RESEARCH ARTICLE

ADHYAYAN Volume 10, Issue 2, 2020 Print ISSN: 2249-1066 Online ISSN: 2455–8656

An Exhaustive Study of the 'BLACK SWAN' Events in the Financial Markets

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Abstract

The study has been analyzed and penned down considering various financial events that occurred in the history of finance and the magnitude of impact they had in one or more countries or at a global level. The need to capture the same is to provide caution before any decision we make in the financial markets and infer from the past for bad events not to let them occur again and for good events to use the ideology for earning better returns or achieving the devised objectives.

Keywords: Crisis, Events, Economy.

Adhyayan: A Journal of Management Sciences (2020); DOI: 10.21567/adhyayan.v10i2.4

Introduction

"Black Swan"

A 'Black Swan' event is an unforeseeable one that is usually not expected and carries potentially severe consequences. These events are rare in nature and have a significant effect post its occurrence. The insistence of such events can only be inferred after their hindsight.

The term 'Black Swan' was coined by Nassim Nicholas, a professor of finance, a writer, and former Wall Street Quant trader for twenty-one years, where he developed computer models for major financial institutions. This term became fashionable after the Financial crisis that had occurred in the year 2008.

The word 'Black Swan' means an unpredictable or unforeseen event, typically one with extreme consequences- which we can infer from the explosions the events had created. The below listed and explained 'Black Swan' events are worth reading to know how far the consequences had to be saved. The extent of occurrence and the upshot of the same.

Events Covered in the Study Includes

1. 'Black Swan' Event 1946: Hungary Hyperinflation Crisis
2. 'Black Swan' Event 1997: Asian Financial Crisis
3. 'Black Swan' Event 1998: Long-term Capital Management
4. 'Black Swan' Event 2000: The Dot-com Crash
5. 'Black Swan' Event 2001: Crash of 9/11
6. 'Black Swan' Event 2008: Global Financial Meltdown
7. 'Black Swan' Event 2009: European Sovereign Debt Crisis
8. 'Black Swan' Event 2010: Fukushima Nuclear Disaster
9. 'Black Swan' Event 2014: Crude Oil Crisis
10. 'Black Swan' Event 2015: Black Monday China
11. 'Black Swan' Event 2016: Brexit
12. 'Black Swan' Event 2020: *Corona Virus* and *its Grand Strike*

The research was carried out using secondary data analysis or the archival study from the internet such as case studies, research papers, website information etc.

Objectives of the Study

- To study the impact of past financial events on a country-specific or global level.
- To elucidate and recognize the sustainability or repetition of those events.
- To identify the major influences on countries and also at a global level.
- To look at the factors leading to the events' occurrence.

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How to cite this article: Sengupta, I. (2020). An Exhaustive Study of the 'BLACK SWAN' Events in the Financial Markets. Adhyayan: A Journal of Management Sciences, 10(2):22-35.

Source of support: Nil

Conflict of interest: None

Findings of the Study: 'Black Swan' Events that Changed the Financial World

1. 'Black Swan' Event 1946: Hungarian Hyper Inflation Crisis

Hyper inflation states that characterized by rapidly rising (500%+annually) of freely traded goods. Declining purchase power threatening economic stability to repay external debts. The Causes are:

- A huge gap existing in an economy between demand and supply.
- Excessive printing of paper currency.
- An economical distortions and virtual demolition of the purchasing power of public and private savings.

1946 Hungary Crisis

In 1921, Germany was one of the most known hyper-inflation cases, but it's not even close in numbers compared to 1946 Hungary.

The unfavorable hyperinflation ever recorded took place in Hungary in 1946 at the end of World War II. In Germany, hyperinflation occurred in Hungary as a result of a requirement to pay reparations for the war had just over. Economists project that the daily inflation quota in Hungary during this era exceeded two-hundred %, which assimilates to an annual inflation rate of higher than around 13% quadrillion. During this period, prices in Hungary doubled every 15 hours. Inflation of the Hungarian currency was so out of control that the government issued an entirely new currency for tax and postal payments. Bureaucrat announced the value of even that special-use the money daily due to massive fluctuations. By August of 1946, all Hungarian banknotes' total cost in circulation valued at one-tenth of a United States penny.

Hyper-inflation in 1946? Caused due to World war-2 leading to Destruction and Aftermath.

Hungary was affording much of World War II's destruction until 1944 when it has become a battleground between Russia and Germany, half of the Industrial capacity of Hungary's destroy and further, 90% was damaged. The country was majorly challenged with damaged transportation facilities, so it's no worth of use. With no tax base rely upon, so the government taken various steps to sustain the economy.

Printing of More Money Got out of Hand Quickly

The industrial capacity of Hungary was completely damaged, due to world war 2 prices were already rising in Hungary, the government decided to boost the economy by printing money; further, they lend money to banks at a lower rate, and then banks lend money to various companies, to stabilize the economy.

Money supply in Hungarian

In July 1945, there were 25 billion Pengo (old Hungarian currency) in circulation. By the end in July 1946, Hungary had about 47 septillions (Trillion-Trillion) Pengo in circulation.

The cost of goods

Good costing 379 Pengo in September 1945, cost 1septillion Pengo by July 1946. At the height of inflation, prices were rising at an astronomical rate of 150,000% per day. The Hungarian government and banks created a new denomination of bills rather than just the Pengo.

Figure 1: 'Black Swan' Event 1946: Hungarian Hyper Inflation Crisis

Pengo was replaced by Milpengo, which was replaced by Bilpengo, again the currency was replaced by the Adopengo, and then finally, the Millard Bilpengo. Lastly, due to the inflationary period, trillion and billion Pengo was worth $0.12 USD. The forint replaced the Pengo on August 1, 1946, which is 400 octillion Pengo becomes 1 forint.

Conclusion

The hyperinflation had a goal beyond stabilization. It was a conscious effort at economic restoration and revitalization. The various policies can control the inflation rate, in this case, the Hungary government changed the currency only, as the previous currencies were exhausted by the inflation, workers are badly affected during this event (hyperinflation).

2. 'Black Swan' Event 1997: Asian Financial Crisis

It generally referred to devaluation of many Asian currencies especially the "Asian tiger" which includes countries like which include countries like South Korea, Thailand, Malaysia, Indonesia, Singapore and the Philippines.

Causes

- USA raised interest Rate: As USA raised the interest rate many FDI started taking their money from emerging markets and started investing in USA market. Due to which there was a lot of capital outflow in Asian market.
- Sharp decline in semiconductor prices.
- Devaluation of Chinese Renminbi and Japanese Yen.
- Currency peg- so exports become more expensive and less competitive. • Asian Crony Capitalism (ill disciplines banking corruption)

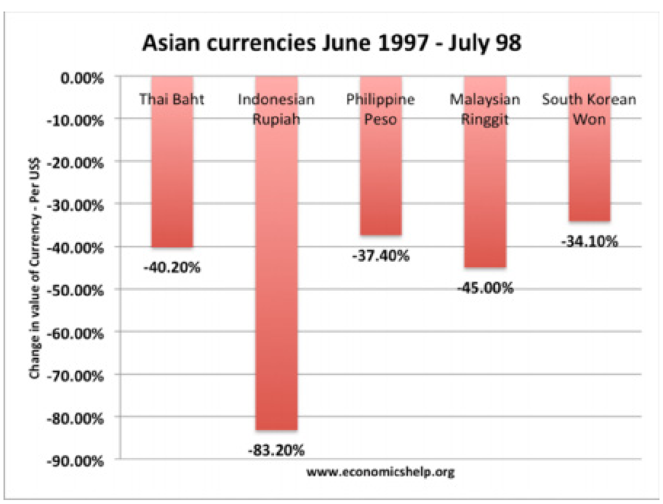

Figure 2: Asian Currencies June 1997-July 1998

During 1990, the above East Asian countries enjoyed huge growth because of Foreign capital goods coming into their countries they experienced a boom and their exports gloom. These countries became export-oriented countries. To become export-oriented countries, they pegged their currencies with US dollar. The East-Asian countries started to buy lots of US dollar in order to stabilize the value of their currency. There were huge forex reserves (USD) that why their central bank to pump that dollar into the economy. This action overheated the East-Asian economies as especially the Thailand economy, as they can see hot money i.e. FPI inflow getting highly volatile and can be sucked out of the country at short notice. The bang of the asset bubbles resulted in losses of over 70% in the currencies & these countries' stock markets. This lead to the credit bubble.

In July 1997 Thailand currency Thai Bhatt collapsed, leading to massive depreciation in the currency rate. The Thai government had to float the Bhatt due to a lack of foreign currency to support the US dollar's earlier pegged system. Besides, as their home currency depreciated, the government started selling off more and more forex reserves (US dollar). As a result, now Thai Bhatt went from being "pegged" currency to a freely floating currency overnight. The currency value of the Thai Bhatt plunged rapidly. It is also known as Tom Yung Kung crisis. The value of Bhatt fell by 40.2%

A similar situation can have been seen in Indonesia, leading country into financial turmoil as well as president of Indonesia resigned from his post as he was unable to control the situation. The Indonesian Rupiah fell by 83.2%

South Korea also suffered from a similar effect where the leading chaebols, i.e., family managed big businesses that went bankrupt due to depreciation of the home currency. There was financial and macroeconomic instability in the East- Asian countries. The unemployment and bankruptcies rate were rising at an exponential rate.

The "Asian Tiger" GDP got destroyed. The most affected countries were Indonesia, south Korea and Thailand and spread across Hong Kong, Malaysia, and the Philippines. The suicide rate was increasing day by day.

When these countries were suffering from massive losses, the IMF (International Monetary fund) provided a helping hand to these countries. Although the considerable effort by IMF many countries like Malaysian PM Dr. Mahathir Mohamad refused to take help from the IMF and imposed capital control to shield currency from speculation. His action proves beneficial to Malaysia's economy.

IMF always want to liberal capital accounts.

- There is strong correlation between free capital flows and financial crises.
- Asian countries faced the largest slowdown episodes following 1997 but they recovered from it. Now, they have built high forex reserves as a buffer against shocks. Expect for Hong Kong, who no more hard pegs their currency.

3. 'Black Swan' Event 1998: Long-term Capital Management

Long term capital management was a hedge finance management firm, which was founded in 1994 by John W. Meriwether—using absolute-return strategies combined with high financial leverage. Talking about a hedge fund is a privately owned firm that raises money from large investors, including individuals, pension funds, and charities, to increase the investment value. Led by two noble prize laureates and other leading economists, used complex mathematical models to derive huge returns.

Before 1997: LTCM held around $30 of debt for every $1 of capital, which they operated at a high leverage position (25:1). After the two crises, In 1997 Asian financial crisis and the 1998 Russian financial crisis. The relation between crisis and LTCM was the main type of trades. Convergence among US, Japan, and European Sovereign Bonds. Long positions in arrive markets sovereigns, hedged back to the dollars.

What went wrong was the leverage ratio of the LTCM firm reached the level of 250:1, and the funds were vulnerable to shocks because of the extreme leverage in the markets.

The fund lost 44% of its value by August 1997. A potential fire sale of its assets would cause economic turmoil.

Causes

The company has lost over $4.6bn in less than four months. The fund lost $550m mostly due to the swap spreads and equity volatility bets.

The Federal Reserve intercede and gathered 11 banks to bailout Long-term capital management. On September 23, 1998, $3.6bn recapitalized under the guidance of the Federal Reserve. Fund liquidating and resolving in early 2000.

Strategies used had mainly four approaches to trade:

- Convergence trading strategies.
- Fixed Income Arbitrage
- Leverage/ UBS investments
- Merger Arbitrage/ Risk Arbitrage

They focused on cash mergers and stock mergers. The procedure to trade: firstly, they borrow fund from the banks, and then buy the securities with the borrow funds and lastly, borrow from another bank to keep guards as collateral.

Five issues were addressed in these events

- How LTCM Trading Activity lost much money despite its Star traders and Economic Modellers. Past crises are never perfect witch of what will subsequently materialize in the upcoming scenario. Trusting archival data as a predictor of the future is a false picture. Diversification does not protect risky positions when the markets behave unpredictably.
- The appropriateness of LTCM's risk-management strategies in the context of its overall objectives VaR. was employee incorrectly, dangers of traders gaming or manipulating the system, the parameters of the suitable model for the commercial bank, which was entirely insufficient for a hedge fund. Events that risk model predicted had a negligible probability of occurring happened several times a week in 1998.
- Can using risk management techniques by Fund's Senior Management prevent losses that incurred. LTCM was already using the standard risk management techniques, which proved overall regulation needed to tighten.
- The behavior of the Federal reserve and other large banks regarding their rescue of LTCM The Fed did not contribute any of its funds and instead acted as a negotiator. The banks argued over who was disclosed the most-14 firms offered to bail out long-term capital management. Finally, the 11 firms only did invest $3.625bn of new capital.
- Parallels between LTCM and the 2008 financial crisis. Both of them faced a search for lenders, and the abundance of liquidity tended to lead to lax credit status and lacked back-up plans; lastly, they exploited intrinsic deficiencies in the risk management system and ignored the warning signs of the Russian Debt default.

Learnings from Long-term capital management and apply to future risk management? Controlling credit and liquidity can present recklessness gambling with financial terms. No economist or firm is smarter than the market itself- the market cannot be controlled. High leverage needs to be controlled accordingly- a company should not be highly financed through its debt.

Conclusion

The LTCM is an example of risk management failure-, especially in VaR. High leverage left the firm susceptible to exogenous shock and liquidity constraints. Complex mathematical models or star economists cannot predict the future of uncertainty. LTCM should rectify their mistakes while reviewing past events and should take decisions accordingly.

Risk- it is based on the assumption of a well-defined and constant objective probability distribution that is known and entirely possible. Uncertainty has no scientific basis on which to form any calculable probability. Transparency- to deal with relationship management and openness. Trading credit- taking leverage to many profits. Frequent market analysis- a hedge fund should make periodic analysis about the market conditions to anticipate the worst-case scenario since there are many risk factors involved in it. Regulations- there must be proper regulations to hedge as well, though it is not restrained to retail investors, it is still civic money, and something should have strict enforcement in using the same.

4. 'Black Swan' Event 2000: Bursting of Dot.com or Technology Bubble

Dot.Com bubble was a historic speculative bubble covering roughly 1997-2000 era, during which the stock market in automated or manufactured nations saw their equity value rise rapidly from growth in the internet-based sector and related fields. The Dot.com started in 1995, with the establishment of technology or e-commerce business, was an entirely new concept in the market and a new industry altogether. The human tendency is to follow the trends in the markets, so they don't want to miss upon any single opportunities to

Figure 3: 'Black Swan' Event 2000: Bursting of Dot.com or Technology Bubble

access the markets. The dot.com bubble was a stock exchange bubble caused by excessive speculation in Internet-related corporation within the late Nineties, an amount of enormous growth within the use and adoption of the web. In 1999, there were 457 IPO based on the internet-related industry in US Markets. At the same day, more than 100 stocks prices doubled in the first day of trading in history. As people were the craze of about try something new.

Reasons behind the growth of the Bubble

Investor beliefs to Get Big Fast in the short term, so they highly depended upon venture capitalists and IPO's in the available the markets- Rapid Growth strategies. It was retailer dominated markets, which definitely means that no institutions participated in the markets. Early successor: few founders start selling their stakes from the markets, they know that once the stock prices touched the peak, smart trader or investor will not wait for the completion of the pattern, he/ she will sell the stocks after its breaks up to 1-2% from the peak point. So this how investors made enormous profits out of the markets.

The investor should not get greedy when the traders in the markets manipulate stocks price. Lastly, Dot.com has exhausted all the capital they received from the venture capitalists and their IPO's and were still failing to generate profits.

The crash

A large no of IT stocks processed for sale caused a drop in the index in one day, which triggered a chain reaction of selling the shares, due to which the NASDAQ Index lost 9% or fell by 9% in three days.

The Dot.com crash had removed dollar five trillion in terms of market value. After the crash they needed to file the bankruptcy or liquidated the firm and acquired by someone. But some companies were able to manage the effects of the Dot.com crash or bubble burst in highly speculative markets (E-bay, Amazon.com & Yahoo).

Analysis

To avoid such a situation: Investor or trader should follow the strategies or depth Fundamental Analysis & Technical Analysis of the companies, an investor should never rely on information which is available to them, they should consult the professional managers in imperfect markets. These will help investor not to get influenced by the herd mentally or information overloads in the markets.

5. 'Black Swan' Event 2001: Crash of 9/11

The crashes in the year 2000 and 2008 are such that they could have been avoided, or at least their consequences could've been edged off. However, one cannot ignore the terrorist attacks on New York City that would in no measure be foreseen- notwithstanding the market reaction to these events could've been edged off because the market was already reeling from the Dotcom crash a year before this happened. US stock market finally opened on September 17, 2001, after the longest closure since 1993. The coordination of NYSE with NASDAQ had happened to handle the situations. The systems were destroyed but people were safe. The telco companies worked phenomenally to get everything settled.

The crash Aftermath

The closure was intended to put in place the market chaos and panic selling. On the first day of the closure, NYSE lost more than 7%. It was observed that there was a huge set off in the Airline and insurance stocks. This crash occurred soon after the Dot Com bubble and hence the repercussions were worse than ever and since the US stock market

Conclusion

The large passenger commercial plane crash was a huge one to destroy the Centre. The world changed, and it manifested everything. There was panic everywhere, and the markets were affected harshly

6. 'Black Swan' Event 2008: Global Financial Meltdown

From December 2007 to June 2009, the United State suffered an extended economic downturn, that can be known as The Great Recession. It was the worst financial crisis in the US, since the great depression and leaving an impact on Homes & businesses in America and around the world.

Causes

While failures in financial regulations and excessive borrowings by household. Globalization: this was the most drastic one as many countries invested in the US and with the downfall in the US economy, risks were very high due to the global connectivity and financial system. The primary root of The Great Recession was the Subprime Mortgage Crisis. A mortgage is a loan which allows people to buy house upfront. A subprime mortgage is commonly issued to borrowers with low credit ratings. Historically, many banks wouldn't make loans to people with bad credits; in the early 2000s, the housing markets were booming.

Hence, banks begin to give subprime mortgages to people even if they had low credit ratings, in other words, lender of the banks who were loaning money to people who are less likely to pay them back and charging them more money for those mortgage loans to high-interest rates. There wasn't a good deal for lender and borrower, or this doesn't sound a good deal for the lender or borrower. However, many people took on this subprime mortgages because still, they want to make more enormous profits, if their house increased in value and that seems pretty good bat, which ultimately houses start growing in market value or housing has started building in their benefits over the past recent years. Homeownership had always said to be the American dream and people may never have to imagine. Now they could own their home, which is for sure a possibility in front of them. So, where did things go wrong?

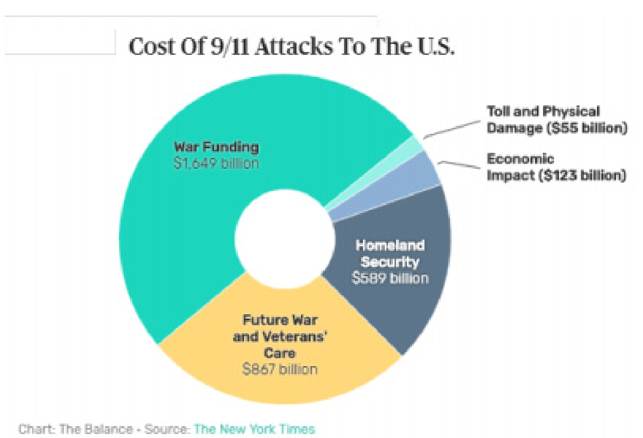

Figure 4: The Cost of 9/11attacks to the US.

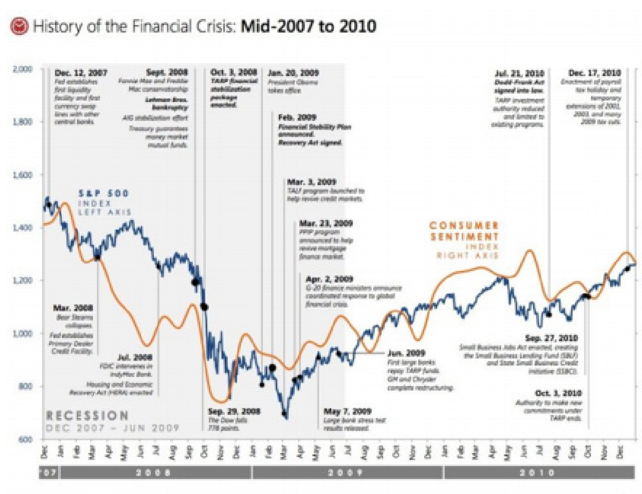

Figure 5: 'Black Swan' Event 2008: Global Financial Meltdown

Effects

The crisis has genesis panic in financial markets and encouraged investors to take their money out of risky mortgage bonds and equity also, financial institutions like Lehman Brothers going bankrupt, Fannie Mae and Freddie Mac being born under government control.

Recession Begins

In 2007, the housing bubble burst, as the demand comes down, the prices of the home drops rapidly, later people stop investing in real-estate since there was no as profitable but many people were no longer able to pay their mortgages or sales their houses, and the banks closed their homes, since the four close of houses were now worthless money, the financial institutions were lost their money too, along with the homers. As a result, the housing market fails, and banks collapsed, and the economy severely affects also, and the Great Recession had officially gone.

Impact on America

What is this mean for average America? The economic downturn was demonstrating, many people and businesses suffered substantial financial losses and therefore spent less money, further damaging the economy. Financial firms were not as capable of lending money, and in 2008, the US government finally had stepped in to bail out the banks, increasing the national deficits.

During the great recession, more than 8 million Americans lost their jobs and nearly, 4 million homes foreclosed each year and 2.5 billion businesses were closed in that era; bank balance, further the auto industry, and government spending programmers help to avoid even bigger crisis but may it take a decade more to understands the significance of great recession.

The crisis reminded us that the policy matters, that the events of 2008 were mostly by the decision made years before by governor legislator and policymakers of the countries, it's been a decade since the Great Recession. Governor insists that the global financial system has altered since then they said that safety measures had enhanced.

The current system is vigorous; it is true that some problems have clear up. However, the concern is still imminent, so could this type of economic crisis materialize again? Well, the short answer is yes, even though a lot has changed. Many new rules are being enforced the same governing constitution and authority still manage the financial system is still eminently centralized many banks are contributing high-risk loans once again

Although credit default rates are low today that could change very quickly with fiat currencies like the US dollars or Britain Pounds.

The amount of money in circulation rising unpredictably because central banks and regimes can decide when to do Quantitative easing in the economy. When the money supply increment drives too fast, nations may be a levy to economic disasters by hyperinflation.

So, what's the quick fix in 2008 as the world was conscious of the shock of the financial crisis and the outcome of many issues with the existing system.

7. 'Black Swan' Event 2009: European Sovereign Debt Crisis

It is sufficing to say that the European Financial Crisis was an aftershock to the larger financial meltdown of 2008. The indications began to show up when Iceland's banking system failed and this spread to Portugal, Italy, Ireland, Greece and Spain in 2009- or as the PIIGS as they were known. The Sovereign Debt crises began due to the enormous amounts of public debts that these countries were holding and these debts touched the skies and were now creating trouble. Later, the ECB (European Central Bank) had to pace in to bail them out. However, in this case the crisis loitered for many years. Although these countries were able to dig themselves out of the hole, nevertheless these countries were way far off from the satisfactory working level, and they still continue to struggle from modest growth rates and high debt to GDP ratios- Greece is the most blazing example which has been bailed out twice since the crisis started.

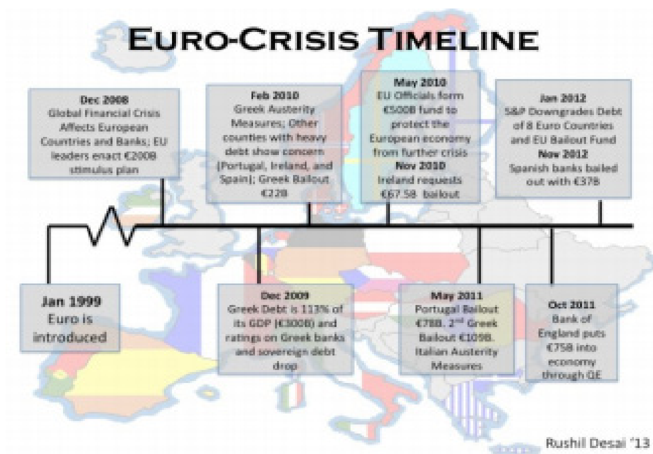

Figure 6: Euro Crisis timeline from December 2008 to October 2011

After Math

The crisis had raised black clouds for Europe, and because of the debt, there were so many economic, political and social instabilities. The problems of Europe didn't end- it still suffers from political instabilities like Brexit, Yellow Vest Movement in France and Italy's contention with the ECB over its budget in hanging dark masses over Europe's economic prospects.

Conclusion

The European Sovereign Debt Crisis arose due to the large public debts, and due to this, they had to face challenges and instabilities till today. To hold public debts is very normal for any country, but there's a signal line to these debts, the government or institutions must not over limit their fund layouts to limit that they cannot line for. The European crisis had had them to face huge insufficiencies and precarious situations one after the other that were leading this crisis.

8. Black Swan' Event 2010: Fukushima Nuclear Disaster

Yet another natural disaster that caused a massive loss of life and an even sizeable financial catastrophe for Japan which is the third-largest economy. The natural disaster that occurred here is a 8.9 magnitude earthquake and the squealing 100 feet Tsunami that hit the Northeast Shoreline of the island nation on March 11, 2011, that rooted for the death of 28,000 people. The disaster devastated Japan's economy in many ways. The Tsunami

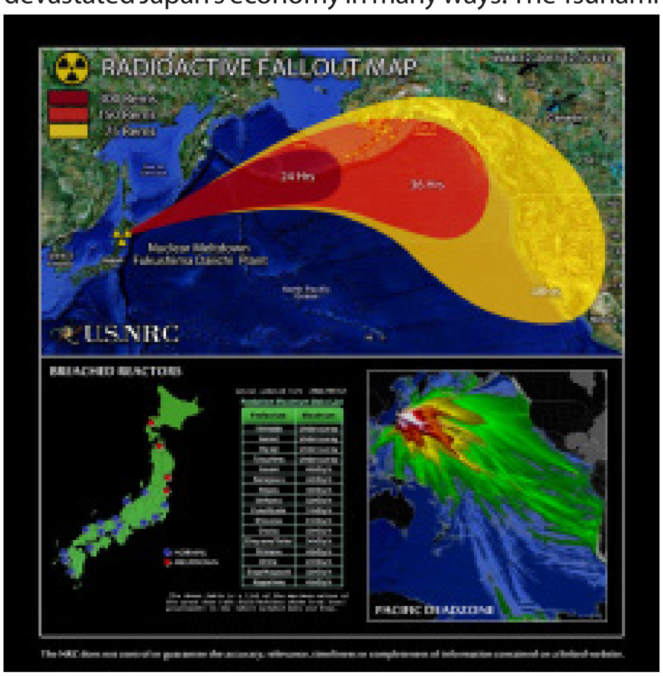

Figure 7: Radioactive fallout map of Nuclear Meltdown Fukushima Daiichi Plant

damaged the Fukushima nuclear power plant because of which there were radioactive leaks which took too long to stop. The hit region was accountable for 6-8% of the country's total production, which took a big strike. The disaster's timing was also unfortunate since, at that time, Japan was only beginning to come out of the deflationary pressures and stagnating growths for two decades.

Aftermath

Stock markets around the world recovered sharp losses with Nikkei by 16%, Topix by 9.5% and Dax by -4%. The disaster was humongous, and hence 11 of 50 (total) nuclear reactors were shut down, which in turn led to the decrease of 40% of the country's electric generation capacity. Japan was forced to import oil to replace the generation capacity- this means that Japan was burdening its highly indebted economy.

Also that due to this disaster, Japan was forced to close some of the key ports and Japan was highly dependent on its exports so tis was another misfortune for the country since it would have led to huge losses in export its incomes.

Conclusion

Natural disasters cannot be avoided, yet the consequences after that are tough to face, just like it did in Japan's case. The earthquake and Tsunami created pathetic situations for the country while recovering from its past long-lived issues such as deflation and stagnant growth. The nuclear plants, ports, economic posts were all out of place, and the economy was facing a black hole situation. Their exports were reduced to a great level because of which they faced even worse conditions.

9. 'Black Swan' Event 2014: Crude Oil Crisis

A particular part of the first decade of the golden age saw booming growth in the well developed economies and the emerging economies of Latin America and Asia.

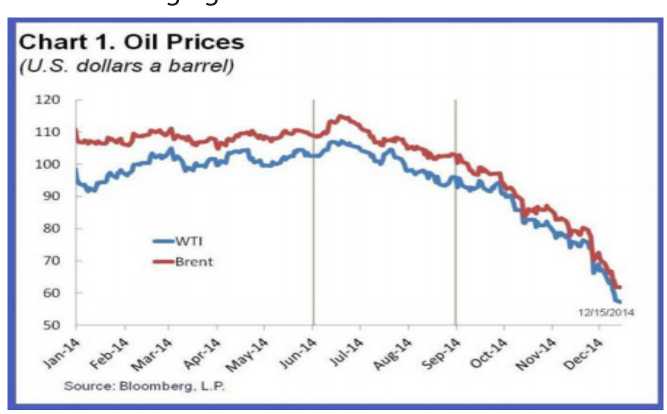

Figure 8: Variation in Oil Prices: January to December 2014

These caused a huge commodity demand as it happens in any expansionary cycle, especially Crude Oil.

China was the main driver of this explosion with its double-digit economic growth which created a rapacious appetite for the goods. This commodity, profitable or thriving also encouraged US and Canada to pump their Oil stock – the former from the shale constitutions in North Dakota via Fracking & the recent from the regions of the Canadian province of Oilsands of the Alberta zone. Also, with Libya (an oil-rich nation) back in Western govern by 2014, pumping more to the global sprout supply went from 5 million barrels per day in 2008 to 8.5 million barrels in 2014.

These were the time when global growth was beginning to dwindle, led by China. The cram created by the combination of over-supply and weaker demand of the goods led to a price deterioration from the \$110/cask to \$50/cask. The amount of Crude has strived ever since barring a minor rebound, but this time it is the long-term move towards renewable energy that is driving down the costs. These have hurt all the Oil exporting countries like the OPEC members & Canada.

Factors Affecting

The simple economics of demand and supply, exogenous or unexpected shocks, alternative energy sources, the movement of the dollar and market speculation. When the economic activity increases in an economy, demand for oil rises; without a similar surge in supply, Oil's price will upswing. When the recession hit in 2008 and economic activity dropped in many of the world's leading economies, the cost of Brent plummeted from \$145 a barrel in July that a year to below \$40 within five months. After that, china's demand rose, and prices steep over the following five years. To control this, increasing costs and economical marketing bring on additional supply. The stockpiles of Oil come from two broad areas OPEC and Non-OPEC nations. OPEC supplies around 30mn barrels of the one hundred and fifty million barrels at the world uses every day. Oversupply by OPEC nations has cited as one of the main reasons behind the near sixty per cent dropping Brent from June 2014 to January 2015.

Analyzing the Factors behind the oil price decline

Firstly, the price could decline due to the external deviation in the oil market's supply curve. Secondly, crude oil prices diminish due to the shift in the internal environment of the oil market's demand curve.

Finally, if brokers believe that the future oil market conditions will be unfavorable for oil prices than in the current scenario, they would react by selling their level of inventories on hand.

Good value alternative- will see the price of oil drop. Nuclear, wind and crop-based Oil are all good examples where consumers could switch from one source to another. However, this depends on consistent supply and competitive pricing.

Exogenous shock- is an event that moves market prices and cannot be explained by the economies. These are often event risks that are sudden and unpredictable.

Market speculation- oil prices are addressed by the futures market, and there is much contemplate as to where demand and supply patterns will be in the millennium.

Future outlook

The future path of oil prices is highly unpredictable. Here are some essential measures to avoid future trends. New technology and policy could profoundly affect or lead to the oil demand to decline. The current pace of oil-related capital spending may be insufficient to meet future demand needs.

10. 'Black Swan' Event 2015: Black Monday China

Black Monday that happened to be attached to October 19, 1987, is the name or term attached to a sudden and unprotected stock market crash that thumped the global financial system. Back in the US, the Dow Jones Industrial Average fell exactly 508 points, which led to the futures market's crashes and the options market largely. By the end of the month, the majority of the major exchanges had relinquished more than 20%.

Black Monday as it was turned when a crash on the Chinese market wiped out 2.7 trillion dollars from the global stocks. Now, China has spent total of 200bn dollars in propping up its currency and stock markets and it said it will deploy its 547bn dollar pension fund to start buying up stocks as well but here's the rub at first no money was used to buying up stocks which

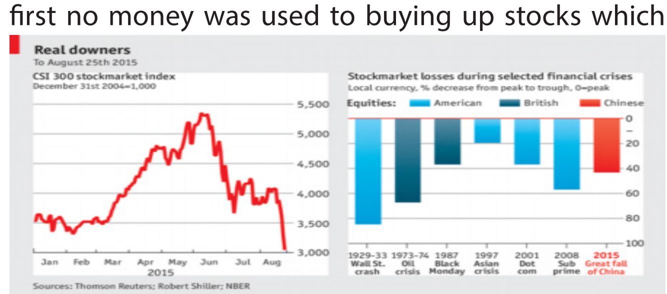

Figure 9: Left to right: CSI 300 Index- January to August 2015 and List of Financial Crisis from 1929-2015.

suggest Beijing is already realized that supporting the markets like this is a somewhat futile in short this is China's first capitalist crisis. So it turned to the tried and true remedies of the interest rate cuts the more monies for the banks to loan, the problem is this crisis of its own making Beijing encouraged the one 150% run-up in the markets in April 2014. More than ninety million investors borrowed 358bn dollars to buy Chinese stocks that grant needs paid back.

The day coined after the Shanghai stocks plummeted -8.5% on news of an economic slowdown in the world's second-largest economy. Still, there were undoubtedly other factors that subsidize the fall. Like the American position in 2008, Chinese companies were allowed to borrow funds inexpensively from the banks, which encouraged them to take needless risks in the stock market. As expected, the borrowing rate soon outpaces the rate at which these investment companies could grow, causing a significant drawdown.

On top of that, weak economic data clutched the government to the point where it decided to cripple the yuan's parity against the dollar. China has been commonly using the peg to manage the fiscal policy since its economy is so heavily export-oriented. However, the plan miscarries as China's stock index lost 30% of its value in 3 weeks. It was sparking a sell-off in other financial markets.

Effects on other countries

The global impact of the situation is of more significant concern. The stock market decline and the subsequent crash have caused decreased Chinese demand, affecting countries with substantial business interests in the country. Among these are Chile, which consigns almost half of its copper exports to China, and the United Kingdom, which has numerous mining and energy staked in the Chinese region. The UK stock market also deals with a sharp decline as an outcome of the smash but was able to recover its losses by the end of the week.

Aftermath

If China's economy continues to swing, it could be bad news for the other economies. China is the largest exporters of goods and services, due to the massive drop-down of the Chinese stock markets, the global markets were directly hit down because of the reason China has a large number of exports. Because of its large exports and the stocks market striking lows, china was facing a current economic instability. A lot of things followed up and markets were diminishing. The effects were much devastating than expected.

11. 'Black Swan' Event 2016: Brexit

Brexit means that British exit from the European Union(EU) and they changed their relationship EU to the association on three areas, i.e., trade, security and migration from one country to other.

So in 1975, Belgium, France, Italy, Luxembourg, Netherlands and West Germany signed the Treaty of Rome and formed the European Economic Community. The UK included, it tried to join in 1963 and 1967 but blocked by French President Charles de Gaulle. In 1973, the UK became part or a member of the EEC.

After joining 2 years back, the UK held its first-ever national referendum to decide whether it should turn around and leave. Do you think that the UK should stay or leave the European Community (stock market)? The vote wasn't close; 67% of people decide to stay in the EC.

The UK kept arbitration ways to stay independent from crucial form of the EC. It didn't accompany the open border that the rest of EU created in 1995 to create utterly free movement within the community, and it chose to keep the British Pound as its currency instead of adopting the Euro. But the development that exited most likely was the adoption of the Lisbon treaty in 2009.

The EU is an agreement between the 28 European countries or states needed to follow the laws passed in this accord. Individually can freely travel in any of these countries, and it also allows people to make free trade between these countries, so there will be no extra checking on the borders to move their goods to other countries and no tariffs to pay.

The United Kingdom was the first country to leave the European Union in 1973. In many ways, it designed to mirror the world's most successful federal republic: The United States, the individual countries of Europe decide they'd be better off- economically, geopolitically-

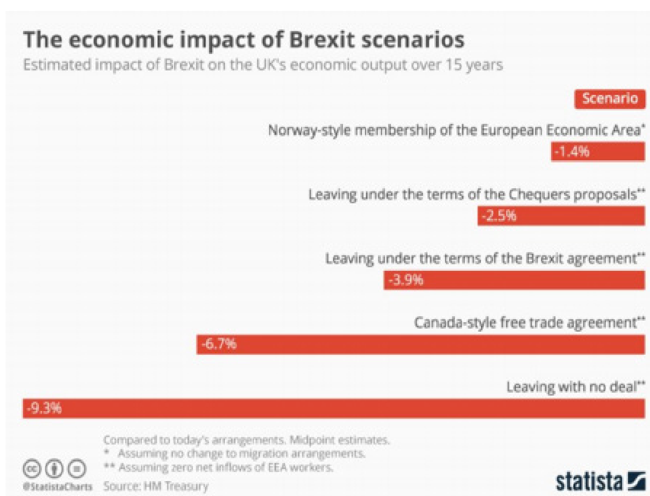

Figure 10: Economic Impacts of Brexit Scenarios

if they formed a unified group; hence, it was a right decision.

Transition period

It means that countries are given space to set new laws, or new free trade agreements is haggle. A transition period is an implementation period to set different laws for migration, trade, and work.

Brexit Crisis

It was the first time an existing EU member country had been permitted to have its exclusive deal. Britain will be permanently out of the ever closer union, never part of a European super-state. There will be stringent new restrictions on access to our welfare system for EU migrants, no more something for nothing. The deal was dependent on Britain choosing to remain in the union during a vote scheduled for June 2016. By a narrow majority of 51.9%, 0r 48.1% the UK decided to leave the European Union. The consequence was immediate. Cameron quit, and the value of the British Pound plummeted. Today, it remains 15% lower against the US dollar. These prompted a leadership contest which Theresa May win uncontested after all her opponents dropped out. Theresa May become the Prime Minister of the UK, and her message was clear that 'Brexit means Brexit'.

The invoking of Article 50, which starts a two-year count down for the UK to negotiate its future relationship status with Europe before it has to leave and we are going to make a success of it.

Two years isn't a very long time to get through the long list of key points which include: whether the European court of justice will continue to have jurisdiction over the UK; whether the Uk will deny the Human Rights Act in favors of writing their British Bills of authority; how the security and crime-fighting relationship will work; how much the Uk will pay for EU tenders that it committed to before Brexit; what the rights will be for community citizens living in the United Kingdom, for Britons living in the EU; what will happen to Scotland; who voted to endure in the EU by a large margin of 62%-38%, there is some talk it will leave the UK and become an EU member; what will happen along the land border between Northern Ireland (of the UK) and the Republic of Ireland (an EU member state).

Withdrawal Agreement

Mr. Johnson has largely the change agreement which was conferred by Theresa May. He changed the previous custom duty, the countries can move their goods from one to countries, ultimately they have to pay tariffs while crossing Northern Ireland, if the goods remain to NI then, companies can ask for a refund of taxes they have paid earlier, and if goods moved to Republic of Ireland(Iris), there is no refund.

At the end of 2017, the Uk and EU agreed upon a proposal for Brexit. There will be no hard border between Northern Ireland and the Republic of Ireland. The rights of Uk citizens for living in the EU countries would be protected and vice versa.

Lastly, Britain agreed to pay a so-called Divorce Bill to the EU, somewhere in the region of 37 billion pounds, or $49billion, to spend over four years. Britain must agree to pay before any move forward. The trade negotiations won't get a very remote unit; the money intervention is settled. Now the money negotiation is going to be very nasty. Perhaps, the biggest issue is whether Brexit will be hard or soft. These mainly have to do with trade and immigration.

Soft Brexit

It would widely keep things as they are now. It would Continue the free movement of goods and people from the continent.

Hard Brexit

It would result in import taxes on goods and services in both directions. It would also restrict the migration of EU citizens into the UK. Finally, Brexit happened after a series of delays on January 31 2020.

Aftermath

Now the UK has, according to Protocol, left the EU, transition period starts immediately after the closer of this deal. During the Transition period, the Uk has to follow the European Union rules and pay the money accordingly. Most of the conditions will remain the same with a few changes in their policy.

No more EU summits: UK Prime Minister, if he wants to attend the meeting, then he need special invitation for EU councils summit in the future. We will hear a lot about the trade: Now the Uk left the EU community, UK can have different terms and conditions to sell and buy goods from different countries. But there is a blockage in their path, UK cannot enter into any trade with any countries till the completion of a transition period. UK passport Color will change: their existing Burgundy passport will continue to be valid but the new passport will replace the Burgundy color with the Blue color. Brexit coins: the coins have to meltdown due to the extension period of Brexit.

Conclusion

Brexit and its impact on the global terms will lead us to the conclusion that as every coin has two sides, which definitely going to effect the Uk and other countries, Brexit will give leverage to UK economy but to some extend. This might influence the other countries, who are currently trading with them as part of EU community.

The country who are more into import than exporting the goods to the other countries due to scarcity of the resources is majorly dependent on the other countries like China, Europe, and India for its imports. As Europe is providing free trade from one area to other, Brexit is associated with higher risk in longer term, now the firms had to pay tariffs to crossed the borders from one region to other.

Economic impact: One in every ten jobs are connected to EU, which might affect the jobs of the Britain citizens directly or indirectly. Which could also influence the FDI's to pull out their money from the economy in worst time, immigration and economic regulation of the UK economy.

Around 60% of Uk small business comes from the EU. Before Brexit, firms are freely move their goods from one country to European union regions, there will be no tariffs, which help the UK economy to create job opportunities for their citizens, now it might affect the countries very badly. The main effect on the Brexit was seen on the medium- to- premium brands, which affects the many of the shops were close down as they could see that they will not able to generate revenues from Brands in Uk, such as Mother Care and so on.

12. 'Black Swan' Event 2020: Corona virus: True 'Black Swan' Event

All the markets are on a running roller coaster ride, due to coronavirus outbreak. The world markets were in the correction phase after the outbreak of past epidemics like the financial crisis 2008 and the tech com bubble,2001, which has again come down to the bearish phase due to the virus outbreak news and creating a panicking situation around the globe. Many indices are substantially coming down. There is a dramatic decline in the markets, especially in the equities stock markets.

Impact on Different Countries

- *United States of America*

The "Superpower country", a country which is a home of top Forbes 500 companies like Google, Facebook, and Microsoft, have seen slump in their stock market. The Dow Jones Industrial Indices is an index of the top 30 large companies in the "bearish phase". It has seen a 20% downfall from its most recent high. The four primary industries like airlines, amusement parks, hospitality and dining, which contribute around 5.5% to GDP have seen a dramatic decline in their prices and even many people have lost their jobs. Companies like Delta Airlines and united airlines have been trailing lower to its 52 weeks' low.

- *China*

The "Manufacturing superpower", a country famous for its reasonable employment rate, productivity, and workforce. The origination place of the virus(COVID-19). It is the largest importer of the oil reserves. Due to COVID-19, the oil demand in china plunged to 20%. Thousands of automobile companies work with Chinese suppliers to produce parts for their vehicles. However, they stopped their manufacturing due to quarantine and necessary implication set up by the higher authorities.

- *United Kingdom*

The "European superpower", the nation famous for its royalties and monarchy. They have the largest stock market in the world and are also the largest exporters of financial services across the globe. Despite cutting interest rate by Bank of England, the UK index FTSE 100 was dropped more than 10% depicting its worst fall since 1987. Airlines group like IAG was down more than 20%, and Tui fell 17%. China accounts for 9.4% of total goods imports from the UK. UK based luxury brand Burberry-group has seen a decline in their sales in mainland China and Hong Kong. It has closed 64 of its stores in several different countries.

Figure 11: Stock Markets across the globe as on March 13, 2020

- *India*

The "Rising superpower", a country famous for its mutual fund's scheme, fixed deposit, and aggressive equities investors. The India stock indices Sensex and Nifty stocks are laggard due to COVID-19. The Sensex-30 is trading at 26.65% 52-week low. Nifty had a fall by more than 8%, depicting the panic and fear of the stock markets street. The company like 'Infosys' has been severely affected as they are not in a condition to buy new software or export their services. The country's balance of payment is critically affected as most of the goods were exported from China. The trade impact of the virus is estimated to be around 348 million dollars. The most affected sectors will be chemical sector around 129 million-dollar, apparel with 64 million-dollar, automobile at 34 million dollars, electronics at 12 million dollars and metals at 27 million dollars.

Various Sectors affected includes

- *Aviation Sector*

Shares of travel companies have experienced the steepest falls due to the cancellation of the many flights and travel restrictions across the globe. According to IATA (International Air Transport Association), the airline industry will face around $29.3 to $113 billion losses in their revenues. Some airlines such as Fly be, Antilia, and Indigo, which were already under massive debt, will be more affected due to COVID-19 scenario. Governments worldwide are striving to rescue their airline industry by giving them tax concession, permitting to pay taxes interest-free in the next tax cycle, and providing them necessary quantitative easing airline industry. After the USA federal bank cuts its interest by half a percent, there was a slight rise in Delta, united airlines, and southwest airlines.

- *Automobile sector*

Hero MotoCorp biggest bike manufacturers company in India has put on halt its manufacturing facilities for their employees' safety. Also, fiat Chrysler has halted their production plant in Europe as they struggle to suspect key components parts for the vehicles from Chinese suppliers.

Hospitality Sector

The nationwide lockdown and inbound travel restriction lead to hotel business a steep drop in its occupancy rate. In India the hotel business is who contributes 10% to its GDP is likely to suffer around rs.620 crore losses. The Hilton hotel and MGM Resorts have seen around 5% and 16% downfall in their stock prices. Starbucks has predicted that it will lose up to $430 million in revenue from its chain all over the world.

Pharmaceutical Sector

COVID-19 is more likely to harm the American pharmacy industry as USA imports from china products like chemicals and Active Pharmaceutical Ingredients have increased up to 76% between the last ten years (2010-2020).

Though India is one of the top formation exports of the drugs globally, its imports account for more than exports as its dependence on China is very high for about 16 classes of antibiotics products are export from china. Many pharmaceuticals company states that they have enough stocks of the drugs but if lockdown continues till the mid of June, then supply shocks disruptions of certain medications can take place.

Analysis of the Study

In a bearish market, investors or traders start panic buying or selling the stock due to highly fluctuating markets or unstable markets. In the current situation, a layperson should hold the shares as a temporary correction in the market due to pandemic coronavirus at the globe. Due to this, investors started selling their stake from the equity markets and park their money into safer side investments or instruments such as Debt markets or Gold ETF's. But in some article, Analysts told that investor should hold their stake in the stock market, or else they will miss the opportunities to re-enter in the market, and hence, they will only be left with losses in hand.

Conclusion

'Black Swan' events are now being very recurrent and therefore has become a major risk factor for investors in the financial markets as well as the general population since it has far-reaching consequences- the 2008 housing meltdown is a clear example since it affected anyone and everyone. The 2008 meltdown was an upsetting event and the waves shook the entire integrated global financial system. The term 'Black Swan' itself means an unforeseeable situation and hence these events cannot be well predicted but there can surely be devised a contingency plan and designed funds for any such situation tat may arise in a country or the at a global level. These instances in the past ten years itself is more likeable than not that they will occur again.

'Black Swan' events are such that everyone fears them and in fact the concerns are real if one uses leverages. Nevertheless, if one event is an out of the blue occurrence, equity shareholders must not face trepidation- it was evident that the prices are low during the event, but it is also known that prices will return as they were before the event. Moreover, the reaction's repeatable nature provides chances to trade the recuperation and even insipid the scene of crime. There are passable things and situates to worry about and 'Black Swan' is honesty not one of them.

Just as we know every situation has a perceptional effect- that is positive and negative. Although 'Black Swan' events have a negative connotation, the perception differs from individual to individual as affected. An example of this is that an unanticipated crash in the stock market is negative for most of the investors but good for those with a goal of aggressive short positions.

Although 'Black Swan' are unpredictable, every country, investor, business and individual must ideally be prepared for such affairs. Considering that preparing for events is not easy, one can start by critically thinking a rare even or imaginative situation that could prove cataclysmic for a business. Businesses and investors must take preventive measures to mitigate risks and minimize potential damages. Pre-planned measures include taking insurances and diverse policies to protect against any unforeseen happening such as a fire. An equity investor can minimize their risk in case of a 'Black Swan' event by hedging their risk aptly. A hedging strategy is always the best to mitigate or transfer risk and secure the returns. Similarly, a country can develop financial regulations to sum for the future so that the financial institutions are strengthened, and there is plugging the loopholes that may invite such catastrophic events.

References

https://www.datadriveninvestor.com/2019/01/18/9-black-swan-events-that-changed-the-financial world/#

https://economictimes.indiatimes.com/wealth/personal-finance-news/how-the-coronavirus-has-hit indian-and-global-markets/articleshow/74745391.cms

https://economics.rabobank.com/publications/2013/september/the-mexican-1982-debt-crisis/