Business Club

2008 Financial Crisis

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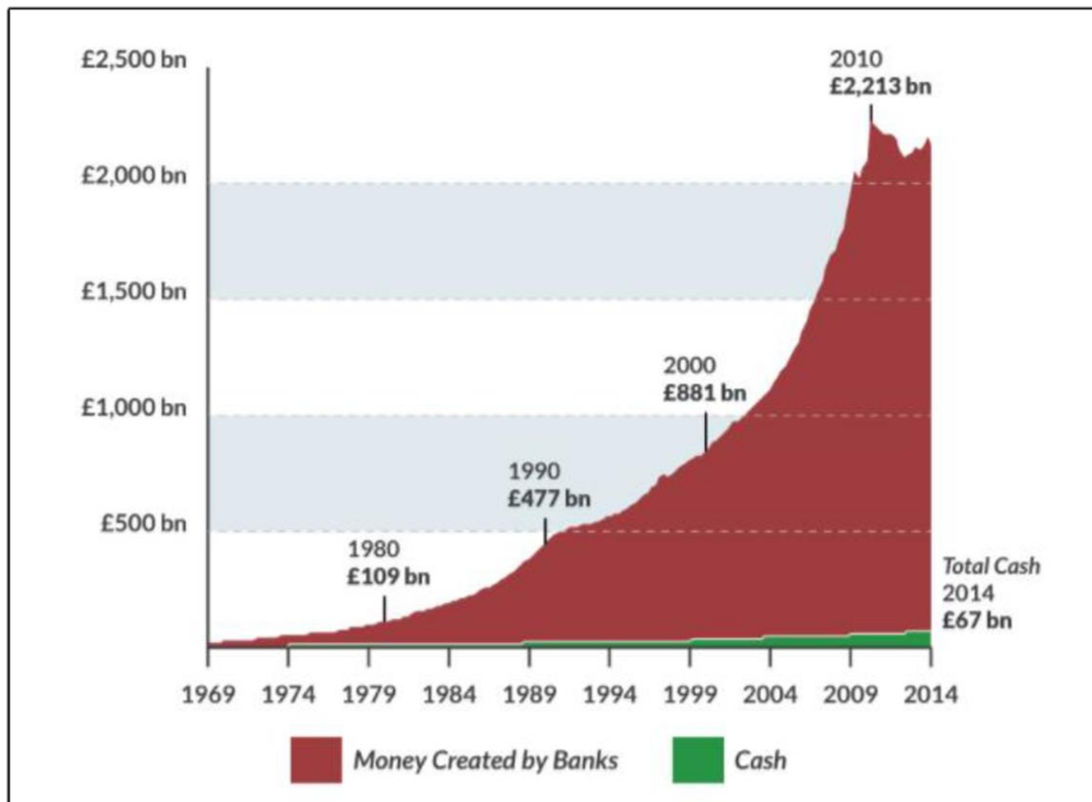
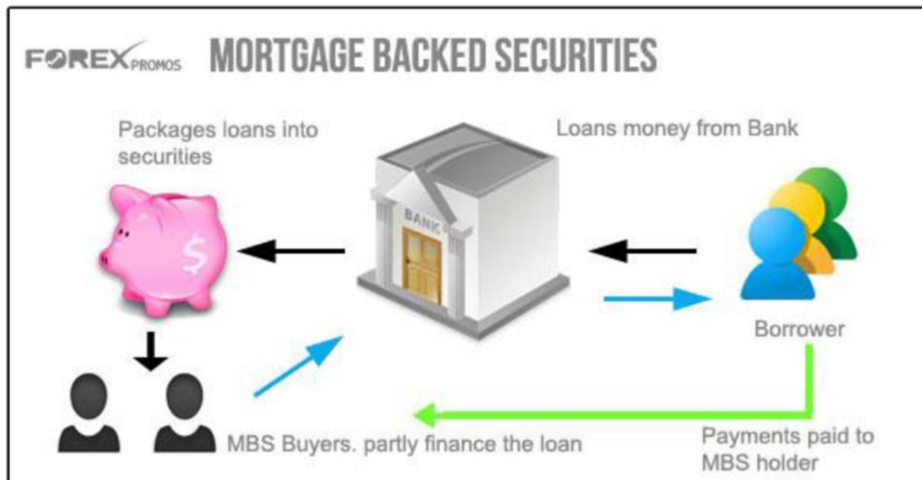
2008 FINANCIAL CRISIS

Banks make more money when they give out loans, i.e. when people go in debt. Every time a bank gives out a loan, new money is created. The financial crisis happened because the banks could create too much of money and that too very quickly. In the last seven years leading to crisis, they almost doubled the money as well as the debt in the market.



It all started in 1975, when Lewis Ranieri introduced the concept of "Mortgage Backed Securities." First, we need to know what a 'mortgage' is? When you need to buy a home, you borrow hundreds of thousands of dollars from a bank. In return, the bank gets a paper called a" mortgage". So, the homeowner periodically pays a part of the principal amount with additional amount called interest. Whoever holds that piece of paper, the homeowner is supposed to pay him the amount.
So, to make more money, the smart investment bankers make a tradable security whose value is backed by these mortgages, which means that if you are not able to pay back the loan, the bank gets back the house. They bundle thousands of these types of mortgages and split them in thousands of shares, each called a "mortgage backed security". In the process of making these securities, the banks earn a lot of fees. The Mortgage backed Securities (MBSs) are traded in the market like any other stock of the company. The value of these MBSs fluctuate according to the price of the mortgages in the housing market and the delinquencies of the home owners.



After we know what a Mortgage backed security is, now we can now analyse what went wrong and why the whole US economy crashed leaving thousands of people homeless and thousands jobless. There were many other securities similar to the MBSs that were involved in the crisis like CDOs, Credit Default Swaps, etc.** Many insurance companies like AIG provided insurance on these bonds. These securities were thought to make a guaranteed profit because they thought everyone pays their mortgage and even if some of them default, they could eventually take back the house and sell it back to recover the amount of the loan. Getting a loan on houses became easier than getting your child's admission into a primary school. Everyone thought that the price of the mortgages would always increase over time as there was always a demand for more houses. This is where everyone was wrong.

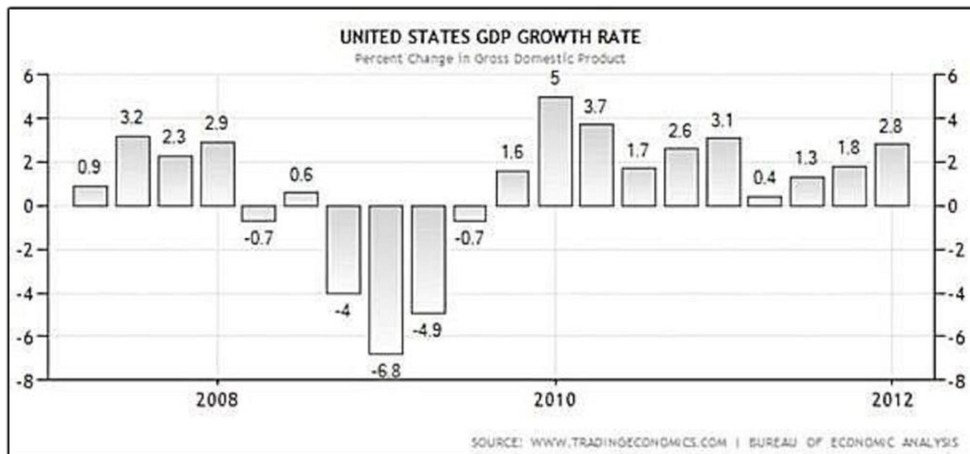
"It ain't what you don't know gets you into trouble. It's what you know for sure that just ain't so."

-Mark Twain

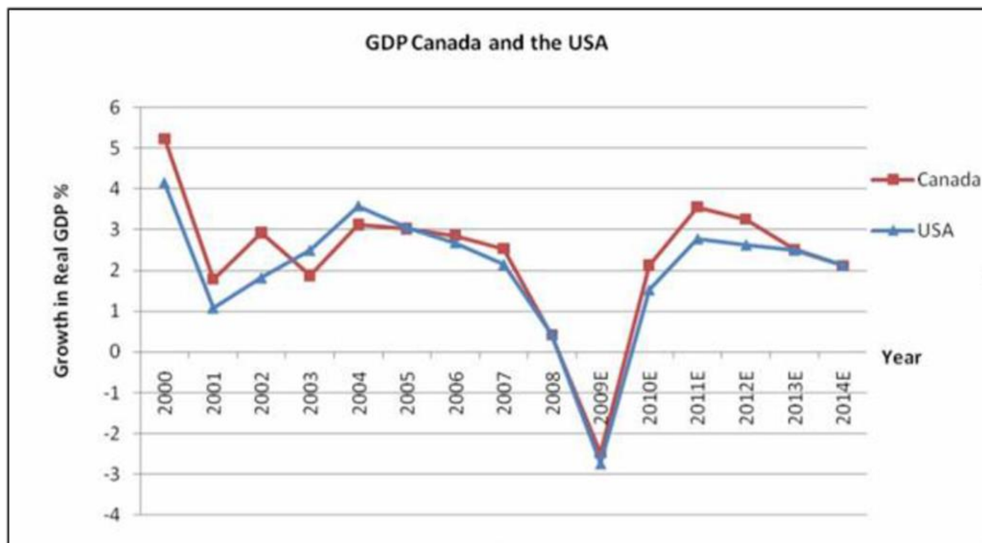
Things were looking pretty good initially, everyone was happy. The builders were getting more and more housing projects, willing borrowers easily got loans, the banks made huge sums of money in charging their fees in return to facilitate the loans. Even the investors were happy as long as these securities paid off as they expected. But soon, things started to change. Many of these loans were subprime mortgage loans which meant 'adjustable rate loans'. Initially, they turned out to be cheaper because their interest rates were based on Fed's funds rate. In 2004, Fed started increasing rates. It rose from 2.25% to as high as 6.25% at the end of 2006. Homeowners started to default, they could not afford those high interest rates. It was until 2005, the ABX index, which tracks the value of a sub-prime mortgage bond, started plummeting. This resulted in decline in the prices of these mortgages. Soon, even the people who were paying regularly, started to default because the prices of the mortgages fell and became even lesser than the amount of the loan to be repaid. So, the bonds and the securities became worthless. Eventually, the debts became unpayable.

EFFECTS OF THE FINANCIAL CRISIS

Loss in Income



According to the Congressional Budget Office(CBO), the financial crisis of 2008 cost the US $648 billion which was approximately a loss of 5800$ per household. Not only US, countries like UK and Indonesia have also suffered significantly due to this crisis.



This graph shows a comparative study of GDP growth of the 2 neighbours-US and Canada. GDP growth rate is a parameter which reflects on how the economy of a country is progressing. A negative growth rate indicates a recession, as shown corresponding to the year 2009 in the graph.
The IMF (International Monetary Fund) estimated world output growth rate at 3.75% in 2008. Owing to the subprime mortgage crisis, the growth rate saw a heavy fall to 2.2% in the year 2009.

Plunge in home values

The U.S. incurred a loss of $3.4 trillion in real estate wealth which is approximately $30,300 per U.S. household. There were 500k additional foreclosures that began during the acute phase of the financial crisis.

In this graph, the X-axis denotes the years and the Y-axis denotes the deviation from mean price of houses over 32 years.

Plunge in the Stock Market

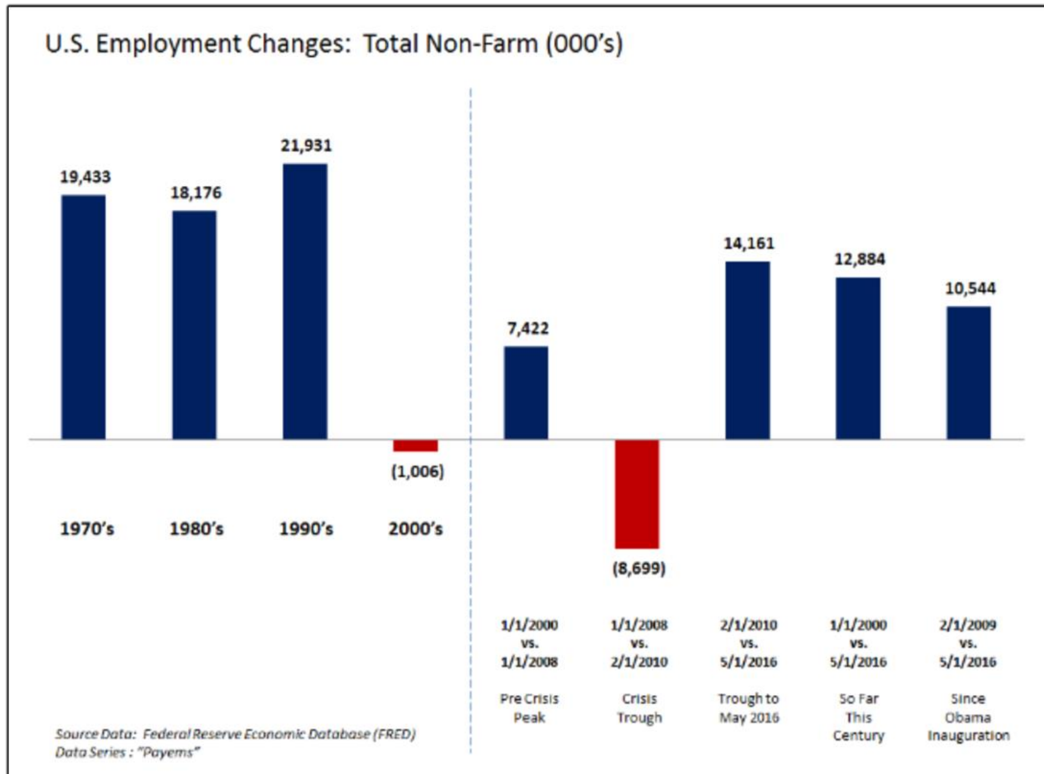
Within a span of 9 months (July 2008 to March 2009), the U.S. alone lost $7.4 trillion dollars in stock wealth which is approximately $66,200 per U.S. household. Stock exchanges in other countries also suffered huge crashes.

In this graph, on the left hand vertical axis we can see the total market capitalization in US dollars (2E+13=$20 trillion). The horizontal axis shows the corresponding years. The right vertical axis shows the value of the S&P 500 index.

Scarcity of Jobs due to Financial Crisis

Due to slow economic growth during this period, 5.5 million more American jobs were lost. Not only US, many countries were engulfed by recession during this period.

In Feb 2008, 63,000 jobs were lost in US. The figure kept increasing with time and in Sep 2008, 159,000 jobs were lost, taking the employment rate of US to 10.9%, which was highest in 5 yrs.



The blue histograms denote an increase in job openings in the US while the red ones represent decrease in job openings which indicates recession.

Toppling of Giants

Lehman Brothers, the 4th largest Investment Bank in US, filed for bankruptcy on 15th September 2009 not being able to withstand enormous losses due to the Financial Crisis. Bear Stearns, another "giant" of this time, had to close 2 hedge funds to avoid further losses. The effects of this crisis could be felt all over the world.

JP Morgan, a reputed investment bank, bought Bear Stearns for $10 per share which ironically had a 52-week high value of $133.2 per share in the pre-crisis week.

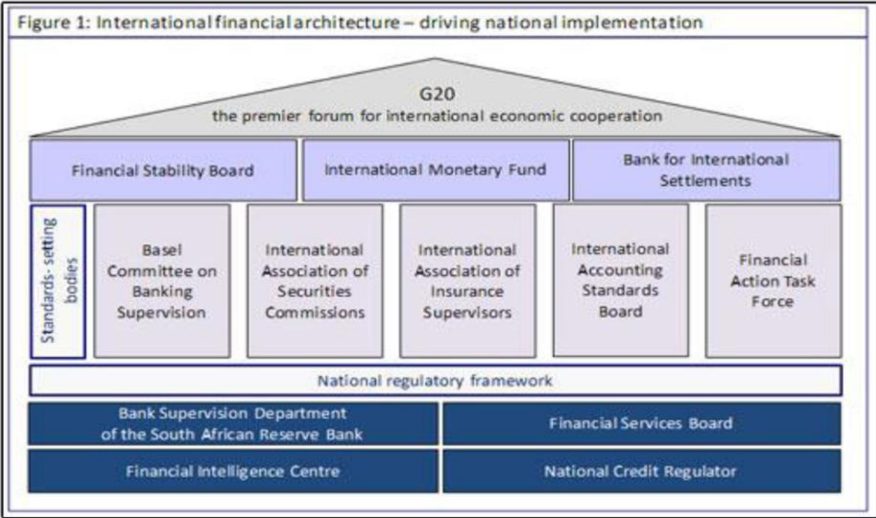
MEASURES TAKEN AFTER THE FINANCIAL CRISIS

Introduction of TARP (Troubled Asset Relief Program)

The Troubled Asset Relief Program was a part of Emergency Economic Stabilization Act of 2008. The main aim of the US Government behind launching this program was to buy the toxic assets so that financial stability is restored in the US market which was under subprime mortgage crisis.

Establishment of FSB (Financial Stability Board)

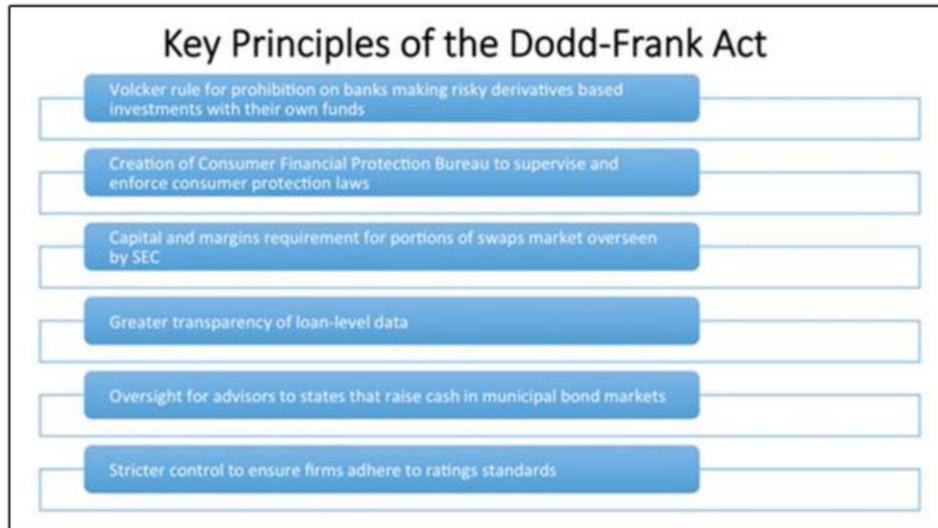
The Financial Stability Board, established in 2009 after the G20 London Summit, is entrusted with the responsibility to monitor global financial systems and make recommendations on how to improve the current financial scenario. They also try to ensure that the world is free of such devastating financial crises which impact millions of lives. The major participating countries constituting FSB include Russia, Germany and India.



Dodd-Frank Act (2010) and Financial Services Act (2012)

The Dodd-Frank Wall Street Reform and Consumer Protection Act was signed by President Barack Obama in 2010. The biggest financial reforms act after the Great Depression of 1929-30, this was enacted to introduce changes in all the federal financial regulatory agencies of US.

The Financial Services Act(FSA) was enacted in 2012 by the Parliament of UK which created the Financial Conduct Authority and the Prudential Regulation Authority as new financial regulators of England. A financial committee was also created in the Bank of England which would prevent it from falling under such crisis again.

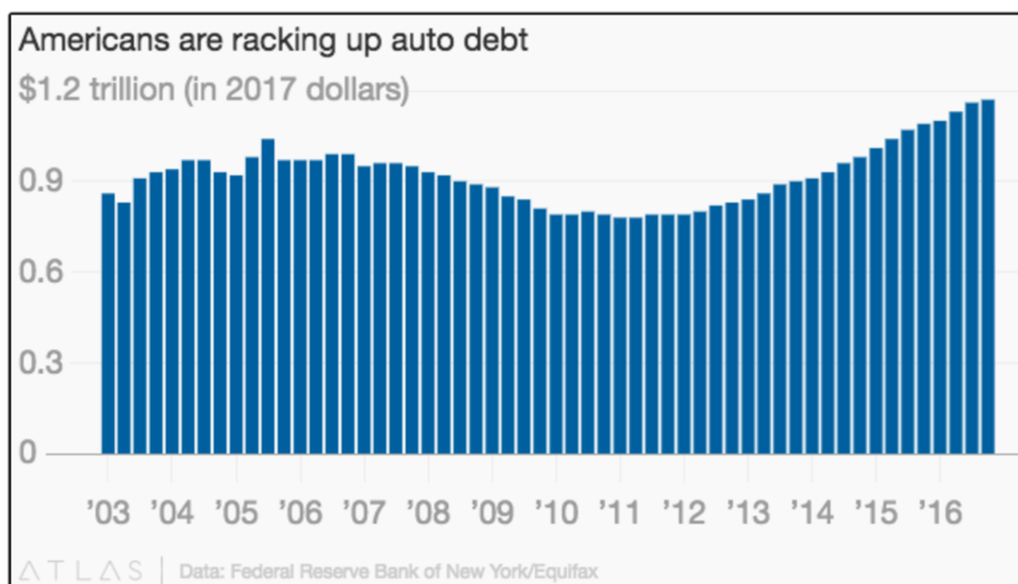


CAN THE FINANCIAL CRISIS HAPPEN AGAIN??

A borrower becomes a delinquent when he/she is unable to pay the amount on the due date. A single day delay makes the borrower a delinquent. There is a time limit which likely depends on the lender up to which delinquency is allowed. If the payment is due up to that date late mark, mortgage move to the default status and foreclosure proceedings starts.
Automobile Mortgage Delinquencies are rising like never before.
In 2016, Americans outstanding auto loan debts rose to 1.2 trillion with a dramatic rise of 9% as compared to the last year.

What's driving the auto lending boom?
After the 2008 crises, mortgage regulations were tightened and the new norms prevented banks and other credit intermediaries from writing loans on a subprime basis. On the other hand, these new norms were not imposed as strictly on the automobile sectors. Nearly a quarter of loans are subprime.

Fast Forward to the Future…
Like what happened in the 2008 crises with the house mortgages, a similar but less intense situation may come up. With the rise of number of defaulters, the price of used cars in the American market are surely going to decline.



Now, we will look into some more crisis that occurred in the financial system.

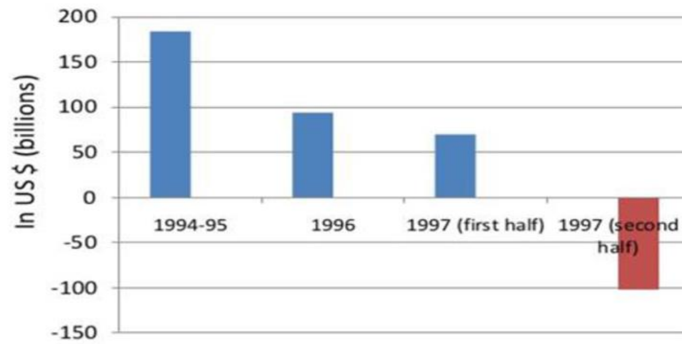
ASIAN CRISIS OF 1997

Popular enthusiasm about Asia's boom deserves to have some cold water thrown on it." - Paul Krugman, The Myth of Asia's Miracle, 1994
And he was right! In fact, there wasn't only cold water, there was Liquid freak in Nitrogen thrown on the South-East Asian Economy. So much so that these so called "Tiger Economies" saw a reduction of about 70% in the value of their currencies and hence, stock markets.

The Asian crisis just like the Global Financial crisis was caused due to high levels of money/currency circulation in the economy and began with a series of asset bubbles. Since these are developing nations, their treasuries provide a higher interest rate on bonds of the country as compared to that provided by countries like U.S.A or Great Britain. This made these countries an undeniably amazing investment for foreign investors. Moreover, countries like Thailand had pegged their Baht to the U.S. Dollar and also used to export technologically sound semiconductors which were in demand across the world. These countries started experiencing high levels of Foreign Direct Investment. This in turn led to soaring Real estate values, soaring corporate expenditure. However, these were financed by taking heavy loans from the banks. Due to abundance of money in circulation, banks provided cheap credit.

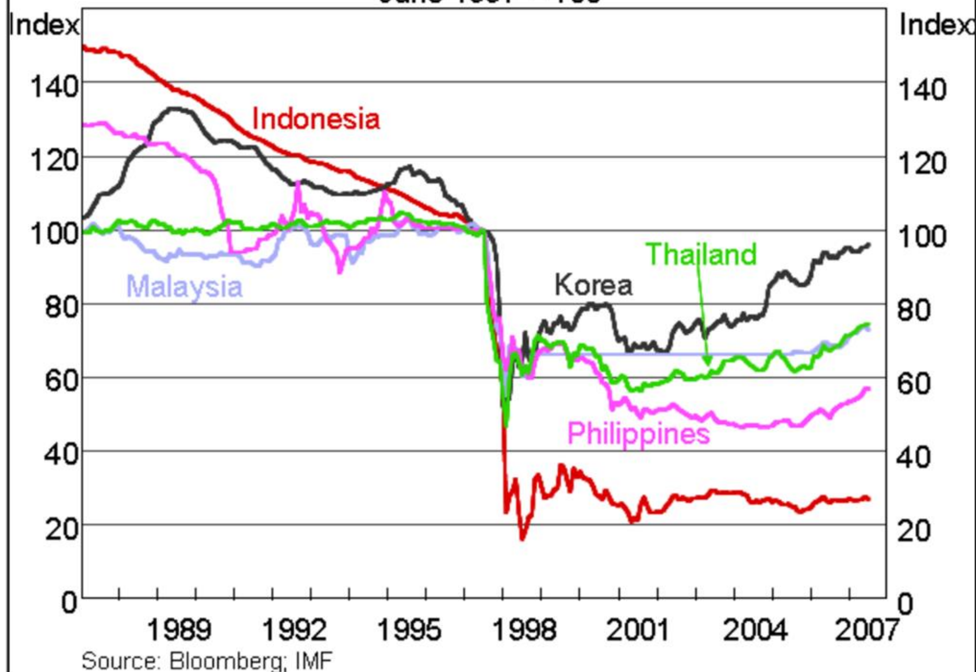
All's Good, so what happened?

By the mid-1990s the demand for exports had decreased as US had emerged as a stronger export hub. Also, The Chinese yen had been devalued making exports from China cheaper comparatively. These countries had begun to lose their power as exporters. Investors were also starting to realize that the capital was been put into non-productive channels such as real estate. The prices of real estate were increasing but this was caused by a false perceived demand for property. They were keen on extracting their investments as fast as possible. These speculative attacks completely rattled the market. Foreign Investors who saw potential in the Thai Baht and converted their Dollar reserves to Baht started converting them back to Dollars. This shattered the Thai currency. The government couldn't any longer hold their peg to the U.S. and let the Baht float. As the U.S. economy recovered from a recession in the early 1990s, the U.S. Federal Reserve Bank under Alan Greenspan began to raise U.S. interest rates to head off inflation.



This made the United States a more attractive investment destination relative to Southeast Asia, which had been attracting hot money flows through high short-term interest rates, and raised the value of the U.S. dollar. Following this devaluation, other Asian currencies including the Malaysian ringgit, Indonesian rupiah and Singapore dollar all moved sharply lower. These devaluations led to high inflation and a host of problems that spread as wide as South Korea and Japan.

As a result of the devaluation of Thailand's baht, a large portion of South-East Asian currencies fell by as much as 38%. International stocks also declined as much as 60% since these countries had trade relations and outstanding transactions with the rest of the world.

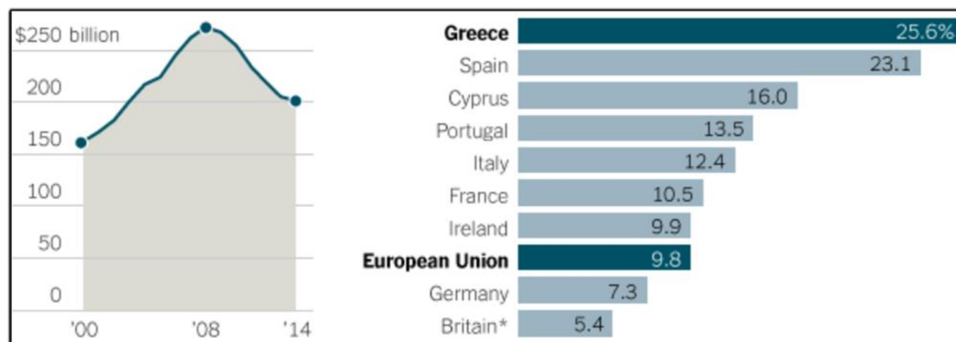


So, what's the solution?

Well it's obvious, The IMF. The IMF sanctioned a loan of $110 Billion to stabilize the currencies, markets and economies. In exchange for the funding, the IMF required the countries to adhere to strict conditions, including higher taxes, reduced public spending, privatization of state-owned businesses and higher interest rates designed to cool the overheated economies. Some other restrictions required countries to close illiquid financial institutions without concern for employment. By 1999, many of the countries affected by the Asian Financial Crisis showed signs of recovery with gross domestic product (GDP) growth resuming. Many of the countries saw their stock markets and currency valuations dramatically reduced from pre-1997 levels, but the solutions imposed set the stage for the re-emergence of Asia as a strong investment destination.

GREEK DEBT CRISIS

Greece became the center of Europe's debt crisis after Wall Street imploded in 2008. With global financial markets still reeling, Greece announced in October 2009 that it had been understating its deficit figures for years, raising alarms about the soundness of Greek finances.



Suddenly, Greece was shut out from borrowing in the financial markets. By the spring of 2010, it was veering toward bankruptcy, which threatened to set off a new financial crisis.
To avert calamity, the so-called troika — the International Monetary Fund, the European Central Bank and the European Commission — issued the first of two international bailouts for Greece, which would eventually total more than €240 billion.
The bailouts came with conditions. Lenders imposed harsh austerity terms, requiring deep budget cuts and steep tax increases. They also required Greece to overhaul its economy by streamlining the government, ending tax evasion and making Greece an easier place to do business.

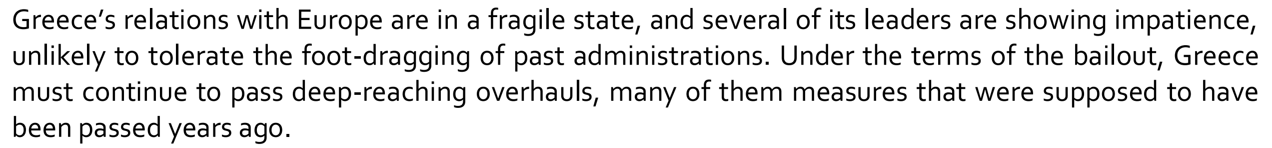
Causes…

Greece was in huge debt from the long-time itself but the political parties and leaders hided all this from the general public. It was only in 2008, people came to know that the deficit is around 13% of the Gross Domestic Product, breaking the norms of EU, which stated a limit of 3%.

If Greece has received billions in bailouts, why has there still been a crisis?

The money was supposed to buy Greece time to stabilize its finances and quell market fears that the euro union itself could break up. While it has helped, Greece's economic problems have not gone away. The economy has shrunk by a quarter in five years, and unemployment is about 25 percent.

The bailout money mainly goes toward paying off Greece's international loans, rather than making its way into the economy. And the government still has a staggering debt load that it cannot begin to pay down unless a recovery takes hold.
The government will now need to continue putting in place deep economic overhauls required by the bailout deal Prime Minister Alexis Tsipras brokered in August, as well as the unwinding of capital controls introduced after political upheaval prompted a run on Greek banks.



Greece's relations with Europe are in a fragile state, and several of its leaders are showing impatience, unlikely to tolerate the foot-dragging of past administrations. Under the terms of the bailout, Greece must continue to pass deep-reaching overhauls, many of them measures that were supposed to have been passed years ago.

2008 FINANCIAL CRISIS TIMELINE

1983 – A new financial security is created by combining multiple mortgages, bundled up to form a CDO (Collateralized Debt Obligation)

1984-1988 – This new security is widely marketed by investment banks and is increasingly offered to investors as a diversified and safe security.

1990 – The first subprime lending bubble. Greatest subprime lender (By market share) FAMCO goes belly up. It stopped its subprime lending operations and soon filed for bankruptcy in 2000.

1995-2001 – The dot com bubble and bust.

2000 – The market for subprime loans and mortgages sky rockets to $160 Billion from $39 Billion in 7 years (1993-2000).

2000-2003 – Early 21st century recession and the dot com bust incentivises the fed to rev up the economy.

2000-2001 – The Fed lowered the Federal funds rate 11 time from 6.5% to 1.75% (May 2000 to December 2001)

2002-2003 – Mortgage denial rate goes town to 13.9% from 28% in 1997.

2003 – The Federal Funds rate is further lowered to 1% (The lowest in 45 YEARS!!)

2003-2007 – Subprime mortgage market increases 292% from $332 Billion to $1.3 Trillion

2005 – U.S. home ownership rate peaks at an all-time high of 69.2%. Thanks to subprime lending and NINJA loans (No Income No Job or Assets) almost 70% of the U.S. citizens have homes.

2005 – People start realizing that there is a bubble and shorting the housing market expecting a bust. Credit Default Swaps are created for the Toxic Junk tranches of CDO's by ISDA. People start buying them aggressively. They short the housing market using these SWAPS.

2005 August – Raghuram Rajan along with many more profound economists present a paper defaming Subprime lending and exposing its dangers. However, his arguments are ridiculed by chairman of the U.S. Federal Reserve Alan Greenspan.

2005 September – IT STARTS!! Median household prices drop 3.3% in the second quarter of the year

2005 – Many employees are fired from major investment banks such as Merrill Lynch, Lehman Brothers, Bear Stearns who saw the demise coming and wished to put forward their contrasting view of macroeconomic trends

2006 – Goldman Sachs, J.P. Morgan Chase and big shot IBs started reducing their net long position by buying swaps.

2007

Feb 27- Dow Jones free falls 416 points, a staggering 3.3%

February-March – The U.S. Subprime industry collapses. Reputed names such as Accredited Home Lenders Holding, New Century Financial, DR Horton and Countrywide Financial file for bankruptcy.

August – Worldwide credit crunch as subprime mortgage backed securities are found in portfolios world over. From BNP Paribas (France) to Bank of China, people experience liquidity squeeze world over.

August 17 – The Federal Reserve cuts the repo rate by half a percent to encourage short term loans for banks and to inject liquidity into the economy

August 31 – President Bush announces bailout for some limited homeowners who couldn't pay their debts. Ameriquest which once was the largest subprime lending firm goes belly up and files for bankruptcy.

September 18 – The Federal Reserve further lowers the repo rate by 0.5%
October 5 – Merrill Lynch wrongly announce their long exposure to junk CDO's as $5.5 Billion later found out to be $8.4 Billion. Morgan Stanley reports its losses at $14 Billion.
2008
March 16 – Bear Sterns is acquired by J.P. Morgan Chase at fire sale prices of $2 a share.
September 14 – Merrill Lynch is sold to Bank of America.
September 15 – Lehman Brothers files for bankruptcy.
September 18 - Treasury Secretary Henry Paulson and Fed Chairman Ben Bernanke meet with key legislators to propose a $700 billion emergency bailout through the purchase of toxic assets. Bernanke tells them "If we don't do this, we may not have an economy on Monday."
October 6-10 - Worst week for the stock market in 75 years. The Dow Jones loses 22.1 percent, its worst week on record, down 40.3 percent since reaching a record high of 14,164.53
October 9, 2007. The Standard & Poor's 500 index loses 18.2 percent, its worst week since 1933, down 42.5 percent in since its own high October 9, 2007
October 11 - The Dow Jones Industrial Average caps its worst week ever with its highest volatility day ever recorded in its 112-year history. Over the last eight trading days, the DJIA has dropped 22% amid worries of worsening credit crisis and global recession. Paper losses now on US stocks now total $8.4 trillion from the market highs of the previous year.
2010
April 16 – As the dust starts to settle, The Securities and Exchange Commission (S.E.C.) sues Goldman Sachs for fraud, for allegedly having failed to disclose vital information to investors in one of its "Abacus" mortgage-backed CDOs in 2007. The CDO was allegedly 'designed to fail' by the hedge fund of John Paulson, so that Paulson could make large profits by betting against it. Allegedly this was not disclosed to investors by Goldman, and they lost roughly a billion dollars, while Paulson & Co profited.