International Finance

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International financial system: Main Players

OTHER IMPORTANT INTERNATIONAL PLAYERS

International Banks

Major banks operate internationally to service their MNC clients. The globalization of business is well expressed in the banking sector.

Cross-border mergers have also created a few top global asset management firms. In 2009, U.S.-based Blackrock became the world's largest asset manager with over $3 trillion under management by buying Barclays Global Investors (BGI) from Barclays, a major British bank. BGI was created in 1995 when Barclays bought Wells Fargo Nikko Advisors, which combined the asset management activities of Wells Fargo, a California bank, and Nikko Securities, a leading Japanese broker.

The emergence of more consolidated financial institutions at the global level is a recent phenomenon. One reason is that banks were often protected from foreign takeovers, either through explicit regulation or through political maneuvering, because they are considered to be important and strategic components of the economy. It was the Uruguay Round that paved the way for the deregulation of the financial services sector. The recent financial crisis has changed the regulatory enviroment.

OTHER IMPORTANT INTERNATIONAL PLAYERS

The International Monetary Fund (IMF)

The main goals of the IMF are to ensure the stability of the international monetary and financial system (the system of international payments and exchange rates among national currencies that enables trade to take place between countries), to help resolve crises when they occur.

To meet these objectives, the IMF offers surveillance and technical assistance . Surveillance is the regular dialogue about a country's economic condition and policy advice that the IMF offers to each of its members.

OTHER IMPORTANT INTERNATIONAL PLAYERS

The World Bank

This institution was also created in 1944, as the International Bank for Reconstruction and Development (IBRD) , to facilitate postwar reconstruction and development.

Several programs are focused on the poorest countries in the world. The WB provide low-interest loans, interest-free credits, and grants to developing countries for investments in education, health, infrastructure, communications, and other activities.

The World Bank also provides advisory services to developing countries and is actively involved with efforts to reduce and cancel the international debt of the poorest countries. Rogoff (2004) describes the World Bank as a complex hybrid of a long-term development bank, an aid agency, and a technical assistance outsourcing center.

OTHER IMPORTANT INTERNATIONAL PLAYERS

Multilateral Development Banks (MDBs)

These institutions provide financial support and professional advice for economic and social development activities in developing countries. The term typically refers to the World Bank Group and four regional development banks: the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, and the Inter-American Development Bank.

OTHER IMPORTANT INTERNATIONAL PLAYERS

The World Trade Organization (WTO)

In 1995, the GATT members created the WTO, headquartered in Geneva, Switzerland, which had 153 member countries in 2010. Whereas GATT was a set of rules, the WTO is an institutional body. The WTO expanded its scope from traded goods to trade within the service sector and intellectual property rights.

Various WTO agreements set the legal ground rules for international commerce to hopefully ensure that the multilateral trading system operates smoothly. The agreements are negotiated and signed by a large majority of the world's trading nations and are ratified in the parliaments of the member countries.

If there is a trade dispute between countries, the WTO's dispute settlement process helps interpret the agreements and commitments, and it ensures that countries' trade policies conform to them. In the past decade, for example, Europe and the United States have bickered over international trade rules regarding steel and bananas and have needed WTO rulings to end the conflicts.

OTHER IMPORTANT INTERNATIONAL PLAYERS

The Bank for International Settlements (BIS)

The BIS, established in 1930, is headquartered in Basel, Switzerland. It fosters international monetary and financial cooperation to promote stability and serves as a bank for central banks. Bimonthly meetings of the governors and other senior officials of the BIS member central banks to discuss monetary and financial matters are instrumental in pursuing this goal.

BIS standing committees support central banks and authorities in charge of financial stability more generally, by providing background analysis and policy recommendations. The best known is the Basel Committee on Banking Supervision, which developed into a standard-setting body on all aspects of banking supervision, including the framework that regulates the amount of capital international banks must hold.

OTHER IMPORTANT INTERNATIONAL PLAYERS

The Organization for Economic Cooperation and Development (OECD)

The OECD operates from Paris, France, and is a group of 34 relatively rich member countries. It provides a setting to examine, devise, and coordinate policies that foster sustainable economic growth and employment, rising standards of living, and financial stability in member countries and beyond. Analysis by the OECD staff and representatives of the member countries in specialized committees may culminate in formal agreements or treaties between member countries. Negotiations at the OECD on taxation and transfer pricing, for example, have paved the way for bilateral tax treaties around the world.

OTHER IMPORTANT INTERNATIONAL PLAYERS

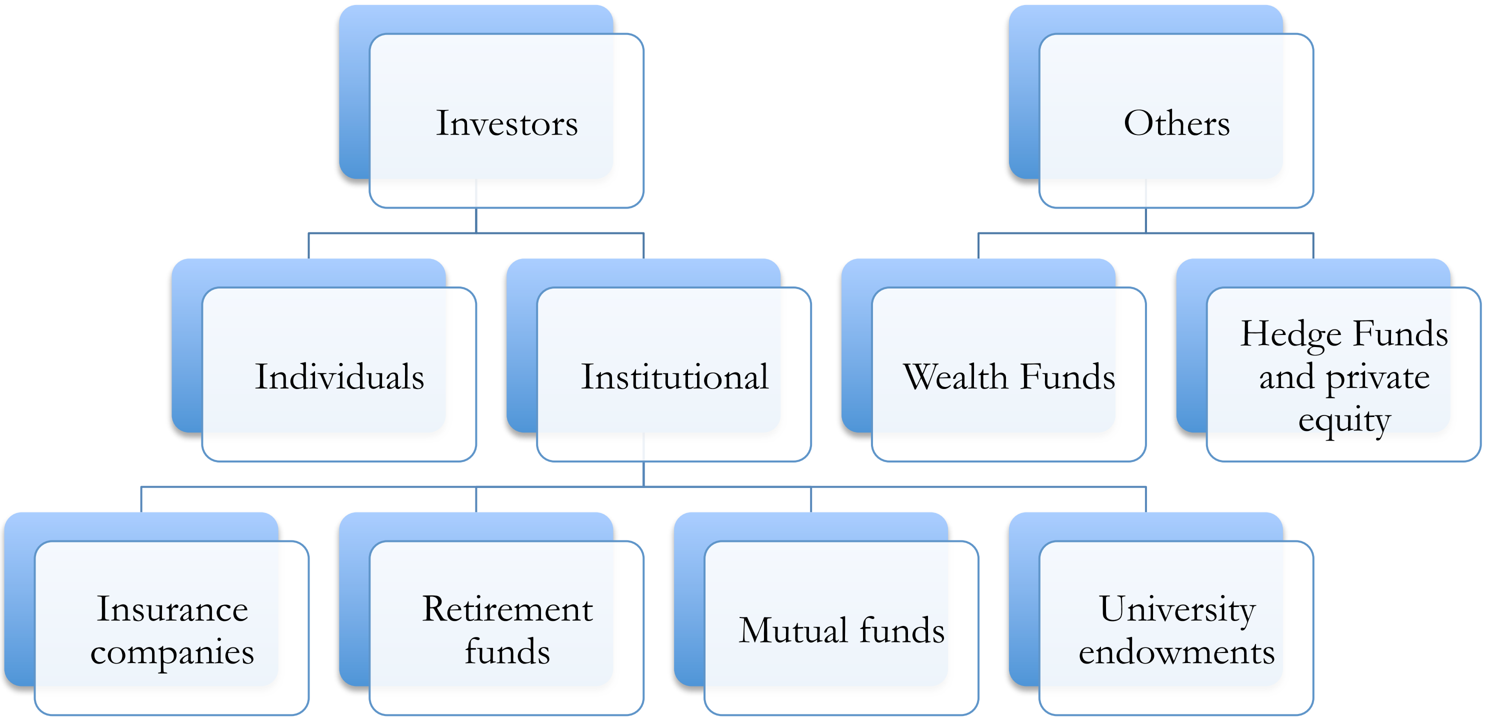
The European Union (EU)

The member states of the EU seek to create a common market in which goods, services, people, and capital can move around freely and to achieve economic and political integration.

Governments

Governments are important players in international financial management because they set the regulatory environment in which multinationals operate..

OTHER IMPORTANT INTERNATIONAL PLAYERS



International financial system: ***"From gold and silver up to bitcoins…"***

Chapter Outline

- Evolution of the International Monetary System
- Current Exchange Rate Arrangements
- European Monetary System
- Euro and the European Monetary Union
- The Mexican Peso Crisis
- The Asian Currency Crisis
- Fixed versus Flexible Exchange Rate Regimes

Evolution of the International Monetary System

- Bimetallism: Before 1875
- Classical Gold Standard: 1875-1914
- Interwar Period: 1915-1944
- Bretton Woods System: 1945-1972
- The Flexible Exchange Rate Regime: 1973-Present

Bimetallism: Before 1875

- A "double standard" in the sense that both gold and silver were used as money.
- Some countries were on the gold standard, some on the silver standard, some on both.
- Both gold and silver were used as international means of payment and the exchange rates among currencies were determined by either their gold or silver contents.
- *Gresham's Law* implied that it would be the least valuable metal that would tend to circulate.

Classical Gold Standard: 1875-1914

- During this period in most major countries:
  - Gold alone was assured of unrestricted coinage
  - There was two-way convertibility between gold and national currencies at a stable ratio.
  - Gold could be freely exported or imported.
- The exchange rate between two country's currencies would be determined by their relative gold contents.

Classical Gold Standard: 1875-1914

For example, if the dollar is pegged to gold at U.S. \$30 = 1 ounce of gold, and the British pound is pegged to gold at £6 = 1 ounce of gold, it must be the case that the exchange rate is determined by the relative gold contents:

\$30 = £6

\$5 = £1

Classical Gold Standard: 1875-1914

- Highly stable exchange rates under the classical gold standard provided an environment that was conducive to international trade and investment.
- Misalignment of exchange rates and international imbalances of payment were automatically corrected by the *price-specie-flow mechanism*.

Classical Gold Standard: 1875-1914

- There are shortcomings:
  - The supply of newly minted gold is so restricted that the growth of world trade and investment can be hampered for the lack of sufficient monetary reserves.
  - Even if the world returned to a gold standard, any national government could abandon the standard.

On the Balance of Trade:

David Hume (1711–1776) agreed with North's philosophy and denounced mercantile assumptions. His contributions were set down in Political Discourses (1752), later consolidated in his Essays, Moral, Political, Literary (1777).

Added to the fact that it was undesirable to strive for a favorable balance of trade it is, said Hume, in any case impossible. Hume held that any surplus of exports that might be achieved would be paid for by imports of gold and silver. This would increase the money supply, causing prices to rise. That in turn would cause a decline in exports until the balance with imports is restored.

On the Balance of Trade:

Exports

France → UK

France ← UK

Gold

Prices go up →Make less attractive exports for the UK consumer → French exports decrease

Prices go down → Make more attractive UK products → UK exports increase

Interwar Period: 1915-1944

- Exchange rates fluctuated as countries widely used "predatory" depreciations of their currencies as a means of gaining advantage in the world export market.
- Attempts were made to restore the gold standard, but participants lacked the political will to "follow the rules of the game".
- The result for international trade and investment was profoundly detrimental.

Bretton Woods System: 1945-1972

- Named for a 1944 meeting of 44 nations at Bretton Woods, New Hampshire.
- The purpose was to design a postwar international monetary system.
- The goal was exchange rate stability without the gold standard.
- The result was the creation of the IMF and the World Bank.

Bretton Woods System: 1945-1972

- Under the Bretton Woods system, the U.S. dollar was pegged to gold at $35 per ounce and other currencies were pegged to the U.S. dollar.
- Each country was responsible for maintaining its exchange rate within ±1% of the adopted par value by buying or selling foreign reserves as necessary.
- The Bretton Woods system was a dollar-based gold exchange standard.

The Flexible Exchange Rate Regime: 1973-Present.

- Flexible exchange rates were declared acceptable to the IMF members.
  - Central banks were allowed to intervene in the exchange rate markets to iron out unwarranted volatilities.
- Gold was abandoned as an international reserve asset.
- Non-oil-exporting countries and less-developed countries were given greater access to IMF funds.

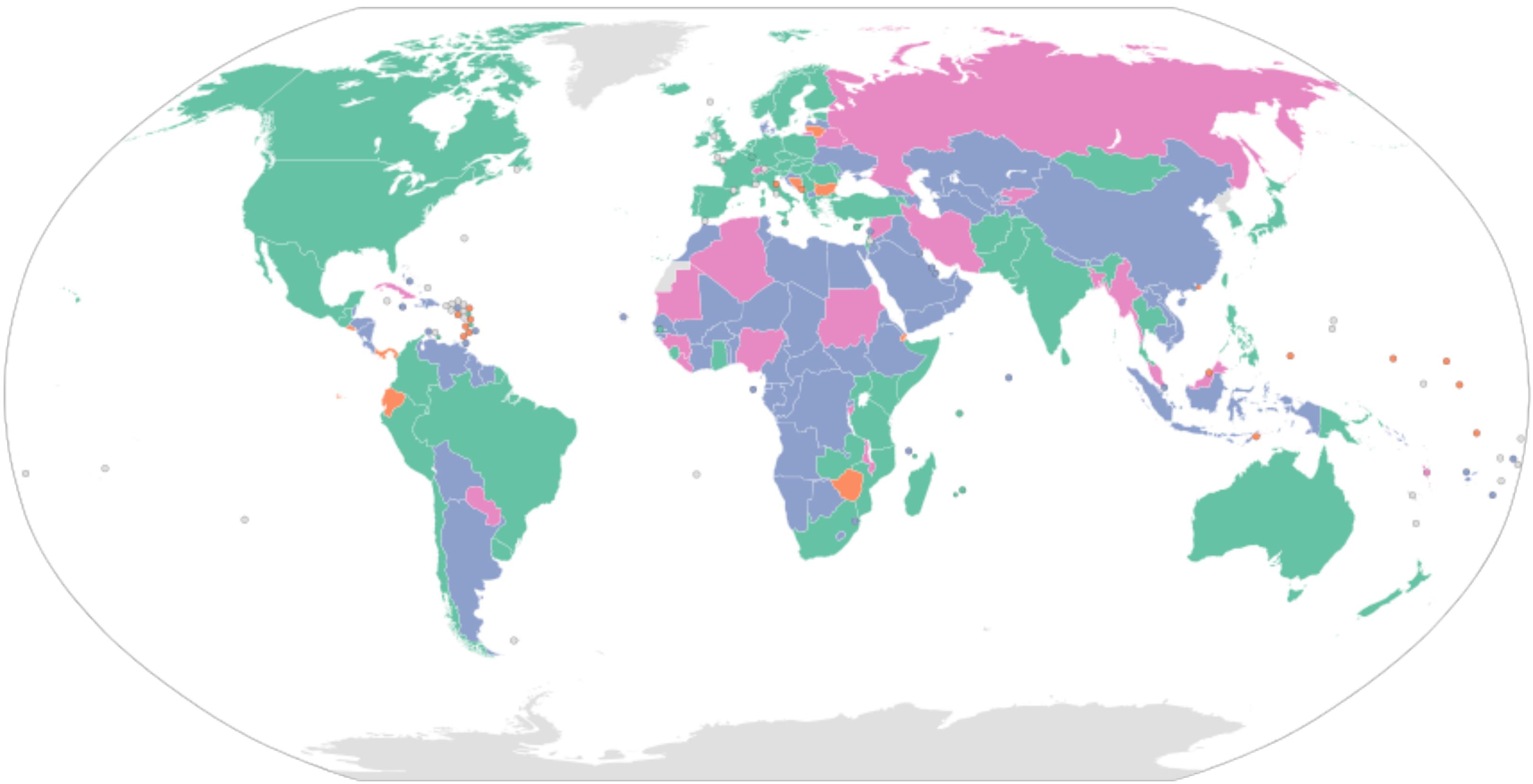
Current Exchange Rate Arrangements

- Free Float
  - The largest number of countries allow market forces to determine their currency's value.
- Managed Float
  - This regime combines government intervention with market forces to set exchange rates.
- Pegged to another currency
  - Such as the U.S. dollar or euro (through franc or mark).
- No national currency
  - Some countries do not bother printing their own, they just use the U.S. dollar. For example, Ecuador has recently dollarized.

Fixed versus Flexible Exchange Rate Regimes

- Arguments in favor of flexible exchange rates:
  - Easier external adjustments.
  - National policy autonomy.
- Arguments against flexible exchange rates:
  - Exchange rate uncertainty may hamper international trade.
  - No safeguards to prevent crises.
- Dirty floating…

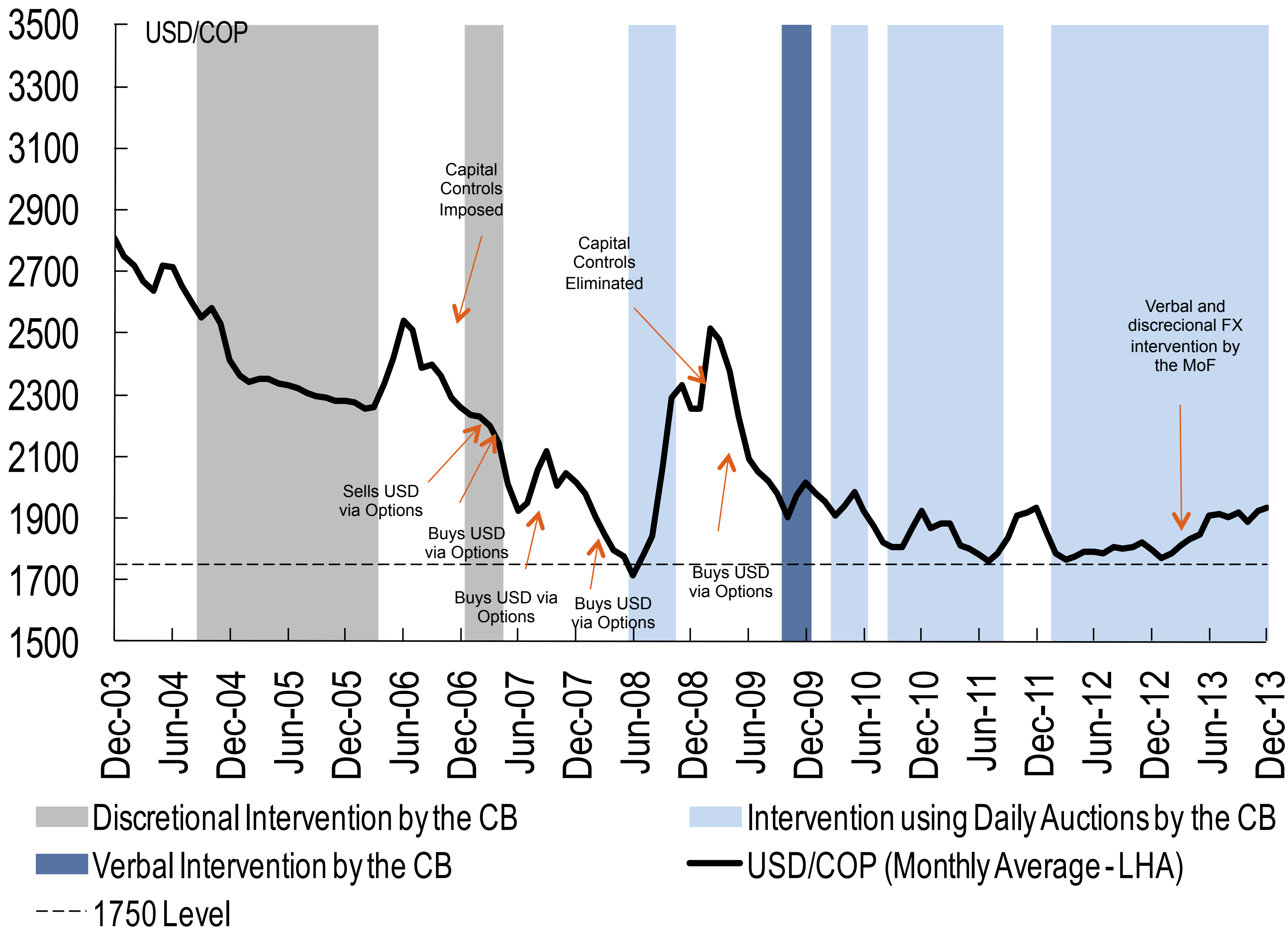
FX REGIMES



Source: IMF

Floating (floating and free floating)
Soft pegs (conventional peg, stabilized arrangement, crawling peg, crawl-like arrangement, pegged exchange rate within horizontal bands)
Hard pegs (no separate legal tender, currency board)
Residual (other managed arrangement)

COP's Mysterious Ways



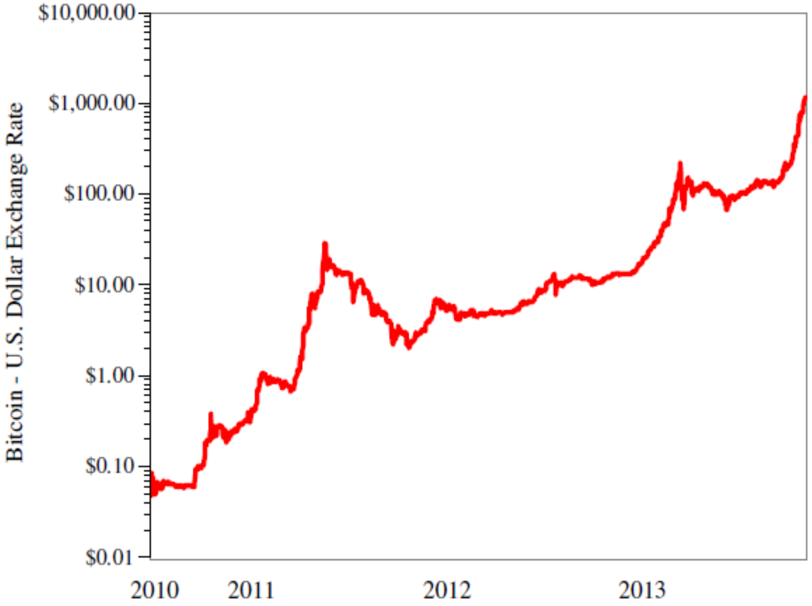
 Source: Citi Research & Bloomberg

New frontiers… What is a bitcoin?

- Bitcoin is a peer-to-peer payment system and digital currency introduced as open source software in 2009 by pseudonymous developer Satoshi Nakamoto. It is a cryptocurrency, so-called because it uses cryptography to control the creation and transfer of money. Conventionally "Bitcoin" capitalized refers to the technology and network whereas lowercase "bitcoins" refers to the currency itself.

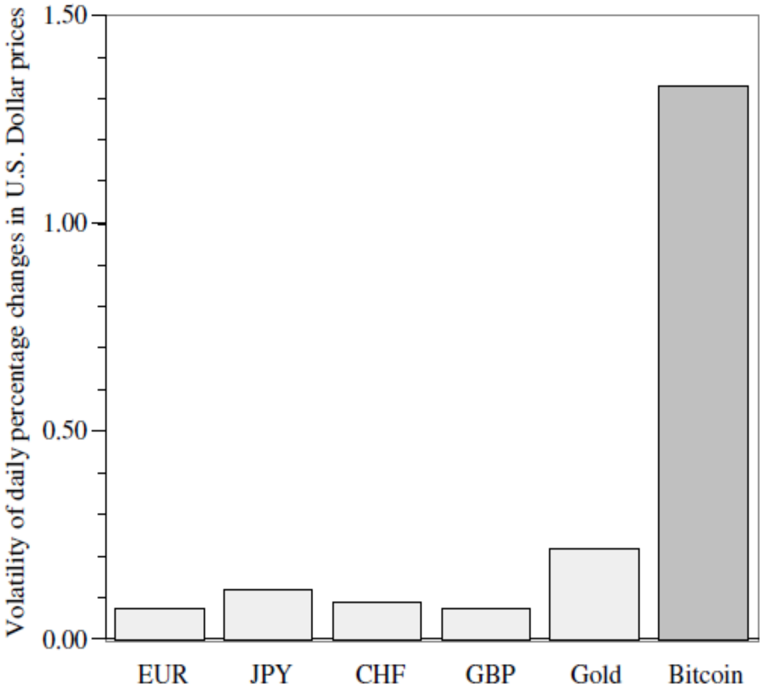
New frontiers… What is a bitcoin?

Value of one Bitcoin in U.S. Dollars
The figure shows the value of the Bitcoin-Dollar exchange rate, recorded daily at midnight on the Mt. Gox Exchange in Japan from July 17, 2010, up to November 29, 2013.



"Bitcoin appears to behave more like a speculative investment than like a currency".

Volatility of Bitcoin compared to major currencies
The figure shows the annualized volatility of the percentage change in daily exchange rates for four major currencies, gold, and Bitcoin, all measured against the U.S. dollar. Volatilities are calculated for the period January 1, 2013 up to November 29, 2013.



Is Bitcoin a Real Currency?
David Yermack
NBER Working Paper No. 19747
December 2013
JEL No. E42,G23

Currency and financial crises

Currency Crisis Explanations

- In theory, a currency's value mirrors the fundamental strength of its underlying economy, relative to other economies. *In the long run*.
- *In the short run*, currency trader's expectations play a much more important role.
- In today's environment, traders and lenders, using the most modern communications, act by fight-or-flight instincts. For example, if they expect others are about to sell Brazilian *reals* for U.S. dollars, they want to "get to the exits first".
- Thus, fears of depreciation become self-fulfilling prophecies.

Currency Crisis Explanations

First generation

The 'first generation' of models of currency crises began with Paul Krugman's adaptation of Stephen Salant and Dale Henderson's model of speculative attacks in the gold market.In his article,Krugman argues that a sudden speculative attack on a fixed exchange rate, even though it appears to be an irrational change in expectations, can result from rational behavior by investors. This happens if investors foresee that a government is running an excessive deficit, causing it to run short of liquid assets or "harder" foreign currency which it can sell to support its currency at the fixed rate. Investors are willing to continue holding the currency as long as they expect the exchange rate to remain fixed, but they flee the currency en masse when they anticipate that the peg is about to end.

Second generation

The 'second generation' of models of currency crises starts with the paper of Obstfeld (1986). In these models, doubts about whether the government is willing to maintain its exchange rate peg lead to multiple equilibria, suggesting that self-fulfilling prophecies may be possible, in which the reason investors attack the currency is that they expect other investors to attack the currency.

Third generation

'Third generation' models of currency crises have explored how problems in the banking and financial system interact with currency crises, and how crises can have real effects on the rest of the economy. McKinnon & Pill (1996), Krugman (1998), Corsetti, Pesenti, & Roubini (1998) suggested that "over borrowing" by banks to fund moral hazard lending was a form of hidden government debts (to the extent that governments would bail out failing banks). Radelet & Sachs (1998) suggested that self-fulfilling panics that hit the financial intermediaries, force liquidation of long run assets, which then "confirms" the panics.

The Mexican Peso Crisis

- On 20 December, 1994, the Mexican government announced a plan to devalue the peso against the dollar by 14 percent.
- This decision changed currency trader's expectations about the future value of the peso.
- They stampeded for the exits.
- In their rush to get out the peso fell by as much as 40 percent.

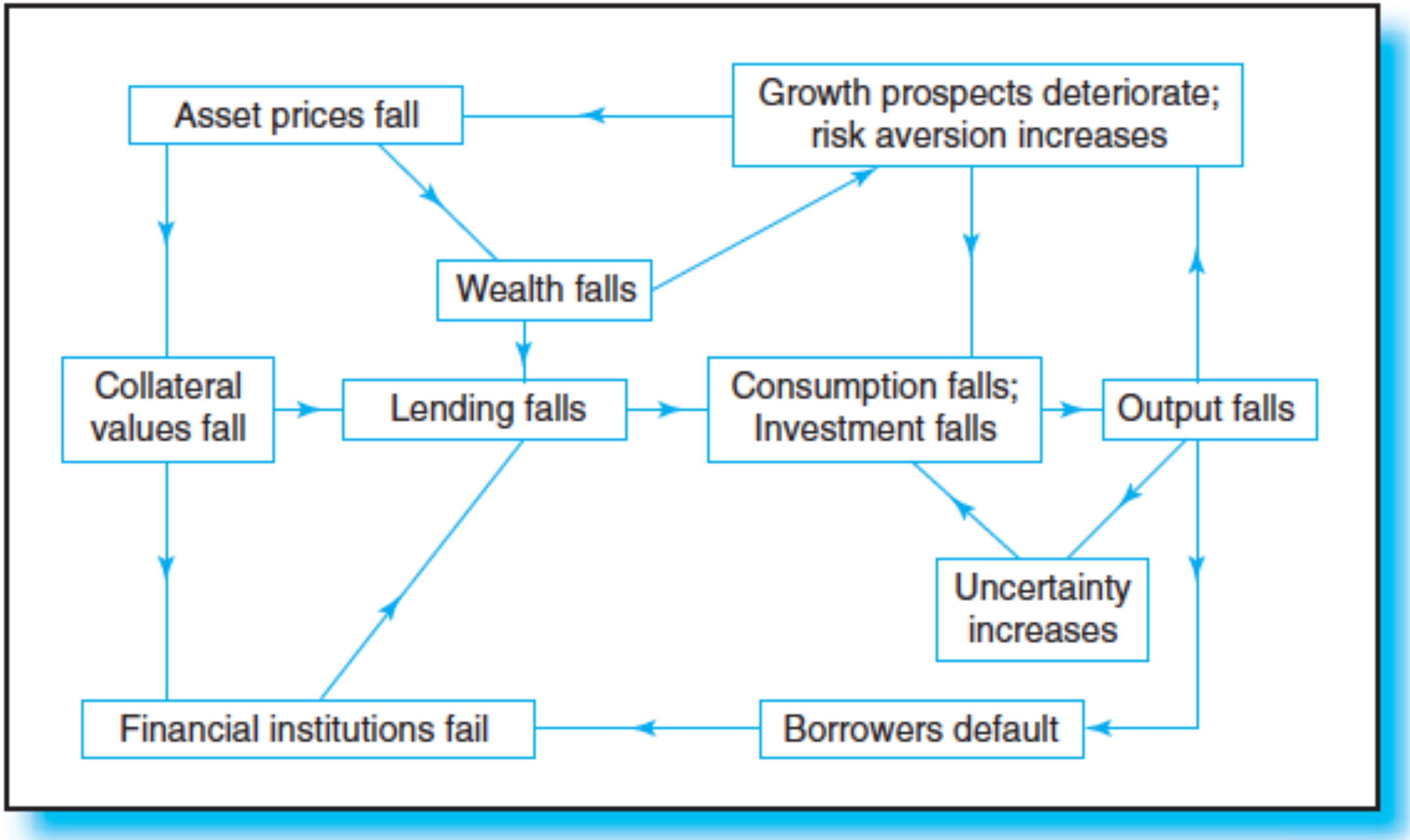
The Mexican Peso Crisis

- The Mexican Peso crisis is unique in that it represents the first serious international financial crisis touched off by cross-border flight of portfolio capital.
- Two lessons emerge:
  - It is essential to have a multinational safety net in place to safeguard the world financial system from such crises.
  - An influx of foreign capital can lead to an overvaluation in the first place.

The Asian Currency Crisis

- The Asian currency crisis turned out to be far more serious than the Mexican peso crisis in terms of the extent of the contagion and the severity of the resultant economic and social costs.
- Many firms with foreign currency bonds were forced into bankruptcy.
- The region experienced a deep, widespread recession.

Financial crisis



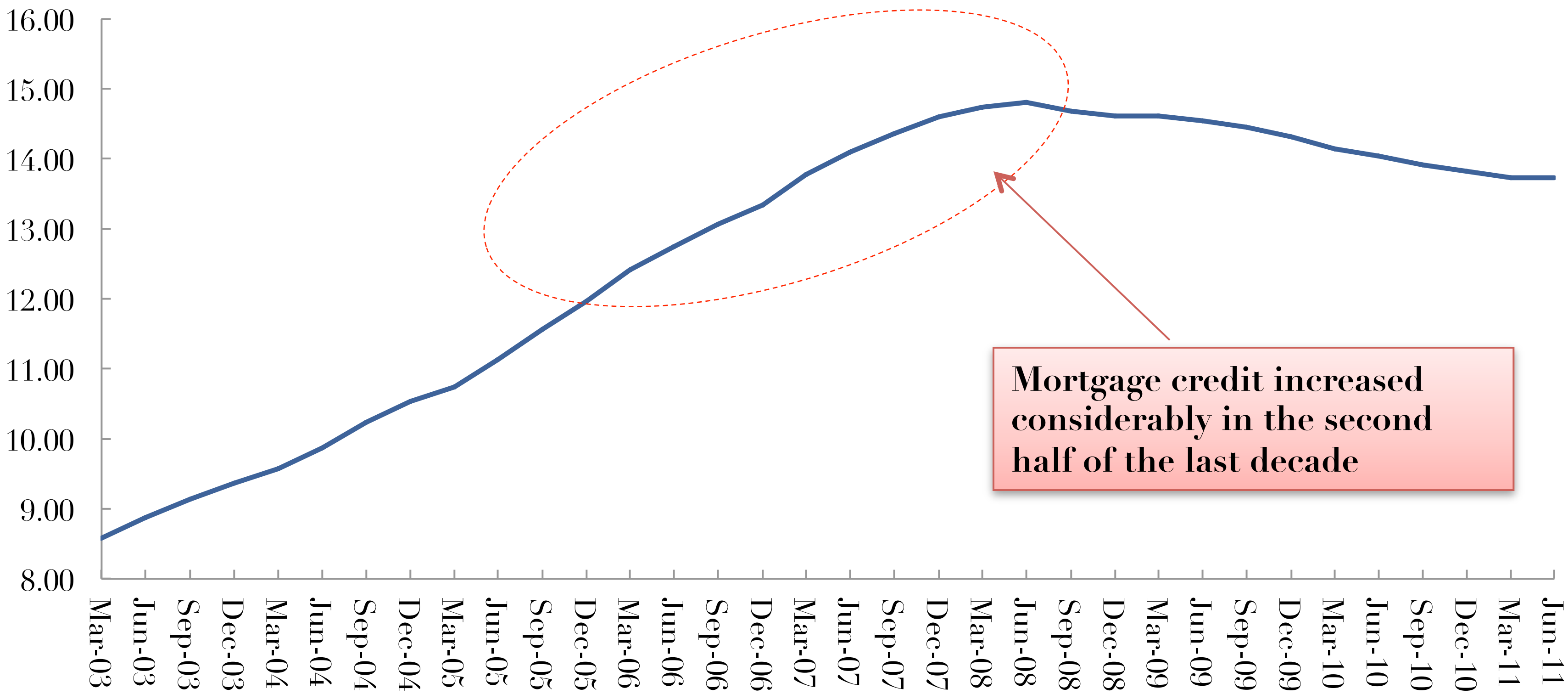
Note: This exhibit is inspired by Figure 19-1 in Gregory Mankiw and Laurence Ball (2011).

1. Genesis of the Crisis and its first Wave (Up to 2007)

Genesis of the Crisis and its first Wave (Up to 2007)

- The origin of the crisis was linked to the US housing sector.
- Total mortgage loans for the US financial system were growing steeply, reaching an all time high in late 2007/early 2008.
- Simultaneously, mortgages were being split, repackaged and sold as mortgage backed securities, which were safe under the premise that a countrywide drop in home prices was highly unlikely.

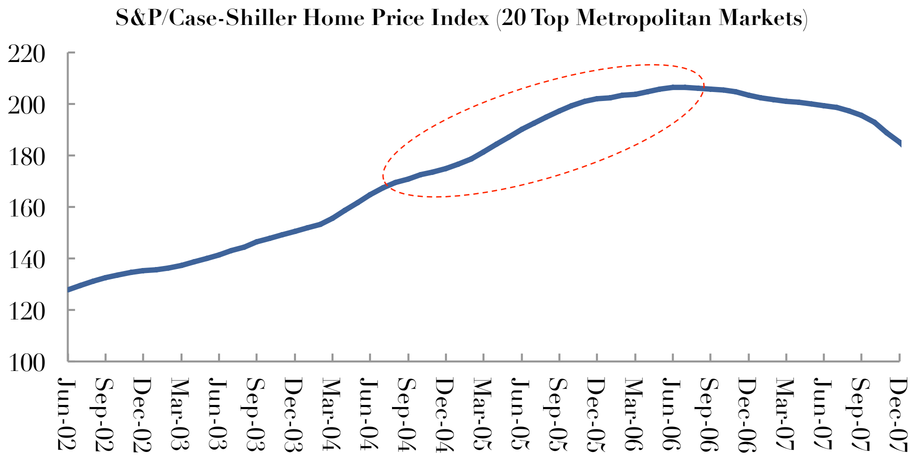
Total US Financial System Outstanding Mortgage Debt (USD Trillion)

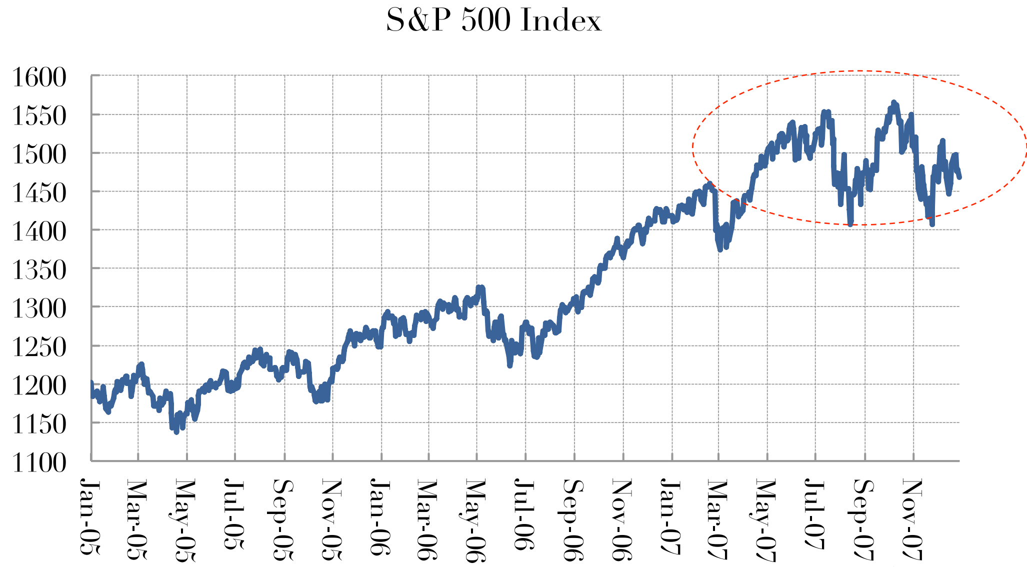


Source: Bloomberg, Citi Research

Genesis of the Crisis and its first Wave (Up to 2007)

- Overall housing prices peaked in late 2006 and began to fall through 2007. At that time housing economists stated that nominal house prices have not declined simultaneously in the US.
- General stock indices were reaching their peaks in late 2007.

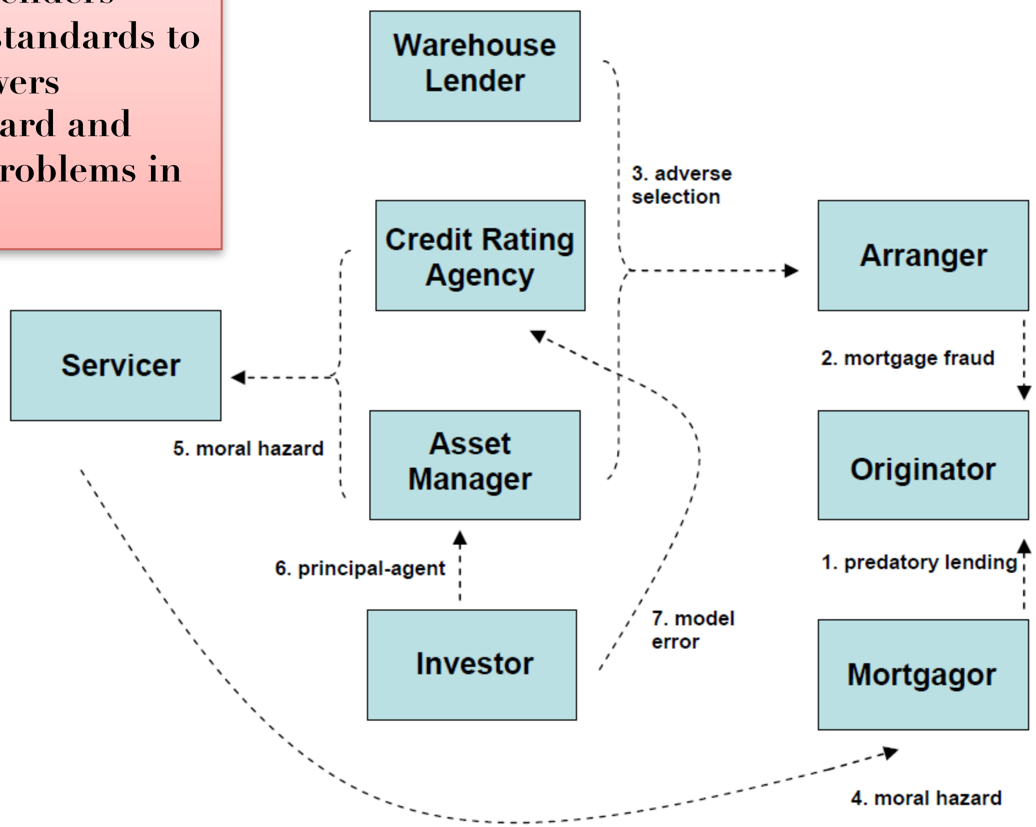




Source: Bloomberg, Citi Investment Research and Analysis

Genesis of the Crisis and its first Wave (Up to 2007)

However, increasing house prices made even more profitable the securitization of mortgages. Some lenders reduced its credit standards to "subprime" borrowers creating moral hazard and adverse selection problems in the system.



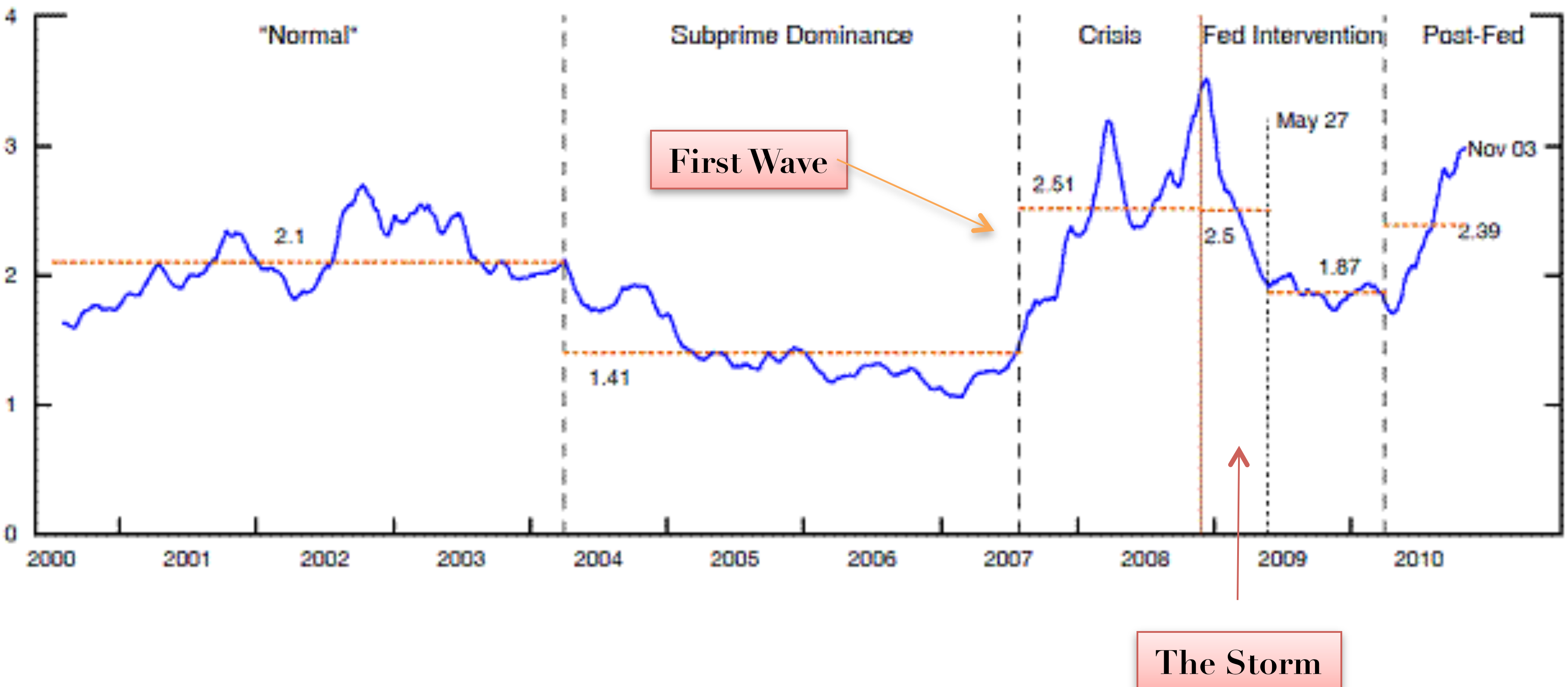
Source: Ashcraft (2010), Federal Bank of New York.

Genesis of the Crisis and its first Wave (Up to 2007)

- The crisis origins were highly connected to the US housing market performance. When housing prices started to decline and subprime borrowers start to getting behind of their payments, MBS start loosing its value.

- Federal Reserve economists pointed out that regard the risk premium on MBS to have been unnaturally low during the housing boom, but shot way up as the market for new MBS broke down in the fall of 2008. The spread was brought quickly back down by the Fed's announced intention to purchase large quantities of MBS.

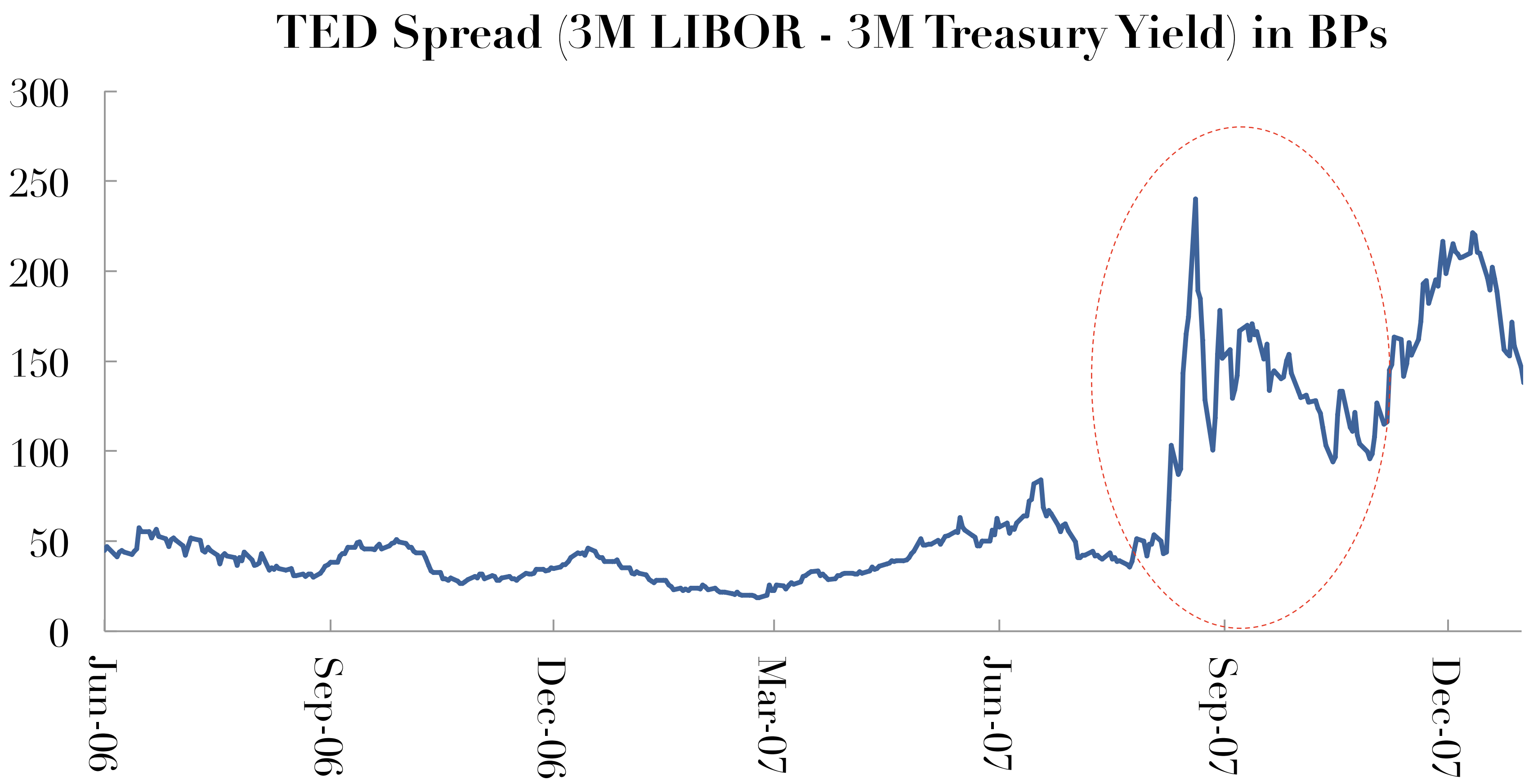
Yield spread between mortgage-backed securities and U.S. Treasuries of comparable maturity, in percentage points, 4-week moving average



Source: Econbrowser.com and Hancock and Passmore (2010)

Genesis of the Crisis and its First Wave (Up to 2007)

- When the problems in the US housing sector started, and given the high exposure of some participants of the financial system to MBS, the interbank market started to display liquidity problems.
- Market liquidity concerns began by late 2007, as evidenced by the difference between falling Treasury Yields and a rising LIBOR (known as the TED Spread).
- This indicator shows a flight to quality in late 2007, as short term capital was redirected to safer investment in treasuries and away from riskier interbank loans.

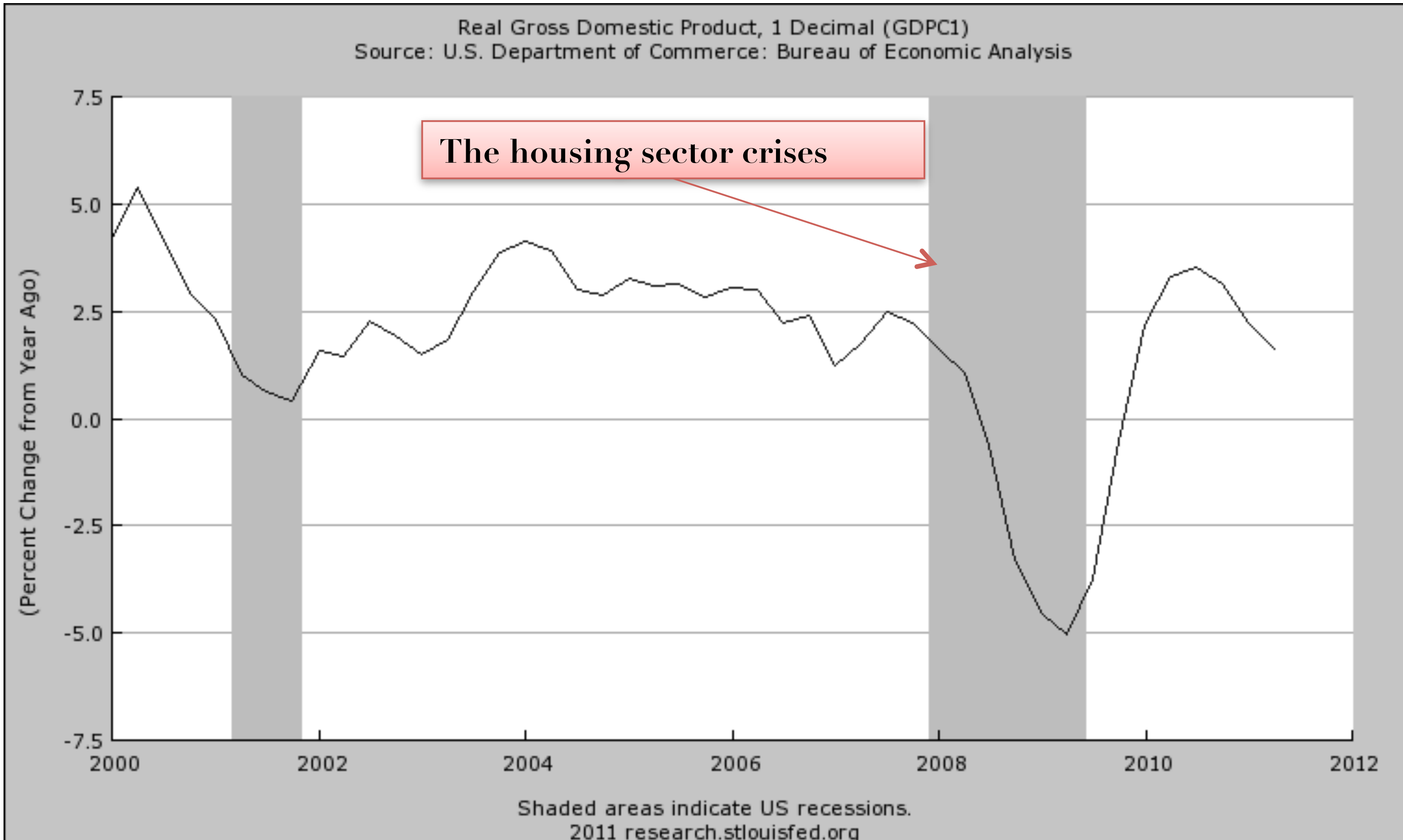


Source: Bloomberg, Citi Investment Research and Analysis

Genesis of the Crisis and its First Wave (Up to 2007)

- A weak housing sector and a financial system exposed to interbank liquidity constraints, affected economic activity.
- GDP growth began to dwindle in this early stage of the crisis.

GDP Growth (YoY) and US Recessions

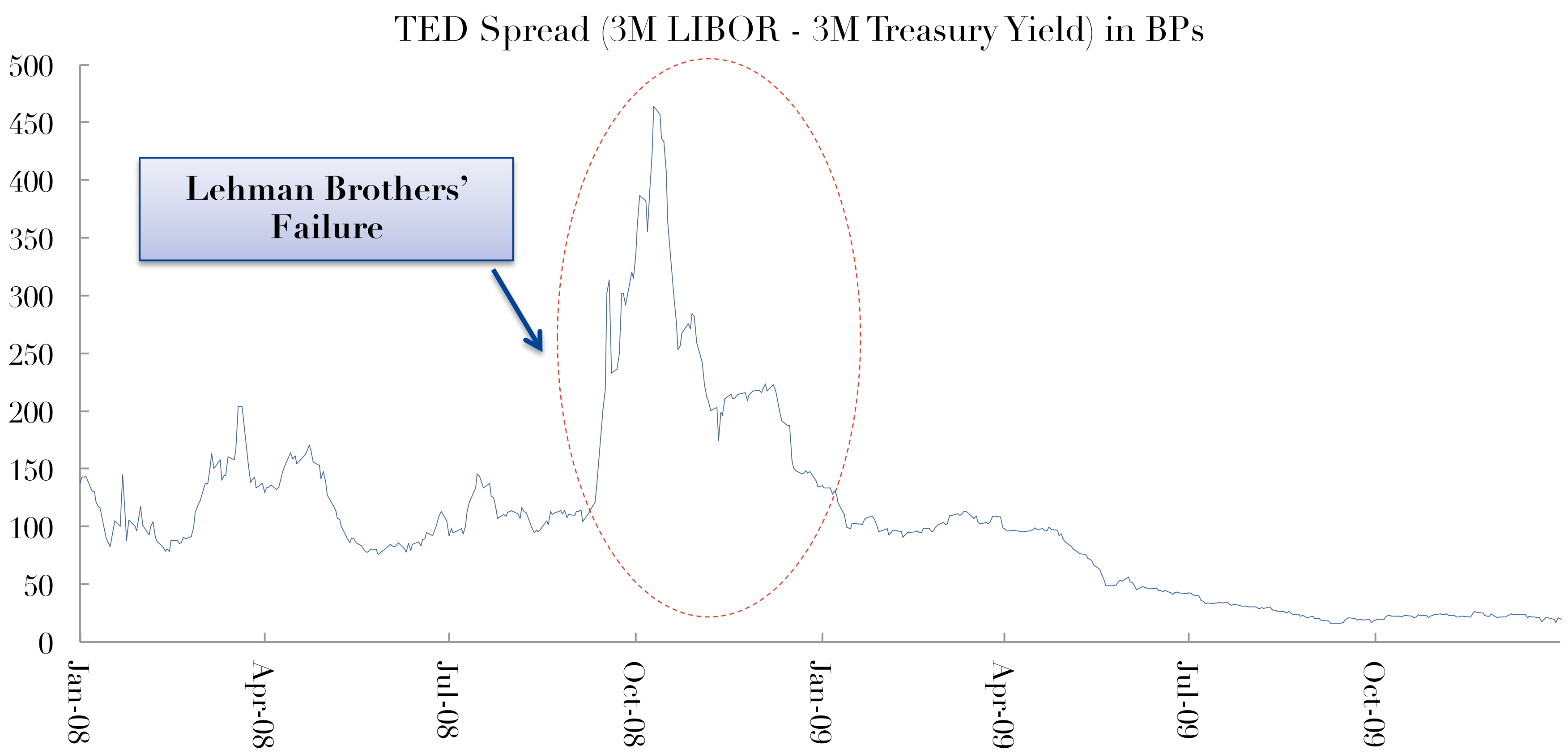


Source: FRED. Federal Reserve of St. Louis.

2. The Storm (2008)

The Storm (2008)

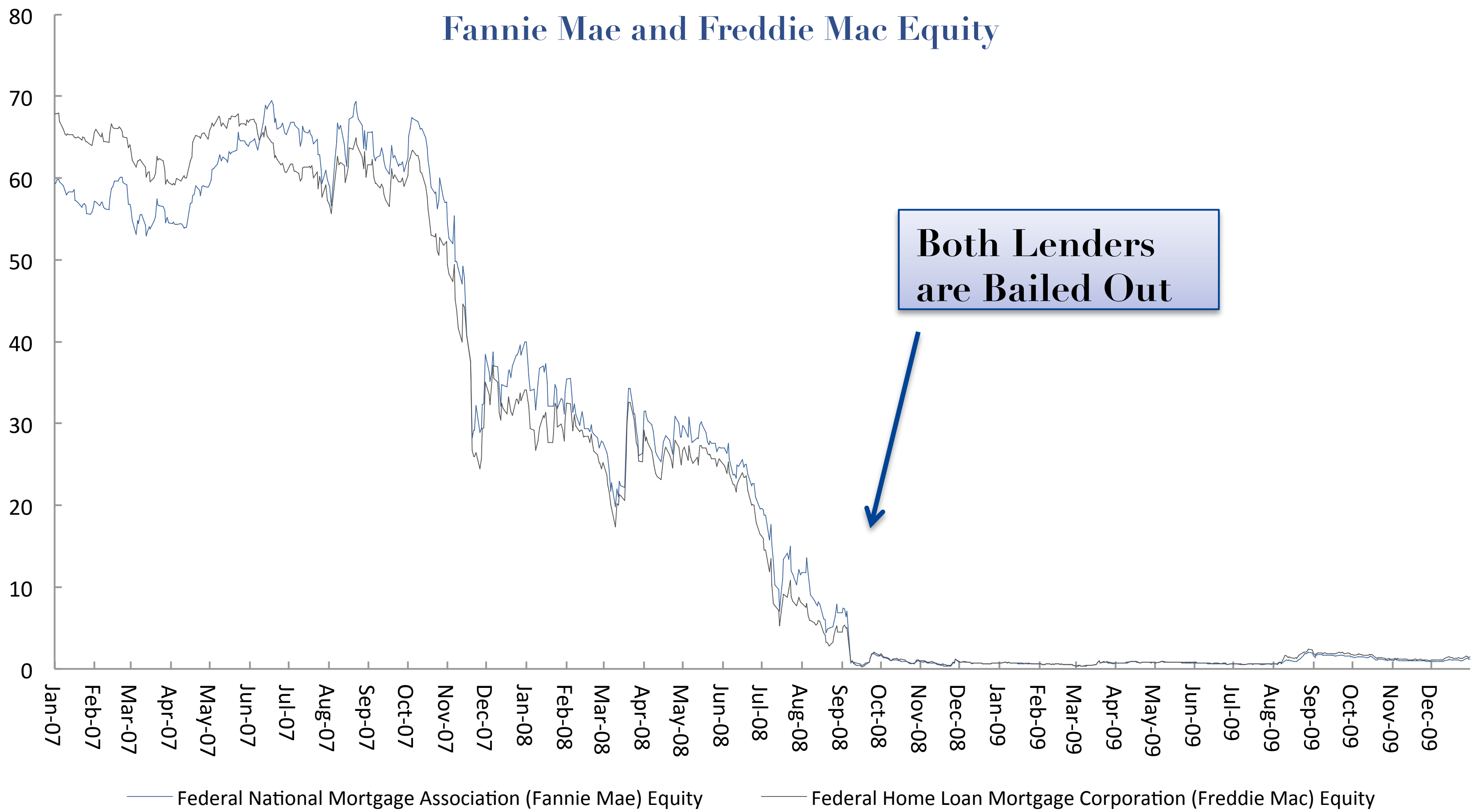
- Bear Stearns was the first company to collapse, receiving help from the Federal Reserve and finally being bought by JPMorgan in March 2008.
- Lehman Brothers' failure generated a market liquidity freeze (as shown by the TED Spread). Banks were reluctant to lend to each other, and took shelter in safer treasury bills and bonds.
- A US$700 billion bailout for was signed into law on October 3, less then a month after Lehman Brothers' failure. This bail out made up the Troubled Assets Relief Program (TARP).



Source: Bloomberg, Citi Investment Research and Analysis

The Storm (2008)

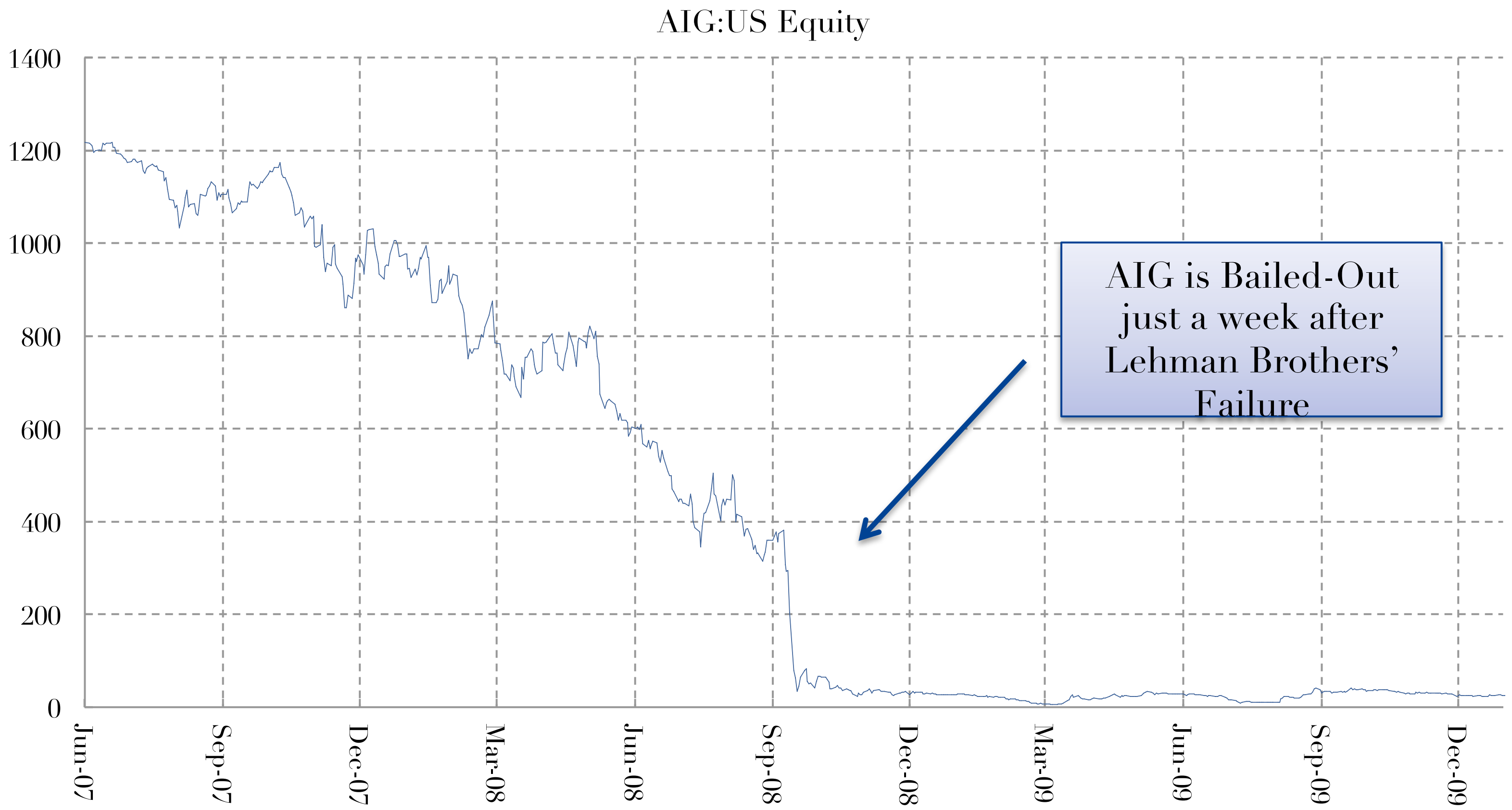
- Fannie Mae and Freddie Mac were in trouble themselves, and were finally place into conservatorship of the Federal Housing Finance Agency on September 7.



Source: Bloomberg, Citi Investment Research and Analysis

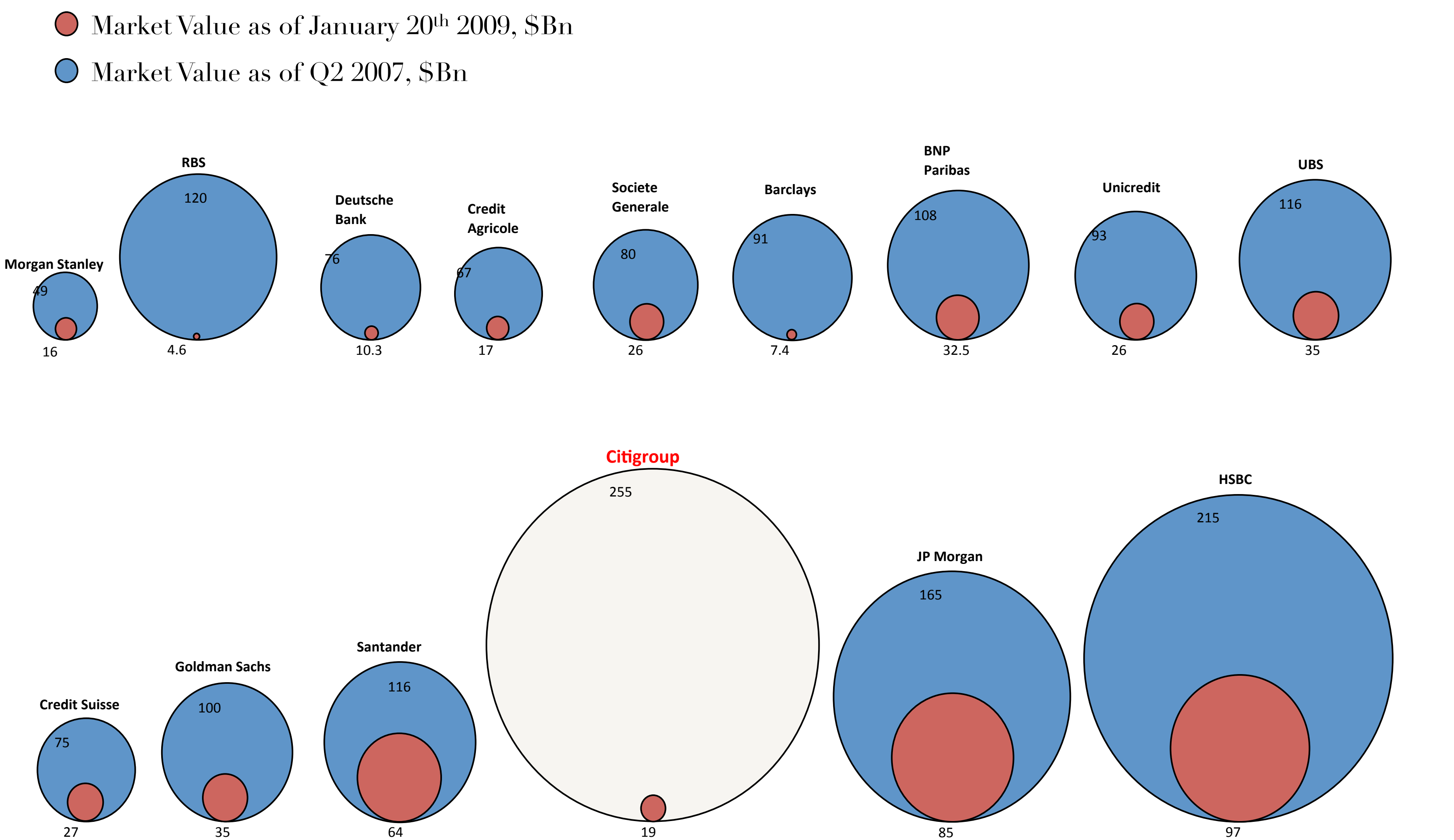
The Storm (2008)

- AIG received its own bail-out . The United States Federal Reserve Bank on September 16, 2008 created an $85 billion credit facility to enable the company to meet increased collateral obligations. The Federal Reserve Bank and the United States Treasury by May 2009 had increased the potential financial support to AIG, with the support of an investment of as much as $70 billion, a $60 billion credit line and $52.5 billion to buy mortgage-based assets owned or guaranteed by AIG, increasing the total amount available to as much as $182.5 billion*.



Source: Bloomberg, and Citi Investment Research and Analysis .
* Federal Reserve Board. "U.S. Treasury and Federal Reserve Board Announce Participation in AIG Restructuring Plan". Press release. http://www.federalreserve.gov/newsevents/press/other/20090302a.htm. Retrieved July 11, 2011.

And After The Storm….

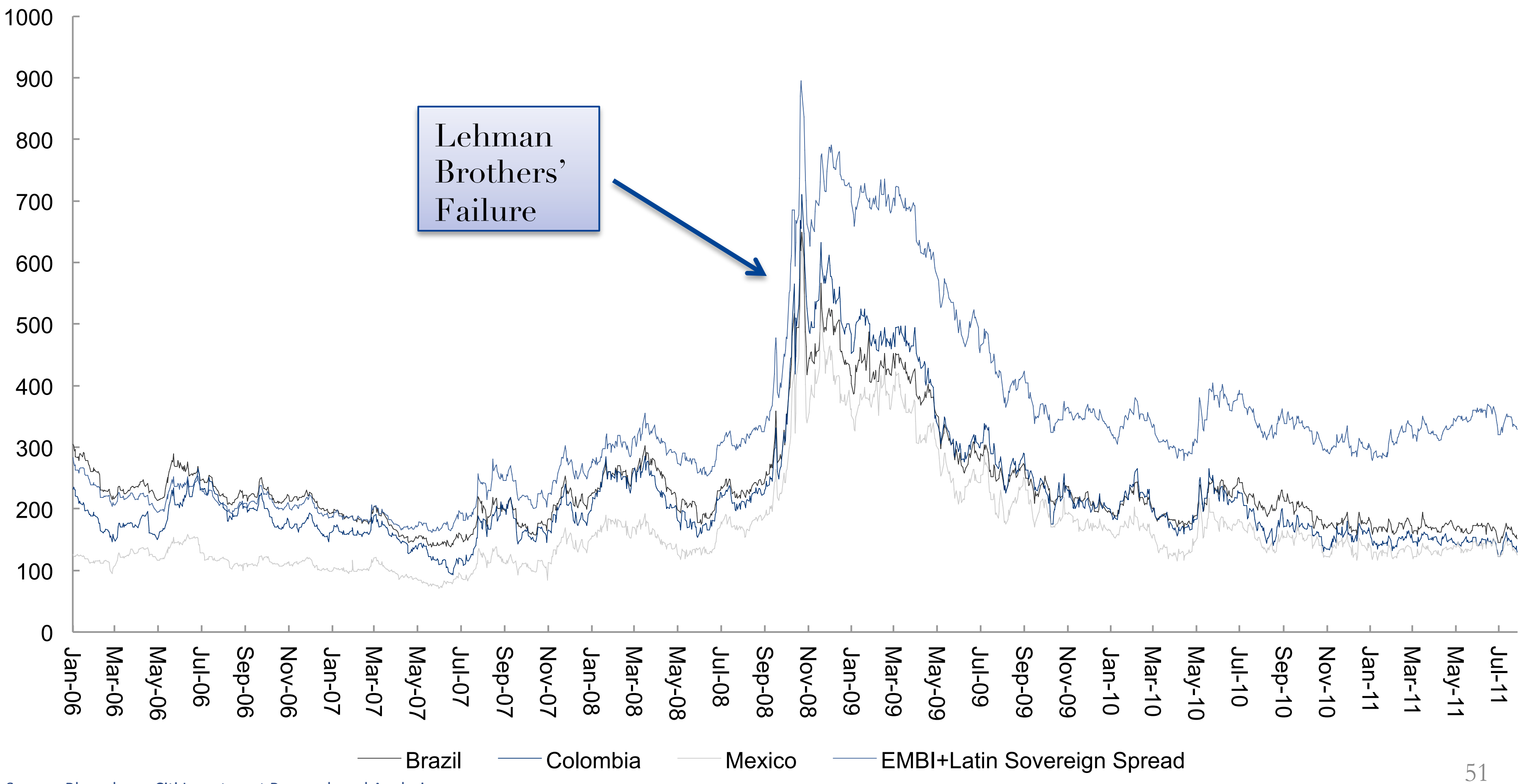


Source: Bloomberg, Jan 20th 2009

Meanwhile in Emerging Markets…

- Before September 2008, emerging markets were performing quite well. Latin American debt spreads were low.
- Even as the crisis hit the hardest in developed economies, a generalized flight to quality around the world associated with a heightened risk aversion lead to capital outflows from emerging economies, and generated higher risk premiums.

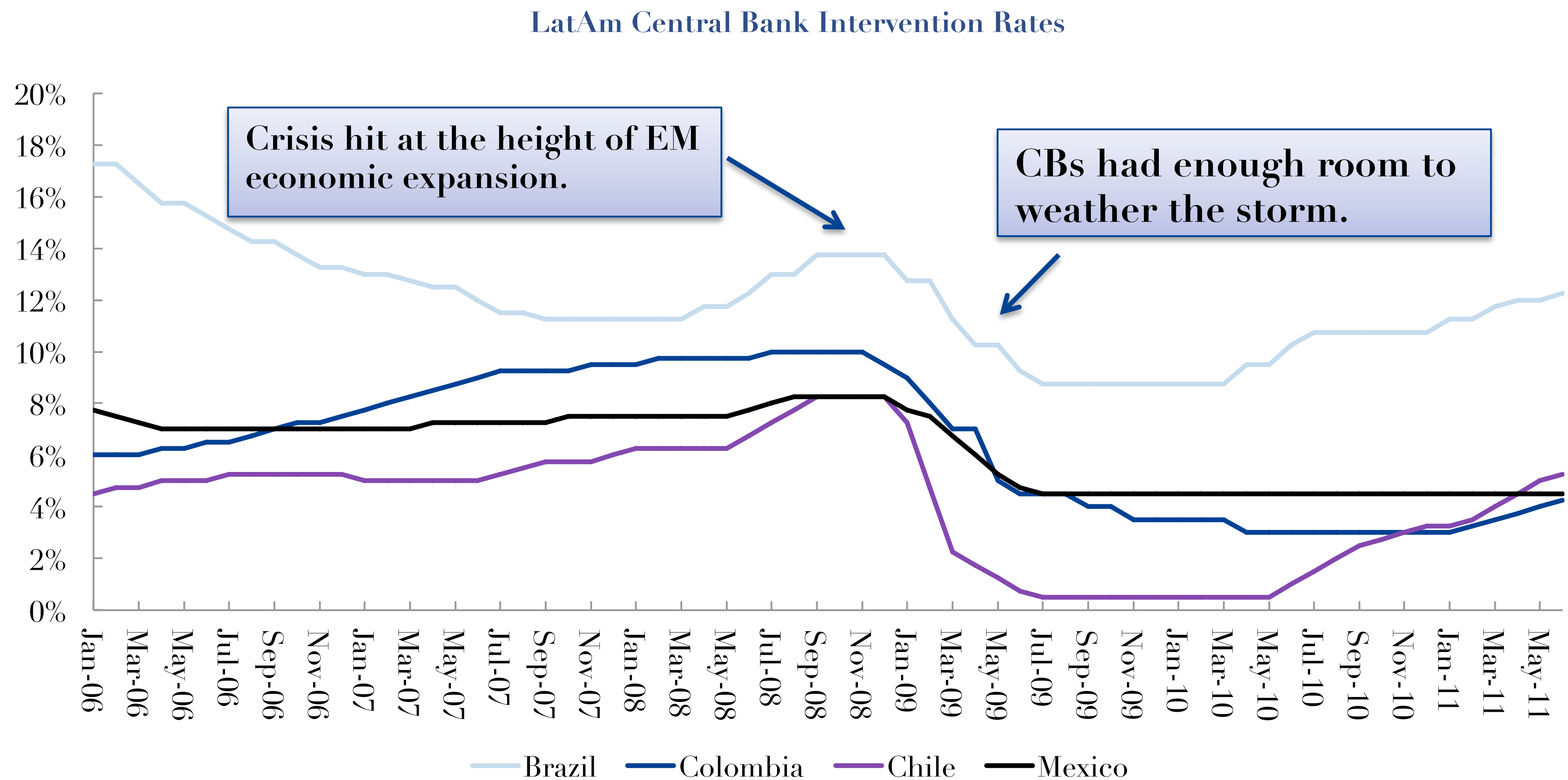
LatAm EMBI Spreads



Source: Bloomberg, Citi Investment Research and Analysis

Meanwhile in Emerging Markets…

- Emerging market economies were at the peak of their business cycles, and their central banks had pushed their intervention rates to high levels just before Lehman Brother's collapsed.
- Monetary authorities were able to provide ample liquidity in emerging economies conducting a countercyclical monetary and fiscal policies, and thus these were able to better weather the storm without reaching a liquidity trap.



Source: Bloomberg, Citi Investment Research and Analysis

3. Weathering the storm (2008-2009)

A Brief Timeline

Summer 2007: *Markets first respond on a large scale to concerns that mortgage-backed securities might significantly underperform expectations*

August 10, 2007: *Federal Reserve announces that it "will provide reserves as necessary" amidst strains in money and credit markets*

September 18, 2007: *FOMC lowers target federal funds rate 50 basis points to 4.75 percent, the first of a series of rate cuts*

December 12, 2007: *Fed announces creation of the Term Auction Facility (TAF), the first of several new tools designed to provide liquidity to markets*

March 11, 2008: *Fed creates Term Securities Lending Facility (TSLF), which trades banks' illiquid assets, including mortgage-backed securities, for liquid Treasury securities*

March 16, 2008: *Fed creates Primary Dealer Credit Facility (PDCF), allowing it to lend to primary dealers for the first time*

March 14-24, 2008: *Fed announces it will provide term financing for JPMorgan Chase to purchase Bear Stearns by taking risky securities off Bear's balance sheet via the PDCF*

September 7, 2008: *Federal Housing Finance Agency (FHFA) places Fannie Mae and Freddie Mac in government conservatorship following increasing scrutiny over their soundness*

September 15, 2008: *Lehman Brothers files for Chapter 11 bankruptcy protection*

October 3, 2008: *President Bush signs into law the Emergency Economic Stabilization Act of 2008, establishing the $700 billion Troubled Asset Relief Program (TARP)*

November 25, 2008: *Fed announces creation of the Term Asset-Backed Securities Loan Facility (TALF), supporting the issuance of asset backed securities. Becomes operational in March 2009*

November 25, 2008: *Fed announces program to purchase direct obligations of Fannie Mae and Freddie Mac, and mortgage-backed securities backed by them. Purchases begin January 5, 2009*

December 11, 2008: *The Business Cycle Dating Committee of the National Bureau of Economic Research announces that the recession began in December 2007*

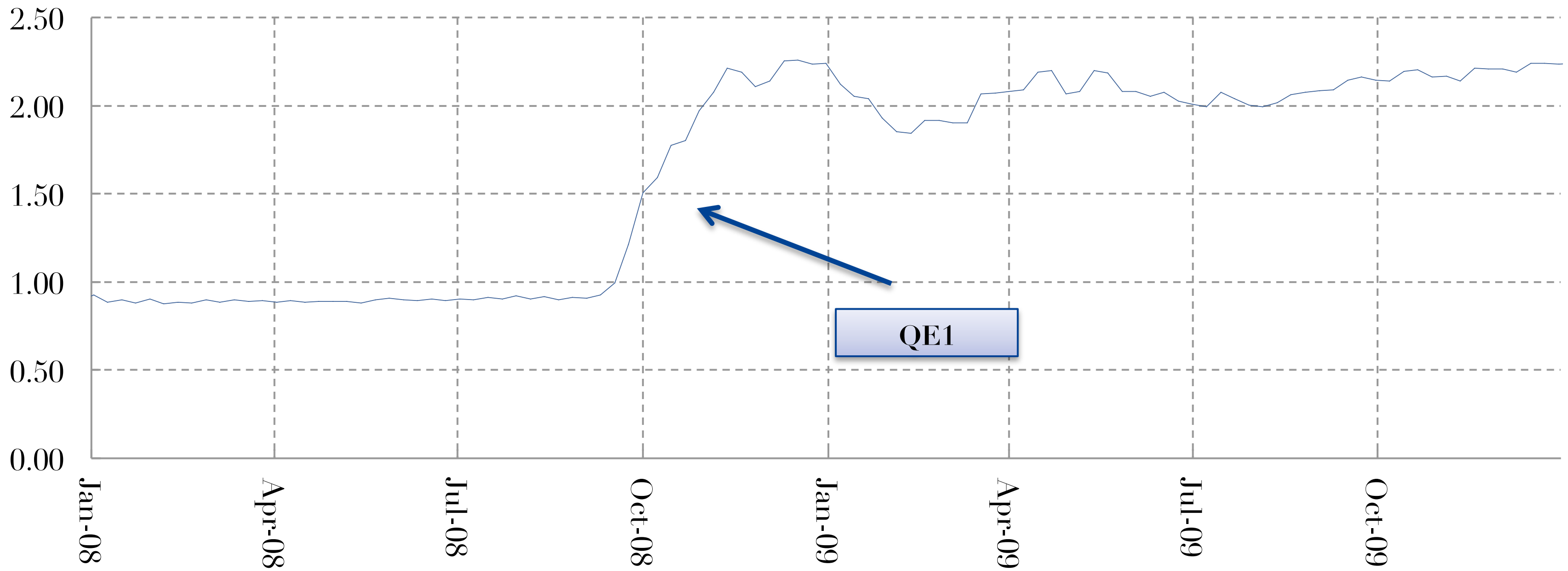
December 16, 2008: *FOMC votes to establish a range for the fed funds rate of 0 to 0.25 percent*

Source: Based on http://www.richmondfed.org/publications/research/annual_report/2008/pdf/article.pdf and Citi Investment Research and Analysis

Weathering the storm (2008-2009)

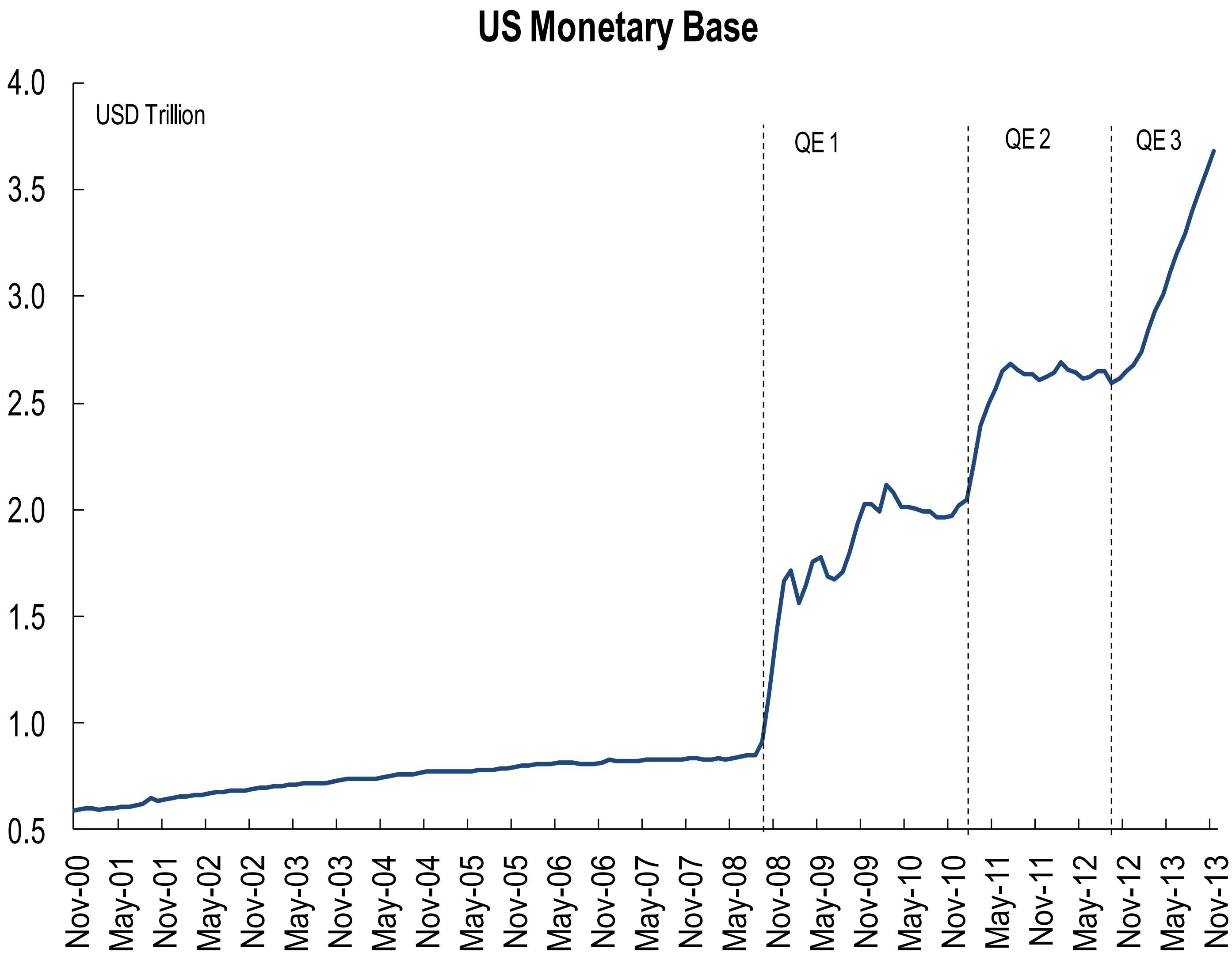
- The Federal Reserve began its first round of quantitative easing, which included buying "toxic" assets such as mortgage backed securities, while pumping liquidity to the market.
- In addition, the FED introduced the Troubled Asset Loan Facility (TALF), which extended around US$1 trillion in loans.
- TARP (Troubled Asset Relief Program) funds were used to buy Citi stock in October 2008, and a more elaborate bail-out plan was announced in November 2008.

FED Balance Sheet: Assets (USD Trillion)



Source: Bloomberg, Citi Investment Research and Analysis

Buzz word of the day… QE and Tapering



Source: Bloomberg & Citi Research

Weathering the storm (2008-2009)

- Almost three years after Lehman Brothers' Collapse, the world economy is still recovering.
- The Federal Reserve carried out a new round of quantitative easing (QE2) until June 2011, and has not yet begun to remove this excess liquidity from the market. As a result, world liquidity is still high, which continues to support worldwide economic growth.
- The recession in the US officially ended in 2009 according to the NBER's Business Cycle Dating Committee, but GDP growth is still weak.
- But is not over…