

# Global Macro Trading for Idiots: Part Two

The Brain Damaging World of Foreign Exchange



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## Welcome back, idiots.

*Note (August 12, 2024): This post was originally published on November 29th, 2024. I've removed the paywall and unlocked this post for all free subscribers given the prominence of the carry trade unwind in the Japanese Yen over the past week. I hope it contributes to your understanding!*

In our last installment of “Global Macro Trading for Idiots”, we covered the riveting and edge-of-your-seat action that is trading the US yield curve.

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By the end of the article (if you were paying to see the trade below the paywall, which you really should have, it was a banger) I had explained how to understand the basics of trading the yield curve and how to implement (using futures) our recommended trade - selling 10s on 2s10s30s when it was -104bps risking 10bps of NAV DV01, expecting a steepening.

Over the next two months, 2s10s30s steepened nearly 80bps from our entry. I make no promises the trades in this one will be as good as that was, but there's only one way to find out!

As we all know by now, the yield curve can't predict anything so I don't even know why we were talking about it! Now, we're going to talk about why we're all here, money.

Well, currency, at least.

Foreign Exchange (FX) is the most liquid market in the world, employing high leverage to take advantage of small moves. Currency markets tie the global economy together, making foreign exchange (FX) an essential consideration when analyzing cross-border capital flows and international trade and investment.

Just like with the first installment, there are hundreds if not thousands of FX primers out there that you can use to learn about every intricacy. That's not what this article is for, this is focused on trading and learning the implications of FX rates across various markets. Even equity investors focused solely on stock picking cannot ignore the impact of FX moves on their portfolio's performance. This article will touch on the clear cut basics, and (below the paywall) I will expand on my own views for some FX trades over the next few months.

In today's connected markets, **every investor is essentially an FX trader**, whether they realize it or not. Mastering some currency market basics allows you to understand important signals sent related to volatility, hedge more effectively, and construct unique trades for specific global macro outcomes. So let's get started!

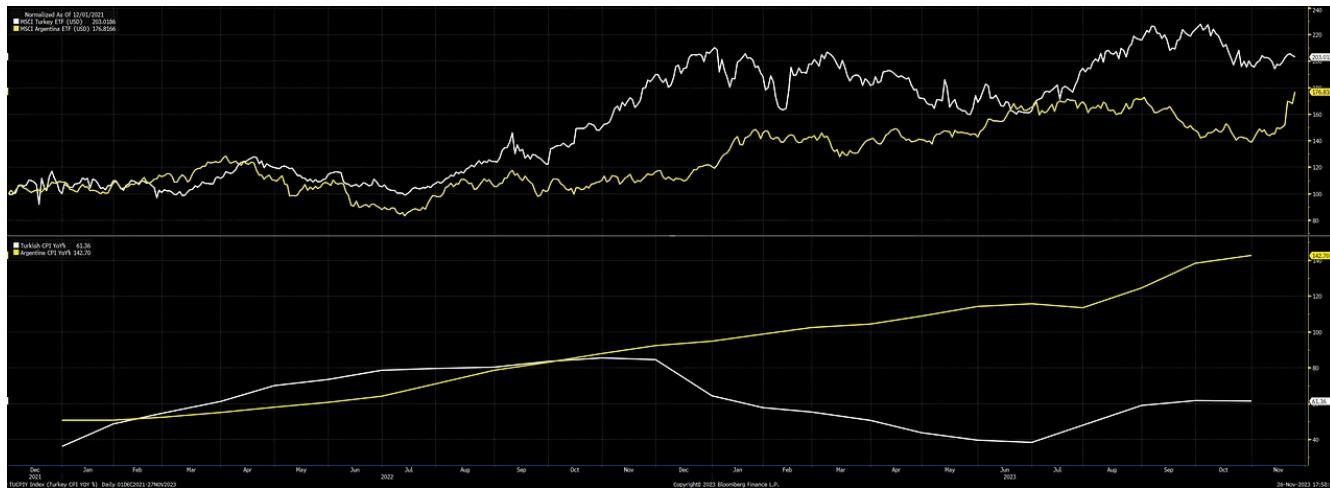
## **FX is important. For everyone.**

Take recent currency developments in some inflation-plagued emerging markets.

Persistently high inflation - at one point nearing triple digits in Turkey and well past triple digits in Argentina, has driven aggressive interest rate hikes from central banks that have utterly failed to control these currency's tailspins - local currencies like the Turkish Lira and Argentine Peso continue to lose purchasing power.

This fuels demand for hard assets as citizens rush to protect savings, bidding up equities, real estate, gold and cryptocurrencies denominated in the local currency.

This might seem like something you could be wholly unconcerned with as an equity investor, but you might be surprised at the opportunities in international stocks you'd miss by not paying attention to it. Turkish and Argentine stocks have soared even on a dollar-hedged basis.



**The return of the MSCI Turkey ETF (TUR) in 2022 was > +100%.** So if you did so well as an equity investor in 2022 that a relatively uncorrelated asset going up 100% in your portfolio that year wouldn't have helped you, you can probably continue to stay unaware of FX moves.

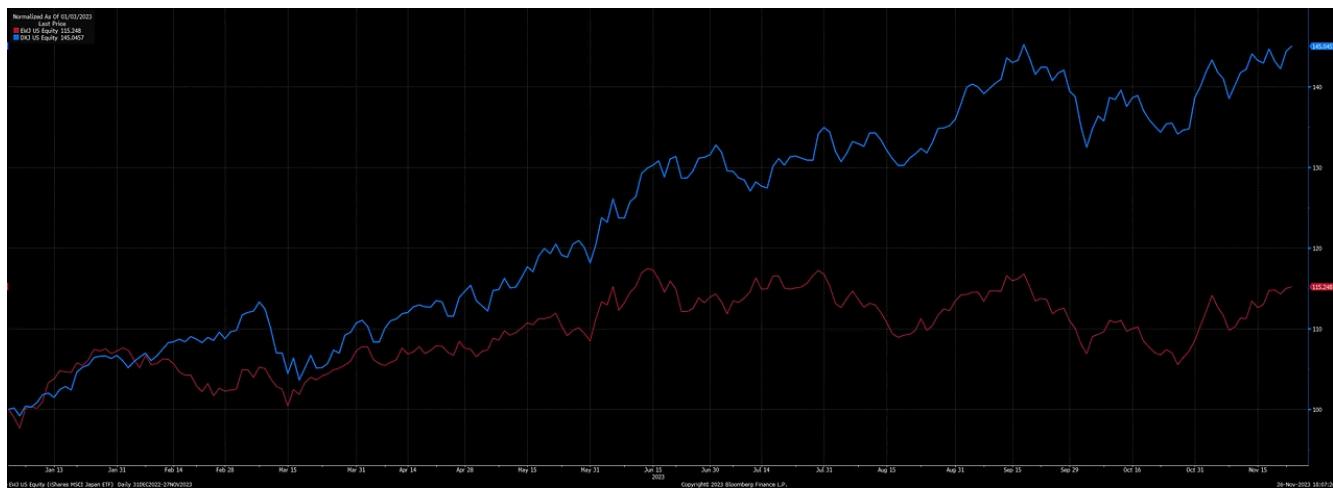
For the rest of us, inflation and FX rates affect all asset classes. After all, you're transacting in a globalized economy...with transactions denominated in - yep, you guessed it - currencies!

This is not just something that's limited to having an impact on the stocks of emerging markets, FX reverberates through asset classes.

Historically (and currently, as well), escalating US trade tensions and devaluation of the Chinese yuan have caused ripple effects like surging gold prices and increased inflows to US stock indices and bonds as Chinese capital took flight. FX changes can be a determinant in foreign markets as much as they can be in local currency markets.

Perhaps the most recently stunning example of FX impacting equity returns has been during Japan's recent bull run - understanding how Japan's economic rebound would affect equities might have gotten you to allocate to Japanese Equities (represented by the EWJ ETF), good for a cool 15% return YTD, but understanding the reaction of the BoJ in light of it and the effect that would have on the currency could have resulted in your Japanese equity allocation being USD Hedged (represented by the DXJ ETF) and therefore **up 45%**.

Triple the returns just by understanding how your thesis is impacted by FX.



Understanding FX seems not too big of an ask even for an equity focused investor/manager when it's the difference between these FX-hedged (in blue) and unhedged returns in USD (in red) on a couple popular Japanese single name equities:



In the example above, the Bank of Japan's dovish monetary policy contrasted with the hawkish Fed and weakened the Yen dramatically against the US Dollar. It was relatively straightforward and also not the hardest thing to predict (for me, at least, predicting the reversal is proving to be orders of magnitude more difficult).

So, before we get into forwards and carry and geopolitics and elections and NDFs, I'd like to state the following: **95% of FX is policy rate and implied policy rate changes.**

That's going to encompass the rest of it (economic growth, inflation, etc) since it's all packed in to how the market is pricing those implied rates. If your view on rate differentials is correct, you're likely going to make money in FX (at least in G10 FX).

Some people will disagree here. What I say to that is:



So while it's not all about relative central bank policy...this is *Global Macro Trading for Idiots*, as a fellow idiot, I'm here to tell you: yeah, it is pretty much all about interest rate differentials (and market expectations thereof).

In the example above, the Bank of Japan's dovish monetary policy contrasted with the hawkish Fed and weakened the Yen dramatically against the US Dollar.

It was relatively straightforward and also not the hardest thing to predict (for me, at least, predicting the reversal is proving to be orders of magnitude more difficult but will be equally if not more rewarding once it occurs - more in this later).

Yes, there are a few other things - geopolitical and systemic risks manifest strongly in currency moves which reverberate across markets, relative valuation of currencies in terms of purchasing power parity and inflation, commodity and risk beta...still - it's mostly interest rates.

Sorry, not sorry.

Let's get into why...

## Carry

A carry trade, fundamentally, is the strategy of borrowing in a currency with a low-interest rate and investing in a currency with a higher rate. "Carry" measures this difference as a function of how much the investor is earning (or losing) in an FX position. Earning carry in FX is being short variance in global policy movements, which translates to essentially being short global volatility.

Consider, for instance, the dynamics between the US dollar and the Mexican Peso. In this example, I am the carry tradooooor.

I exchange my US dollars (USD) for Mexican Peso (MXN), where the one-year rate is currently 10.1% rather than earning 5.25% in a one-year Treasury bill. I am long MXN denominated in USD - similar to how one might buy Apple stock and end up long AAPL denominated in USD.

The FX trader intuitively understands that there is no such thing as a trade that is not a pair trade. When you buy something, you are shorting something else against it (typically a currency). Every numerator needs a denominator.

At the end of the year, in the unlikely scenario that the Peso is unchanged in value, I will have earned the carry (i.e. I will have earned 10.1%, or 4.85% more than if I had just bought T-bills).

Over a year, in an ideal scenario where the Peso's value remains stable, this trade could yield a return of 10.1%, offering a 4.85% advantage over investing in U.S. Treasury bills.

Leverage plays a critical role in amplifying these returns, as does the rate paid to borrow in the denominator currency.

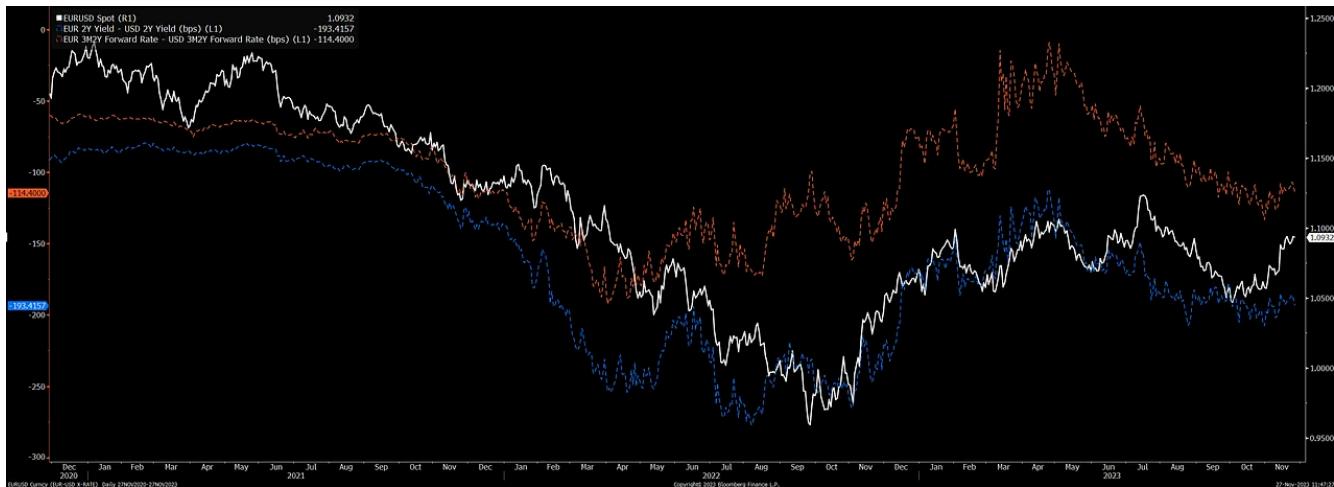
For instance, with an initial margin, an investor might leverage their position by 10 to 20 times, borrowing dollars to invest in Pesos. This means that while the borrowed dollars are subject to U.S. interest rates, the invested amount in Pesos earns at the higher Mexican rate.

However, this is a double-edged sword: any fluctuation in the FX rate can significantly impact the profit and loss due to the leverage. If Mexico has a credit crunch that's due to uniquely Mexican idiosyncratic factors while the U.S. stays stable, the policy rate in Mexico will come down rapidly as US's does not - rapidly devaluing MXN vs USD and unwinding the carry trade.

You might be thinking “well, why would I borrow USD at 5% when I can borrow a currency that has 0% rates?”. Good, you’re already thinking like a degenerate. We’ll get into that later, but as I am sure you can imagine these carry trade unwinds can get *violent*.

Carry is one of the factors that makes interest rate differentials, including real interest rate differentials (adjusted for market expectations of inflation) and forward interest rate differentials (adjusted for future expectations of policy rate changes) the primary driver of FX returns. Indeed, rarely will you see FX volatility that isn’t driven in one way or another by the carry trade.

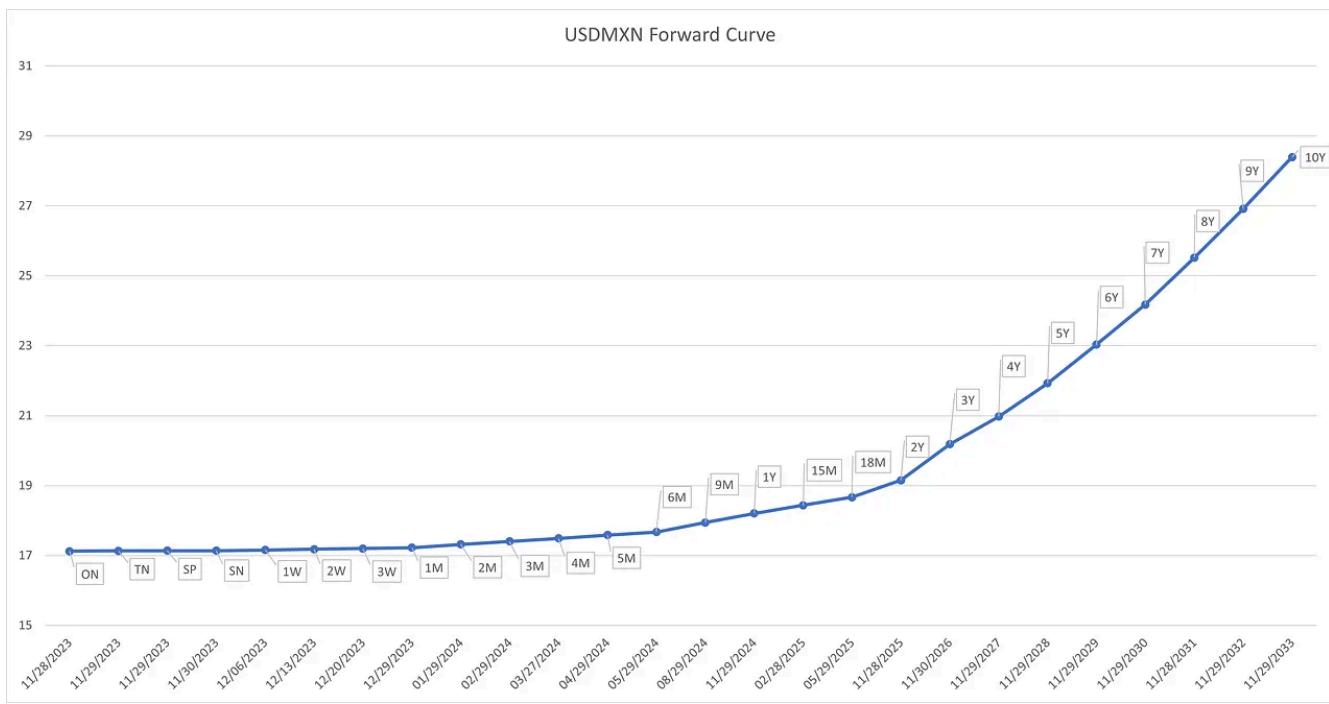
As we can see in this example from the past 3 years in EURUSD, the correlation is quite severe:



EURUSD - which had undergone a massive move that many were lost trying to anticipate a reversal in - bottomed in September 2022. The difference between the EU and US 2 year yield (a tenor sensitive to both the current policy rate and policy rate expectations in the short term) bottomed a month earlier in August 22 at roughly -275bps, while the difference between the 3m2y (the expected 2 year yield, 3 months forward from now) bottomed in April 2022. Despite the invasion of Ukraine, the worries of an impending energy crisis, the questions as to a European recession, the interest rate differential still prevailed.

## Forex Forward Pricing

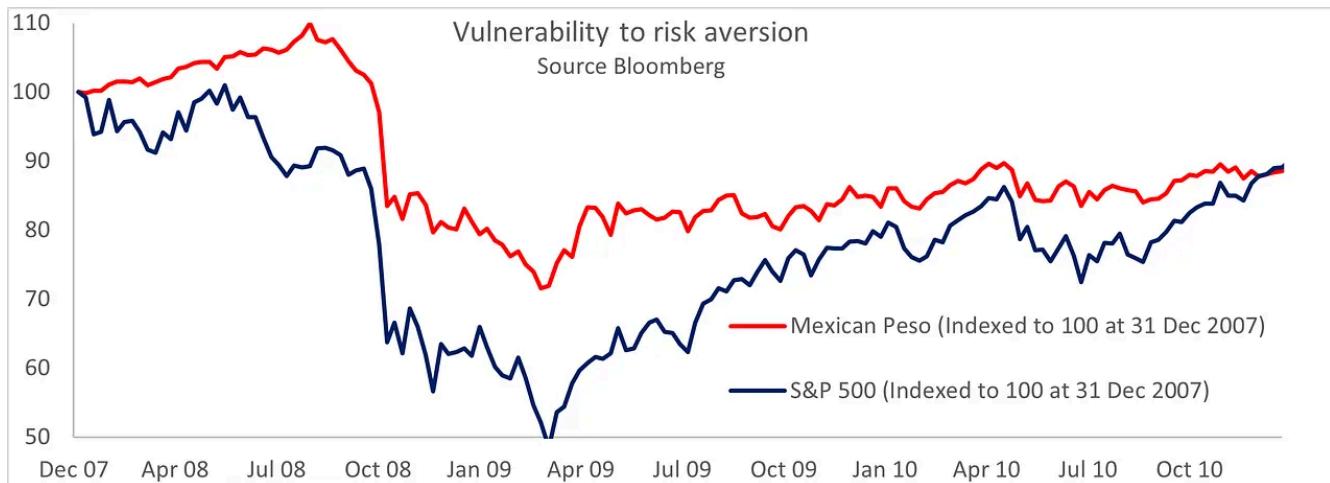
An alternative to the direct carry trade is engaging in Forex forward contracts. These contracts are designed to factor in the interest rate differentials between two currencies. Using our earlier example of the dollar/Mexican Peso (USDMXN) trade, let's explore how forward pricing works. The forward price, in theory, should align with the spot price adjusted for the interest rate differential over the contract duration. However, practical market frictions often lead to slight deviations from this theoretical price.



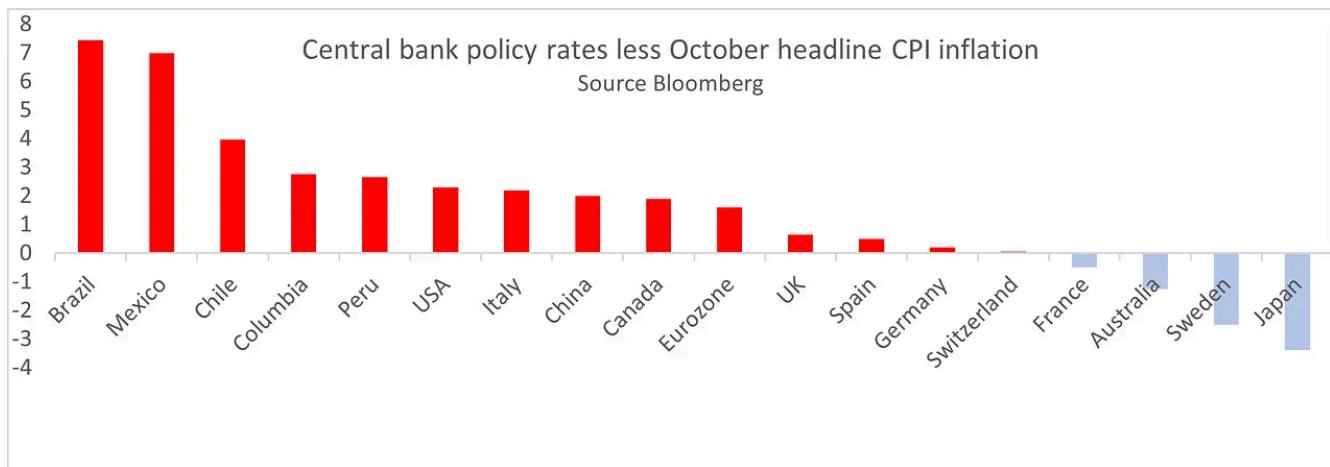
On a specific date, say November 27th, an investor could purchase Mexican Pesos at a rate of 17.23 per dollar and invest in a two-year Mexican bond yielding 10.4%.

Alternatively, they could buy a two-year forward contract for Mexican Pesos, keeping their funds in a two-year U.S. Treasury yielding 4.9%, and later receive 19.23 Pesos per dollar. This forward contract essentially offers an additional 2 Pesos per dollar - an 11.5% gain over spot buying, roughly translating to an annualized gain of 5.75%, compensating for the foregone interest in the Mexican bond.

## LATAM Carry



The Latin American countries have a poor track record with inflation and have suffered deep currencies devaluations in the past, but those lessons have been learned and many LATAM central banks now have much policy rates relative to inflation than advanced economies.



This determination to avoid previous mistakes with aggressive rate hikes to kill inflation has paid off with strong currency appreciation. Bloomberg has an index of representing an equally weighted investment in 6 LATAM currencies (Argentine Peso, Brazilian Real, Chilean Peso, Colombian Peso, Mexican Peso and Peruvian Sol) using 3-month money-market securities, using dollars borrowed at a 3-month rate.

This strategy has outperformed not just the S&P 500, but most other major asset classes over the past two years.

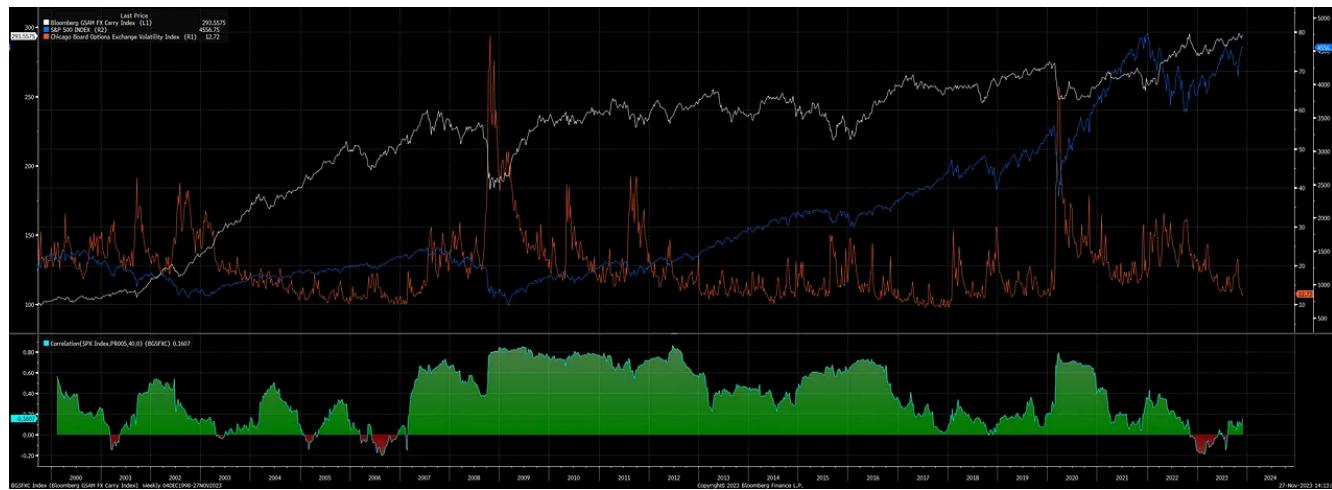


Something to note, however, about LATAM FX outside of MXN and BRL is that there is a huge liquidity premium, and these pairs are typically difficult to transact in at size. Normally you have to hope for some sort of Corporate or Government flow to get liquidity, and that is difficult to predict. Keep this in mind when you look to earn LATAM carry, because if you need to get out at the same time as everyone else, well...it can be ugly.

## When the Carry Hits the Fan

Carry trades are fundamentally short volatility, not just FX volatility but in general (especially in LATAM, where things tend to more smack the fan in the face rather than just hit it).

Take a look at the relationship between the Bloomberg GSAM FX Carry Index, the VIX and the SPX.



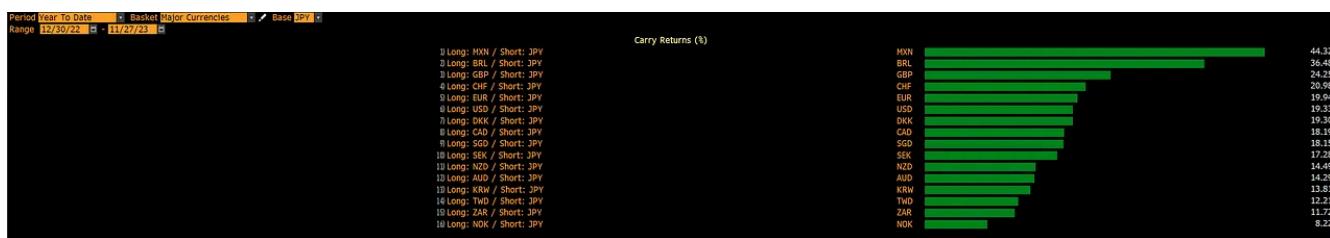
When there's global volatility, the correlation between the SPX and FX carry trades goes to 1. This is important to know for anyone who has exposure in a country that's the long leg in a popular carry trade.

The most popular of the carry trades will tend to be ones that have the widest interest rate differentials. This is why the risk/reward is not that attractive anymore (imo) on long dollar yen, because *everyone is borrowing yen* (to buy dollars, or pesos, or Turkish liras if they're real degenerates). It does not take that much to cause a vicious cycle in

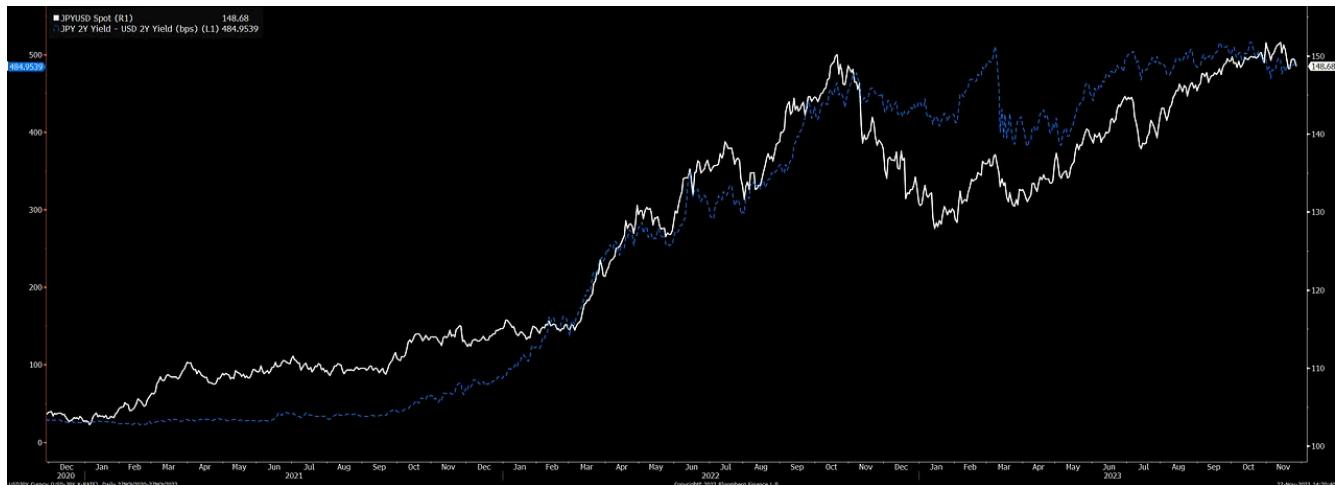
the opposite direction, because the changes are amplified by both future expectations and positioning. Japan has not raised rates yet, but if they were to engage in a rate hiking cycle the narrowing interest rate differential combined with the crowded trades would cause a rapid appreciation in their currency. This would be magnified even further if it were to happen at the same time as other central banks began cutting rates (or being expected to). The unwind can be correlated with or even the cause of large drawdowns in stocks.

It also can create some pretty unique scenarios that can help you prepare your overall portfolio. For example, right now we're in an environment where carry trades have absolutely killed it. The most popular funding currency is, obviously, the Japanese yen - it's the only country globally that's still got negative interest rate policy. The Japanese yen has gotten destroyed this year again, with most major currency carry trades using it as funding having significant returns and MXNJPY (a truly degenerate carry trade with an interest rate differential higher than 900bps) returning 44.32% YTD.

While those kind of returns are precarious, they're also difficult to short. The bleed on the carry as you take the other side can wipe you out, which is why it's so essential to wait for a catalyst to present when you're fading these trades and to be aware of them when you're in them. Really, just think of it as earning carry being long vol (getting paid to earn if things stay the same) or short vol (being paid to earn if things change a lot).



The reason is pretty clear once one overlays the interest rate differential with the currency:



Source: J.P.Morgan, Bloomberg Finance L.P.

It's important to know your own carry, but also the carry trades that are popular in the market.

## The Reality of Long-Term Forwards & Interest Rate Parity

When extending this logic to longer durations, such as a 10-year forward, the dynamics become even more intriguing. Here, an investor could lock in a rate to buy back dollars at a future date, theoretically securing the carry without currency risk. However, in reality, such "free lunches" are rare in finance. The forward price for a ten-year period, for instance, might be 28.3 MXN per dollar, effectively nullifying the carry advantage of the Mexican bond over its U.S. counterpart.

The principle of interest rate parity states that the difference in interest rates between two countries should be reflected in the forward exchange rate between the two currencies.

For example, if the interest rate in the US is 5% and the interest rate in Europe is 3%, then according to interest rate parity the forward price of the euro should be trading at a 2% premium to the spot euro rate.

Why does this theory hold up? Well let's think about it.

If you borrow 1 million dollars at 5% interest in the US, convert it to euros at the spot rate, invest that money in Europe at 3% interest, and simultaneously lock in a forward contract to convert it back to dollars in a year, you should end up with the same amount of dollars after the year regardless of the euro fluctuations in between.

The 2% higher US interest rate is offset by the 2% extra premium you pay on the euro forward rate. So you end up indifferent between holding dollars or euros. No free lunch!

This is why the forward rate and the interest rate differential must be connected. Otherwise investors would arbitrage between the two currencies until the opportunity disappears.

Of course in practice there are risks, transaction costs and other market frictions that can cause deviations from theoretical parity. But it remains a fundamental anchor point for currency forwards.

Understanding these dynamics is important for understanding a phenomenon that has influenced global markets significantly, the flipping of Japanese investor's flows out of US Treasuries, which has exacerbated the selloff in US rates.

If it seems confusing, don't worry, you're not alone. Apparently, George Saravelos is equally confused.

George Saravelos, for one. In a note published today, Deutsche Bank's global head of forex research has turned both barrels on the yen. Here's some popcorn 🍿, dive in:

“

Japanese intervention to defend the yen will at best be ineffective and at worst make the situation worse. Why? Because a simple glance of the yen's drivers - yields and external accounts - puts the Japanese yen in the same league as the Turkish lira and Argentian peso [chart below]. Not only does Japan have the lowest nominal yield in the world (and the only economy with negative rates), but also record low real yields, a direct function of the BoJ's refusal to tighten policy in the face of high inflation. Japan now also has one of the worst broad basic balances in the world – not on the back of a large current account deficit but because the BoJ has effectively engineered slow-motion capital flight from domestic investors into foreign assets. **If you are Japanese, what is the point of buying a 5-year JGB with a nominal yield of 50bps when you can buy a 5-year US treasury with a real yield of 3%?**

Don't worry, “*Global Macro Trading for Idiots*” is here to ensure you don't make the same mistake.

See, here's the thing about this: Japanese investors tend to be Japanese, which entails being in Japan, and most of them probably plan on being in Japan in 5 or even 10 years time. That requires (unfortunately, for the Japanese right now) Japanese Yen. Some of these investors even have obligations they must deliver on in Japanese Yen in the future. They are probably not interested in taking directional bets on exchange rates.

The cost of hedging against adverse moves in exchange rates is typically what deters Japanese money from seeking higher nominal yields outside of the country:



The above image shows a rough proxy for FX Hedged EGBs, USTs and Gilts versus JGBs. The reality is there's no reason for a Japanese investor who has to hedge (the majority of them) to buy US treasuries right now. Or gilts or bunds for that matter.

These are all considerations for both rates and FX.

## The Few Non-Interest Rate Reasons for FX to Move

Now, interest rate differentials (and predicting interest rate differentials) are, in my opinion, most of what makes up FX returns. But that's not to say it's the only thing. As we can see here, the strategy of simply selecting every month the 3 currencies with the highest interest rate and going long them versus short the 3 with the lowest interest rate has outperformed the PIMCO Bond Total Return Fund, it's done so with some very uncomfortable BTFO'd carry trade related volatility (primarily from COVID) making for a terrible sharpe:



Besides the risk of these very levered, very crowded trades unwinding in a reflexive manner (which we will touch on later), the reason for higher rates and the overall economies of the countries is quite important.

A good question to ask is “how manageable is the inflation?” and “how long will it necessitate keeping rates high?” and “how long can the inflation continue before it leads to extreme consequences?”



Looking at a scatter plot of countries' real GDP vs. CPI YoY gives us a good backward looking snapshot of how their economies have fared relative to inflation, and looking at unemployment relative to policy rate gives us an idea of how rate hikes have affected them:



While forward expectations of rates are likely to be much more helpful in forming your view (especially because they are taking these things in already), determining what you're seeing or missing when you express it is important - and to do that you'll need to understand which economic releases are going to be the most important (sometimes a single CPI print changes the trend of an FX pair for months to come, sometimes it means nothing).

## Purchasing Power Parity

The basic idea behind purchasing power parity (PPP) is that exchange rates should equalize the purchasing power of different currencies. In other words, a dollar should be able to purchase the same standardized basket of goods and services across countries when accounting for the FX rate.

PPP suggests that large and persistent deviations from these theoretical exchange rates grounded in relative price levels will tend to revert back over time. Currencies become overvalued when their exchange rates make prices much higher than justified and undervalued when their prices are much cheaper. A dollar should be able to purchase the same standardized basket of goods and services across countries when accounting for the FX rate.

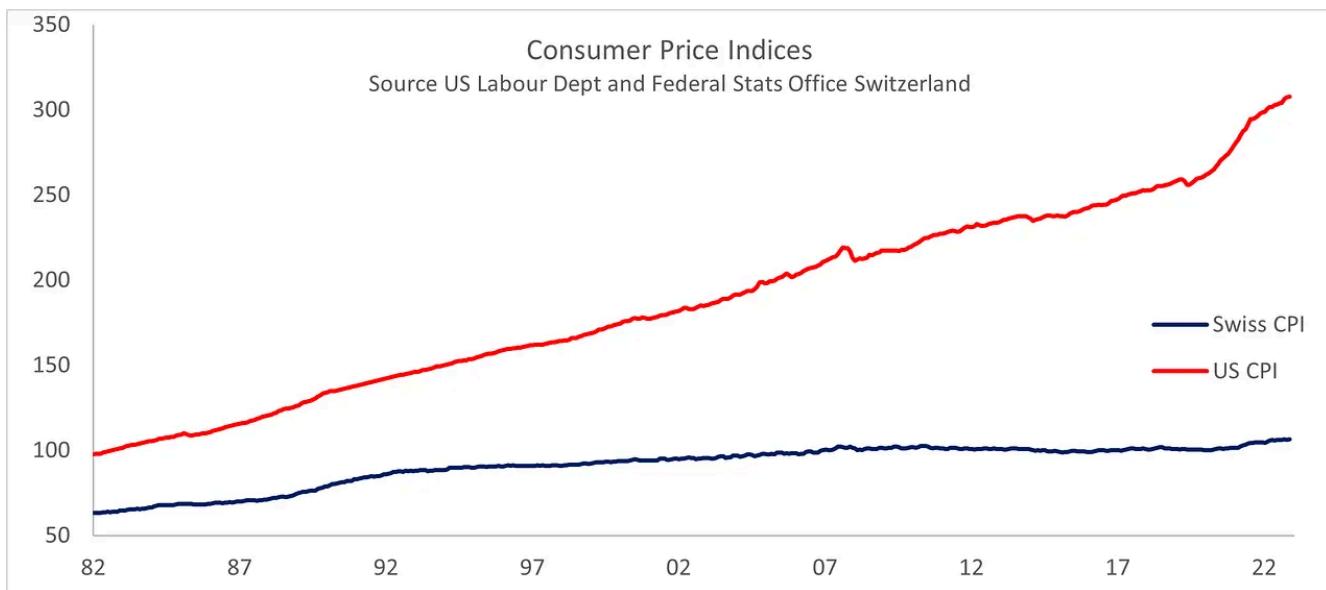
An easy way to show this is with the “Big Mac Index”. A McDonald's Big Mac burger, should trade for the same effective price across different countries when exchange rates adjust for purchasing power. For example, if a Big Mac costs \$5 in the US but just £3 in the UK, in theory the pound is undervalued relative to the dollar based on PPP. Over time, exchange rates should adjust so the identical goods trade for parity. So if UK Big Macs suddenly shot up to £7 but US Big Macs stayed stable, PPP suggests the British pound would strengthen closer to the equivalent \$7 based on burger pricing parity.

Let's take a more specific example, like the cost of a Big Mac in Turkey, where inflation has hit a high of 85.5% last year.

In December of 2021, the price of a Big Mac in Turkey was 19.99 Turkish Lira (TRY) and there were 13.3 Lira to the dollar, giving a dollar price of \$1.50. In theory, this should cost roughly the same price as it does in the US [note that cheaper Turkish labour rates and the cost of exporting a Big Mac to New York mean PPP is not 100% accurate in practice] but it will still illustrate the concept of PPP quite well.

One year later in December 2022, the Turkish Big Mac cost 47 Lira – an increase of 135%. However, there are now more than 28 Lira to the dollar, which means that if that Big Mac still costs 28 Lira, the cost in dollars is \$1.66 – an increase roughly in line with US inflation. PPP provides a rough guide to how currencies will respond to different inflation rates – any country with much higher inflation relative to others should experience a currency devaluation that keeps its goods at roughly the same price in foreign currency terms.

The Swiss Franc provides another good example. The US Consumer Price Index which provides an index for the average cost of a typical basket of consumer purchases has risen from 97.7 in December of 1982 to 307.6 in October of this year – an average annual increase of 2.85% over the period, although the past couple of years have seen increases at a much faster pace. A similar Swiss CPI started at 63.3 in December 1982, but the Swiss central bank has kept a tight control over inflation, and this index was 106.4 in October – an average annual increase of just 1.28%.

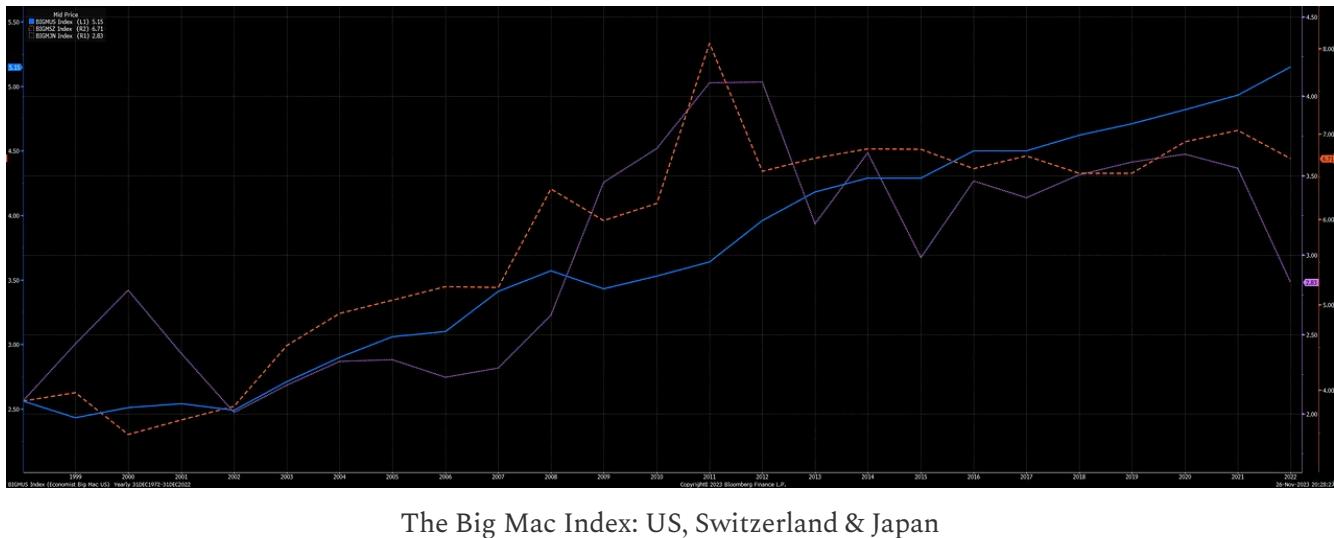


In other words, the dollar's purchasing power has been eroded, and the consumer basket of goods now costs more than three times as much as it did in 1982, whereas the Swiss consumer basket cost only 68% more than in 1982. Now look at how many Swiss Francs can be bought for a dollar – less than 1 compared with a high of close to 3 when Paul Volcker crushed US inflation in the early eighties.

Obviously fast food burgers have their flaws when modeling complex currency dynamics. But the point is valid - exchange rates do tend to oscillate around rates justified by relative price levels and purchasing power over the very long run.

Think of PPP as shorter term FX volatility floating around an anchor point tied to fundamental inflation and consumption differences between countries. When times are turbulent, PPP expectations can provide ballast amidst market chaos.

Let's look at the Big Mac Index in three Developed Market countries, the US (BIGMUS), Switzerland (BIGMSZ) and Japan (BIGMJN):



The Big Mac Index: US, Switzerland &amp; Japan

We can see clearly that it should not be true that a big mac costs less than three PPP dollars in Japan and more than six in Switzerland, but it is. And the thing is, it's difficult to trade on this because there's really no impulse for it to correct except over longer periods of time. Eventually a catalyst will come along and rubber band this back, but other than being aware of it, it's generally a good idea not to make this the sole reason for a trade.

## Debt Dynamics: Local vs Foreign Currency

When you look at truly legendary - I mean like, go into the history books level - FX trades, the logic and reasoning behind them makes it seem like interest rate differentials are maybe not 95% of why currencies move.

Soros doesn't talk about breaking the Bank of England and then follow it up with another trade on USDJPY with something like "well, you know, the BoJ was keeping rates pretty low. and then the fed...wasn't. so, yeah."

While that is the reality behind the majority of actually successful FX trades, there are those that make it seem much more sexier. These trades happening regardless of policy rate and being driven primarily by debt dynamics or a failed attempt at the impossible trinity or crisis-level economic idiosyncrasies or some other fourth thing are relatively rare and almost solely limited to emerging markets.

The majority of rockstar FX trades have one structural setup in common, which is produced by the vulnerability of a centralized authority trying to exert its will on free markets. Whether that's the UK trying to participate in the fixed European Exchange Rate Mechanism (at an unfeasible exchange rate of 2.7 DEM) back in 1992 or Japan trying to keep 10 year JGBs below 25bps in 2023 - these are the breeding grounds for massive FX moves.

If you are planning on trading FX, rate differentials (including real rate differentials and all implied forward rates etc.) should be not just your bread and butter but also your salad, your entree and your dessert. These trades are more like the sprinkles on the ice cream on top of your apple pie. It would be unwise to ruin a whole meal because you just *need to have them*.

Still, it's still good to have a foundation in case you do ever come across these kinds of trades.

When analyzing emerging markets, especially for carry trades, an important consideration is the makeup of a country's sovereign and corporate debt stock - specifically the divide between local currency versus hard currency obligations.

Countries like Turkey, South Africa and Brazil rely heavily on issuances denominated in or linked to foreign currencies like the US Dollar or Euro. This leaves them vulnerable to swings in the value of their local currencies. A depreciating Real means those US Dollar debts become much more costly for Brazilian companies to service.

By contrast, developed markets like the United States, Europe and Japan finance themselves predominantly in local currency. This avoids currency mismatches that could wreak havoc on debt sustainability. The Bank of Japan can always print more Yen to finance bonds while the Fed does the same for Treasuries.

In traditional economic thought, a country should never default on debt denominated in its own currency as long as it has access to the printing press.

For emerging markets without this luxury, a rise in global rates or risk aversion can set off a vicious crisis cycle. As capital flows reverse, local currencies weaken sharply.

Foreign currency debts pile up faster while locals rush to dump those instruments for greenback safety.

This dynamic was on full display during Federal Reserve tightening cycles in 2013, 2018 and 2022, which kicked off plunging emerging market currencies, equities and bonds. Those reliant on external financing suffer the most severe consequences until the Fed pivots back to easing mode. The saying “the US sneezes and the world catches a cold” is primarily about US economic weakness, but it should really be about the Fed’s hiking cycle. That’s what Long Term Capital Management learned in 1997.

The Asian Financial Crisis of 1997-1998 was a currency meltdown that illustrated how quickly cross-border capital flows can reverse and expose structural vulnerabilities in emerging market economies.

Many Southeast Asian nations like Thailand, Malaysia and South Korea had linked their currencies to the US dollar and relied on short-term loans from overseas investors to fund growing current account deficits. This worked nicely when the Fed kept rates low. But it set them up for crisis once tightening hit.

As US rates rose in 1997, foreign investors began pulling money from Asian markets. Currencies came under pressure but central banks initially tried defending their dollar pegs by selling FX reserves and raising rates. All this did was tighten domestic liquidity, crush their stock markets and tip their economies into recession.

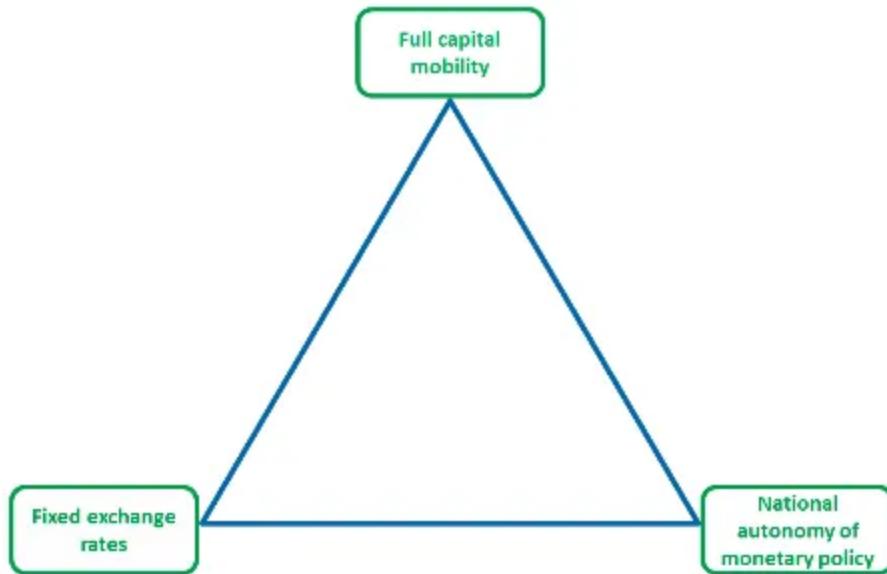
Eventually the selling was too intense, and one by one currencies were freed to float lower. The Thai baht kicked things off, soon followed by the Malaysian ringgit, Korean won, Indonesian rupiah and others. Weaker currencies only sped up capital outflows as foreign investors looked to salvage failing positions.

IMF bailouts with strict austerity measures provided lifelines but the regional contagion was severe. Major Korean conglomerates defaulted, Indonesian leader Suharto resigned amid riots and Malaysia imposed capital controls to halt plunging markets.

The key takeaway is how quickly investor sentiment flipped once currency pegs looked unstable. Attracted by miracles of Asian Tiger growth, overseas capital flooded in

without proper vetting of risks. When the tide went out, structural flaws were exposed by the first wave of selling. A full blown regional crisis ensued.

### The “impossible trinity”:



The impossible trinity is a core concept in international economics capturing the inherent tradeoffs countries face between three policy objectives - a fixed foreign exchange rate, free capital movement, and an independent monetary policy.

According to the trinity, countries can only choose two out of these three options. Attempting to pursue all three at once is futile and will only end in tears.

How was this relevant in the Asian crisis? Well, those Tiger economies thought they could keep stable dollar pegs, attract foreign capital inflows with high rates, AND run independent monetary policy to support growth. And for awhile it seemed to work marvelously! Until it didn't...

Once Fed tightening triggered investor flight from Asia, the trinity tradeoffs were brutally exposed. Defending the currency pegs ate through FX reserves, raising interest rates to prop up exchange rates while growth slowed only sped up debt defaults and recessions.

And their close link to the rising dollar made running an independent monetary policy impossible. They were importing the Fed's tight conditions even as their domestic economies cratered.

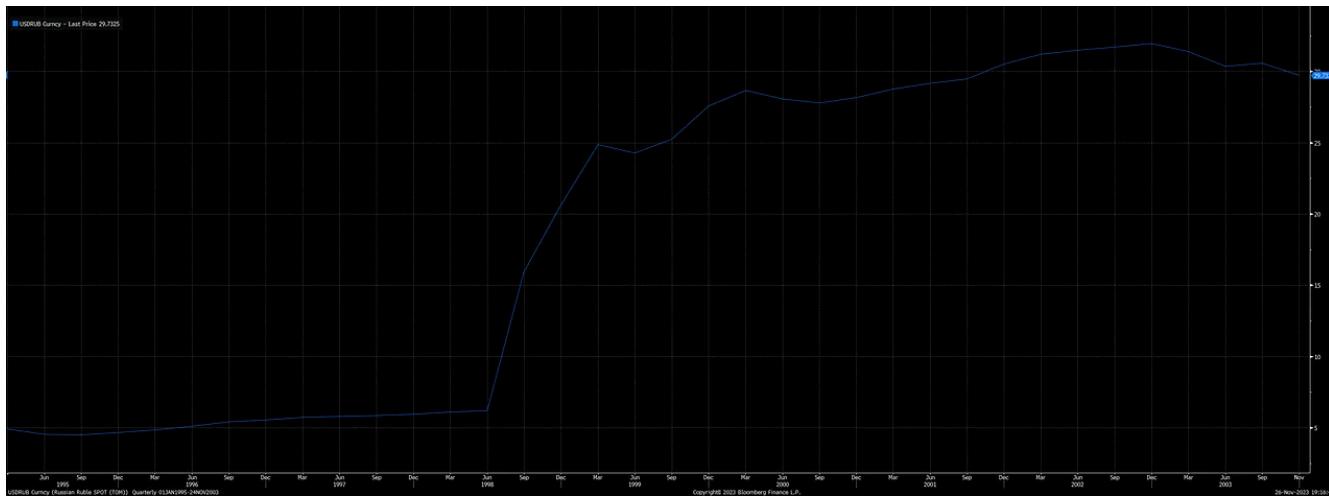
In the aftermath, most of Asia learned the hard way to pick only two sides of the triangle. Most let their exchange rates float more freely in order to keep some monetary control. Others like Hong Kong chose to rigidly fix to the USD at the cost of importing American monetary policy. Depending on who you ask, China is the odd man out with regards to still attempting the trinity.

Just as Southeast Asian economies were battling currency collapse and contagion from the 1997 crises, trouble was brewing from another EM heavyweight - Russia.

By 1998, Russia was running massive twin budget and current account deficits funding imports as part of assistance packages to former soviet bloc countries and government spending. Much of this was financed with short-term bonds (GKOs) denominated in USD and other foreign currencies. This set up inevitable crisis when investor sentiment turned.

Oil prices collapsing in 1998 was the straw that broke confidence in Russia's fragile economic recovery. And despite a \$22 billion IMF bailout in July, by August investors were fleeing Russian markets en masse. The central bank burned through almost all its reserves trying to defend the floating-peg that tried to keep the USDRUB exchange rate below 7.1.

But on August 17th, they had to give up and let the ruble free float. The traditional economic thought regarding countries paying local currency denominated debt was not accurate in this situation, Russia eventually defaulted on domestic debt (which Long Term Capital Management was exposed to) as the economy tipped into severe recession.



The ruble crisis only exacerbated outflows from troubled Asian markets adding fuel to the regional conflagration. It underscored how quickly investor panic spreads across emerging markets during periods of global risk aversion.

So yet again, the illusion of easy international capital flows into high returning EMs evaporated once crisis hit. And currency pegs proved their consistent role as transmission mechanisms turning localized turmoil into global market earthquakes.

## When All Else Fails...Currency Controls

Distressed emerging market governments often attempt unconventional measures to stem rapid currency declines and capital outflows. These last resort options typically involve imposing capital controls - restrictions on foreigners pulling money out of the country.

Controls can take various forms:

- Taxes on equities/FX transactions
- Limits on daily trading volumes
- Requirements to keep money onshore for minimum periods
- Outright bans on foreign asset purchases

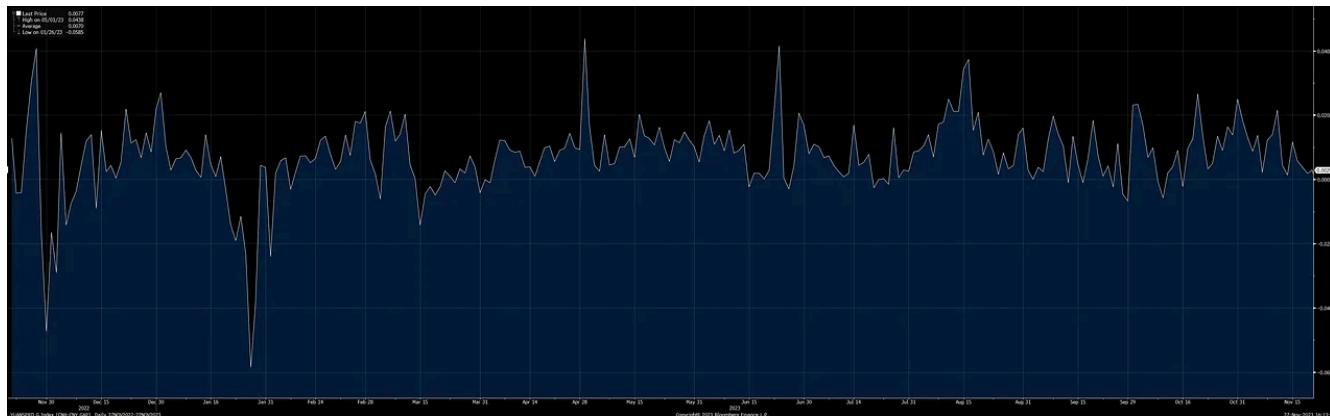
Controls aim to choke off supply of hard currency, supporting the local currency from further falls. But they also isolate domestic markets, create black market arbitrage

opportunities, and undermine investor confidence.

This is where non-deliverable forwards (NDFs) come into play. These derivatives allow traders to bet on the future value of restricted currencies without physically settling the transactions.

For example, when Malaysia imposed FX controls during the 1997 Asian crisis, the ringgit continued trading offshore in NDF markets in Singapore and Hong Kong beyond the reach of regulators. The difference between local currency prices and NDF prices reflected pent up selling pressure.

In effect, restricted local markets price where the currency trades in theory. Meanwhile NDFs price where the currency would trade absent restrictions in practice. The gap highlights the distortions created by capital controls. We can observe the same thing with the fix of the Chinese Yuan vs. CNH (the offshore Chinese yuan NDF). You can view the disagreement between the free market and the CCP play out simply by subtracting the two:



NDFs simply produce an unofficial parallel FX rate once governments start meddling to obscure market realities. For currency traders, they provide crucial and tradable signals on the true state of restricted currencies.

Understanding these kinds of vulnerabilities is crucial for determining which emerging economies are built on solid ground versus those constructed on a bed of forex volatility.

# Fighting the Man: Politics, Elections, Referendums & Central Bankers

In FX, it isn't just you and your counterparty in the market. It's you and your counterparty and a bunch of governments. That means you have to be willing to accept and anticipate risk from things like shock central bank decisions, FX interventions, referendums, elections and other political nonsense.

These events can trigger volatility that is rooted in the market's level of anticipation and continued uncertainty. Central banks intervene in FX markets primarily to influence their currency's exchange rate. This intervention can take various forms, such as direct buying or selling of the currency, adjusting interest rates, or making public statements intended to influence market sentiment. The goals of such interventions include stabilizing the currency, controlling inflation, supporting export competitiveness, and maintaining financial stability.

More often than not, if you wake up to a headline about an FX intervention that really bones you, you were either *way too late to the trade* or you got *way too greedy*. Don't complain about them, it's simply part of the game - most of the time you just need to pay attention to the signals, it's rare these things come out of nowhere.

It's hard to talk in abstract terms about these kinds of events, so we've put together some examples:

## Brexit Referendum (2016)

The United Kingdom's referendum on European Union membership in June 2016 serves as a prime example. The unexpected result, favoring "Brexit," led to immediate and dramatic consequences in the FX market. The British pound (GBP) plummeted, recording a staggering overnight drop against major currencies, such as the US dollar (USD) and the euro (EUR). This was the sharpest one-day fall in GBP's history, driven by the uncertainty surrounding the UK's future economic relationships and the anticipated impact on its trade, investment flows, and broader economic stability.

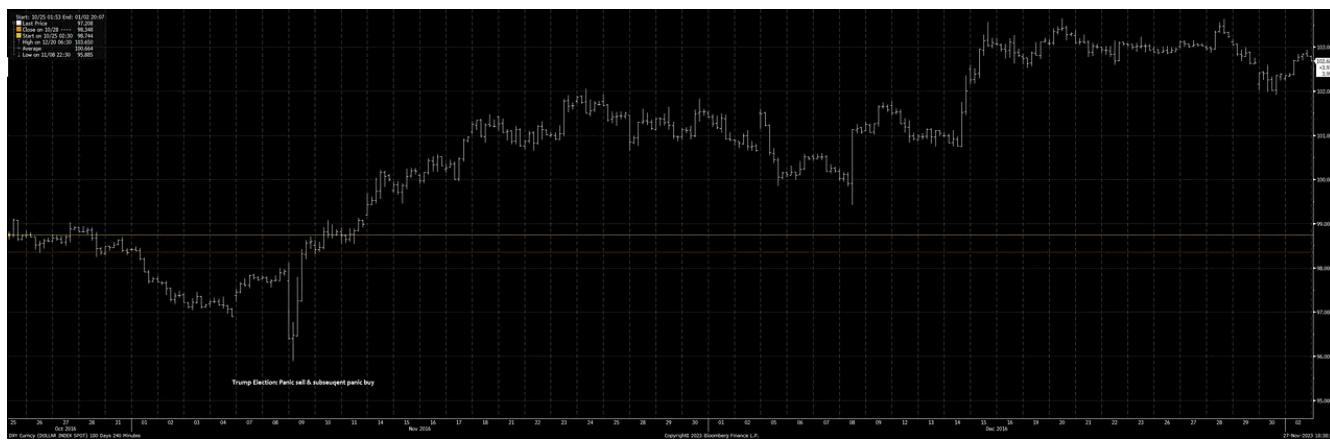
The market's reaction to Brexit encapsulated a broader theme in FX trading: uncertainty breeds volatility. The referendum's outcome led to significant economic uncertainties,

including concerns about trade barriers and shifts in foreign investment, all of which were reflected in the GBP's volatility. This scenario also highlighted the reflexivity in the markets: as the pound weakened, it triggered a feedback loop, with investors pulling out capital in anticipation of further declines, thereby exacerbating the fall. It has impacted pretty much all aspects of sterling since, including inflation (due to labor and immigration restriction) and (resultingly) interest rates.



The moron premium persists to this day

## US Presidential Elections (2016)



Panic Selling, immediately followed by panic buying that drove the DXY to fresh highs

The 2016 US Presidential Elections also had a notable impact on currency markets. The unexpected victory of Donald Trump led to a short-term decline in the USD, followed by a substantial rally. Initially, the markets reacted to the uncertainty and unpredictability associated with Trump's policies. However, once it became apparent that his administration would pursue fiscal expansion, deregulation, and tax reforms, the USD strengthened considerably against other major currencies.

The rally in the USD was driven by expectations of higher inflation and interest rates, as Trump's policies were expected to spur economic growth. This expectation aligned with the Federal Reserve's rate hike trajectory, further buoying the dollar. The market's reaction to the US election underlined the importance of policy anticipations in FX trading. The shifts in fiscal and monetary policy outlooks significantly influenced currency valuations, reflecting the market's forward-looking nature.

## **Swiss National Bank (SNB) Intervention (2011-2015)**

A notable example of FX intervention occurred with the Swiss National Bank (SNB) between 2011 and 2015. In September 2011, amid the European sovereign debt crisis, the SNB set a cap on the Swiss franc (CHF) at 1.20 against the euro (EUR). This decision was taken to prevent excessive appreciation of the franc, which was being viewed as a safe-haven currency and was rapidly appreciating. Such an appreciation was detrimental to Switzerland's export-driven economy and risked deflation.

The SNB's intervention involved massive purchases of foreign currencies, predominantly euros, to maintain the CHF cap. This action had significant implications for FX traders, as it effectively limited the franc's appreciation against the euro, creating a relatively stable CHF/EUR exchange rate.

However, in January 2015, the SNB unexpectedly abandoned the cap, leading to a sudden and sharp appreciation of the franc. The EUR/CHF pair collapsed within minutes, showcasing one of the most dramatic movements in recent FX history. This event blindsided many traders and resulted in substantial losses for those who had bet on the continuation of the cap. There are still FX traders today who suffer from PTSD because of this:



Gap Risk is no Joke

## [PAID CONTENT BELOW]

Beneath the paywall, you'll find:

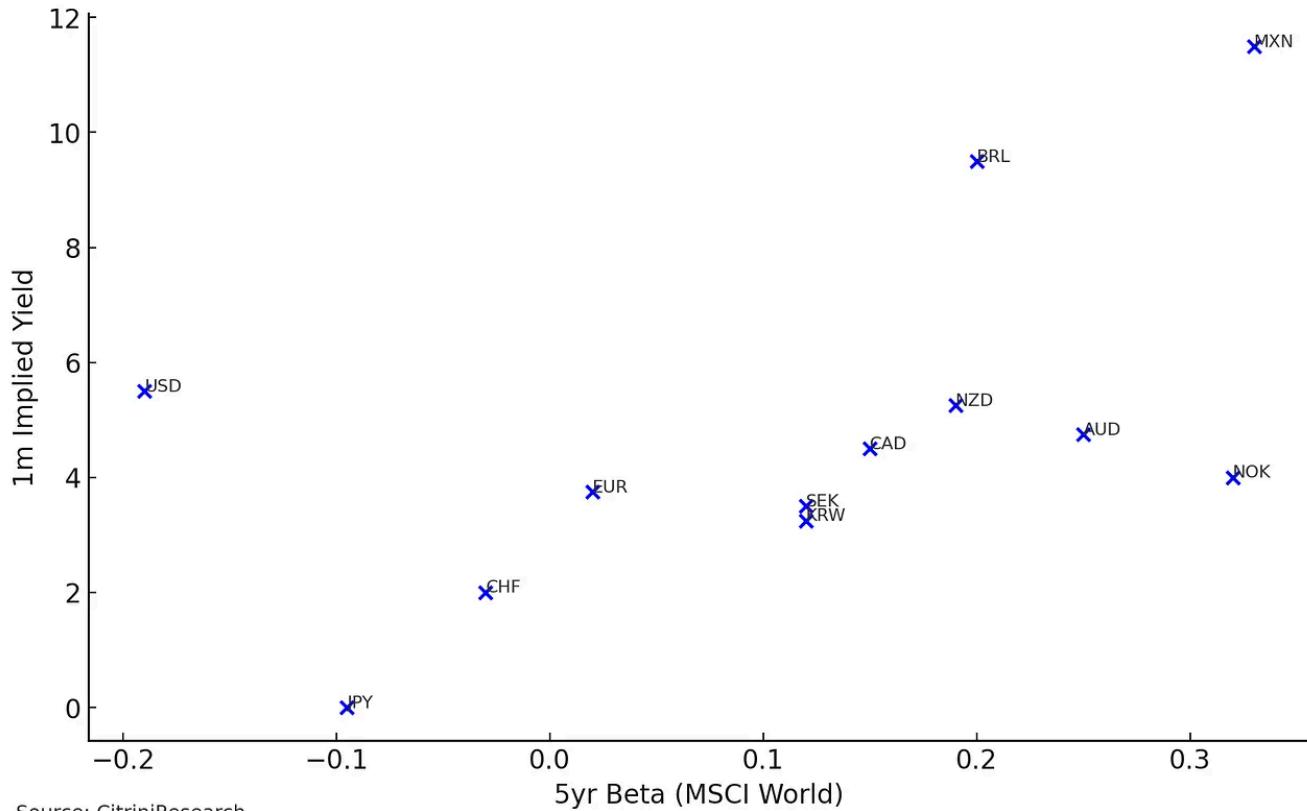
1. our current FX trade ideas - including our stop loss/target/thesis and scenario analysis
2. our advice on how to discover attractive FX trades
3. formulating, planning and executing an FX thesis successfully - including technical indicators I regularly use find entries, exits and manage risk
4. a list of lessons I've personally gathered from by polling veteran FX traders (who have managed to survive many unforgiving FX moves) on what they wish they'd known when they first started.

I have removed the paywall as the trades have played out, so I'm adding it to the educational content above.

Please become a paid subscriber if you'd like to receive the trades at the time they're first posted!

## Crafting an FX Trade



Different currency pairs have different correlations. One of the more important correlations is the correlation to risk assets/beta to stocks (this tends to correlate with implied volatility for the pair). High beta, high carry currencies are the riskiest to hold during periods of volatility, while low carry, low beta are the safest.

Despite USD currently having a relatively high carry, it is still the global reserve currency and tends to outperform when things go badly in the global economy.

We can look at this over longer periods of time, during periods like recessions or simply YTD to assess how a currency pair is reacting relative to bonds, metals, stocks or oil.

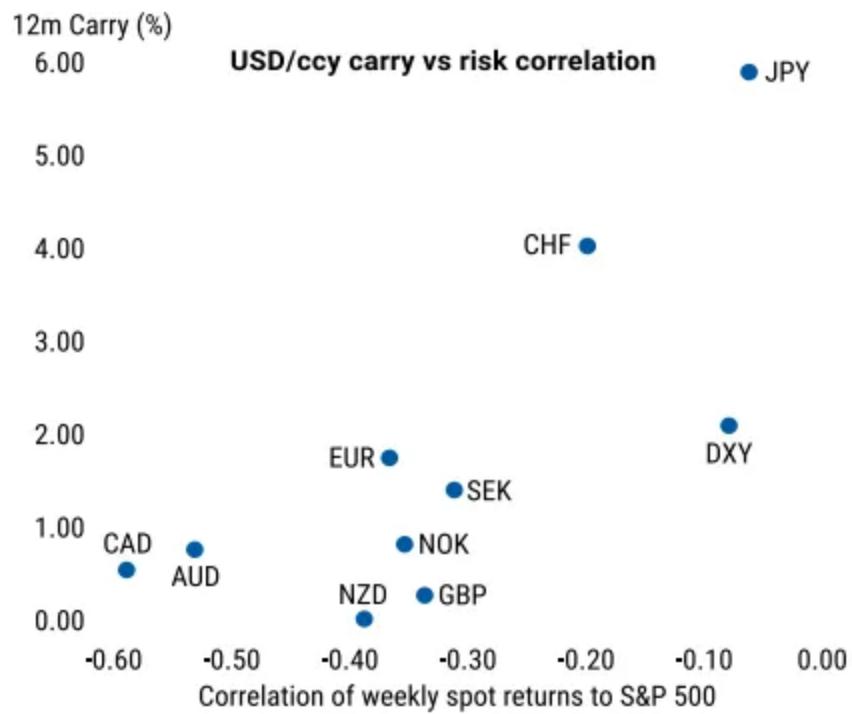
Here are example correlations between weekly spot returns and currency pairs (as ccy/USD) year to date:

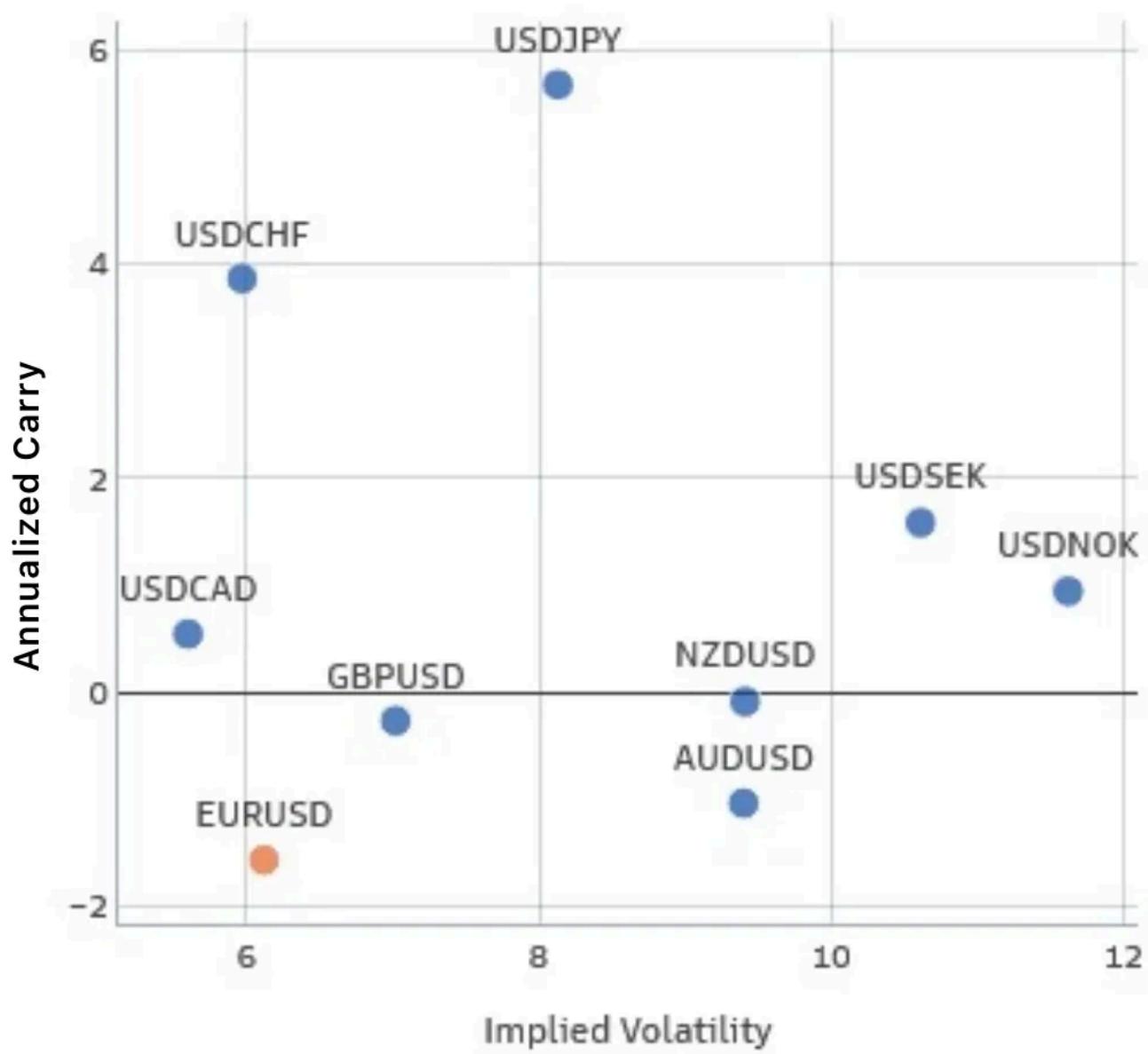
Security	S&P 500 INDEX↓
11) S&P 500 IND...	1.000
18) CAD-USD X-R...	0.589
16) AUD-USD X-R...	0.522
15) CNH-USD Cro...	0.484
13) EUR-USD X-R...	0.473
14) GBP-USD X-R...	0.407
17) NZD-USD X-R...	0.406
12) CHF-USD X-R...	0.244
20) JPY-USD X-R...	0.145
19) Bloomberg D...	-0.567

This year, a week where SPX went up was likely to be correlated to the Euro, Chinese Yuan, Aussie Dollar and Canadian Dollar strengthening against the dollar, while it was much less likely that the Japanese Yen or Swiss Franc would have.

And, most importantly, is the role of the dollar in risk assets. Dollar strength tends to be both the cause of and the result of bad things, unless those bad things are much worse in the US than they are globally.

The Japanese Yen, Swiss Franc and US Dollar are also “Safe Haven” currencies, i.e. FX pairs that investors flock to when they are worried about geopolitical or systemic risk.





If you're angling for a significant move to hedge your book from a recession using the unwind of the JPY carry trade, you'd have some options.

Some of the best risk reward is in AUDJPY. This would have a very significant move, considering AUD's commodity beta to industrial metals, but it might not unwind as spectacularly as USDJPY if China's economic localization manages to isolate it somewhat (relative to expectations, and considering China is already in an economic downturn and working to emerge from it).

The positioning is probably most extreme in USDJPY or MXNJPY, but with something like MXNJPY you'd be bleeding carry to the point that if that recession doesn't materialize inside of a few months you're already hurting badly. That unwind will be the most violent but also require the best timing and risk management until the reversal.

If you wanted to take the most advantage of a favorable funding currency despite betting against a carry trade, you'd look at CHFJPY. On one hand, you'd have the benefit of the PPP model being very stretched from the mean (one big mac worth of francs buys you two big macs in Japan!) and the less severe negative carry, but you might face a hit if MENA geopolitical concerns are the cause for the economic slowdown because Japan is more negatively affected by higher oil prices than Switzerland (and CHF is still the defacto safe haven for stuff like this, even if JPY has been one in the past it might not appear as attractive to investors for this kind of thing right now).

Then again, we don't necessarily need an economic slowdown to get a significant rally in the yen against the dollar, we just need rate differentials to come down. That's what happened after the Fed's last hike in 2018:



That can happen via an economic slowdown (there's a lot more cutting to be done by the Fed than the BoJ) or by a process where rates are cut moderately in the US and policy normalization in Japan leads to rate hikes back to neutral.

## Levels & Technical FX Trading

## Technicals matter more in FX than other assets,

I don't know if this is actually true, but I've found it to be. Equities regularly defy technicals, and you can get along pretty well over there even if you never look at a chart. It's extremely rare for FX pairs to not obey technicals pretty significantly.

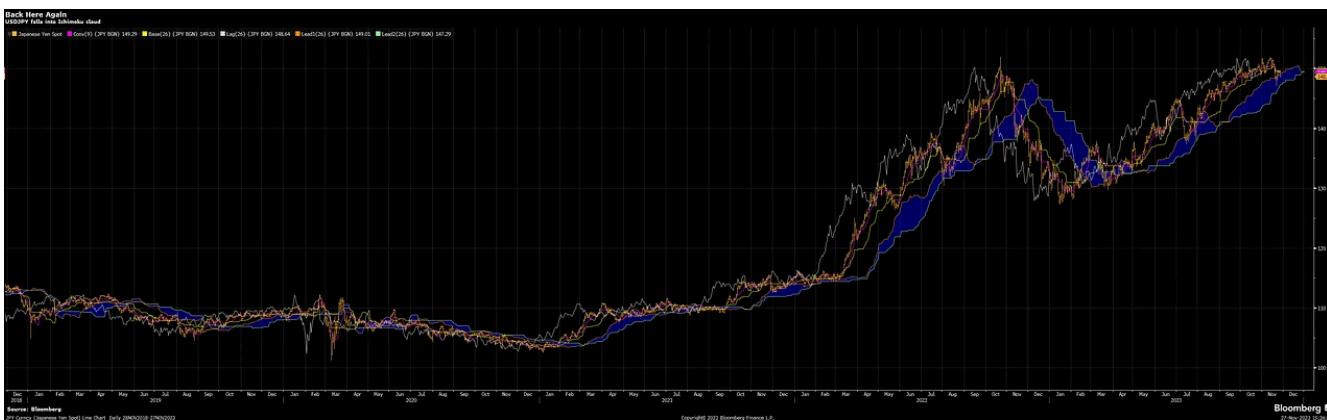
These are all the kinds of things that go into crafting an FX trade, along with (very important here, especially considering the leverage) utilizing technicals to get a good entry and exit. I tend to stick with simple levels, trend lines and moving averages because I firmly believe that technical analysis is a self-fulfilling prophecy, meaning the more simplistic the analysis the more likely everyone is to fulfill the prophecy for you.

### 1. Support/Resistance Levels or Significant Option Strike levels for nearby OpEx

- a. With the leverage and volume inherent in FX markets, option expiries can create short term demand zones or supply thresholds around major strike levels. Monitoring the open interest and volume for strikes clusters can signal areas of technical support or resistance. A big open buy interest at a strike below spot suggests prices may be cushioned on a dip to that strike as dealers hedge deltas by buying spot. And heavy call open interest above spot indicates the spot price may struggle to climb too far above a strike level.  
Traders can reference expiration calendars and open interest tables to pinpoint the strikes with biggest optionality. These strike zones frequently end up playing a technical role around expiration dates even if spot levels have little lasting fundamental meaning

### 2. Trend/Momentum Studies & Support/Resistance Levels

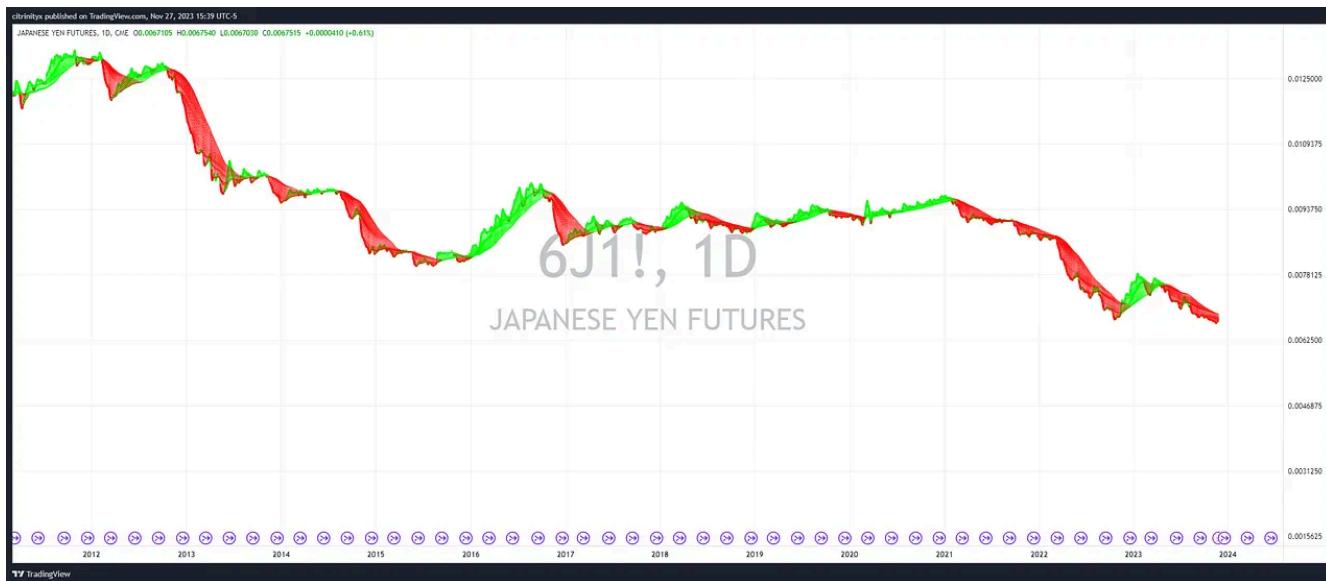
- a. This is mostly for determining entries and exits, the two things I use here are simple moving averages (similar to a trend following strategy) and ichimoku clouds:
  - i. Ichimoku Clouds on shorter timeframes are good indicators of support/resistance areas, and longer timeframes, they are excellent for determining what's a routine pullback and what's a change in regime/trend:



When I am trading actively, I use the 4 period exponential moving average as a quick determinant of whether a move is exhausted and needs to reverse before continuing (i.e. if there is a gap between the candle/bar and the 4ema, it's likely to reverse), the 13EMA as a short term directional, 100EMA for trending and 200SMA for trend changes. You can see the 4ema candle gap here preceding a reversal, this is the daily but it tends to work on all time frames:



I'll also utilize moving average crossovers to a degree (i.e. is the higher frequency / lower period moving average above or below the longer one) which is a good quick estimate of trend and inflection points. I take every moving average, at intervals of 5, between 5 and 100 and then display them as green if they are above the next frequency and red if they are below. It looks like this:



Technicals also give you an angle that provides insight on exactly what the market has priced in. For example, when it comes to the Norwegian Krone, the market has been quite bearish on it relative to the euro since rate hikes began.

That view has been getting priced into the markets since 2022, with significant NOK underperformance. If you were of the mind that it should be faded at some point, but needed some gauge to determine when that had the highest likelihood of working, you could take a look at the technicals and see a decent setup forming that provides an easy and distinct level to manage your risk against:



## CitriniResearch's Current FX Trade Ideas

I alerted to these trades early in the paid subscriber chat on November 17th.

The first trade is a combination, long Japanese Yen vs Swiss Francs and U.S. Dollars.

### Short USDJPY

**entry: above 149.75**

**target: below 142**

**stop-loss: above 150.25**

### Short CHFJPY

**entry: above 170**

**target: below 158**

**stop-loss: above 172**

If you want to play the carry trade unwind, you'll need to come to terms with the fact that you'll get run over a few times. USDJPY is at ~150. Let's say this trade doesn't work. Well I am willing to risk 0.5 to 1 every time the pair goes above a significant level (like 150, 155, 160, 165 etc) and then comes back below it - if it means I am maybe making 10-20 when the unwind happens. It's a waiting game, but you can't just put the trade on and wait because you're bleeding negative carry the whole time. You have to be strategic about the long term view but tactical in your positioning and risk management.

As announced in the subscriber chat a couple weeks ago, we are short USDJPY and CHFJPY. For those riding the JPY carry trade wave, the pivotal question isn't necessarily about the future widening of policy rate differentials, but rather how long these differentials remain enticing enough. Despite significant tightening, the Fed's "higher for longer" stance in the face of persistent inflation and robust growth hints at markets pricing in a more substantial short-term "r-star" (the natural rate of interest). This anticipation, rooted in the challenge of taming inflation, might have temporarily bolstered the allure of JPY carry trades. However, as signs of a U.S. economic slowdown and easing inflation become clearer next year, we foresee a shift in market dynamics. This could lead to a reassessment of the U.S. short-term r-star, particularly if the Fed embarks on rate hikes in the second quarter of 2024. Such a shift could diminish the attractiveness of JPY carry trades, potentially prompting a reversal in the USD/JPY trend. The PPP differential in CHFJPY combined with its significant recent move makes me believe we are set up for some mean reversion. Swiss CPI is stable (below 2%) and undershooting the SNB's forecast, meaning it's unlike the SNB has to do more in the way of hiking - since their last hike in June economic activity has remained usbdied and excess CHF strength has made inflationary pressures from abroad unlikely to be imported. As tight financial conditions hurt the local swiss economy, the SNB will shift to weaker policy.

I'm aware my current hit rate on these JPY trades is 1 out of 3, but my PnL is positive on USDJPY overall - because I'm focusing on very asymmetric setups. Could USDJPY have room up to 155 or higher? Sure. Why not.

But it's going to reverse eventually, it's my inclination based on how well yen carry trades have worked this year that it's going to do so down to 140-142 easy within the

first half. I'm ok with being wrong 3 or 4 times in a row - but only if when I am right it pays 9-10x.

I am short USDJPY from an average of 149.765 with the expectation of it being below 143 before the end of Q1 24. Now, of course, I am not going to wait until 145 and then take profit. I will be measured about it and attempt to exit with a 145 average cover. That is, of course, unless something changes - in either direction! I have found that some traders are very eager to admit they're incorrect on a thesis and scrap it after something changes, but don't have the same kind of process for when something changes that supports their original thesis.

In fact, I once saw someone in a massive trade (long USDJPY) who exited in March of 2022, RIGHT AFTER they received their confirmation (first Fed hike/BoJ meeting w/ policy unch in the same month) that the BoJ would remain dovish while the Fed remained hawkish and that rate differentials would rise to the point that a "double vicious cycle" would occur (one in which the Fed's hawkishness forced further BoJ dovishness on economic concerns, which would cause JPY to be sold to buy the Dollar, and the subsequent rises in global yields forced JGB yields up against the upper band of YCC, which would force the BoJ to fight against speculators by printing yen to buy JGBs, which would devalue the yen against the dollar...).

Why did they exit?

Because USDJPY went from 113 to 125 in the span of a month, so they exited. "I expected the price to go up and it went up so I'm out" is not logic. Despite the fact that the developments had confirmed the thesis in an extraordinarily straightforward manner and it was clear to them and, probably, nearly everyone else in the market that USDJPY would still have to go much higher as this reflexivity played out, they exited. Despite seeming like the "responsible" thing to do (after all, "nobody ever went broke taking profits") this kind of behavior has the same impact on your PnL, over time, as having a trade go against you because the facts changed that you don't cut. Plenty of people have gone broke taking profits. How? Because not every trade will have them. So the ones that do need to pay for the ones that don't.

I believe the one that pays for the ones that didn't is coming up in the yen, and if it doesn't I think

## **Short EURNOK (entry >11.75, stop 12, target 11.25-10.75)**



The optimism in EUR stems from the anticipation of capital repatriation, driven by local yields in the Eurozone maintaining a favorable position above FX-hedged U.S. equivalents throughout our forecast period. Additionally, broader trends in Eurozone capital demand and integration will be critical factors to monitor, as these could propel the EUR/USD beyond its fair value, estimated at around 1.10.

However, the ECB is stuck dealing with the German economy essentially already in a recession. Although U.S. interest rates might be on a downward trajectory, Eurozone rates are projected to fall more sharply. The ECB stands out as potentially one of the first major central banks to reduce rates, responding to a confluence of near-recessionary growth and a rapid pace of disinflation. This policy response is a crucial element in the anticipated depreciation of the Euro against the Dollar.

In the last market overview, we entered the EUR 3m2y receiver (or Euribor H4H5 spread at -80bps), since then an additional 25bps of cuts has been priced in for 2024. While I believe SOFR currently prices cuts somewhat accurately for the Fed, I believe the ECB will have to do much more, much more quickly to prevent further deterioration.

Norges Bank is seen as the most tolerant G10 central bank when it comes to above-target inflation, even forecasting continued above-target inflation through 2025. This dovish policy stance has weighed on the NOK. The NOK is expected to underperform in

2024 as Norway's economic growth moderates, the terms of trade outlook is weak, and Norges Bank maintains high tolerance for sticky inflation. However, wages continue to grow at ~5% and Norges Bank is likely to support NOK via a reduction in the amount of NOK it sells due to lower petroleum revenues and a wider budget deficit. NOK at these levels makes an attractive long, although it has significant sensitivity to risk assets and oil. Therefore, pairing it with a lower beta JPY trade that could benefit from volatility harming carry trades is something I think could provide a decent hedge.

**Trades I'm Currently Looking at:** I am keeping an eye on short USDCLP (expecting copper to go higher) and long PLNSEK to outweigh some of that negative carry from the JPY trade - Poland is faring pretty well, while Sweden's economy languishes. Sweden has already triggered the Sahm rule (implying it is already headed into a recession)

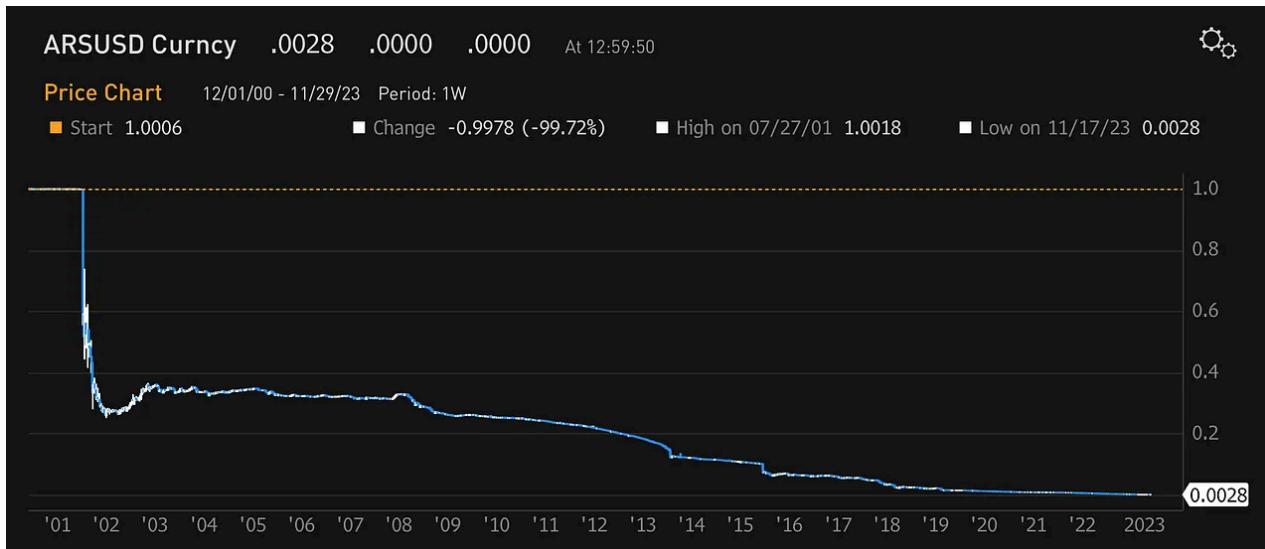


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## Lessons from FX Traders

I've asked a few friends and acquaintances who successfully make a living trading FX what *they* would put into "Global Macro Trading for Idiots" as lessons they wish they'd known when they started out, here's what they had to offer:

- Don't pick a fight with a central bank. At least not a G10 one, and not without serious backup.
- Gap risk is real.
- If you're a retail trader, ensure your broker is not screwing you on carry (i.e. that you are actually earning it/earning what you're supposed to be when you've got a spot FX position)
- They say FX is a 24 hour market but most G10 trades when London is open.
- If you're trading FX (or FX options) you always have interest rate risk..
- A ccy pair is XXXYYY, you buy and sell in units of XXX and the P&L is in units of YYY. It is a long/short trade, you're long XXX and short YYYY.
  - For example for EURUSD buy and sell in units of EUR and have direct USD P&L. In USDJPY, you buy and sell in units of USD and have JPY P&L. CME FX futures have USD P&L
- You will always trade with too much leverage. The spot platforms encourage it. CME futures leverage is more than enough to fuck up.
- Currencies are low vol compared to most assets, until they aren't.
- FX carry trades last longer than you expect
- FX carry trades implode more violently than you are prepared for.
- Gap risk is *really* real.
- The currencies of countries that are fucked go down...forever. Try not to get yourself caught out playing a long term reversal in, say, ARS



- G10 FX is pretty much always mean reverting, but you never know how far it's going to deviate from the mean in the first place.
- Levels (e.g. support and resistance) are much more important in FX than other assets, considering officials who can come in and change the entire equation are also looking at those levels and having similar psychological reactions.
- Every asset is correlated to another asset, in FX these correlations can become reflexive (where people think a pair will strengthen or weaken simply because its correlated asset went up or down, even well past the levels where that would make economic sense). Be aware of these correlations but be more aware of when they break down, that's where some serious money can be made.
- We have had FX option expiration at least 2x a day for every business day since time immemorial. So we don't want to hear equity guys bitching and moaning like little children :)

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