The History of Financial Crises

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The Historical Context

♦ In 2001, the U.S. economy experienced a mild, short-lived recession

♦ The terrorist attacks of 9/11, 2001

♦ The burst of the dotcom bubble in 2000

♦ Accounting scandals (inflated revenues, falsifying results, Enron, Xerox...)

♦ The fear of recession really preoccupied everybody's minds
Low Interest Rates

♦ To keep the recession away, the Federal Reserve lowered the Federal funds rate 11 times - from 6.5% in May 2000 to 1.75% in December 2001.

♦ That created a flood of liquidity in the economy.

♦ Cheap money travels fast and very far!
Consequences

- Cheap money resulted in:
  - More home loans offered by all sorts of banks
  - All sorts of home buyers
  - More “appreciation” in home prices
Financial Engineering

- But the bankers thought that it wasn't enough to lend the cheap money

- They decided to repackage these dangerous loans into collateralized debt obligations (CDOs) and pass on the debt to other banks who were looking for better returns
Playing with Risk

- Loans were given to “subprime” borrowers with poor credit histories who struggled to repay them.
- These risky mortgages were passed on to financial engineers at the big banks, who turned them into supposedly low-risk securities by putting large numbers of them together in pools.
Pooling

- Pooling works when the risks of each loan are **uncorrelated**. The big banks argued that the property markets in different American cities would rise and fall independently of one another.

- But this proved wrong. Starting in 2006, America suffered a nationwide house-price slump.
Debt, debt, debt...

- Low interest rates created an incentive for banks, and other investors to hunt for riskier assets that offered higher returns.

- They also made it profitable for such outfits to borrow and use the extra cash to amplify their investments, on the assumption that the returns would exceed the cost of borrowing.

- The temptation to “leverage” increased.
Disappointment...

- Pooling and other clever financial engineering did not provide investors with the promised protection.

- Mortgage-backed securities slumped in value. Worse, they became worthless.

- They became worthless, despite the ratings agencies seal of approval. It became difficult to sell suspect assets at almost any price, or to use them as collateral for the short-term funding that so many banks relied on.
The Beginning of the Fall

- From June 30, 2004, onward, the Fed started raising rates so much that by June 2006, the Federal funds rate had reached 5.25% (which remained unchanged until August 2007).

- Then, during the last quarter of 2005, home prices started to fall, which led to a 40% decline in the U.S.

- Home Construction Index during 2006. Not only were new homes being affected, but many subprime borrowers now could not withstand the higher interest rates and they started defaulting on their loans.
The real economy began to exhibit problems related to the financial crisis as early as March 2006, when investment expenditure on residential structures began to decline.

In early 2008, this decline spread to investment in business equipment and consumer spending on durable goods. It wasn’t until the summer of 2008 that consumer spending broadly and GDP began falling, signs of a recession.
Casualties

♦ In 2007, things start to go sour

♦ Every month, one subprime lender or another was filing for bankruptcy

♦ During February and March 2007, more than 25 subprime lenders filed for bankruptcy, which was enough to start the tide. In April, well-known New Century Financial also filed for bankruptcy

♦ Northern Rock, a British mortgage lender, was an early casualty in the autumn of 2007
More Casualties...

- The Fed started slashing the discount rate as well as the funds rate, but bad news continued to pour in from all sides. Lehman Brothers filed for bankruptcy, Indymac bank collapsed, Bear Stearns was acquired by JP Morgan Chase.

- Merrill Lynch was sold to Bank of America, and Fannie Mae and Freddie Mac were put under the control of the U.S. federal government.
Interconnected Economies

- Seeing housing prices in the U.S. rising, foreign banks sought opportunities to invest in the U.S. housing market, such as through CMOs issued by investment banks.

- When the mortgages backing these securities began to fall in value, the value of the securities themselves began to fall. Seeing their asset prices falling, investors attempted to liquidate their holdings beginning in August of 2007.

- These assets became frozen because of a lack of buyers in the market. As credit became scarce and in response to a lack of confidence in U.S. financial institutions, international banks began to raise the interest rate at which they lent money to one another, known as the LIBOR.
Intervention... Too late

- The U.S. government then came out with National Economic Stabilization Act of 2008, which created a corpus of $700 billion to purchase distressed assets, especially mortgage-backed securities
Who is/are to Blame?

- The Federal reserve: kept low interest rates for long time

- The Fed’s defenders shift the blame to the savings glut: saving over investment in emerging economies, especially China

- That capital flooded into safe American-government bonds, driving down interest rates.
Toxic assets

- Collateralized Mortgage Obligations (CMOs), a type of collateralized debt obligations (CDOs), allowed these problems to spread from the mortgage market to other sectors of the economy, having especially widespread effects on financial markets as a whole.

- CMOs were mortgage-backed securities issued by investment banks and other financial institutions, which since they were not part of the commercial banking system, were allowed to operate unregulated by the federal government. As the value of mortgages fell due to increasing default rates, the value of these securities fell likewise.
The European Economies

- But the focus on net capital flows from Asia left a blind spot for the much bigger gross capital flows from European banks.

- They bought lots of dodgy American securities, financing their purchases in large part by borrowing from American money-market funds.
Central Banks Regulations

- Lax capital ratios proved the biggest shortcoming
- Since 1988 a committee of central bankers and supervisors meeting in Basel has negotiated international rules for the minimum amount of capital banks must hold relative to their assets
- But these rules did not define capital strictly enough, which let banks smuggle in forms of debt that did not have the same loss-absorbing capacity as equity
Banks Gambling

- Under pressure from shareholders to increase returns, banks operated with minimal equity, leaving them vulnerable if things went wrong.

- And from the mid-1990s they were allowed more and more to use their own internal models to assess risk—in effect setting their own capital requirements.

- Predictably, they judged their assets to be ever safer, allowing balance-sheets to balloon without a commensurate rise in capital.
Lack of Liquidity

The Basel committee also did not make any rules regarding the share of a bank’s assets that should be liquid.

And it failed to set up a mechanism to allow a big international bank to go bust without causing the rest of the system to seize up.
Too big to Fail?

- When Lehman Brothers went down, the notion that all banks were "too big to fail" no longer held true. Within a month, the threat of a domino effect through the global financial system forced western governments to inject vast sums of capital into their banks to prevent them collapsing.

- The banks were rescued, but it was too late to prevent the global economy from going into free fall.
Remedies

♦ Interest rates were cut to the bone
♦ Fiscal stimulus packages of varying sizes announced
♦ At the London G20 summit on April 2nd 2009, world leaders committed themselves to a $5tn (£3tn) fiscal expansion, an extra $1.1tn of resources to help the International Monetary Fund and other global institutions boost jobs and growth, and to reform of the banks
Greece, Spain, Ireland...

- By the time the IMF and the European Union announced they would provide financial help to Greece, the issue was no longer the solvency of banks but the solvency of governments.

- Budget deficits had ballooned during the recession, mainly as a result of lower tax receipts and higher non-discretionary welfare spending, but also because of the fiscal packages announced in the winter of 2008-09.
Austerity

♦ Austerity became the new watchword, affecting policy decisions in the UK, the Eurozone and in the US and Canada
Short video about 2008 crisis

- https://www.youtube.com/watch?v=h4Ns4ltUvfw
Gold Standard

- Gold standard is a commitment by participating countries to fix the prices of their domestic currencies in terms of a specified amount of gold.

- National money and other forms of money (bank deposits and notes) were freely converted into gold at the fixed price.
Brief Chronology

✦ A county under the gold standard would set a price for gold, say $100 an ounce and would buy and sell gold at that price

✦ Gold standard came to fruition in 1900 with the passage of the Gold Standard Act. The gold standard effectively came to an end in 1933 when President Franklin D. Roosevelt outlawed private gold ownership (except for the purposes of jewellery)
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The Bretton Woods System

- The Bretton Woods System, enacted in 1946 created a system of fixed exchange rates that allowed governments to sell their gold to the United States treasury at the price of $35/ounce.
End of Bretton Woods

♦ The Bretton Woods system ended on August 15, 1971, when President Richard Nixon ended trading of gold at the fixed price of $35/ounce.

♦ At that point for the first time in history, formal links between the major world currencies and real commodities were severed.

♦ The gold standard has not been used in any major economy since that time.
Without the Gold Standard

- Once off the gold standard, a country became free to engage in the money creation process

- The gold standard limited the flexibility of the central banks' monetary policy by limiting their ability to expand the money supply

- In the US, the Federal Reserve was required by law to have gold backing 40% of its demand notes
Recovery in the United States was slower than in Britain, in part due to Congressional reluctance to abandon the gold standard and float the U.S. currency as Britain had done.

Under the Bretton Woods international monetary agreement of 1944, the gold standard was kept without domestic convertibility. The role of gold was severely constrained, as other countries’ currencies were fixed in terms of the dollar. Many countries kept reserves in gold and settled accounts in gold. Still they preferred to settle balances with other currencies, with the American dollar becoming the favourite.
Convertible dollar

- Under this system, many countries fixed their exchange rates relative to the U.S. dollar and central banks could exchange dollar holdings into gold at the official exchange rate of $35 per ounce; this option was not available to firms or individuals. All currencies pegged to the dollar thereby had a fixed value in terms of gold.

- But later, the dollar floated.
Fiat money

♦ Fiat: it shall be in Latin

♦ In December 1971, the “Smithsonian Agreement” was reached. In this agreement, the dollar was devalued from $35 per troy ounce (31.21 g) of gold to $38

♦ Other countries' currencies appreciated. This was the official price of the dollar, and policies to maintain its value relative to other currencies. However, gold convertibility did not resume
Today

- In October 1976, the government officially changed the definition of the dollar; references to gold were removed from statutes. From this point, the international monetary system was made of pure **fiat** money.
The Cryptocurrency

- A cryptocurrency is a digital or virtual currency that uses cryptography for security
- A Peer-to-Peer Electronic Cash System
- Many cryptocurrencies are decentralized systems based on blockchain technology, a distributed ledger enforced by a disparate network of computers
- A cryptocurrency is not issued by any central authority, rendering it theoretically immune to government interference or manipulation
- The confirmation is key in this system. The miners need to solve the puzzle in order to confirm the transaction. By solving the puzzle, you receive a “bitcoin”
Advantages

♦ **Easy transfer** of funds directly between two parties in a transaction

♦ No need for a trusted third party such as a bank or credit card company

♦ **Controlled supply**: there is a limit in the supply of the tokens. In Bitcoin, the supply decreases in time and will reach its final number sometime around the year 2140. All cryptocurrencies control the supply of the token by a schedule written in the code (like virtual gold)
Disadvantages

- Cryptocurrencies are virtual and do not have a central repository, a digital cryptocurrency balance can be wiped out by a computer crash if a backup copy of the holdings does not exist, or if somebody simply loses their private keys.

- Anonymous is good (privacy) and bad (money laundering and tax evasion).

- The cost of producing a bitcoin, which takes an increasingly large amount of energy, is directly related to its market price.

- They are short lived and highly speculative.
Some Numbers

- Real Estate in the world: 217 trillions
- Stocks in the world: 77.7 trillions
- Debt around the world: 184 trillions
- Monetary supply: 95.4 trillions (43.2 in cash)
- Derivatives: 532 trillions
- Gold: 7.8 trillions
- Cryptocurrency: 124 billions (63 billions of Bitcoins)
Suggestions for watching and reading

♦ https://blockgeeks.com/guides/what-is-cryptocurrency/

♦ Empire of Things: How We Became a World of Consumers, from the Fifteenth Century to the Twenty-First, by Frank Trentmann, 2016
The end