StoneX Global Macro Report

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Inflation Is a Process, Not an Event

1 – The US deficit expanded more during COVID than it did during WW1 and WW2 and has not normalized.
2 – Financial repression saved Western governments $8 trillion in the past decade. Why would it stop now?
3 – Events are not inflationary: societies are. Small shocks create inflationary storms when trust is low.
4 – Inflation ends when new institutions and power-sharing arrangements are established. This has not happened.

"Those who cannot remember the past are condemned to repeat it" – G. Santayana

Hokusai's "The Great Wave off Kanagawa" was featured on the back of the new ¥1,000 banknote. This new design coincided a 43-year high in inflation. While it was not the intent of the Bank of Japan, this note serves as a reminder that **inflation usually comes in waves.** Even the poster child for deflation experienced repeated inflationary storms during the late Edo period, the Meiji-era industrialization, the hyperinflation of WW2, and the commodity shocks of the 1970s.

This reminder is especially relevant now that central bankers celebrate their slaying of the inflation dragon: Powell started his Jackson Hole speech with the observation that "inflation has declined significantly" and ended it with the certainty that it was "on a sustainable path to our two percent objective".

This report will argue that these premature victory laps ignore the true nature of inflation. **Inflation is a fiscal phenomenon which arises because of the erosion of trust in social and political institutions**. These underlying fiscal and trust problems have not been addressed. **Inflation will return because our societies are inflationary**.

The first part will discuss the fiscal dimension of inflation. The increase of the US deficit during COVID was greater than during the two world wars, and it has not normalized four years after the pandemic. **Financial repression saved the US, European and Japanese governments $8 trillion in the past decade.** Why would it end now?

The second part will discuss inflation as a trust phenomenon. Next month's CPI will be driven by base effects, commodity prices, and statistical adjustments to Owners' Equivalent Rent. Inflation in the next three years will be driven by the fiscal deficit, which I expect to be larger. **Inflation in the next decade will depend on our trust in institutions, political stability, and ability to compromise rationally.** I am not hopeful.

The third part will argue that **events are not inflationary, societies are**. COVID was not inflationary *per se*: it became so because of the irrational and excessive reaction it triggered in the US and Europe**. Inflation occurs in waves because any shock can start an inflationary storm when trust is low**. These waves of inflation only end after a new social contract regenerates institutions and power-sharing arrangements. The US will experience several other waves of inflation before it reaches this new equilibrium.

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Inflation as a Fiscal Phenomenon

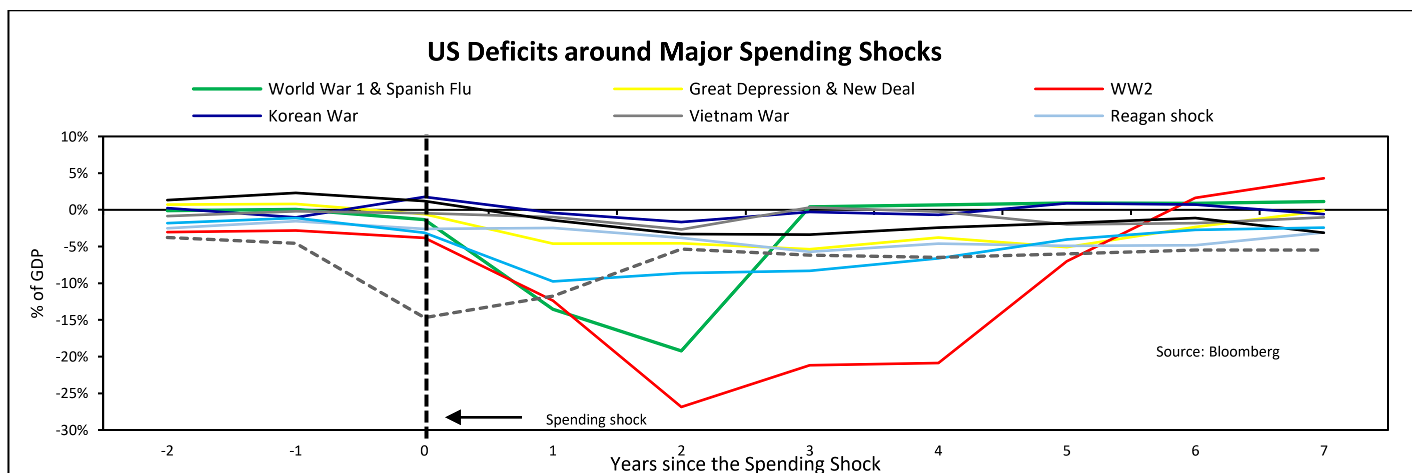
The infamous Hanke-Krus hyperinflation table suggests that **inflation is everywhere and always a fiscal phenomenon**. All the countries which meet Hanke's criterion for hyperinflation (a monthly inflation rate exceeding 50% for at least 30 consecutive days) did so because the government aggressively monetized deficits.

This printing press-financed surge in government spending usually occurs because of civil wars (Yugoslavia in 1990s, the Democratic Republic of Congo in 1993, Nicaragua in the late 80s), external wars (Hungary in 1945, Greece in 1941, the Weimar Republic, China in 1943) or both (the US during the War of Independence, France in 1795, and China in the 1940s). Hyperinflation also occurs when the government loses the ability to raise taxes, as was the case in most of the Eastern bloc in the 1990s.

This observation differs from M. Friedman's famous aphorism that *inflation is everywhere and always a monetary phenomenon* only on the surface. In a narrow sense, inflation is always "too much money chasing too few goods". In a broader sense, inflation is fiscal because the government deficit injects this excess of money into the economy.

Measuring the Fiscal Shock

Hence, the deficit leads monetary growth, which leads inflation. The US experienced nine fiscal shocks since World War 1. With the exception of the Great Financial Crisis, **all the surges of the deficits led to a sustained period of above-target inflation**.



The post-2020 fiscal shock stands out in three ways.

First, its size: **the 2020 deficit of 14.7% of GDP was greater than the deficit during the first full active year of WW1 (13.5% in 1918) and the WW2 (12.4% in 1942).**

Second, its length: based on the CBO's projections, which assume no recession and no new discretionary spending in perpetuity, the deficit should average 6.2% of GDP in the next decade, i.e.**, the 2020 shock is a permanent increase in unfunded government spending**. By contrast, fiscal consolidation was swift after prior shocks, as the budget returned to a surplus in 1920, 1947, and 1956.

Third, no civil war was fought, no great dam was built, no foreign adversary was taken down, and no institution was destroyed. The World Health Organization estimates excess deaths of 968,425 in 2020 and 2021. As a share of the US population, COVID was 60% less deadly than the Spanish flu of 1918. The Hong Kong flu pandemic of 1968, which is barely remembered today and did not cause any policy response, was also more deadly than COVID if deaths are adjusted by life expectancy to measure lost years of life.

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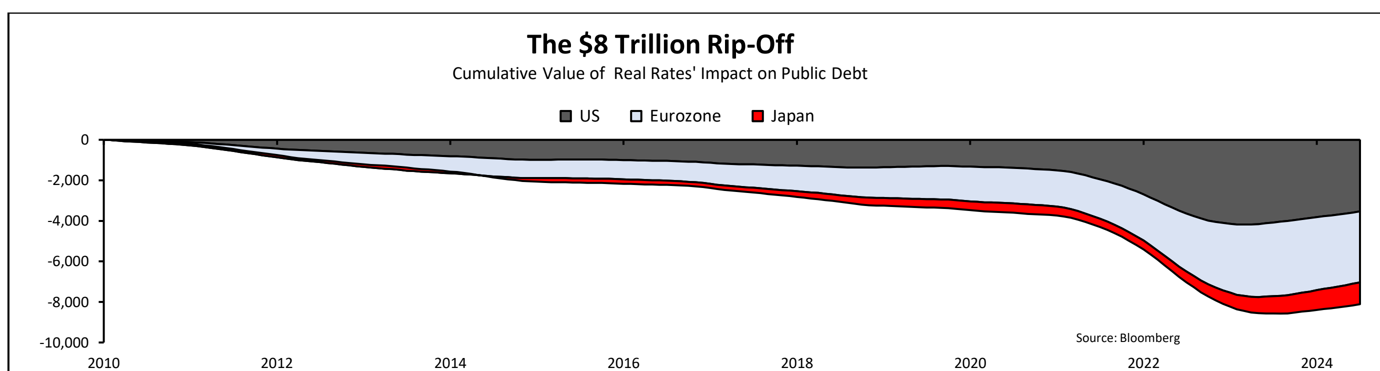
Measuring Financial Repression

Printing currency or forcing the central bank to buy government bonds in order to finance a surge in expenses is not the only form of monetary financing. Financial repression, i.e., the practice of keeping debt servicing costs below inflation for extended periods, is very powerful over time for highly-indebted sovereigns.

The chart below measures the cumulative value of financial repression in the US, the Eurozone, and Japan by multiplying the difference between the inflation and the policy rate by the level of outstanding public debt. As O. Blanchard illustrated in a 2018 paper, the debt-to-GDP ratio can decline without fiscal austerity measures if the cost of rolling the stock of stock sovereign debt is less than nominal growth.

Financial repression saved $3.5 trillion (1.2% of GDP a year) in the U.S., $3.5 trillion (2% of GDP a year) in the Eurozone, and $1.1 trillion in Japan (2.2% a year) since 2010.



There can be a number of objections with this calculation.

First, I used the policy rate, while government debt generally has a maturity of five to ten years. In practice, the difference is not significant because yield curves were flat or even inverted during this period. Also, I compared debt financing costs to inflation, rather than nominal growth so **the de-leveraging effect of financial repression on the debt-to-GDP ratio is even higher** than my estimate.

Second, central bankers would argue that their mandate requires them to keep the policy rate below nominal growth when the economy is operating below trend. However, the stimulative effect of zero-interest rate policies have not been empirically verified, while the de-leveraging effect of financial repression is a mathematical reality. Also, central bankers kept their policy rates well below nominal growth when the economy was overheating in the past three years, suggesting that **financial repression is an entrenched debt-financing strategy, rather than a reversible policy tool.**

Third, central bankers do not have an obligation to keep the policy rate at the level of inflation. True, but systematic financial repression erodes the value of currency as a store of value. Economic agents would eventually demand higher yields for bearing this cost or switch to alternative stores of value. Especially since central banks in China, Brazil, India, Indonesia, and Mexico have kept their policy rates above the pace of inflation over the same period.

Fourth, financial repression can be justified as a liquidity or safety tax, a premium which investors pay to keep their reserves in jurisdictions with strong legal protections. The US and Switzerland may be able to collect a *seigniorage* income from foreigners, but the argument is weaker for Europe and Japan, whose debt is mostly held by locals.

The simplest explanation is usually the best. Western governments burdened with high debs, structurally higher expenses due to demography, and weak tax revenue growth have followed the classical playbook of indebted sovereigns: **finance new spending with debt, force it onto captive buyers (insurance, depository institutions, central banks) and reduce its real value with financial repression.** These fiscal strategies are part of a long-term inflationary mindset, which will now describe.

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Inflation as a Trust Phenomenon

In the first part, we saw that inflation is a monetary phenomenon only on the surface: someone is injecting this money into the economy – and that someone is usually the government. We should dig deeper: governments are not gods who come down from Olympia and suddenly spend trillions of newly-printed currency and financially repress depositors and bondholders.

Governments are the product of the society with which they interact. Policies are the result of a complex game between varying interest groups which compete for political power, and the population over which power is exercised. Inflationary policies are usually adopted when authority is challenged and weak institutions fail to regulate the competition for power. **Inflation is thus the symptom of an underlying social and political disorder,** just as fever is the body's reaction to the presence of a disease.

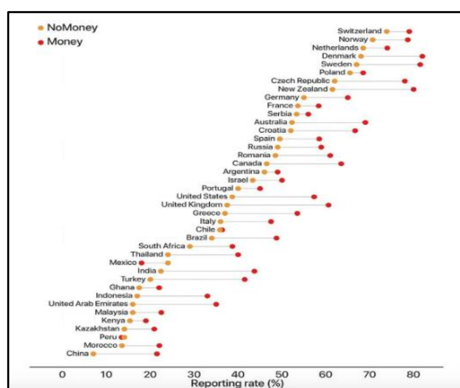
Currency instability is the first external manifestation of this disorder because currencies are the embodiment of the social contract between citizens and the trust in the sovereign. We exchange colourful pieces of paper for real goods and services because of three trust relations.

First, we trust that others will also accept these pieces of paper, the horizontal dimension of the contract.

Second, we acknowledge that the government has the authority to levy taxes, and that we must earn these colourful pieces of paper to discharge this future debt. That's the vertical dimension of the contract.

Third, we trust that these colourful pieces of paper will keep their value over time. That's the temporal dimension of the contract.

A loss of trust at any of these three levels causes inflation. Civil wars are ultimately a dispute over whose sovereign debt can be used to settle private transactions: currency loses its value because we cannot trust that the other party will accept the current payment convention. Currency also loses its value if the government loses the ability to raise taxes, as was the case in Eastern Europe after the fall of the Berlin Wall. Finally, governments can impair the future value of money by issuing too much of it to cover unsustainable expenses, as has been the case in most Latin American currency crises.



Source: Science, A. Cohn & ali

Since *fiat* currencies are backed by trust, **inflation is ultimately a measure of our trust in each other and in our institutions**. This definition of inflation was verified by economists who left 17,000 cash-filled wallets in public offices around the world and measured the likelihood of having the wallet returned with money and without money.

The countries with the most trustworthy public officers had no recent experience of high inflation: Switzerland, Norway, the Netherlands, and Denmark. Conversely, wallets were least likely to be returned with cash in countries that had recent episodes of high inflation, such as China, Peru, Kazakhstan, Kenya, Indonesia, and Turkey.

In summary, **our definition of what matters for inflation depends on our time perspective**.

If we want to predict the next CPI print, we need to dig deep into base effects, seasonal adjustments, weather events, the statistical quirks of insurance prices, used cars, and how new rents roll into the BLS' measures of owners' equivalent rent. Traders who get it right can make good money on CPI release days, but long-term investors should not obsess over 5 basis points misses or beats because "the CPI Is Not Inflation".

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If we care about inflation in the next three to four years, we need to monitor the stance of fiscal policy. The relevant questions become: is the COVID spike in government spending over or is it permanent? Will the increase in tax collections caused by the inflationary boom shrink the deficit, or finance new spending? How many years will it take for the big infrastructure bills (IIJA, IIA, ARPA, and CHIPS acts) to be fully spent? Will states and local governments reduce their expenses or keep spending in unison with the federal government?

Monetary policy matters mostly as an enabler of fiscal spending. Will policy rates stay below nominal growth, effectively accommodating the surge in spending? Will the Fed inject liquidity if excessive government borrowing creates tensions in the bond market? Will failing depository and credit institutions be bailed out? Will the Fed coordinate its balance sheet policy with the Treasury to accommodate new issuance?

If we care about inflation over the next ten years, we need to ask even broader questions: is confidence in institutions rising or ebbing? Are voters becoming more polarized? Are elections won by pandering to the extremes, or meeting in the middle? Is violence accepted as a legitimate form of a political action? Are courts trusted? Is the media seen as objective and are journalists an effective check on power? Are citizens engaged in local government, churches, and social activities? How are marriages and family formation? Is life expectancy rising? How many citizens suffer from obesity, mental health issues, and addictions? Does technology inspire hope or fear? Are public spaces well-maintained and are streets safe? Can the middle class afford homes, decent education, and quality health care?

The responses to these questions are painfully obvious. A recent WSJ poll provided perhaps the clearest and most depressing illustration of the current crisis of trust: **only 34% of Americans believe the American Dream is still attainable, down from 53% in 2012**. Half thought the American Dream was once attainable but no longer is, and a record 17% thought it was never attainable.

Events are Not Inflationary, Societies Are

It is impossible to explain the post-COVID spike of inflation without understanding this broader crisis of trust. There was nothing inherently inflationary about the pandemic. Restrictions on global mobility sent oil prices below zero, lockdowns acted as a forced saving program, and business closures could have started a depression.

Indeed, COVID was deflationary in China and it had no clear effect on inflation in India or Africa. The countries which handled the pandemic competently and rationally, such as Sweden, South Korea, Japan, and Taiwan experienced little economic disturbances and almost no inflation (the fact that these countries tend to have high trust also helped).

COVID was not inflationary: the US and, to a lesser extent, the European response was. The virus did not cause the $9 trillion deficit recorded by the US government over the past four years. It did not cause the Black Lives Matter protests, the great resignation, or the Capitol riots. COVID did not cause the moral panic among highly-educated workers in coastal cities, the “quiet quitting” movement among Millennials, or the “lazy girl job” phenomenon among GenZ-ers.

This report cannot provide a full account of the wave of insanity during the pandemic years, from anti-vaxxer conspiracy theories to multi-millionaire geriatric politicians taking the knee in Kente cloth, and the ridicule of doubled-mask drivers sitting alone in their cars or the Four Seasons Total Landscaping press conference on imaginary electoral fraud.

Suffice it to say that COVID brought to light the deep faults of US society, underlying compulsions of control, death and irrationality, erratic policy-making, and a generalized crisis of trust across society.

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My guess is that the US response to COVID was so extreme because of elites' embarrassment over the Iraq War and the Great Financial Crisis when political and economic leaders appeared incompetent at best and corrupt at worst. There was no acknowledgement of wrongdoing or public accountability, despite the tremendous human and financial cost of the war and the recession.

It is because elites got bailed out for their Iraq and GFC mistakes that the population had to be bailed out during COVID. In 2020, public trust was so eroded that it was impossible to ask the population to take common sense precautions against a new-but-mostly-mild virus. The dangers had to be blown out of proportion and the populace had to be bribed with stimulus checks to ensure compliance.

In other words, **events are not inflationary: societies are**. Events only become inflationary because of the context in which they take place: a similar rise in commodity prices was accompanied by the great inflation of the 1970s and the great moderation of the 2000s.

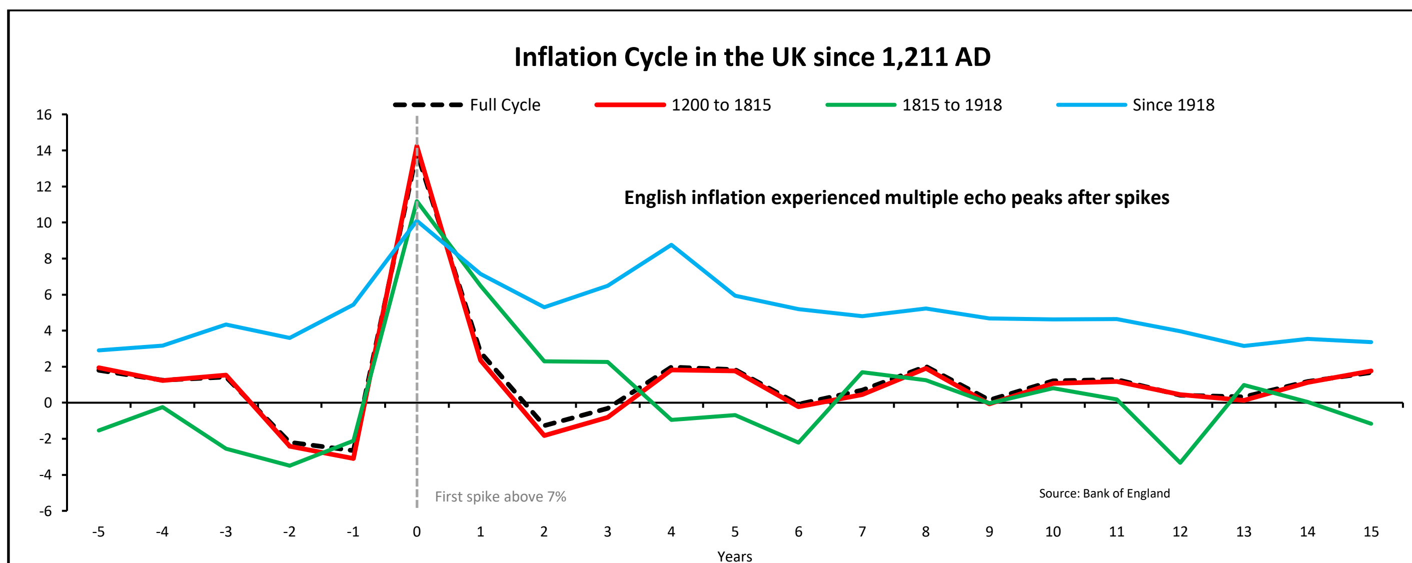
Inflation's entanglement in its broad social context is the reason why it keeps baffling economists who look for consistent causal relations. Inflation sometimes appears because of the credit cycle. Sometimes because of supply chain disruptions. Sometimes because of commodity price shocks. Sometimes because of public deficits. Sometimes because of economic rigidities and excessive regulation. Sometimes because of lack of competition and monopolistic pricing.

Because inflation is so versatile, economists can ascribe the same episode of inflation to the cause which best suits their ideological or professional interests: in the case of COVID, inflation was blamed on supply chains (which conveniently exonerates the Fed and the Treasury), product market shocks, price gouging, or fiscal spending.

Inflation cannot be ascribed to a single cause because **inflation is not a disease, but a symptom**. Economies produce inflation in the same way that the body produces fever when an underlying condition has disrupted its natural balance.

Just like fever ebbs and flows until the underlying disease is cured, **inflation typically occurs in waves**.

Students of US economic history are familiar with the wave-like pattern of the three ascending peaks of inflation in the 70s, and the four peaks of 1942, 1946, 1951, and 1957. The Bank of England's longest time series confirms this wave-like pattern over at least a millennium.



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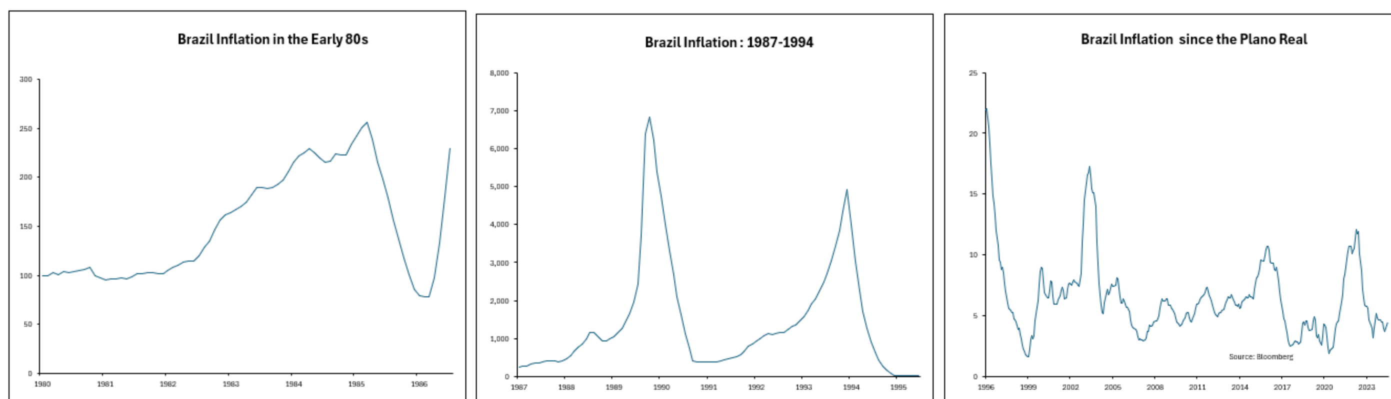
If inflation were caused by events, rather than insititutions, it would be normally distributed, following the random occurrences of floods, pandemics, and foreign invasions.

On the contrary, the same countries keep appearing in Hanke-Krus' infamous hyperinflation table, often over close time periods. This is because **any event can trigger price spikes when social trust is low and institutions are weak.**

Brazil experienced a chronic inflation problem in the 70s and 80s, two spikes of hyperinflation in 1990 and 1994, and multiple failed attempts to solve the problem - the Cruzado plan of 1986, the Bresser plan of 1987, the Summer plan of 1989 and the Collor plan of 1990. Even the most drastic and successful stabilization package, the Plano Real of 1994, did not end this wave-like pattern. Just like a cigarette butt can start a wildfire in a dry forest, relatively small shocks sent Brazilian inflation above 10% in 2003, 2016, and 2022.



Conclusion

This Is Not the End, Beautiful Friend

How does inflation end? Because inflation, or rather *waves* of inflation, are the symptom of deep disturbance in the social contract and a lack of trust in political institutions, inflation durably disappears only when the social contract is revised to bring new institutions.

The debasement of the Continental Dollar ended with the adoption of the US constitution, the introduction of the gold-backed Federal Reserve Note, and Hamilton's fiscal and monetary reforms. The debasement of France's *assignats* during the revolutionary wars ended with Napoleon's gold-backed *Franc Germinal*, the adoption of the *Code Civil*, and the establishment of the *Banque de France*.

Similarly, Latin America and Eastern Europe's waves of hyperinflation did not end until new currencies were introduced, new regimes replaced the discredited governments, and new economic models were chosen or imposed.

The great inflation of the 70s was not as dramatic, but it also ended with a deep transformation of political institutions and economic models: monetarism replaced Keynesian-ism, fiscal dominance ended with independent central banks, unions and price controls gave way to *laissez-faire* and deregulation, and the Thatcher / Reagan revolution brought new economic and political elites.

There has not been a significant reform of institutions and power-sharing arrangements since COVID. A fortunate alignment of the macro stars has brought inflation down for a couple of months, but these respites are not unusual during inflationary times: US inflation also fell to 2.7% in 1972, Brazil's Collor plan worked for a bit, and even the German Papiermark had several rallies during the Weimar Republic.

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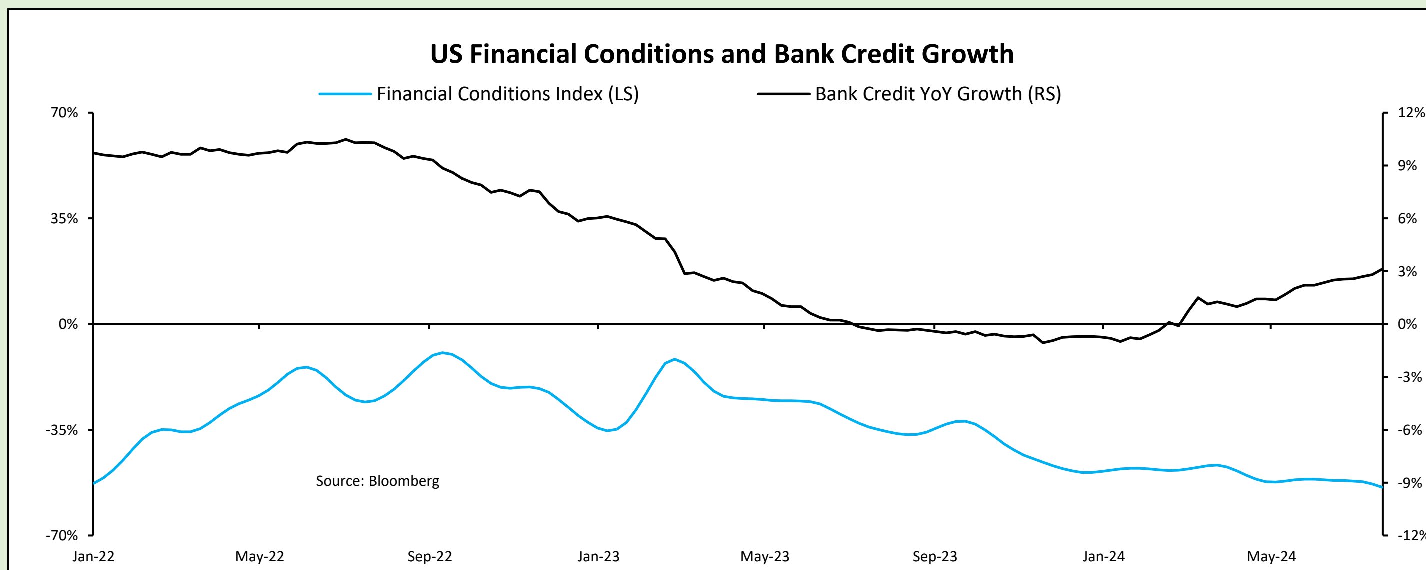
To quote Matthew, no one knows the day or the hour when these things will happen, but I remain convinced that **the next shock will be inflationary, because the underlying conditions have not changed**. The two Presidential candidates of 2020 are running again in 2024 (with a last-minute and politically irrelevant switch on the Democratic ticket). The Federal Reserve which bought $70 billion of MBS a month when home prices were soaring by 20% in the summer of 2021 is still in charge of monetary policy. The central banker which kept rates below zero when Eurozone inflation was 8% is still "laser focused" on restoring price stability.

If anything, **the COVID experience probably set precedents for future policy decisions**. Stimulus checks, forgivable PPP loans, and the cancellation of student debt are now part of the standard economic toolkit. In France, *quoiqu'il en coûte* was the response to the pandemic and Ukraine war: it will be the fiscal playbook for the next economic shock. As we have seen in the first part, financial repression saved the US, European, and Japanese governments $8 trillion in the past decade: why would governments and central banks stop here?

This mindset is already obvious in the Fed's current interpretation of its dual mandate. With real GDP growth of 3% in the past four quarters and the unemployment rate at a historically low 4.3% despite net immigration of 3.8 million last year, the economy is running at or above trend. Even after a series of dovish prints, CPI inflation is still running at 2.9% and super core PCE inflation (ex. energy and housing) is still at 3.3%.

The futures' market pricing of nine cuts by the end of 2025 suggests that **monetary policy is about to turn very accommodative, even as financial conditions are already looser than they were at the Fed's first hike in March 2022, lending standards are easing, and bank credit is rebounding.**



In addition, **the new administration will pursue inflationary policies, irrespective of who wins in November**. Under D. Trump, tariffs, deportations, and tax cuts would drive this second wave of inflation. Under K. Harris, a hike in the minimum wage, restrictions on immigration, and subsidies for homebuyers would have the same effect.

An upcoming report will discuss how investors should position for a second wave of inflation. The behaviour of policymakers and societies during inflationary eras confirm G. Santayana's aphorism that "those who cannot remember the past are condemned to repeat it". Investors do not have to.

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The Consumer Price Index (CPI) is a key measure of inflation that tracks changes in the price of a basket of goods and services that are representative of what urban consumers purchase.

The Chicago Financial Conditions Index (NFCI) is a comprehensive measure created by the Federal Reserve Bank of Chicago to provide a weekly update on U.S. financial conditions. It encompasses a wide range of financial indicators, including those from money markets, debt and equity markets, and both traditional and "shadow" banking systems1.

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