

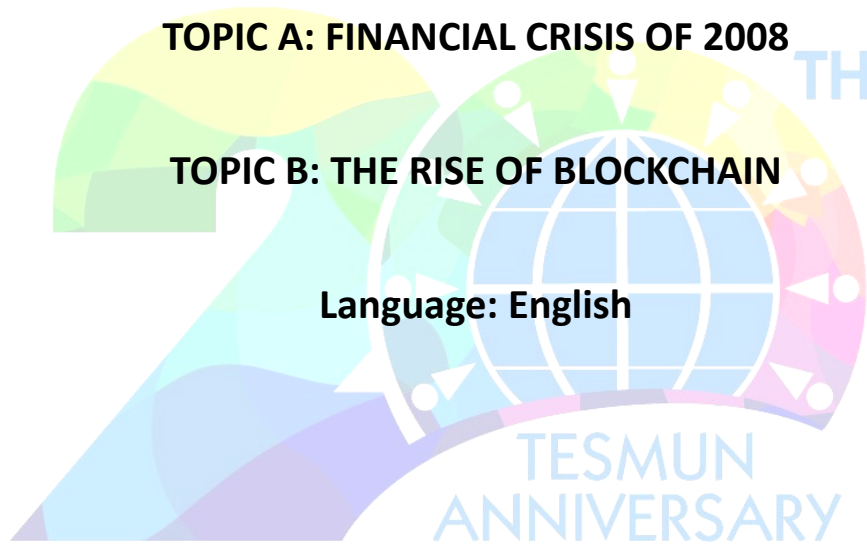


WALLSTREET

TOPIC A: FINANCIAL CRISIS OF 2008

TOPIC B: THE RISE OF BLOCKCHAIN

Language: English





WALL STREET

Author: Valeria Granada Rincón

Time For Opening Speech: (90 seconds)

One opening speech regarding both topics

INTRODUCTION TO THE COMMITTEE

Wall Street is a committee with a focus on finance, business, and investments that is situated in New York City.. Wall Street is an administrative entity to some of the most known corporations in the world; any business that is situated in the avenue is considered to be a part of Wall Street's history. The committee will be established as a business and financial committee, and it will oversee the companies' economic sectors and their effects on the environment and impact on the global market.

Stockbroker administrators will lead the delegations from some of the biggest corporations in the world. Although each company is distinctive and has a different growth strategy, the committee's goal is for businesses to discuss how they solved financial crises or and if intend to establish frameworks for preventing economic

depressions and adapting to new currency systems.

TOPIC A: FINANCIAL CRISIS OF 2008

The US Housing Market

The US housing market refers to the real estate industry and its activities, including the buying, selling, and financing of residential properties in the United States. The US housing market experienced a period of rapid growth and high demand, leading to increased home prices and a shortage of housing inventory. The housing market is influenced by various factors, such as economic conditions, local circumstances, and interest rates. A significant economic recession or downturn can lead to a property market crash, as seen during the Great Recession when the housing bubble burst and the global economy experienced a severe downturn.

The 2008 global financial crisis, commonly referred to as the Great Recession, started as a collapse in the US housing market and extended through financial markets to the rest of the world. The crisis was marked by a dramatic reduction in the amount of **liquidity** in the international financial



markets, which initiated in the US. A **housing bubble**, which are temporary conditions of overpricing and speculations in housing market, fueled by cheap credit (loan or credit with a low interest rate and loose lending standards (relaxation of lending practices by banks and other financial institutions to make it easier for more people to take on loans) that burst in 2007 and 2008, is one of the main causes of the crisis, along with the failure of major commercial and investment banks (financial advisors), mortgage lenders (companies that finance purchases), and insurance companies (financial intermediaries that offer security), and a **market freeze** in the global lending system brought on by losses from subprime loan investments. Subprime loans are offered to individuals who do not qualify for prime-rate loans, typically having low credit ratings or perceived as likely to default due to their job or economical conditions, these loans have higher interest rates and may include unique structures, such as interest-only periods. In many significant advanced economies apart from the US, such as countries in the European Union, Argentina, Russia, Mexico and the UK the crisis caused the worst recessions since the Great Depression. In response,

multiple governments and central banks implemented policies to boost employment and stimulate demand, including cutting interest rates, supplying banks with liquidity, and boosting government spending. Although these actions lessened the damage to the world economy, the recovery was uneven and slow in the years that followed as the market had arrived to a significant decline rate in comparison with past years, and therefore the economic stability required time and effort from financial and political entities of the United States.

HISTORICAL CONTEXT

In order to understand the origins of this economic recession, there were major events that had an impact on the financial system such as the dot-com bubble, which was a rapid rise in the US technology stock equity valuations fueled by investments in internet-based companies during the late 1990s. (Investopedia, 2023) or the economic aftermath of the 9/11 attacks (2001, 7.1% decline, setting a record at the time for the biggest loss in the exchange's history for one trading day), and the Afghanistan/Iraq war (2003, the **S&P 500** fell over 7 trading days but only by 5.3%,



before taking 16 days to recover). The following two events should be taken into account to understand some behavior of this crisis.

Great Depression (1929–1939)

The Great Depression was a severe economic downturn that lasted for a decade and had a profound impact on the global economy, triggered by the stock market crash of October 1929, which led to a sharp decline in consumer spending, business investment, and production. The depression was characterized by high unemployment rates, widespread poverty, and deflation, in which government response was initially ineffective due to poor financial cooperation with the low-income sector, and it was until the implementation of the New Deal policies in the 1930s that the economy began to recover. The Great Depression had a lasting impact on the global economy and led to significant changes in economic policy and international regulations that would be significant for nowadays economy (will be further explained in this guide).

Dot Com Bubble (1995–2001)

The dot-com bubble, also known as the internet bubble, was a period of excessive speculation in the late 1990s and early 2000s, characterized by the rapid rise and subsequent crash of stock prices of internet companies. During this time, investors were highly optimistic about the potential of the internet and invested heavily in internet-based businesses, many of which had high valuations despite having little or no earnings. The bubble eventually burst, leading to a significant market downturn and the failure of numerous internet companies. (*The Street, 2022*)

Despite them, the overall US economy and GDP maintained stability that was favored by low interest rates and affordable loaning from 2000 to 2007. There was stability and growth in the worldwide economy, influenced by the world's greatest economies such as the European Union, China, and the United States by following loan strategies.

As banks and other Wall Street financial institutions were seeking for high return-investments, and they concluded that debt investments in countries wouldn't be profitable considering the status quo of foreign economies, and the consequences



on stock investments still remained from the dotcom bubble loss crisis, hence, investors took advantage of the low-interest rates in housing and decided to invest in a real state due to its security, rentability, and long term profitability. Investors started purchasing, but later on, the investors would opt for purchasing **mortgage-backed securities** (debt security that is collateralized by a mortgage or a collection of mortgages).

CAUSES

The investors that invested assets in the housing market created a lending system with the purpose of creating more Mortgage Backed Securities as it resulted in a great strategy to earn interest return on their payment, and were qualified as safe investments by credit rating agencies as long as the borrower had an adequate credit. It was common that mortgages were only given to individuals with stable employment and relatively high credit (the ability to borrow money or access goods or services with the understanding that the loan would be returned) to ensure there would be no or little risk that the borrower would default. Nonetheless, lenders opted to increase their profit from

mortgage-backed securities and increase the demand for the housing market and considered this could be possible by lowering and loosening mortgage standards, hence, the investors created the “subprime mortgages” which consisted of special loans for people with low income and poor credit, without considering possible consequences that subprime mortgages and other **predatory lending practices** could have in consumers weakened credit histories and reduced repayment capacity, which would have the opposite effect on the market’s demand and overall economic profit for investors and bank institutions.

Predatory Lending Practices

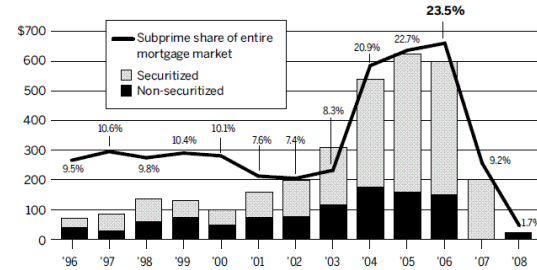
In order to give the impression of affordability, lenders and bank institutions created subprime mortgage products, which disproportionately affected minority families across the United States, as these mortgages typically featured low or no down payments and low initial monthly payments to entice borrowers and these borrowers typically didn’t understand the complex features of their loans and the nature of their interest rates, concealing high costs, fees, and penalties. Besides,

international traders began selling high-risk products, which were the **Collateralized Debt Obligations (CDOs)**, along with the mass purchase of Mortgage Backed Securities from investors, traders, and bank institutions, housing prices started to increase due to the new lending requirements and low-interest rates. This made CDOs and MBSs look like an even better investment option for the involved economic agents. The aftermath of these actions resulted in the opposite effect on the housing market, as consumers were unable to afford the reset, higher payments and were unable to refinance as housing prices started to fall and interest rates on these mortgages rose and borrowers started to increasingly default. Borrowers suffered great profit losses by predatory lending practices, which included loans with excessively high-interest rates, and this led to the subprime mortgage crisis from 2007 until 2010.

Subprime Mortgage Originations

In 2006, \$600 billion of subprime loans were originated, most of which were securitized. That year, subprime lending accounted for 23.5% of all mortgage originations.

IN BILLIONS OF DOLLARS



NOTE: Percent securitized is defined as subprime securities issued divided by originations in a given year. In 2007, securities issued exceeded originations.

SOURCE: Inside Mortgage Finance

Subprime mortgage crisis graph, retrieved from: https://en.wikipedia.org/wiki/Subprime_mortgage_crisis#/media/File:Subprime_mortgage_originations

The Housing Bubble

The bursting of the housing bubble consisted in the significant amount of defaults from borrowers in the housing market, which put more houses back on sale, but there weren't buyers that purchase them. At this point, there was an excess of supply (up), and a lack of demand (down), which made housing prices start to collapse. As prices fell, the borrowers that owned mortgages had a significant price difference, since the mortgage value was greater than the current worth of the house, hence, this made some borrowers stop paying and provoked more defaulting, which made the price decrease more. The decreasing demand for the housing market caused big



financial institutions and lenders to stop purchasing subprime mortgages, and those subprime lenders remained with bad loans which would later start declaring bankruptcy in 2007.

REPERCUSSIONS

There was a vast loss of capital from the financial institutions and investors when the housing market started to decline, alongside, the situation was aggravated by other financial instruments that the financial institutions owned, which were the **Credit Default Swaps**, method that allowed traders to bet a large amount of money on the value flow of mortgage securities, generating accumulation of assets, liabilities and risks that contributed to the collapse of the entire financial system. This provoked multiple financial companies to either declare bankruptcy, commit to a merger, or permit bailout by the government. The stock market crashed and the United States declared a disastrous recession of the economy.

Case Study 1: Lehman Brothers collapse

One important development that intensified the financial crisis was the bankruptcy of Lehman Brothers during the 2008 financial crisis. Lehman Brothers was a global financial firm founded in 1850, which provided investment banking, trading, brokerage, and other services. After starting as a dry goods store, the company eventually grew to offer brokerage services and commodities trading. But in the end, the collapse of the subprime mortgage market brought this firm down, causing it to file for bankruptcy on September 15, 2008. Having \$639 billion in assets and \$613 billion in debts (liabilities), Lehman was the fourth-biggest investment bank in the US at the time of its demise. The bankruptcy was the largest bankruptcy filing in U.S. history, involving more than \$600 billion in assets, and causing a 4.5% one-day decline in the **Dow Jones Industrial Average Index**.

Case Study 2: Washington Mutual Collapse

When Washington Mutual (WaMu) failed in 2008 due to the subprime mortgage crisis, it was the biggest savings and loan bank in the country. Several things contributed to the bank's collapse, including predatory lending and reckless lending. WaMu's rapid branch expansion led to poor locations in an

excessive number of markets. Additionally, the bank had risky mortgages, which resulted in large economic losses. A "run" on the bank occurred in September 2008 as a result of account holders withdrawing \$16.7 billion in deposits over nine days. WaMu was taken over by the federal government, which then put the Federal Deposit Insurance Corp. (FDIC) in receivership. WaMu's banking subsidiaries were sold by the FDIC to JPMorgan Chase for a sum of \$1.9 billion.

emergency loans to the banks to prevent more banks from collapsing. From September 2007 to December 2008, the Fed implemented 10 interest rate cuts, bringing the FED funds rate down from 5.25% to essentially zero. In January 2009, congress passed an act that was able to recollect \$800 billion into the economy through new spending and tax cuts

Table 1: The top 10 largest US public company bankruptcies, 1980 to 2008

No.	Company	Industry	Bankruptcy date	Assets (\$ millions)
1	<i>Lehman Brothers</i>	Investment bank	09/15/2008	639,432
2	<i>Washington Mutual</i>	Savings & loans	09/26/2008	327,913
3	<i>WorldCom</i>	Telecommunications	07/21/2002	103,914
4	<i>Enron</i>	Energy trading	12/02/2001	65,503
5	<i>Conseco</i>	Financial services holding	12/17/2002	61,392
6	<i>Pacific Gas and Electric</i>	Electricity & gas	04/06/2001	36,152
7	<i>Texaco</i>	Petroleum & petrochemicals	04/12/1987	34,940
8	<i>Financial Corp. of America</i>	Financial services and savings & loans	09/09/1988	33,864
9	<i>Refco</i>	Brokerage services	10/17/2005	33,333
10	<i>IndyMac Bancorp</i>	Bank holding company	07/31/2008	32,734

Source: New Generation Research, Boston (retrieved from: <https://www.economicsobservatory.com/why-did-lehman-brothers-fail>)

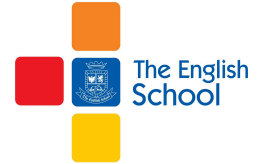
CURRENT SITUATION

International Actions

The government took action regarding the status quo of the economy. The Federal Reserve was also forced to take unprecedented monetary policy measures during the Great Recession to preserve the financial system, they started to offer

National Economic Stabilization Act of 2008

The Emergency Economic Stabilization Act (EESA), also known as the National Economic Stabilization Act of 2008, was a major federal law passed in the United States during the Great Recession as a response to the subprime mortgage crisis. It was intended to keep the American financial system from collapsing by giving the federal government the power to buy and insure specific kinds of distressed assets, up to \$700 billion at first, then lowered to \$475 billion. The act sought to protect property prices, maintain homeownership, unfreeze credit and capital markets, bring stability and liquidity back to the financial system, and foster job creation



and economic expansion.

The EESA was strongly criticized, with supporters believing that it was necessary to stop more economic damage and adversaries criticizing it as a bailout for Wall Street and the banks. It was commonly referred to as a "bailout" for failing financial institutions and banks.

TARP program

Congress and current US President George W. Bush passed the Emergency Economic Stabilization Act of 2008, which included \$700 billion in government bailouts under the Troubled Asset Relief Program (TARP), also known as the banks **bailout**. This program ended by spending \$250 billion bailing out the banks, and the remaining funds were invested in financial aid for other sectors. Besides this, the US treasury conducted stress tests on the largest Wall Street banks, which would be publicly announced by the government, to know whether an institution was arriving at economic recovery or needed to raise more funds. The TARP program, along with the action taken by the FED, panic in the financial system to start to decrease.

Dod Frank Law

In 2010, congress established a law based on a financial reform that aimed to increase transparency, prevent banks from considering risky loans, and establish protection measures to reduce predatory lending practices. This law worked through the establishment of control mechanisms over movements among banks or any other market participants.

There is still no consensus on whether the established regulations are enough to prevent future crises...

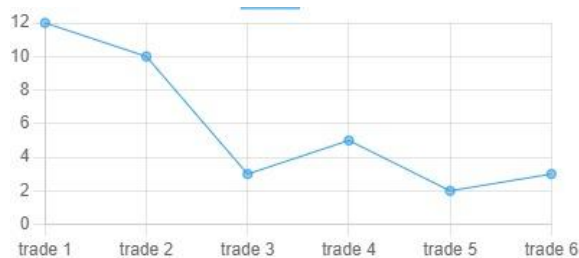
ORIENTATION AND OBJECTIVE OF THE COMMITTEE

It is currently October 2008 and the stock market is in state of panic.

The previous information has been a large context and explanation of the causes, outcomes, and aftermath of the 2008 Financial crisis, which the delegates will have to imitate through their solutions and actions during the committee. All the actions, events, and resolutions established after the timeline of the committee are

non-existent for the committee, however, delegates may take these events as references to stipulate new solutions that can contribute to resolving the crisis. The status quo of the housing market is an excess of supply and a consequently declining demand for houses. The Wall Street status quo is that there are multiple banks at the border of collapse, the banks of Lehman Brothers and Washington Mutual had declared bankruptcy. The committee will adopt a live simulation of the stock market where delegates will be able to purchase and sell assets through the use of directives, the status of the market will depend on the economic status quo of the committee, regarding the established timeline of occurring events. Delegates are expected to be able to read and understand line graphs to comprehend movements in the stock market simulation.

Example:



Read the following link:

<https://www.investopedia.com/trading/candlestick-charting-what-is-it/>

Furthermore, the committee must find rapid measures to prevent defaulting, to stabilize the declining demand of the housing market while preventing the collapse and bankruptcy. Additionally, delegates must arrive at solutions to establish frameworks that could serve to resolve the current financial crisis, prevent future economic recessions, and avoiding the collapse of the current market.

GUIDING QUESTIONS

1. Has your company loaned a subprime mortgage?
2. What is the investment rate of your company towards the housing market?
3. How was your company affected or influenced by the 2008 financial crisis?
4. Has your company been affected by past financial crises, such as the great depression or the 9/11 attacks aftermath?
5. Is your company currently or has been in a merger? How does this



action affect the financial growth of the company?

GLOSSARY

- **Liquidity:** the degree to which a security can be quickly purchased or sold in the market at a price reflecting its current value
- **Housing Bubble:** run-up in housing prices fueled by demand, speculation, and exuberant spending
- **Freeze (in the market):** the situation in which prices, or the price of a particular good or service, are fixed at a particular level and no increases are allowed.
- **Prime-rate loans:**
- **Subprime Mortgages:** Mortgages issued to borrowers with low credit and adjustable rates
- **Defaulting:** Failure to make required interest or accomplishing principal repayments of a debt
- **Mortgage Backed Securities:** group of mortgages that have been organized and securitized to pay out interest like a mortgage bond
- **Collateralized Debt Obligations:** structured investment finance product that contain various assets and loans
- **FED:** Federal Reserve Board - central US bank
- **Housing Bubble:** run-up in housing prices fueled by demand, speculation, and exuberant spending to the point of collapse
- **Bargain:** a socio-economic phenomenon involving two parties, who can cooperate towards the creation of a commonly desirable surplus
- **Credit Default Swaps:** financial contract whereby a buyer of corporate or sovereign debt in the form of bonds attempts to eliminate possible loss arising from default by the issuer of the bonds
- **Bailout:** The process of saving a company, plan, or other thing from failing by providing lots of money
- **NASDAQ:** National Association of Securities Dealers Automated Quotations, American stock market that handles electronic securities trading around the world
- **Dow Jones Industrial Average Index:** Index that groups together the prices of 30 of the most traded



stocks on the New York Stock Exchange (NYSE) and the NASDAQ

- **S&P 500 Global Ratings:** a stock market index that is meant to track the U.S. equity market. The index is made up of 500 of the largest public companies

SOURCES

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- Duggan, W. (2023, June 21). A short history of the Great Recession. Forbes Advisor. <https://www.forbes.com/advisor/investing/great-recession/#:~:text=The%20Great%20Recession%20of%202>

TOPIC B: RISE OF BLOCK CHAIN

The rise of blockchain technology is revolutionizing the financial industry and has the potential to transform various

[008,down%2057%25%20from%20its%20highs.](#)

- CrashCourse. (2015, October 21). How it Happened - The 2008 Financial Crisis: Crash Course Economics #12 [Video]. YouTube. <https://www.youtube.com/watch?v=GPOv72Awo68>
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- Wall Street reform: the Dodd-Frank Act. (n.d.). The White House. <https://obamawhitehouse.archives.gov/economy/middle-class/dodd-frank-wall-street-reform#:~:text=The%20most%20far%20reaching%20Wall,daily%20lenders%20from%20exploiting%20consumers.>

aspects of financial services. Blockchain, a decentralized and transparent ledger technology, has been increasingly adopted by financial institutions and fintech companies to streamline processes, reduce costs, and improve security. Despite the



numerous benefits, the adoption of blockchain technology in the financial industry also comes with challenges, such as regulatory uncertainty, technological risks, and the need for further development and standardization. However, as more financial institutions and fintech companies invest in and develop blockchain solutions, the technology is expected to play an increasingly significant role in the future of the financial industry.

HISTORICAL CONTEXT

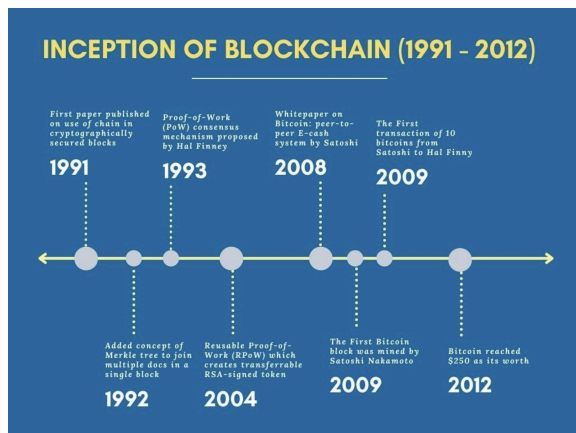
The development of blockchain technology was initiated in 1991, when two American scientists, W. Scott Stornetta and Stuart Haber were working on a program that could record and backup online documents securely through methods of cryptography, later on, they would publish an article on the use of a chain to cryptographically secure blocks to protect the integrity of past information. These scientists introduced the concept of cryptography as a safe encryption method for digital storage of information.

Introduction of Bitcoin (2008 - 2009)

In the late 2008s, there was an anonymous proposal named “Bitcoin: Peer-to-Peer E-cash system” by the pseudonym “Satoshi Nakamoto”, which is considered the creator(s) of both the Bitcoin platform and who also implemented the first blockchain as the public ledger for transactions made using bitcoin. The proposal of bitcoin established the concept of mining coins, the first ever existing **cryptocurrency**, that ensured verifying transactions among **decentralized system** in network by using **hash cash** and **Proof of Work (PoW)** algorithm with software-based computing functions. Bitcoin can be gained in exchange for products, services, or other currencies, and it is created by a process in which users can send and receive bitcoins using "Wallet" software on a mobile device or any web application.

Bitcoin aimed to be a viable alternative to fiat currency. A secure, decentralized, global currency that could be used as a medium of exchange. In the first year, the currency was worth \$0. (Now, it has a total market capitalization of \$126 million). (*Trade Finance Global, n.d*). The Bitcoin whitepaper was made available for download and became open source, enabling anyone with an inclination to expand upon the

programming already in place. As a result, other "altcoins" cryptocurrencies that aimed to improve Bitcoin were released, such as Litecoin, Ethereum, and Namecoin.



<https://www.shiksha.com/online-courses/articles/evolution-of-blockchain-technology/#sec1>

CAUSES

The Rise of blockchain since 2009 aims to facilitate maners to complete digital monetary transactions among users. Bank transactions have presented multiple failures regarding technological issues, transference limitations, additional transfer charges, and the common possibility of hacked accounts. Throughout history, the probability of bank accounts being high is relatively high as numerous methods have been used to develop hacks in bank transactions, giving cybercriminals access to personal data and enabling them to steal

money from bank accounts, factors that make bank transactions more inefficient, insecure, and untrustworthy. The concept of blockchain ensured transparency within transactions, supported with a complex security system that protects all financial data.

Concept of Cryptocurrencies:

Cryptocurrency is a digital currency that is verified and secured through the method of **cryptography**, and that has the ability to permanently record data based on a network distributed among multiple computers (Investopedia, 2022). The key aspect that allows a record of the financial information is maintained through a decentralized system rather than a centralized authority. In such a decentralized system, there is no single centralized authority that makes decisions on behalf of all the parties. Instead, each party, also called a peer, makes local autonomous decisions towards its individual goals which may conflict with those of other peers (Peer to Peer system- P2P).

Blockchain allows the data in a database to be spread out among several networks of computers or devices running software for



the blockchain at various locations. Because of this distribution, the information and history in financial accounts are irreversible. Such a record could be a list of transactions (cryptocurrency), but it also is possible for a blockchain to hold a variety of other information such as legal contracts, state identifications, medical histories or a company's inventory.

How does blockchain Works?

Blockchain works through a combination of three leading technologies that make this system work, which are:

1. Cryptographic keys
2. A peer-to-peer network containing a shared ledger
3. A means of computing, to store the transactions and records of the network

First, the cryptography consists in two keys, a public key and a private key, both help in performing successful transactions between two parties. The public key is an address that is exposed to the network and which the individual can share with anyone for developing financial movements, the private key consists of an **alphanumeric**

code that only the user has knowledge of and that gives access to the funds stored in the account, it can be considered as the “password”. Each blockchain user has these two keys, which they use to produce a secure digital identity reference, which is the most important aspect of blockchain technology. In the world of cryptocurrency, this identity is referred to as a “digital signature” and is used for authorizing and monitoring all transactions which are protected by strong and complex encryption algorithms. The digital signature is merged with the peer-to-peer network; numerous individuals who act as authorities use the digital signature in order to reach a consensus on transactions, among other issues. When they authorize a deal, it is certified by a mathematical verification, which results in a successful secured transaction between the two network-connected parties.

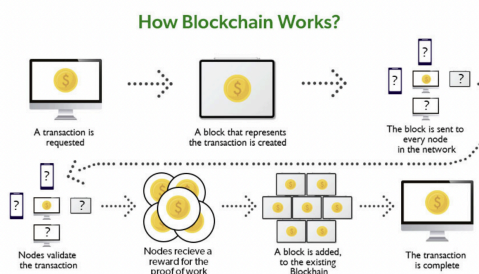
The blockchain collects transaction information and enters it into a “block”, and once the block is full, the information is run through an encryption algorithm, which creates a hexadecimal number called the **hash**. Different types of cryptocurrencies use different encryption algorithms (For example, Bitcoin uses “SHA256”/ Ethereum

uses "ETHASH"/ Litecoin uses "SCRIPT") The hash is then entered into the following block header and encrypted with the other information in the block. This creates a series and collection of blocks from multiple financial accounts' transactions that are chained together, which is referred to as the **ledger** (basis of blockchain). As transactions progress, the entire network works simultaneously, trying to "solve" the hash to validate the blocks, this work is made by actors referred to as the "miners". Miners are actors who participate in cryptocurrency transactions by solving complex mathematical problems that can validate a transaction and add blocks to the blockchain (mining) in exchange for a bitcoin reward, a process called the "**proof of work**". Each miner generates a random hash except for the "**nonce**," short for the number used once. Every miner starts with a nonce of zero, which is appended to their randomly generated hash. If that number isn't equal to or less than the target hash, a value of one is added to the nonce, and a new block hash is generated.

Furthermore, carrying out a transaction between two parties using cryptocurrencies

such as bitcoin would conduce to the following:

1. Inserting a transaction value and wallet address on the blockchain platform
2. Establishing a hash encryption algorithm for all details of financial information (private key)
3. Encrypted and digitally signed transaction
4. Output is transmitted across the global network (through public key) for miners across the globe to solve the problem and validate the transaction
5. Message can be decrypted by second-party private key



<https://www.geeksforgeeks.org/how-does-the-blockchain-work/>

Types of Blockchain

1. Private Blockchain Networks



Managed by one authority, this blockchain operates within private networks that are usually used by private businesses and organizations. Private entities use private blockchains to monitor or modify accessibility preferences, parameters of the network, and other security features.

Example: Quorum (open-source platform that is designed for the specific needs of enterprises and businesses)

2. Public Blockchain Networks

Cryptocurrencies such as Bitcoin are generated by public blockchain networks, which play a role in promoting the use of **public distributed ledger** technology. Within public blockchain data is distributed across a peer-to-peer network, rather than being stored in a single location. A consensus algorithm is used for verifying information authenticity, some of these methods are the **proof of stake** (PoS) and proof of work (PoW).

Example: Bitcoin/Ethereum (two types of cryptocurrencies)

3. Permissioned Blockchain Networks

Permissioned blockchain networks are private blockchains that allow special access for authorized individuals. Organizations typically set up these types of blockchains to get the best of both worlds, and it enables better structure when assigning who can participate in the network and in what transactions.

Example: Ripple (real-time gross settlement system)

4. Consortium Blockchains

Consortium blockchains are optimal and commonly used for collaboration with multiple organizations, these have both public and private components, except multiple organizations will manage a single consortium blockchain network. Although these types of blockchains can initially be more complex to set up, once they are running, they can offer better security.

Example: R3 Corda (platform designed for financial institutions)

5. Hybrid Blockchains

combination of both public and private blockchains. In a hybrid blockchain, some parts of the blockchain are public and transparent, while others are private and accessible only to authorized and specific



participants. This makes hybrid blockchains ideal for use in those cases where a balance is required between transparency and privacy. Example: Komodo (KMD -community currency of the Komodo Platform ecosystem)

6. Sidechains

Different blockchains that run parallel to the main blockchain, allowing for additional functionality and scalability. Sidechains enable developers to experiment with new features and applications without affecting the main blockchain's integrity. For example, sidechains can be used for creating decentralized applications and to implement specific consensus mechanisms. and can also be used to handle transactions of the main blockchain to reduce congestion and increase scalability.

Example: Polygon for Ethereum and Rootstock for Bitcoin

7. Blockchain Layers

Refer to the concept of building multiple layers of blockchains on top of each other. Each layer can have its own consensus mechanism, rules, and functionality which can interact with other layers. This ensures

greater scalability, as transactions can be processed in parallel across different layers. Example: Lightning Network, built on top of the Bitcoin blockchain (second layer solution that enables faster and cheaper transactions by creating payment channels between users)

REPERCUSSIONS

Environmental Implications

Blockchain technology has a significant carbon footprint due to its energy-intensive process of verifying transactions and creating new blocks on the blockchain

The rigorous processes that the blockchain system develops demand mass quantities of energy, which is required for its functions such as mining, by making a large amount of simultaneous calculations that computers have to develop for hours, maintenance of financial data storage of all blockchain users, and formulating hash codes and cryptographic encryption. The overall energy consumption of blockchain is the outcome of the release of significant amounts of greenhouse gas emissions which contribute to the long-term consequences of climate change. Bitcoin presently uses around 110 Terawatt Hours



each year, or about the yearly energy consumption of small nations like Malaysia or Sweden, according to the Cambridge Centre for Alternative Finance (CCAF).

Questioning the Future of Blockchain

The concept of blockchain has been the subject of debate by multiple economists who have skeptical considerations of cryptocurrency and overall the blockchain technology and to what extent this technology can be beneficial for individuals and for the global digital economy. Some factors of blockchain enter into discussion regarding possible concerns that companies or individuals who are very involved in the use of cryptocurrencies could experience and how there would be a huge economic loss regarding actions. First, when resources are allocated to cryptocurrency transactions, these are completely irreversible, hence, the possibility of having refunds is null. Energy demands are tremendous and contribute to great emissions of greenhouse gases such as carbon dioxide, also taking into account that there are very few countries that possess the economic capabilities for investing in high technology that can sustain blockchain

operations and invest the required amounts of electricity and energy. Moreover, cryptocurrencies bring lots of promised benefits that haven't occurred yet; theories assuming that cryptocurrencies and blockchain technology can make finance and lending more affordable are assumptions that cannot be possible in the short or middle term. Furthermore, the evaluation of whether the rise of blockchain is going to be beneficial for the global economy and could provide optimization of investments and financial movements cannot be considered a rapid solution since the adoption of cryptocurrencies is a choice that not all financial institutions or international organizations opt to make, and despite blockchain can have positive aspects at individual or company level, but most if not all profits for the global economy growth or strengthening are subjected into very long term return.

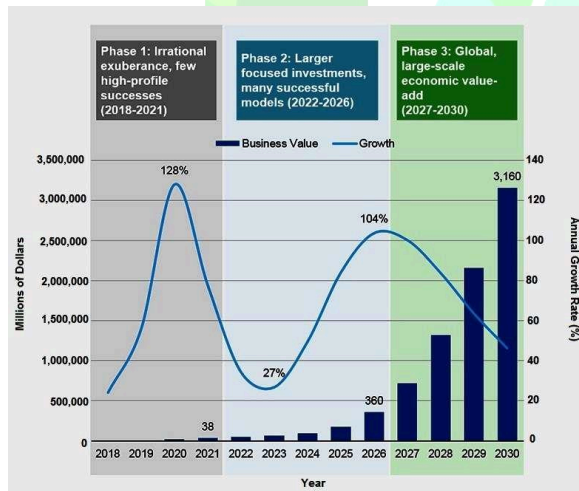
"The Bullish Case for Crypto"

The idea of the "bullish case for crypto" describes an optimistic view of cryptocurrencies' future, especially with regard to their potential for expansion and financial gain. This prediction is based on a number of variables, such as the growing

usage of cryptocurrencies by organizations and individuals, the creation of new blockchain applications, and the possibility that cryptocurrencies might operate as a hedge against inflation and unstable economies. Additionally, because of their potential for large returns and lack of association with other asset classes, some experts and investors see cryptocurrencies as a competitive alternative to conventional investments like stocks and bonds.

point it is expected that in 2026, the blockchain market will arrive to 67.4 billion dollars. This is due in part to increased investment in the technology, extensive use of blockchain solutions in banking and cybersecurity, as well as high adoption of blockchain solutions for payment, smart contracts, and digital identities. Additionally, multiple companies are investing in stocks and purchasing assets in blockchain market. (See [7 Best Blockchain Stocks to Buy in 2023 | The Motley Fool](#))

Wall Street Blockchain Alliance (WSBA)



Blockchain investment growth rate forecast (2018-2030): https://www.researchgate.net/figure/Blockchain-investment-growth-rate-forecast-2018-2030_fig1_343926140

The Wall Street Blockchain Alliance was founded in 2015, and made to establish a non-profit trade association committed to advancing the adoption of blockchain technology throughout global markets. Serving as an impartial and independent organization, WSBA fosters cooperation and education among its wide-ranging international membership, which includes professionals from the banking, investment management, legal, accounting, and technology sectors. The company interacts with a broad range of stakeholders, such as innovators in technology, regulators, legislators, and players in the worldwide market. This involvement is shaped by the organization's working groups, direct

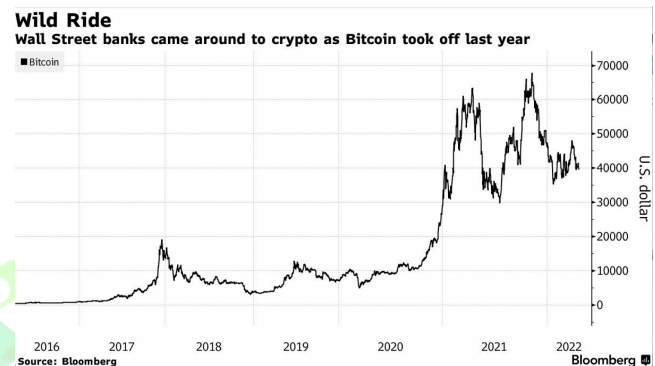
CURRENT SITUATION

The use of blockchain technology by international companies is increasing, to the

correspondence, events, and comment letters, all of which are intended to promote an insightful public conversation on blockchain technology, digital assets, and smart contracts.

Worldwide organizations are leveraging blockchain technology with the common aim of removing **third-party administrator** interventions for executing smart contracts, a computer code is run on top of the blockchain whereby the parties set pre-defined rules beforehand. The finance industry also has been adopting blockchain systems for implementing smart contracts, digital payments through cryptocurrency, and higher levels of security and non-corruptibility, and its record-keeping abilities make the blockchain technology useful for finance functions and the industry among banks and financial institutions, to date, most companies had adopted bitcoin currencies. Examples of companies that have implemented these technologies are major financial companies, including **JP Morgan Chase & Co, HSBC Holdings Plc**, and others, which are actively deploying blockchain technology for various applications. Wall Street Blockchain Alliance and the involvement of major financial companies demonstrates the increasing

integration of cryptocurrencies (especially bitcoin) blockchain technology in the Wall Street and financial sector. (*Bloomberg, 2023*)

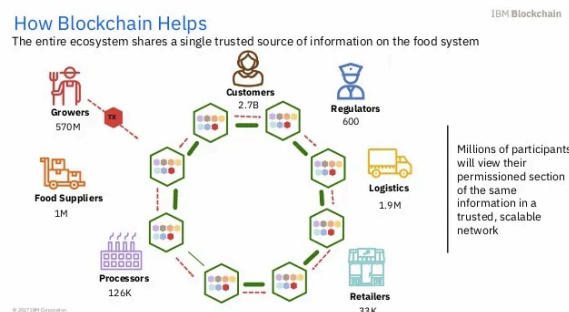


Wall street average company investment in Bitcoin:
<https://www.bloomberg.com/news/articles/2022-04-25/wall-street-firms-make-crypto-push>

Case Study 1: Food Trust Blockchain by IBM

IBM (International Business Machines Corporation) Food Trust is a blockchain-based platform that gives users access to a shared, permission-based view of data regarding the food ecosystem. It facilitates easy data posting and controlled information sharing. Participants can use the solution to access and manage their encrypted blockchain data, which is all maintained on blockchain ledgers and secured by the strongest tamper-resistant, commercially available encryption possible. IBM Food Trust aims to promote

transparency and confidence throughout the food supply chain, from producers to consumers, and to make sure that this helps the food system prosper. By leveraging blockchain technology, IBM Food Trust seeks to enable longer product shelf lives, reduce waste, ensure faster traceability, and provide better access to shared information, ultimately empowering the industry to meet higher standards for transparency and trust.



<https://medium.com/georgetown-financial-technology-newsletter/farm-to-fork-blockchain-in-the-food-ecosystem>

Case Study 2: Medical Histories

The safe administration and archiving of medical history is becoming more and more dependent on blockchain technology. Blockchain protects patient medical records' security and integrity by utilizing distributed ledger technology which allows this blockchain to compile an exhaustive and immutable medical history that includes

diagnosis, test results, and treatment plans. Because blockchain technology is decentralized, approved healthcare practitioners, hospitals, and pharmacies can easily access patient data, facilitating information sharing and enhancing care coordination. Furthermore, by preventing unwanted access and potential breaches, blockchain technology improves the security of medical data. Therefore, the application of blockchain technology in healthcare has the potential to transform security, privacy, and access to medical records, ultimately enhancing the healthcare experience. Some platforms that make use of blockchain technology are MEDICHAIN, MedRec, Boehringer Ingelheim, and IBM.

Case Study 3: Improvement of Walmart Supply Chain Delivery Quality

Blockchain technology has been effectively applied by Walmart to improve supply chain management, particularly concerning delivery quality. Walmart Canada used blockchain technology to resolve payment disputes with its third-party freight carriers, resulting in significant operational efficiencies and a decrease in payment disputes. Walmart has been able to improve



food safety for consumers by reducing the time it takes to trace a product's origin from days to seconds by implementing a blockchain-powered traceability solution. Moreover, real-time visibility into product movement and authenticity has been made possible by the use of blockchain, which has facilitated faster supply chain operations and decreased the possibility of fake goods entering the system, all of which contribute to the supply chain's overall transparency. Implementing this technology has demonstrated the potential of blockchain technology to drive visibility and transparency throughout the entire supply chain, ultimately improving delivery quality and overall supply chain management.

ORIENTATION AND OBJECTIVE OF THE COMMITTEE

The committee should discuss the effectiveness of blockchain and arrive to conclusions of whether the rise of blockchain can be a huge benefit or drawback to global economic growth. In this topic, it is expected for delegates to engage more in debate and active discussion about the multiple aspects of this program, additionally, we expect for delegates to

have solid arguments regarding their company's perspective on the usage of blockchain. Nevertheless, directives will be permitted, as there will be a live simulation of a blockchain system, where delegates will be able to purchase/ sell or make transactions through cryptocurrencies. This topic is expected to have a balance between sufficient debate regarding the advantages or disadvantages of blockchain and cryptocurrencies by considering companies that are active users in the system and taking into account the mentioned case studies specified in this guide.

GUIDING QUESTIONS

1. Is your company in favor of the utilization of cryptocurrencies?
2. Has your company developed a cryptocurrency that is currently part of the blockchain?
3. What is your company's stance regarding the implementation of blockchain systems?
4. Has your company any assets or made direct investments in blockchain technology?

5. Has your company adopted any type of cryptocurrency for performing transactions?
6. Which type of blockchain suits your company's structure and parameters most?

GLOSSARY:

- **Cryptocurrency:** digital currency, which is an alternative form of payment created using encryption algorithms
- **Alphanumeric code:** string that contains both letters and numbers and sometimes also includes special characters
- **Hash:** a function that meets the encrypted demands needed to secure information
- **Ledger:** digital or physical log that records transactions associated with a financial system
- **Public Distributed Ledger:** database that is synchronized and accessible across different sites and geographies by multiple actors
- **Proof of work (PoW):** blockchain consensus mechanism that incentivizes network validation by

rewarding miners for adding computational power and difficulty to the network

- **Proof of Stake (PoS):** the approach used in the cryptocurrency industry to help validate transactions
- **Nonce:** number or value that can only be used once. Nonces are often used on authentication protocols and cryptographic hash functions.
- **Third Party Administrator (TPA):** Company that provides operational services such as claims processing and employee benefits management, under contact with the company.
- **Bullish:** Being Optimistic about a stock's value

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