



# The End of the Beginning

Central Banking, Bitcoin and the Pricing Mechanism



**unchained**  
capital

# 21 Minute Crash Course

---

- **The World Changed in March**
- **Recent Fed Actions**
- **Historical Context of QE**
- **The Experts Are Not Experts**
- **The Pricing Mechanism**
- **Bitcoin vs. The Fed**



# Before we start, remember this throughout the presentation



## Last Three Months (13 weeks)

Average **bitcoin** created each week: **11,394**

Average **dollars** created each week: **\$226 billion**

Total **bitcoin** issued: **148,125**

Total dollars created: \$2,938,499,000,000

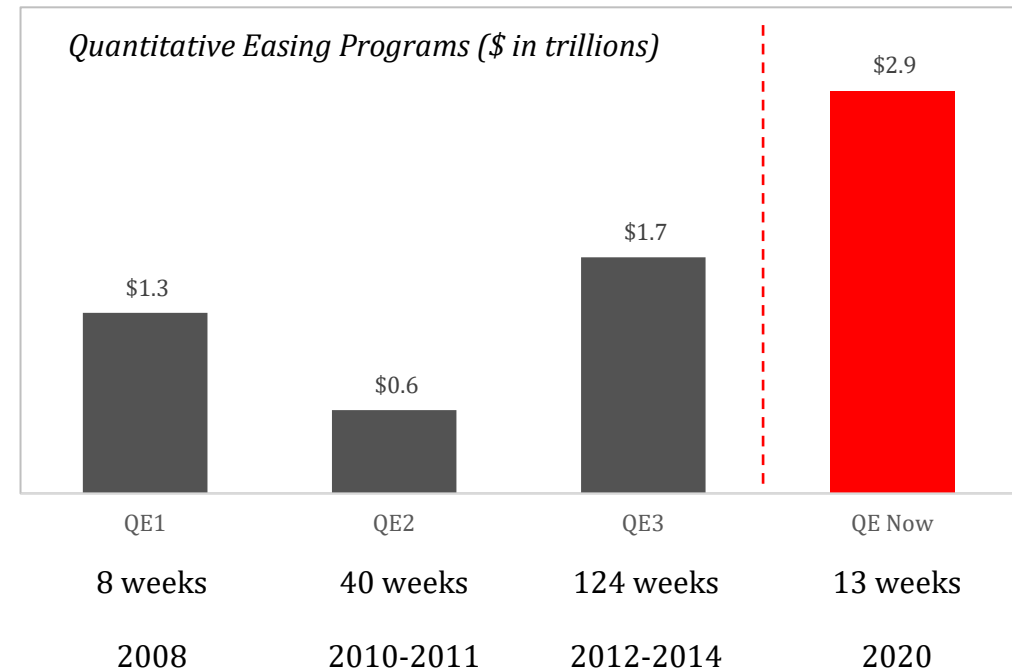
Equals: ~\$20 million dollars for each bitcoin

| Week of:       | Bitcoin Issued | Dollars created by Fed     |
|----------------|----------------|----------------------------|
| March 4, 2020  | 13,638         | \$82,870,000,000           |
| March 11, 2020 | 12,788         | \$70,404,000,000           |
| March 18, 2020 | 10,900         | \$356,301,000,000          |
| March 25, 2020 | 10,013         | \$586,066,000,000          |
| April 1, 2020  | 13,238         | \$557,329,000,000          |
| April 8, 2020  | 13,213         | \$271,534,000,000          |
| April 15, 2020 | 14,263         | \$284,746,000,000          |
| April 22, 2020 | 12,800         | \$205,249,000,000          |
| April 29, 2020 | 12,600         | \$82,793,000,000           |
| May 6, 2020    | 13,100         | \$65,491,000,000           |
| May 13, 2020   | 10,850         | \$212,807,000,000          |
| May 20, 2020   | 5,200          | \$103,031,000,000          |
| May 27, 2020   | 5525           | \$59,878,000,000           |
| <b>Total</b>   | <b>148,125</b> | <b>\$2,938,499,000,000</b> |

# The Fed's "You're Gonna Do What?" moment in perspective



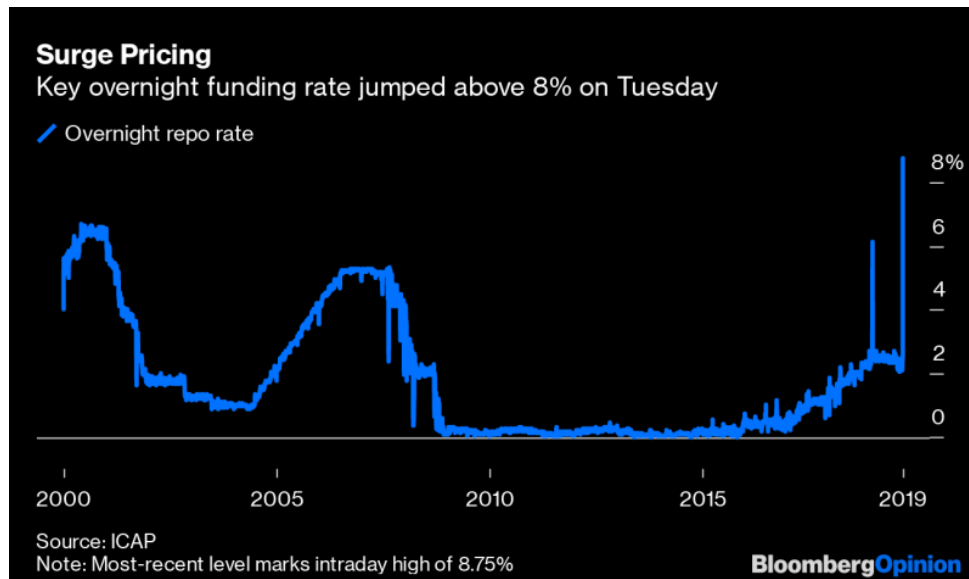
In response to the global economic shutdown and in the midst of a collapse in financial markets, the Fed acted quickly to flood the market with \$2.9 trillion new dollars (and counting); same bag of tricks, just bigger this time.



# Fallout from the global pandemic is providing cover for instability already existent and apparent in the financial system



While it is difficult to think back to what the world looked like before March, instability in the financial system was already reappearing; the repo market broke (a massive \$2.2 trillion short-term funding market) in mid-September 2019 and an oil war began just before mass government-led shutdowns started. Note that both of these issues existed and were independent of any pandemic related shutdown.



1

## MARKETS

### Oil nose-dives as Saudi Arabia and Russia set off 'scorched earth' price war

PUBLISHED SUN, MAR 8 2020-9:01 AM EDT UPDATED MON, MAR 9 2020-5:33 PM EDT



Natasha Turak  
@NATASHATURAK

**NOW, THEREFORE, I, GAVIN NEWSOM**, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567, 8627, and 8665 do hereby issue the following Order to become effective immediately:

#### IT IS HEREBY ORDERED THAT:

- 1) To preserve the public health and safety, and to ensure the healthcare delivery system is capable of serving all, and prioritizing those at the highest risk and vulnerability, all residents are directed to immediately heed the current State public health directives, which I ordered the Department of Public Health to develop for the current statewide status of COVID-19. Those directives are consistent with the March 19, 2020, Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response, found at: <https://covid19.ca.gov/>. Those directives follow:

ORDER OF THE STATE PUBLIC HEALTH OFFICER  
March 19, 2020

2

## Executive Order

BY THE  
GOVERNOR OF THE STATE OF TEXAS

Executive Department  
Austin, Texas  
March 31, 2020

EXECUTIVE ORDER  
GA 14

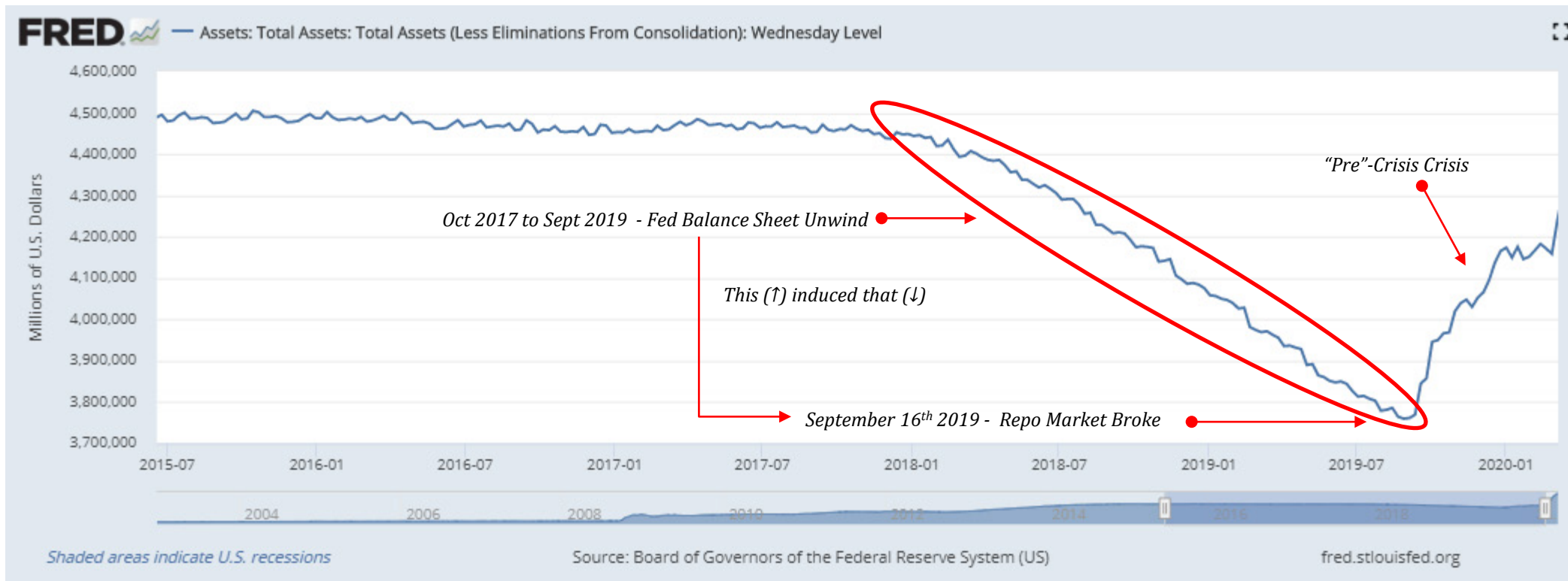
*relating to statewide continuity of essential services and activities during the COVID-19 disaster.*

3

# Before things really got bad, the Fed had already provided over \$500 billion in emergency funding to the repo markets



*Would the Fed have attempted to unwind its balance sheet if it actually understood the impact of draining ~33% of all the cash in the banking system?*

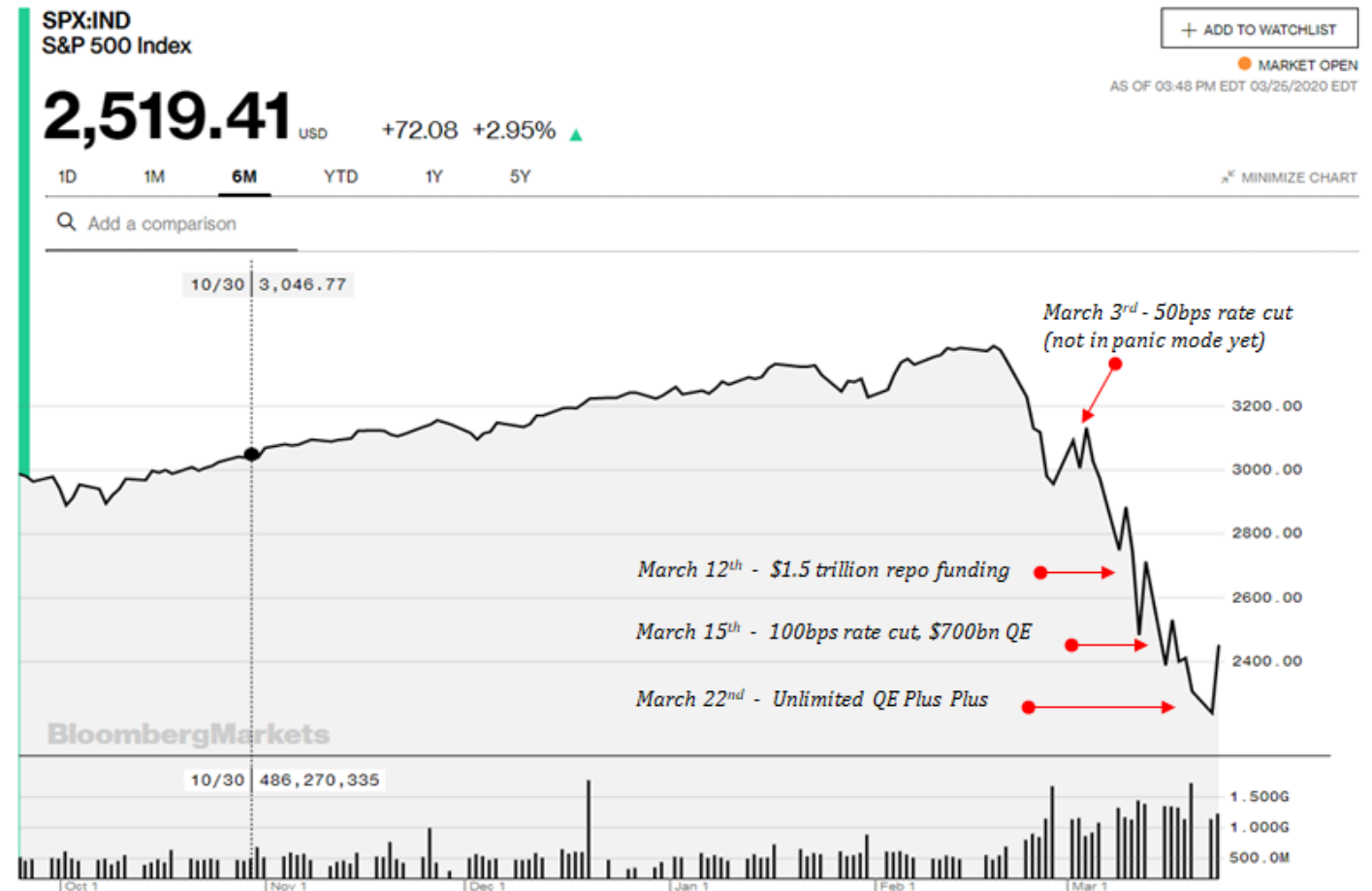


# After the Saudis set off an oil war on March 8<sup>th</sup>, the Fed went into hyperdrive, all before states officially shut down



The global pandemic was an accelerant for sure, but never forget, one of the largest short-term funding markets had already broken, requiring \$500 billion in emergency funding before formal QE was ever announced or there was ever a sign of a pandemic.

Also recognize that massive imbalances in the oil market do not just form in a matter of weeks, it built up over years and it may have been exacerbated by the economic shutdown but it was not created by it.

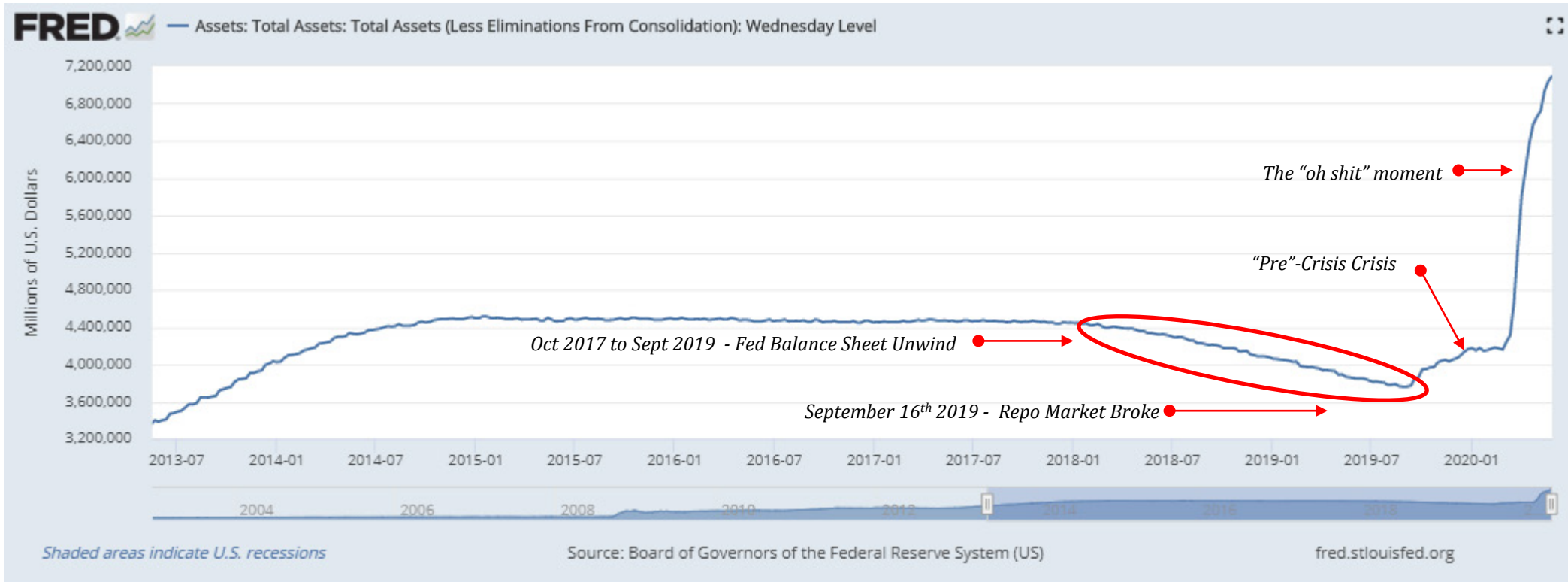


Source: BloombergMarkets (chart annotated by author)

# As the pandemic got real, with the repo market and oil wars as a backdrop, the Fed began to make 2008 look like peanuts



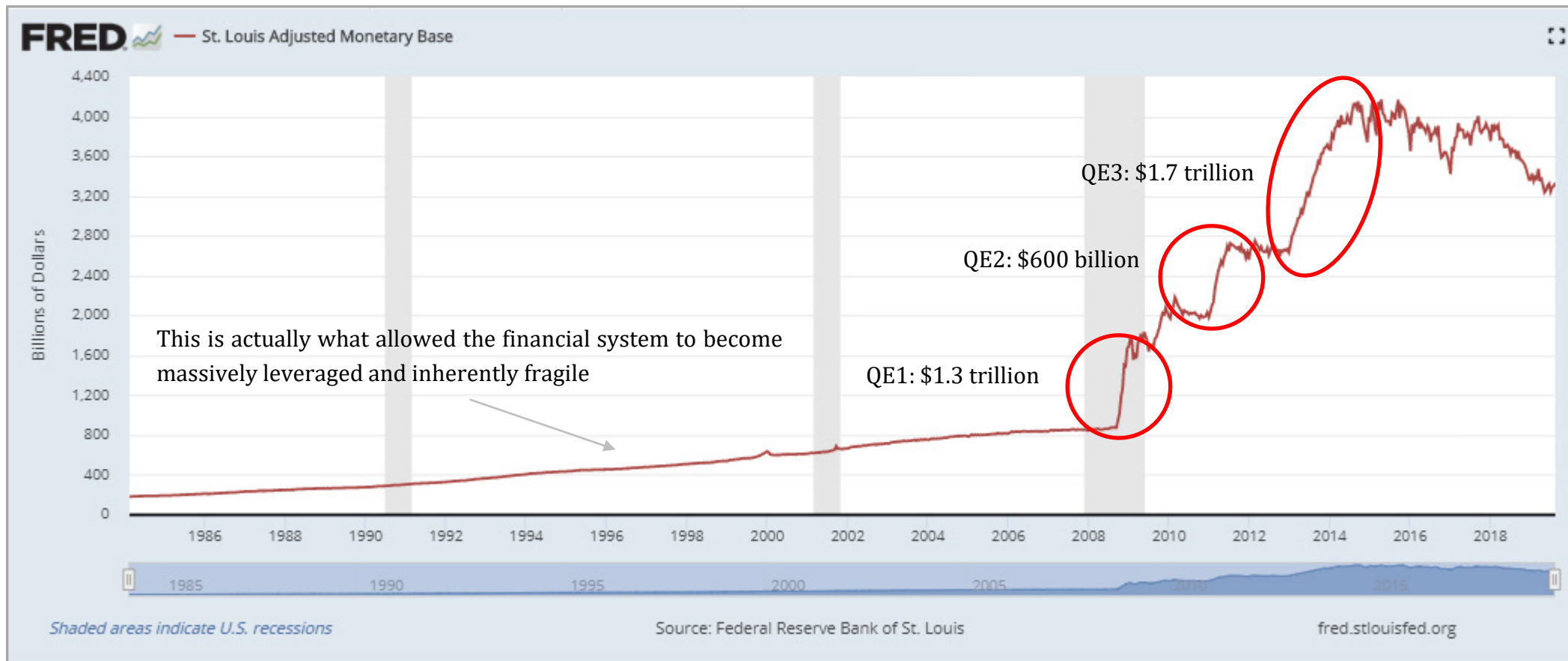
*This is what debt monetization looks like; if anyone tells you that the Fed is not monetizing debt, they are either lying or do not understand the Fed.*



# A Walk Back in Time - 2008 Financial Crisis Revisited



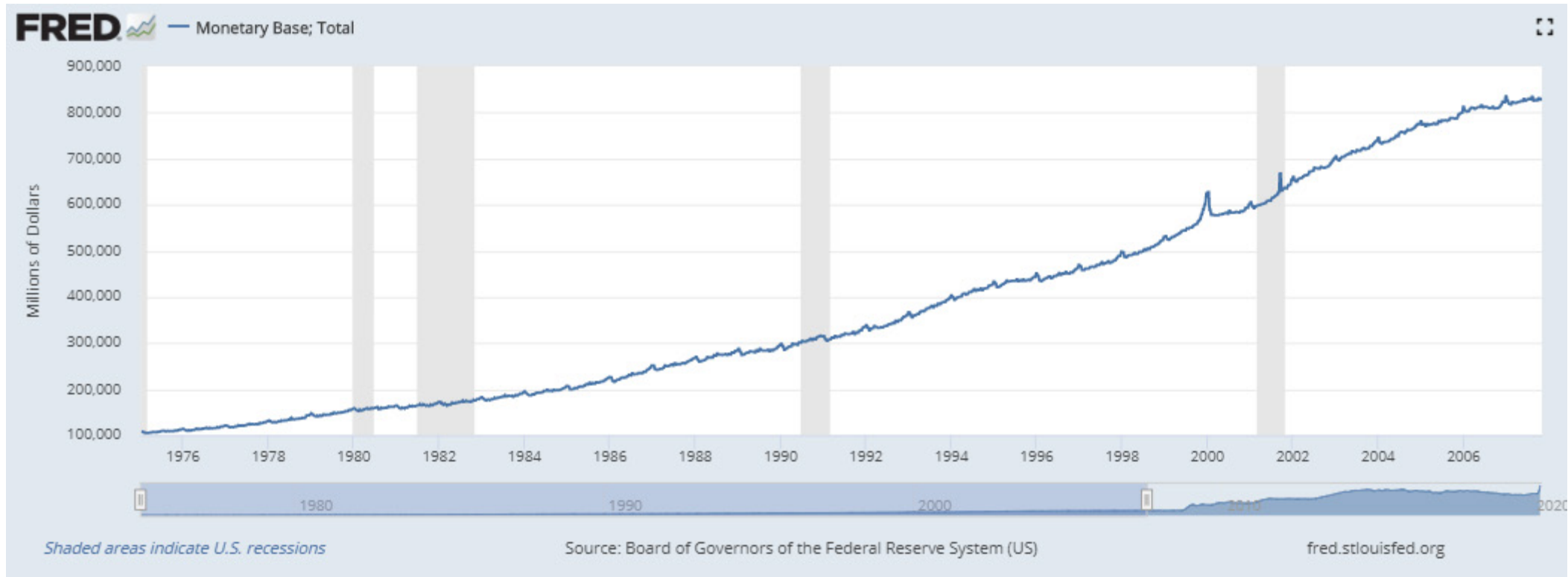
Just as with the crisis today, the match that lit the fire in 2008 (subprime, CDS) was confused as the cause, when it was really the accelerant, overshadowing the inherent source of instability: a massively leveraged financial system, fueled by monetary debasement



# Monetary debasement – Decades Before the 2008 Crisis



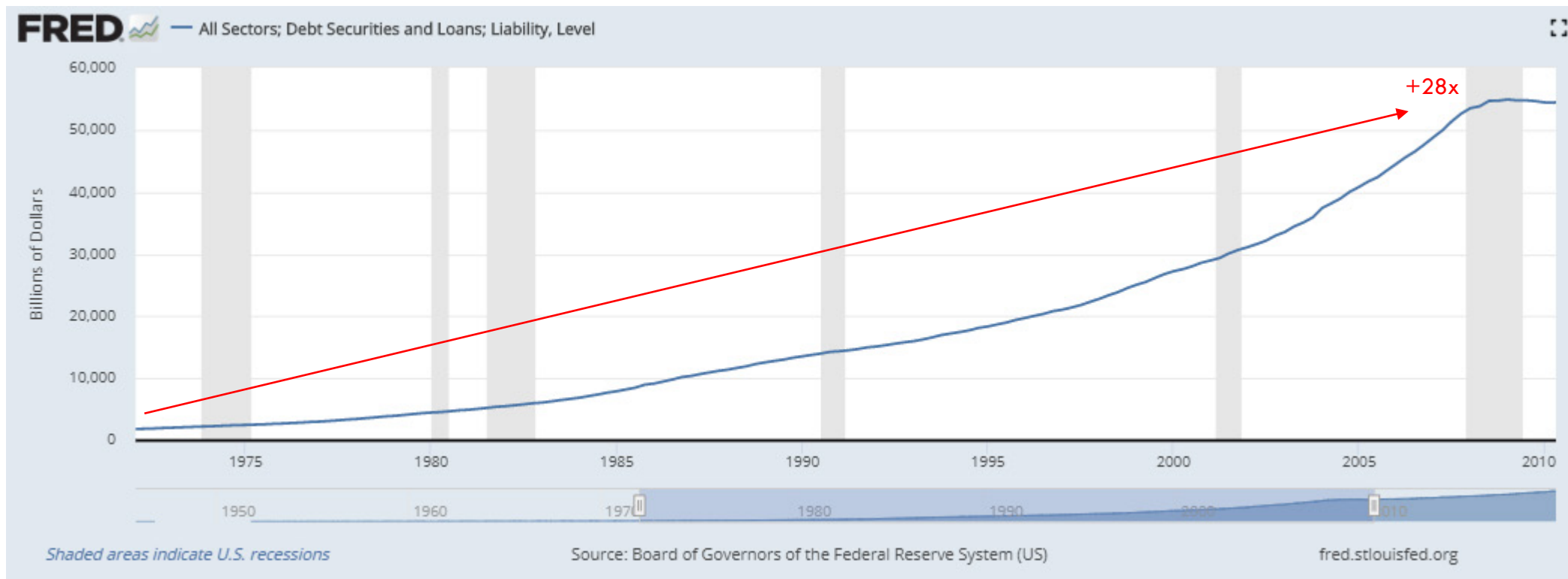
*Perspective is everything; in the four decades leading up to the 2008 crisis, the money supply was increased by 700%, or approximately \$700 billion; note that the Fed's actions since March (+\$2.9 trillion) is 315% more than what occurred in nearly 40 years.*



# Monetary debasement is what allows the credit system to expand unchecked and creates instability & fragility



*The credit system expanded from \$1.8 trillion to \$52.5 trillion pre-2008 crisis, an increase of 28x; in 2008, each dollar was leveraged 65 times over (for ever \$1 dollar, there was \$65 dollars of debt) and there was only \$350 billion dollars in the banking system (150:1, debt to dollars).*



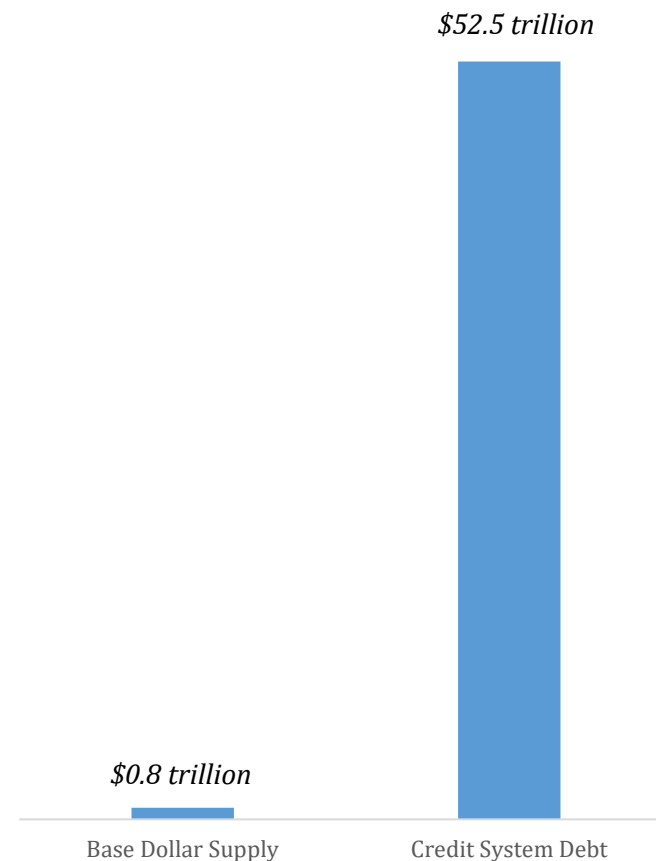
# If there were one chart that explains the 2008 financial crisis, it is this one – debt vs. dollars



Subprime caused a systemic shock to the system; it exposed decades of imbalances that had accumulated in the financial system.

But, the issue was still not really subprime; subprime was a symptom. The 800-pound gorilla was the system leverage that was primed to break however or whenever any material shock was introduced into the credit system, subprime or not.

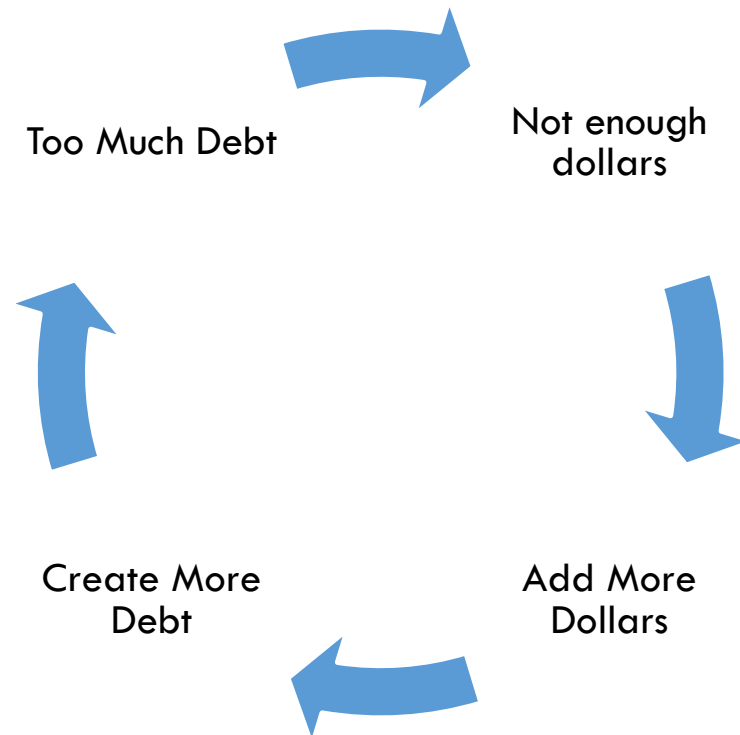
And the extent to which the system had become so leveraged would never have been possible if the base money supply had not expanded 8x over the decades prior; had it not, the credit system would have pulled back far sooner and with far less severe consequences. Big tree fall hard.



# How QE Works – The Problem, Not the Solution



Too Much Debt, Not Enough Dollars, Add More Dollars, Create More Debt, Too Much Debt...



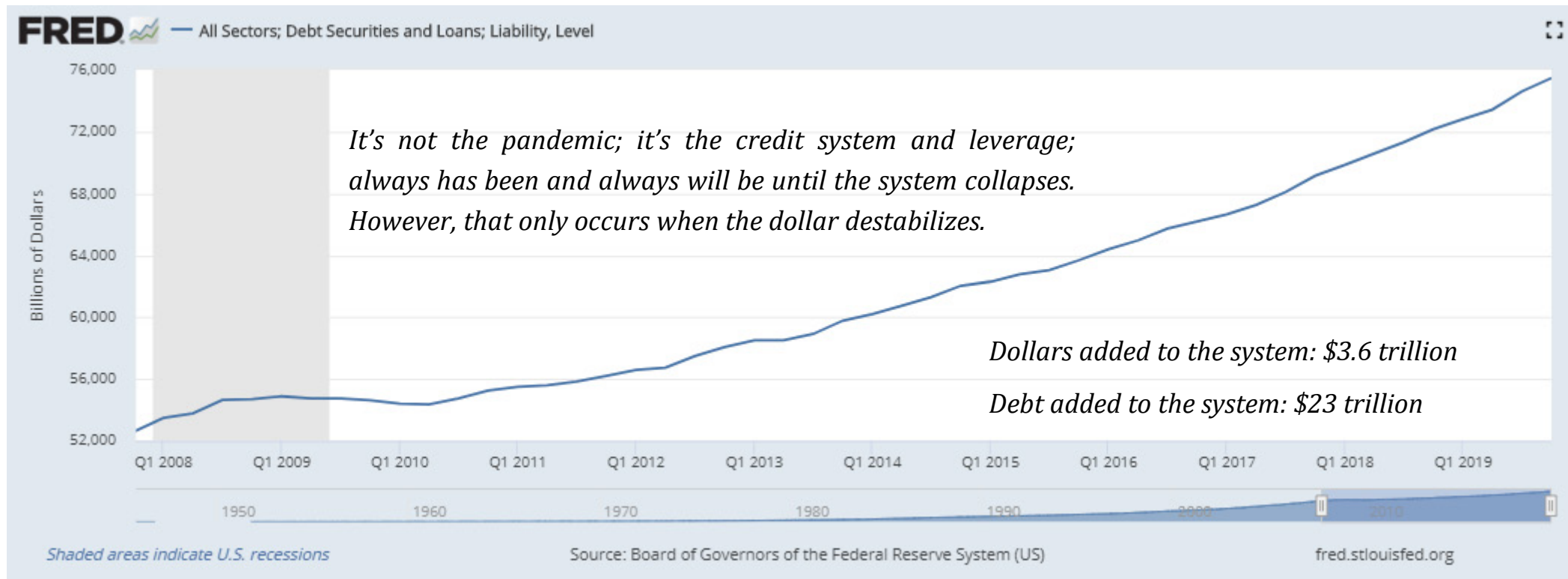
QE cannot solve a debt problem; it creates the debt problem. The introduction of new dollars is meant to stabilize the credit system, such that existing debt levels can be sustained, but it is the existence of additional dollars that then induces credit expansion, ultimately resulting in there eventually being far too much debt once again. It is a vicious cycle.

By its very nature, QE is more like heroin than an antibiotic; the more applied to a financial system, the more dependent that system becomes on it and the worse off when it is removed.

# A Larger Credit System with \$23 Trillion More Debt and Still Too Few Dollars; Bigger Tree Fall Harder



*In 2008, the credit system was unstable and unsustainable (\$52 trillion); now because of QE, it is even larger and more fragile (\$75 trillion).*

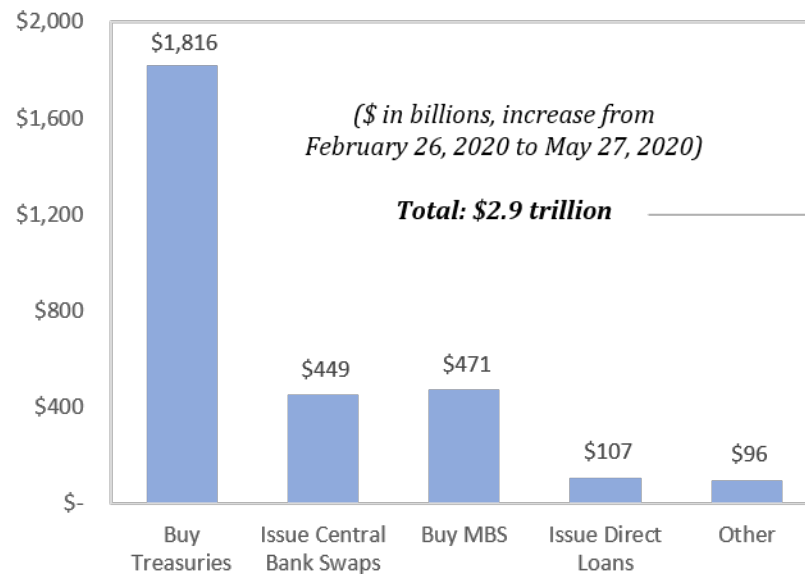


# And this is where we stand today, even after the Fed's creation of \$2.9 trillion new dollars

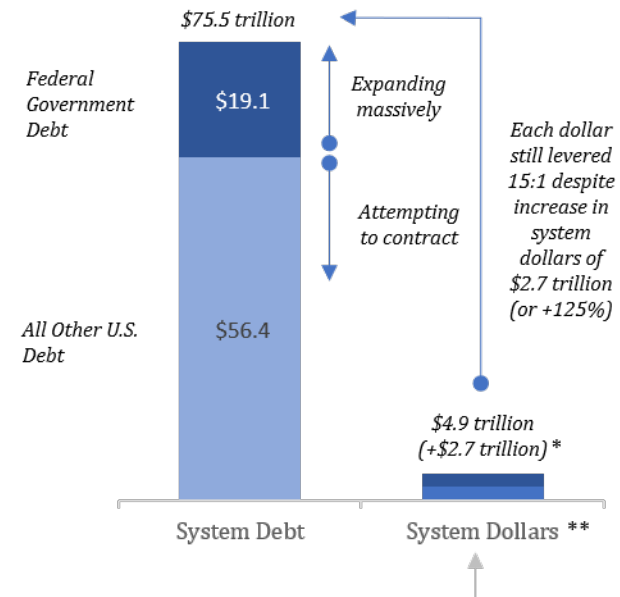


*Despite increasing the supply of dollars by \$2.9 trillion, the credit system remains leveraged at a ratio of 15:1 (debt-to-dollars).*

**How The Fed Added New Dollars into the Financial System**



**U.S. Credit System Leverage Dynamics**



\* Difference of ~\$200 billion relative to \$2.9 trillion dollars created reflects net physical currency withdrawals which have left the banking system plus increase in RRP.

\*\*System dollars defined as dollars in the banking system, dollars held by the Treasury and dollars held by Foreign institutions; excludes physical currency in circulation as these are dollars that exist outside the banking system and are generally not available to satisfy banking system liabilities (dollar denominated debt).

# Besides Ron Paul, no one ever asks whether central banks are **THE actual problem**, rather than part of the solution, **WHY?**



No one questions the obvious. Are central banks part of, if not central to, the problem?

Instead, central banks are always called upon as the quick-fix solution. It is the definition of insanity. Trying the same thing over and over but expecting a different result. Only in this case, the “solution” that is attempted over and over is not just NOT the solution, it is actually the single greatest source of the problem.



# Central Banking is a Monoculture



These two worlds cannot co-exist because they diverge at the most fundamental level

The Fed (and all global central banks) is 100% this side of the equation; there is not debate as to “IF”. Instead, it is how, when and to what extent to manipulate the money supply

## Mainstream Economics



Active Management of the Money Supply is Good



Let's do it; to what extent and when?

## Austrian Economics



Active Management of the Money Supply is Bad



Don't do it; whatever you do, don't do it

# Simplifying the Debate Down to Brass Tax: The Pricing Mechanism



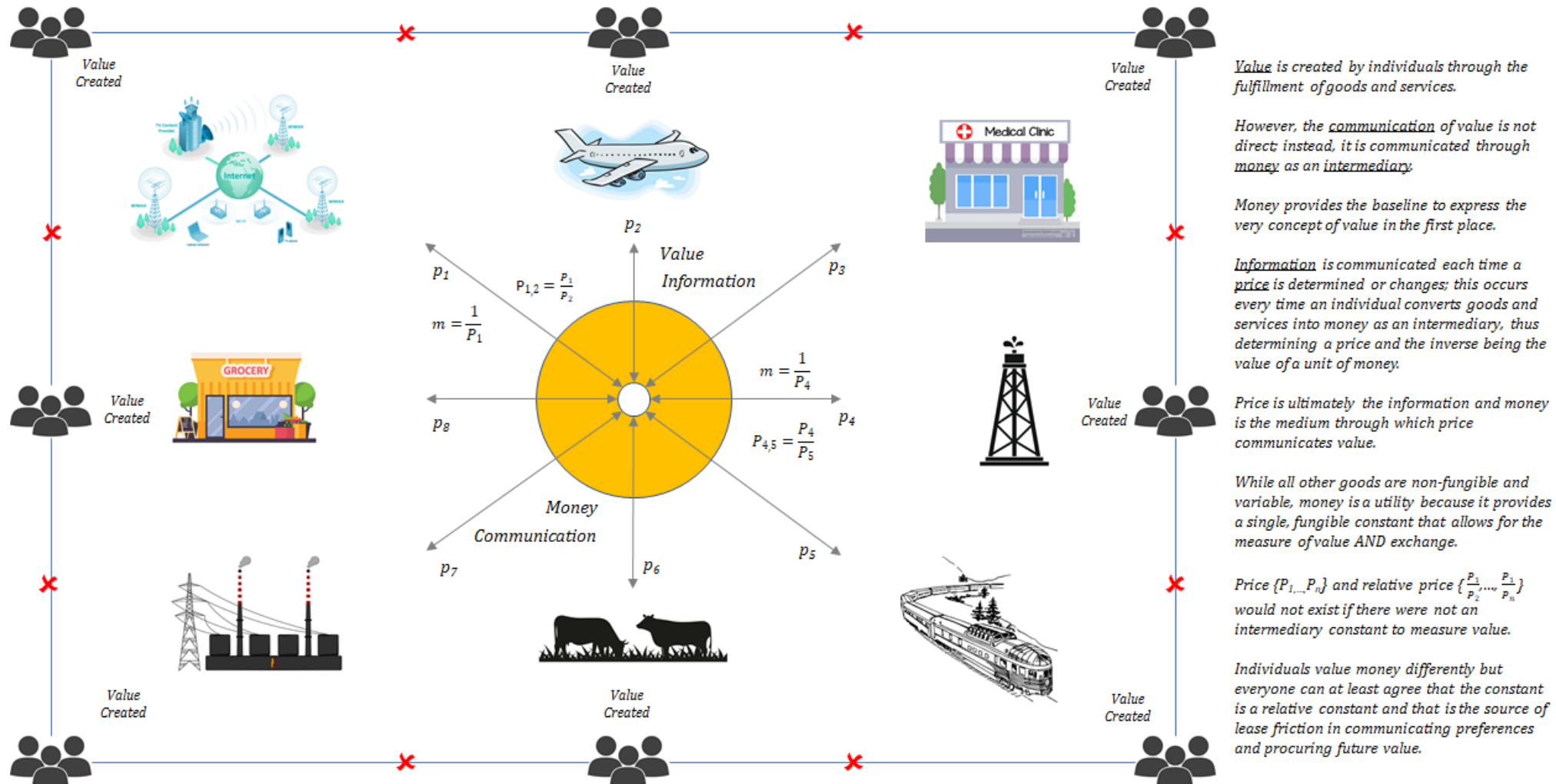
## Friedrich Hayek – The Use of Knowledge in Society

*“We must look at the price system as such a mechanism for communicating information if we want to understand its real function”*

*“In abbreviated form, by a kind of symbol, only the most essential information is passed on and passed on only to those concerned. It is more than a metaphor to describe the price system as a kind of machinery for registering change, or a system of telecommunications which enables individual producers to watch merely the movement of a few pointers”*

*“I have deliberately used the word “marvel” to shock the reader out of the complacency with which we often take the working of this [price] mechanism for granted. I am convinced that if it were the result of deliberate human design, and if the people guided by the price changes understood that their decisions have significance far beyond their immediate aim, this mechanism would have been acclaimed as one of the greatest triumphs of the human mind. Its misfortune is the double one that it is not the product of human design and that the people guided by it usually do not know why they are made to do what they do. But those who clamor for “conscious direction”—and who cannot believe that anything which has evolved without design (and even without our understanding it) should solve problems which we should not be able to solve consciously—should remember this: The problem is precisely how to extend the span of our utilization of resources beyond the span of the control of any one mind; and therefore, how to dispense with the need of conscious control, and how to provide inducements which will make the individuals do the desirable things without anyone having to tell them what to do.”*

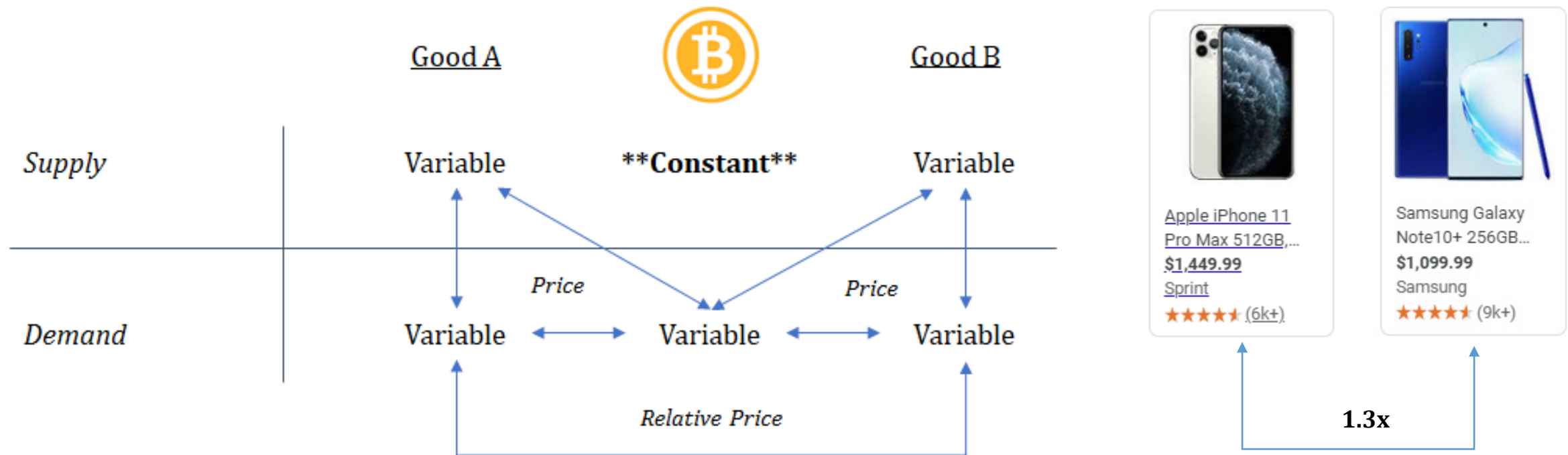
# What is Price? There is No Price, Instead There Are Billions of Ever Changing Exchange Ratios Among All Goods



# How to think about price at a micro level – the exchange ratio between two goods, using money as the intermediary



To be effective in its exclusive utility (as an exchange intermediary), the supply of money must be scarce relative to other goods and services; it is scarcity in the supply of money that allows it to act as a relative constant and through which a pricing mechanism emerges. The value is not just individual price, but rather, the relative value of all goods to each other.



# Quantitative Easing Distorts All Prices Within An Economy by Manipulating the Supply (and Price) of Money



**Rather than have a billion people that actually make up an economy set prices, a few number of people unilaterally change the whole game by clicking a few buttons on a computer screen; it distorts the entire value chain of the pricing mechanism.**



# What Happens when Price is Manipulated Through Changes in the Money Supply Rather Than Change in Preferences?



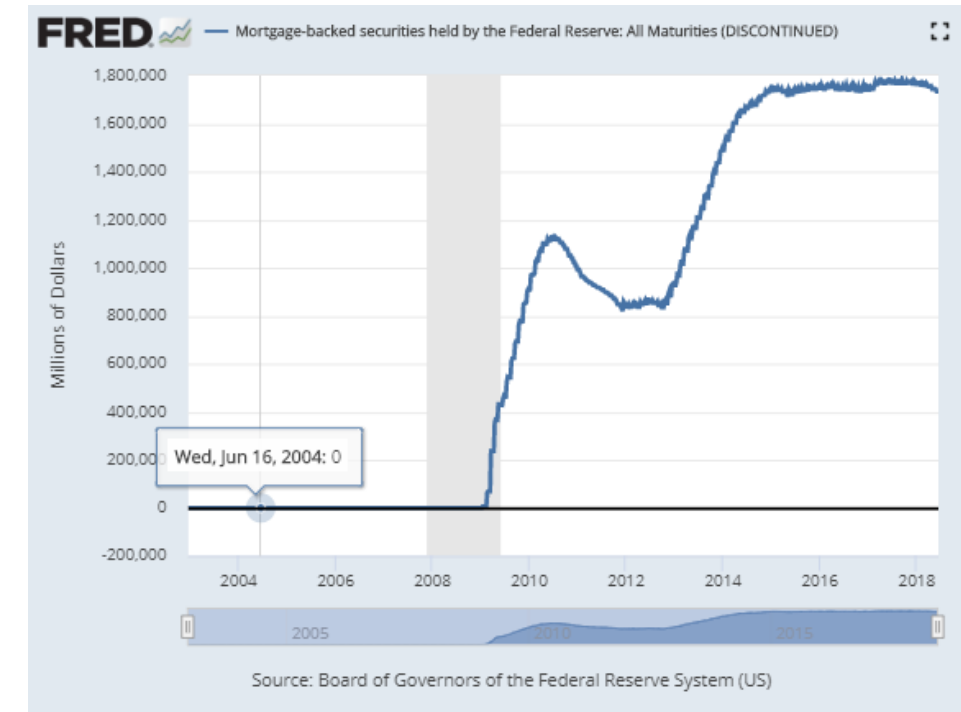
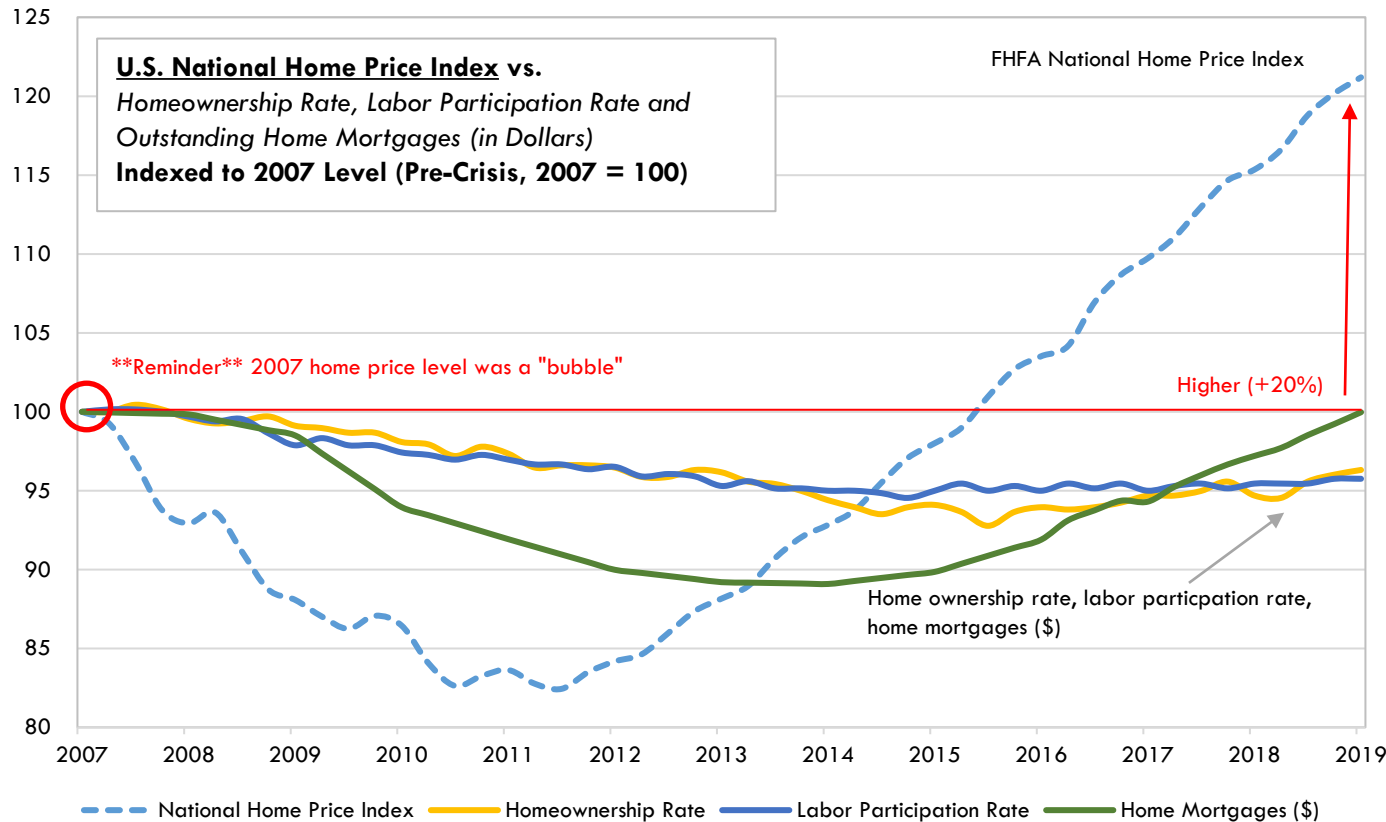
## Friedrich Hayek – The Pretense of Knowledge

*"In fact, in the case discussed, the very measures which the dominant "macroeconomic" theory has recommended as a remedy for unemployment — namely, the increase of aggregate demand — have become a cause of a very extensive misallocation of resources which is likely to make later large-scale unemployment inevitable. The continuous injection of additional amounts of money at points of the economic system where it creates a temporary demand which must cease when the increase of the quantity of money stops or slows down, together with the expectation of a continuing rise of prices, draws labor and other resources into which can last only so long as the increase of the quantity of money continues at the same rate — or perhaps even only so long as it continues to accelerate at a given rate. What this policy has produced is not so much a level of employment that could not have been brought about in other ways, as a distribution of employment which cannot be indefinitely maintained and which after some time can be maintained only by a rate of inflation which would rapidly lead to a disorganization of all economic activity. The fact is that by a mistaken theoretical view we have been led into a precarious position in which we cannot prevent substantial unemployment from reappearing; not because, as this view is sometimes misrepresented, this unemployment is deliberately brought about as a means to combat inflation, but because it is now bound to occur as a deeply regrettable but inescapable consequence of the mistaken policies of the past as soon as inflation ceases to accelerate.*

# A micro and macro example of manipulating pricing through a central banking solution



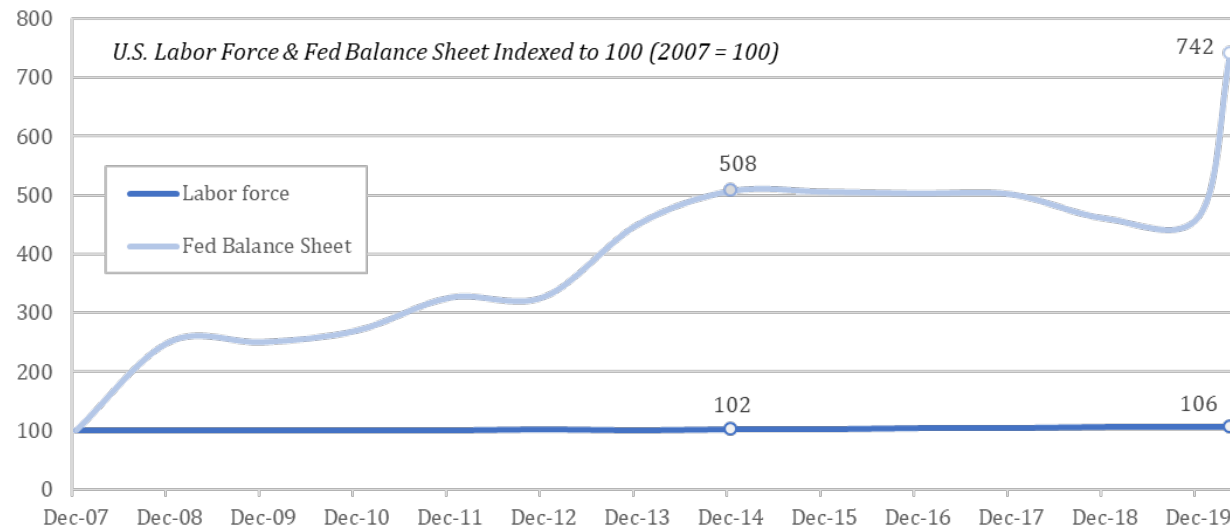
Following the housing crisis in 2008, the Fed proceeded to purchase nearly \$1.8 trillion in mortgage backed securities and home prices rise dramatically, despite the ownership rate and labor participate remaining below 2007 levels. What could go wrong?



# What Happens When Price is Manipulated?



- The pricing mechanism is the primary tool through which information is communicated in an economy; changes in price reflect changes in preferences.
- Manipulation of the pricing mechanism distorts all economic activity. It does not create jobs; instead, it only shifts the balance of powers as to who allocates the money and prices risk. Ultimately, it strips power from the people and centralizes that function over time.
- Not only does it distort relative prices in the short-term, but it also causes the entire supply and demand structures of an economy to adjust to false signals over the long-term; resources are misallocated over decades and imbalances are sustained resulting in more acute and longer-term unemployment.
- Distortion of prices via the manipulation of the money supply subverts the entire function of the pricing mechanism; it not only impairs the monetary medium through which price is communicated but it actually defeats the entire purpose of the money function.



# The Currency with the Lowest Rate of Change In Supply Will Provide the Most Reliable Pricing Mechanism Over Time



- A pricing mechanism emerges only as a derivative function of a large number of people adopting a common monetary medium.
- Price and relative price (i.e. knowledge) is ultimately the value extracted out of money; price and exchange is the utility function of money.
- In money, the information that is actually valuable is understanding the relative value of all other goods (and being able to acquire those goods\_.
- Recognize that there is no such thing as “intrinsic” value; all value is subjective. Money provides the baseline to express the very concept of value in the first place because it aggregates the preferences of all individuals that utilize the common medium to effect exchanges.
- The nominal amount of money is not meaningful; its ability to communicate the preferences of others through its pricing mechanism is what’s valuable.
- Any outside manipulation of the money supply only serves to introduce a variable in the communication of preferences that is unnecessary to that equation; if changes in the price of money merely represents changes in preferences of those that use the money, manipulation actually works opposite to (or undoes) the entire process working as intended.
- The form of money with the lowest rate of change will ultimately communicate prices most effectively because that money will best eliminate any distortion in the communication of preferences created by changes in the money supply (which is extraneous to the information actually of value).
- Bitcoin, via its hard-capped maximum supply of 21 million, will ultimately have the lowest rate of change possible – zero.

# Luckily, It's No Longer an Intellectual Debate, Now We Have a Market Test – Two Competing Monetary & Economic Systems



## Intellectual, Economic & Philosophical Debate:

**Austrian School:** Don't Eff with the Money

**Keynesian School:** Government spending smooths out business cycle

**Monetarist School:** Money supply management smooths out business cycle

**MMT School:** Made up, doesn't exist, just an excuse for government deficits

## Market Test: Purchasing Power of Bitcoin in Dollar Terms



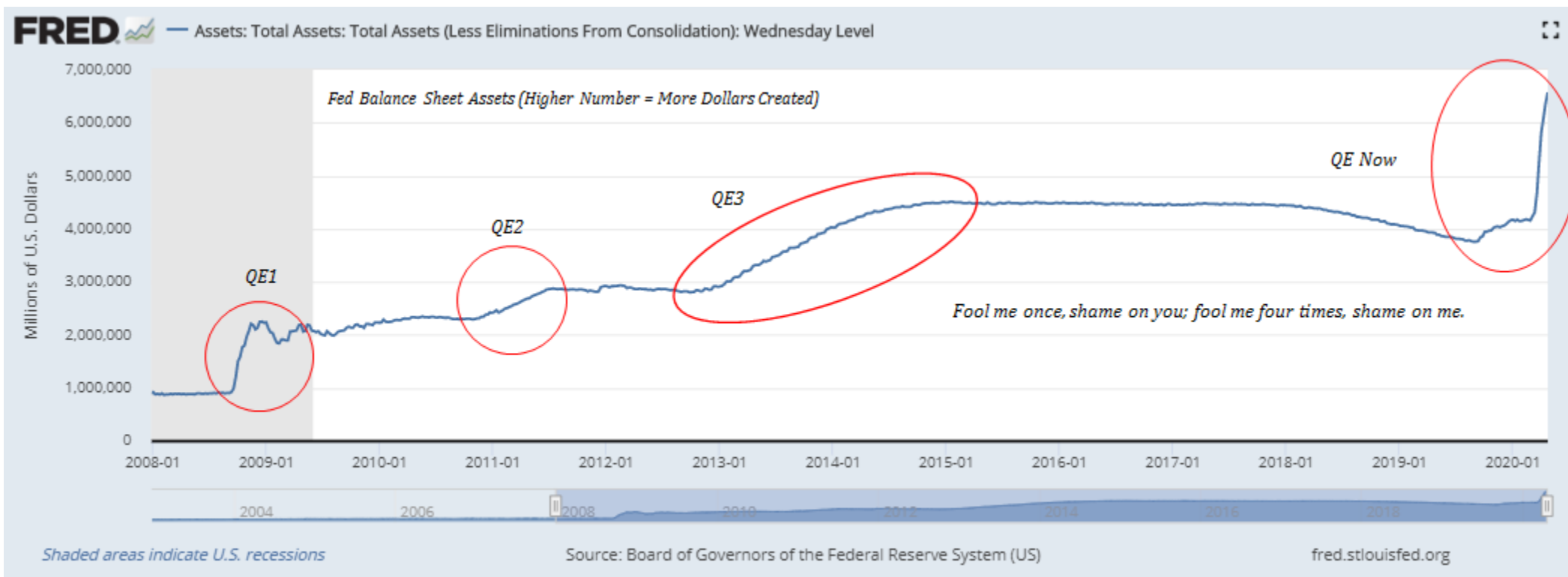
*Remember, a pricing mechanism only emerges as a large number of people converge on a common monetary medium; the purchasing power of bitcoin increasing is the single greatest indication of the market converging on the monetary medium with the lowest rate of change (communicating preference).*

# Exhibit A: Dollar Supply, There's An Old Saying in Tennessee



*"It has happened globally with such speed that even a market veteran like myself was left speechless. [...] We are witnessing the Great Monetary Inflation -- an unprecedented expansion of every form of money unlike anything the developed world has ever seen."*

– Paul Tudor Jones, just last week, explaining his rationale for buying bitcoin

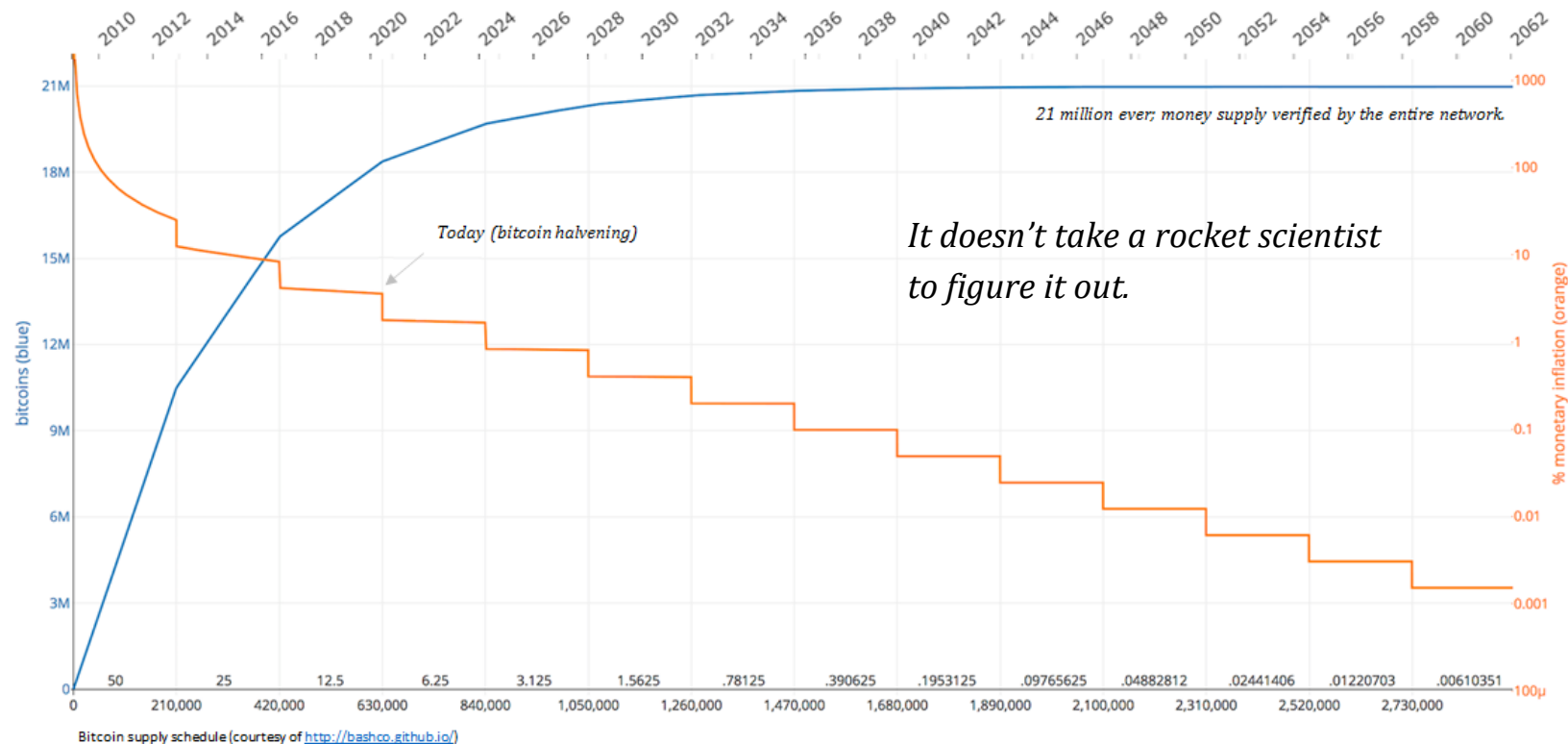


## Exhibit B: Bitcoin Supply, Money Doesn't Grow on Trees



*"I also made the case for owning Bitcoin, the quintessence of scarcity premium. It is literally the only large tradeable asset in the world that has a known fixed maximum supply. By its design, the total quantity of Bitcoins (including those not yet mined) cannot exceed 21 million."*

– **Paul Tudor Jones**, just last week, explaining his rationale for buying bitcoin



# In Summary, it's the pricing mechanism, stupid!



*The central banking model trades short-term stability for long-term volatility; bitcoin trades short-term volatility for long-term stability; at the end of the day, a currency whose supply (and derivatively its pricing system) cannot be manipulated vs. systemic & persistent manipulation.*

## *Have Questions?*

*Check out my Gradually, Then Suddenly Series,  
The Bitcoin Standard or read some Hayek*

***Need Help on Your Bitcoin  
Journey? Look us up.***

*Bitcoin Cannot Be Copied   Bitcoin is Common Sense   Bitcoin, Not Blockchain*

*Bitcoin is Not for Criminals   **Bitcoin Obsoletes**   Bitcoin is Not Too Slow*

*Bitcoin is Not a Pyramid Scheme   Bitcoin is Money   Bitcoin Does Not Waste Energy*

*Bitcoin Cannot Be Banned   **All Other Money**   Bitcoin is Not Too Volatile*

*Bitcoin is a Rally Cry   Bitcoin is Not Backed By Nothing   Bitcoin Fixes This*





## For More Information

Contact Parker Lewis ([parker@unchained-capital.com](mailto:parker@unchained-capital.com))

Unchained Capital  
201 E. 5th St., Suite 108  
Austin, TX 78701