

The FX Quarterly Q3 2022

Currency and macro updates for the innovation economy





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Macro

Supply, not demand, is the primary driver of inflation today

The stars aligned to produce today's spiraling inflation. Since the global economy emerged from the COVID-19 pandemic, consumers have wanted to spend their forced pandemic savings, while businesses with easier access to capital spent and invested handsomely in search of top-line growth.

In the United States, multiple government programs put money in consumer's pockets and boosted demand. Many Americans sought materials to build home offices and start deferred maintenance projects but struggled to buy them because store shelves were empty. Shop owners could not resupply their inventories because factories were closed, ships were backed up at ports, and trucks sat idle with no drivers. For example, home improvement stores could not keep enough lumber and other materials in stock to satiate demand. Then Russia invaded Ukraine and was hit with sanctions, triggering a global cut to energy and commodity supplies and further stressing trade and supply chains. Prices and price volatility shot higher, resulting in multi-decade highs in inflation in the US, other developed countries, and emerging economies.

During the decades prior to 2022, the world had become accustomed to low inflation, low uncertainty and high central bank credibility. Players throughout the global financial markets trusted

and relied on the ability of policymakers to support economic growth, keep prices in check, and occasionally go beyond their official remit—for example, by supporting asset prices in times of financial distress. Yet the tools at their disposal, such as rate setting and quantitative easing, are most effective at controlling the demand side of economies. This time around the inflation fight will be more challenging because both demand and supply-side pressures are driving up prices. A recent Federal Reserve study estimates that two-thirds of the drivers of today's high U.S. inflation are supply-related.¹

Jerome Powell recently appeared before Congress and again took pains to explain the limitations of monetary policy. "What [the Fed] can control is demand; we can't really affect supply with our policies... so the question whether we can execute a soft landing or not, it may actually depend on factors that we don't control." This may not be what markets or politicians want to hear.

¹ Shapiro, Adam H. How much do supply and demand drive inflation. FRBSF Economic Letter series. Federal Reserve Bank of San Francisco. June 21, 2022.

² Source: Fed Chair Powell: Controlling inflation will 'include some pain' - Marketplace



The outlook for the USD depends on how quickly supply-side inflation pressures subside

Policy interest rates are rising globally. The exceptions are few but notable, including the Euro area and China. Despite the jump in rates around the world, inflation has shown few signs of cooling.

For example, the latest inflation prints for the US, UK, and Canada are the highest in the current cycle and the highest in more than 40 years.

One of two outcomes seems likely for the United States economy and the USD.

The Fed may act aggressively to restrain demand, since that is one sphere it can influence, and it may manufacture a recession in the process. This outcome would support a continuation of the trend toward a strong dollar, illustrated in Chart 1. The US dollar remains the world's top reserve currency and a safe haven for global investors. Higher US interest rates, extended for longer, would enhance the US dollar's appeal and encourage capital inflows, further fueling USD strength.

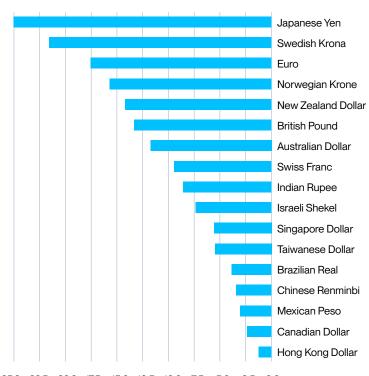
Alternatively, supply constraints may ease to the point where less rate hiking is necessary to moderate prices, paving the way for a soft landing. Under this outcome, we may see a weakening US dollar as interest rate increases become fully priced in and investors favor riskier assets.

The upshot: Inflation uncertainty creates foreign exchange (FX) uncertainty.

Innovation-sector technology and healthcare companies have experienced material impact from currencies in 2022, at the same time they contended with decreased valuations, constrained fundraising, and greater business uncertainty. Firms without established revenue bases overseas have received a windfall as a stronger USD has decreased the cost of their non-USD spend and other commitments. On the other hand, firms and private equity funds with non-USD assets and overseas revenues have suffered FX-related losses when repatriating or

... Bad news on inflation has resulted in good news for the USD; any cooling would result in a reversal of fortunes for the USD.

Chart 1: Percentage change in currencies versus USD since January 2021



-25.0 -22.5 -20.0 -17.5 -15.0 -12.5 -10.0 -7.5 -5.0 -2.5 0.0

Source: Bloomberg as of 7.15.2022

translating assets back to USD. Whether you're on the winning or losing side of FX, we have seen global corporations and funds exploring hedging to remove one element of uncertainty. Hedging half of your risk position may strike an attractive balance between risk reduction and flexibility.



Currency spotlight

The euro (EUR): Parity, bust

The euro broke parity with the US dollar for the first time in 20 years as Europe faced the headwinds of war raging in Ukraine and an energy crisis, while the ECB moved timidly, and the Fed acted aggressively. USD-euro parity is an important psychological level in FX markets.

The fallout from the Russia/Ukraine war has caused a European energy crisis as sanctions on Russia have pushed up costs of commodities, including natural gas imported into the European Union (EU). The crisis may continue to escalate, with a real threat that Russia may turn off the Nord Stream 1 natural gas pipeline into Germany. The Eurozone's largest economy losing its key source of energy would cause further economic distress. Important early evidence of the energy crisis' impact on Germany is showing up in the country's trade balance data: The surplus that took nearly 30 years to build has been wiped out, with three-quarters of the depletion occurring in the last 12 months (Chart 2).

Eurozone YoY CPI ended 2021 at 5% and surged to over 8% as of July.³ The rise in energy prices is a main contributor to recent surges in Eurozone inflation. That said, inflation had reached historically elevated levels even before the Russian invasion of Ukraine.

The ECB was slow to raise interest rates as it prioritized growth, especially in the peripheral economies. The divergence in central bank policies between Europe and the United States has attracted euro-denominated capital into USD assets. The ECB finally began its rate hike cycle with a 50 bps hike in July, but this move may not be enough to support a euro rally considering that the Fed is expected to hike 125 bp over the same period. The ECB is behind and looks likely to continue lagging on interest-rate hikes (Chart 3).

Parity may give way to fresh lows. The Eurozone's structural headwinds, including a vulnerable energy supply, low interest rates and a slowing global economy, should continue to weigh on the euro in the medium term. Meanwhile, if the US labor market remains tight, a hawkish Fed should be a tailwind for the dollar.

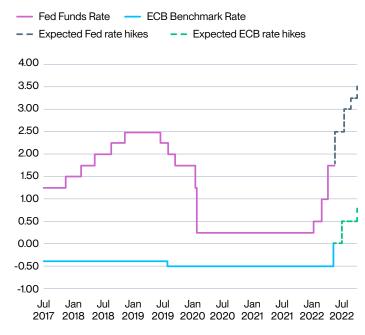
25 20 15

Chart 2: Germany trade balance (in billions of euros)



Source: Bloomberg as of 7.15.22

Chart 3: Policy interest rates for Fed and ECB



Source: Bloomberg as of 7.15.22

³ Source: Bloomberg data as of August 2022

⁴ Source: Bloomberg Fed future hikes determined by Fed Funds Rate Futures and FCB future hikes determined by Furo OIS



What could cause a euro-dollar reversal?

- On the euro side, a resolution to the Ukraine conflict and pullback of sanctions on Russia would add confidence in the Eurozone economy and help tame inflation by easing supply-side pressures. A more hawkish ECB also would support the euro.
- On the USD side, some observers are dreaming of a "Fed pivot" in which the central bank would reverse the aggressive interest rate hikes and/or quantitative tightening it is currently undertaking to address inflation. A Fed pivot would lower projections for the Fed funds rate and reduce yields across the curve, easing the bullish pressure on the USD. For this series of developments to happen, the Fed would need to see signs of cooling inflation, GDP contraction, or possibly higher unemployment. Bad news would be good news: Weakening in economic measures could suggest Fed success at engineering a soft landing, reducing the need for outsized rate hikes.

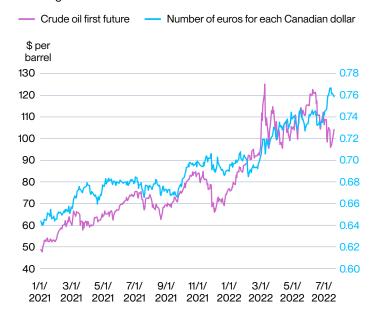
Canadian dollar (CAD): The rise in crude prices is lifting the loonie

At face value, it may seem that the Canadian dollar is struggling against the US greenback. Peeling back a couple layers, however, it becomes obvious that the currency is performing quite well under the circumstances. The loonie is the best performer of the major G10 currencies against the dollar both in the first half of 2022 and from the beginning of the USD's current bull run as illustrated in Chart 1.

Several factors explain the Canadian dollar's resilience. The first is the tremendous rise in crude prices over the past two years. Crude oil makes up about 15 percent of Canada's total exports, and the windfall provided by higher prices has helped shore up local industries and improve the country's goods trade balance. The performance of the currency, measured in Chart 4 against the euro to highlight the loonie's outperformance, has tracked the rise of oil quite closely.

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Chart 4: Crude oil prices versus euro-Canadian dollar exchange rates



Source: Bloomberg as of 7.01.22



Second, the Bank of Canada (BOC) has taken actions very similar to the Federal Reserve's to deal with higher inflation. The BOC has raised its benchmark rate three times already this year, to 1.50% (chart 5), and is hinting at more increases to come. The market expects rates to be at least 3% by year end, mirroring the Fed's path. Rate parity with the United States has helped keep the Canadian dollar close to its US counterpart and has helped it outperform most other currencies.

Last, growth in Canada remains intact, with the economy expected to expand 3.8% in 2022 and 2.4% in 2023.⁵

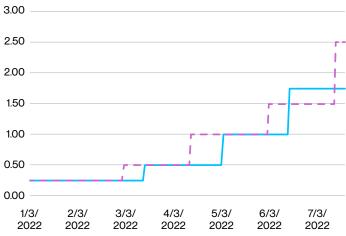
Continued growth will give the central bank breathing room to stay vigilant on inflation by hiking interest rates.

The loonie also has benefitted from a stable government, while the country has avoided much of the negative press related to the geopolitical risks facing much of Europe since the war in Ukraine began.

These factors have been strong pillars supporting the Canadian dollar. Foreign exchange markets don't operate in a vacuum, however, and exogenous factors could easily sway the pendulum. For example, a downturn in oil prices could weaken the loonie. It's difficult to forecast currency movements consistently, but for now, barring major exogenous changes, the convergence of monetary policy and similarities of foundational factors in the US and Canada will likely keep the currency pair within a tight range for the remainder of 2022.

Indian rupee (INR): Not immune from the strong USD tide, so the central bank steps in

The Indian rupee finally tested and broke the important psychological level of 80 rupees to the dollar. **Depreciation continues, despite the Reserve Bank of India (RBI) deploying its war chest of FX reserves to protect its currency from excessive depreciation.** The speed of decumulation of reserves, as seen in Chart 6, demonstrates the urgency in the campaign, which has had mixed success.



Source: Bloomberg as of 7.03.22

... Convergence of monetary policy and similarities of foundational factors in the US and Canada will likely keep the currency pair within a tight range for the remainder of 2022.

Chart 6: India foreign exchange reserves (in USD billions)



Source: Bloomberg as of 7.03.22



The central bank also has taken other measures. The RBI is now acting directly in foreign exchange markets, stepping in to alleviate rising demand for US dollars (which puts selling pressure on the rupee). Other measures taken include:⁶



Doubling borrowing limits for companies from abroad, to \$1.5B for the fiscal year.



Removing interest-rate ceilings for banks to attract more funds from foreign entities.



Relaxing rules for foreign parties to invest in Indian corporate and government debt.

Foreign investors that have benefited by participating in India's booming economy over the last decade have been supported further by the RBI's recent actions. Yet this good news is accompanied by elevated FX market risks. **Current conditions may be great for entry but can be disappointing for exits.**

Average depreciation of the rupee has been roughly 4.4% per year for the past decade. It has ramped up in 2022, with investments losing roughly 6% on currency depreciation year to date. For funds with five- to 10-year exits, such currency losses can add up quickly: Currency return would have shaved close to a third off total return over the last decade.

It's difficult to tell whether RBI intervention will be effective in curbing further INR depreciation. And we will never know the counterfactual—how weak the currency would be without the bank's intervention efforts. Ultimately, the fate of the rupee may be out of policymakers' hands. The USD's current bull cycle looks to have legs; it is driving the direction of currencies, especially for countries that are big users and importers of oil and other commodities.



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Quantitative insights

High inflation or low growth - which is scarier?

Central banks across developed and emerging economies have begun battling inflation. Rising prices are no longer considered transitory, as they have made their way into wages and other "stickier" parts of the economy.

Central banks face a tall task for two reasons. First, central bank efforts may address demand-side inflation pressures, but they can't address supply-side aggravators such as trade and supply-chain disruptions. Second, policies aimed at fighting higher prices can cool economic output and growth. Global economic growth is projected to fall roughly 50% from 2021 to 2022, according to the IMF.⁷

The result is spiraling inflation and deteriorating economic growth—a very bad combination akin to a tasteless but high-calorie dessert. Central bankers are hopeful for a soft landing,

a perfectly manufactured deceleration of the economy that brings prices into check but avoids recession. Pulling policy levers too much or too little risks leaving economies at one extreme or the other.

Which extreme is worse? History suggests low growth is the greater evil.

We carried out an empirical analysis to assess the health of the US economy when inflation and growth have been stretched in either direction.⁸ There have been 203 quarters since 1972. In forty-two of them, the economy was in one of four stretched states:

- · High inflation with high growth
- · High inflation with low growth
- · Low inflation with high growth
- Low inflation with low growth⁹

Table 1 below reports the average annual performance of the S&P 500 in each stratum, as well as the overall performance for benchmarking purposes.

Table 1: Performance of S&P 500 during stretched periods of inflation and growth (Quarters 1972-2022)

	All Quarters	High inflation/ High growth	High inflation/ Low growth	Low inflation/ High growth	Low inflation/ Low growth
Average annual return	7.1%	9.7%	0.6%	27.3%	4.4%
Number of quarters	203	10	18	5	9

A quarterly period is categorized as high inflation or high growth if the economic print is above the 80th percentile, based on quarterly data from 1972-2022, and categorized as low inflation or low growth if the reading is below the 20th percentile. The time series for inflation and growth are year-over-year core CPI and quarter-over-quarter GDP growth, respectively.

Over the 50-year period analyzed, the US economy has been in one of these four states in 42 of 203 quarters, with 18 quarters qualifying as stagflation.

Source: Bloomberg as of July 2022

⁷ Source: World Economic Outlook, April 2022: War Sets Back The Global Recovery

⁸ We use equity market over- or under-performance as a suitable proxy for the health of the economy.

⁹ High and low defined as being above the 70th and below the 30th percentiles respectively.



In both of 2022's first two quarters, the US economy was in the high inflation/low growth bucket, a situation commonly called stagflation. This was the worst combination in our study, with sharp equity market underperformance (average annual return of 0.6% versus +7.1% for all quarters). At the other end of the spectrum, the goldilocks scenario of low inflation and high growth registered strong outperformance—no surprise.

Results during the other two stretched states were more illuminating. Stocks outperformed in the high inflation/high growth quarters but underperformed in the low inflation/low growth quarters. In other words, high inflation appears to be fine for public equities when growth is strong, but stocks have struggled during periods with low growth, even when inflation was low as well.

... Economies have shown greater resilience against high inflation than they have against low growth.

Developed-economy central banks, including the BoE, the Fed, and the ECB, have been criticized for complacency during the current flare-up of inflation. Some observers have argued that rate hikes did not come quickly enough when the first signs of rising inflation appeared in 2021, and that policy rates appear to be lagging as inflation rises further.

The results of this study suggest central banks' patience may have been warranted, especially considering the strong employment picture. Economies have shown greater resilience against high inflation than they have against low growth.





Trending topics

Commodity prices may have peaked

Rising commodity prices are central to the global inflation problem in 2022. Commodity prices are higher across the board since March 15, 2020.

A broad-based commodity index has nearly doubled since that date, with oil prices' 159% increase through July 21, 2022 leading the way (see Table 2).

Yet year-to-date performance shows clear signs of a reversal, especially since the start of the Russia-Ukraine war. Lumber, a commodity-market darling post-COVID, has fallen by almost half this year.

There is usually a lag between changes in commodity prices and headline inflation. Looking ahead, we can expect the ongoing reversal of prices to provide some relief on inflation. That is encouraging—but we must keep in mind that lower commodity prices also may signal slowing GDP growth and possibly recession.

Table 2: Commodity price performance since key dates

	Since 03.16.2020 (COVID lows)	2022 year-to-date	Since 02.25.2022 (Russia-Ukraine)
Broad-based commodity index	86%	17%	3%
Crude oil	159%	28%	5%
Copper	38%	-27%	-27%
Wheat	46%	6%	-4%
Corn	63%	-3%	-13%
Lumber	86%	-48%	-54%

Source: Bloomberg data through 07.21.2022. BCOM is the broadbased commodity index, generic first futures prices for all other.

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