growing asset bubbles. It turned out that the risk diversification benefits of securitization had been illusory because some of the biggest investors in securitized instruments were the leveraged financial intermediaries that had created them. And the global spread of such assets did not diminish risk by dispersing it; on the contrary, these assets were a source of contagion, transmitting the crisis around the world when asset prices collapsed. Meanwhile, equity market bubbles have regularly appeared in both mature and emerging markets. It is now clear that financial deepening is often built on shaky fundamentals, such as asset bubbles and high government debt, that provide no lasting benefits.

Yet policy makers debating how to retool the system to prevent future crises should keep in mind the merits of financial deepening. Deep financial markets helped foster the significant productivity growth of the 1990s and gave many borrowers unparalleled access to credit. Public equity listings can improve corporate governance. Debt capital markets serve as an important alternative to bank credit, particularly in times of financial system distress. Financial system reform should be aimed at retaining these benefits while curbing the dangerous excesses.

Going forward, emerging markets stand to gain the most from financial deepening. Many emerging market economies rely on banking systems that mainly fund large corporations. If these companies could raise funding in debt markets, as they do in mature markets, banks would focus more on lending to the small and midsized businesses that fuel economic growth. Similarly households—many of which lack access to formal banking services, much less consumer credit or long-term borrowing—hoard their savings, restraining economic growth in their own countries while exacerbating financial imbalances in the global economy. Indeed, as leaders in the emerging world seek to encourage more domestic consumption in their economies, the task of fostering healthy financial system development is more important than ever.

23 Robert G. King and Ross Levine, "Finance and growth: Schumpeter might be right," *The Quarterly Journal of Economics*, Volume 108(3), August 1993; and Ross Levine, "Finance and growth: Theory and evidence," National Bureau of Economic Research Working Paper 10766, September 2004.

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