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Understanding Yen Carry Trade and Its Impact

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Introduction: - The Yen Carry Trade is a popular financial strategy in which investors borrow money in JPY currency where interest rates are typically very low, and invest in higher-yielding assets in other countries. The idea is to profit from the difference between the low borrowing costs in JPY (usually in yen) and the higher returns from investments abroad.

This strategy is particularly attractive when the Bank of Japan (BoJ) maintains a very low or even negative interest rate environment, as has been the case for much of the past few decades. By borrowing in yen at a near-zero rate and investing in assets that offer higher yields, such as U.S. Treasury bonds, stocks, or emerging market assets, investors can potentially generate significant profits.

How Yen carry Trade Works:

1. Borrow Japanese yen at a low-interest rate: Investors borrow Japanese yen, which typically has a very low-interest rate, often close to zero or even negative.
2. Convert the borrowed yen into a higher-yielding currency: The borrowed yen is then converted into a currency that has a higher interest rate, such as the US dollar, the Australian dollar, or the New Zealand dollar.
3. Invest in higher-yielding assets: The converted funds are then used to invest in higher-yielding assets, such as government bonds, corporate bonds, or other financial instruments denominated in the higher-yielding currency.
4. Profit from the interest rate differential: The investor earns the higher interest rate on the invested assets, while only paying the lower interest rate on the borrowed yen. The difference between the two interest rates is the potential profit from the carry trade.
5. Repaying the Yen Loan: Eventually, the loan in yen is repaid. If the yen depreciates during this period, the repayment amount in the investor's base currency becomes even cheaper, boosting returns.

The yen carry trade involves borrowing in Japanese yen, typically due to Japan's low-interest rates, and investing in higher-yielding assets elsewhere. The strategy profits from the interest rate differential, assuming that exchange rates do not move adversely enough to wipe out those gains. If there are indications of potential adverse FX movements, such as yen appreciation, traders are likely to unwind their positions to avoid losses from currency fluctuations that could offset or exceed the interest rate benefits. Of course,

institutions with larger risk appetites can deviate from Govt bonds and T-bills and venture into stocks, commodities, and

corporate bonds. Most institutions do.

The exaggerated market impact of the yen carry trade often stems from the use of derivatives, such as options or futures, which replicate the carry trade strategy with significant leverage. In these derivative-based strategies, even a small adverse movement in exchange rates can lead to amplified losses due to the high leverage, forcing rapid unwinding of positions. This unwinding can create a domino effect, leading to increased volatility and sharp movements in the underlying assets and currencies, especially in times of market stress.

The real dynamics of the carry trade involve borrowing in a low-interest currency (like the yen) and investing in higher-yielding assets. However, when the yen appreciates or when market sentiment shifts towards risk aversion, investors rush to close their trades to avoid losses. The large volumes involved and the leverage used in derivative-based replication can exacerbate these market moves, leading to a more significant impact on both the currency and the financial markets.

Historically, these carry trades seem to have done well.

The graph above shows the performance of carry trade in G10 currencies, and the index is called "Bloomberg GSAM FX Carry Index". You can google it and compare it against stock indices to see relative performance.

Historical Examples

The yen carry trade gained popularity in the late 1990s and early 2000s as Japan maintained ultra-low interest rates in response to its prolonged economic stagnation. The Bank of Japan's (BOJ) commitment to near-zero rates created a fertile ground for this strategy.

Investors flocked to borrow in yen and invest in higher-yielding assets worldwide, driving significant capital flows across global markets. This trade contributed to liquidity in financial markets and often amplified asset price movements.

In the 1990s, Japan's economy was grappling with the aftermath of the asset bubble burst. The BOJ slashed interest rates to stimulate economic activity, making borrowing extremely cheap.

This environment catalysed the yen carry trade, attracting global investors who could borrow yen at negligible costs. By the early 2000s, this strategy was widespread, influencing capital flows and asset prices globally

A notable historical example of the yen carry trade occurred in the period leading up to the 2007-2008 Global Financial Crisis. During this time, Japan maintained extremely low interest rates, and the yen was a favoured currency for carry trades. Investors borrowed yen at near-zero interest rates and invested in higher-yielding assets, particularly in emerging markets and U.S. securities. As a result, the yen weakened, global asset prices surged, and financial markets became increasingly interconnected.

When the financial crisis began in 2007-2008, market conditions changed drastically. Investors became risk-averse, leading to the unwinding of yen carry trades. This caused a rapid appreciation of the yen and a sharp decline in global asset prices.

Key Events:

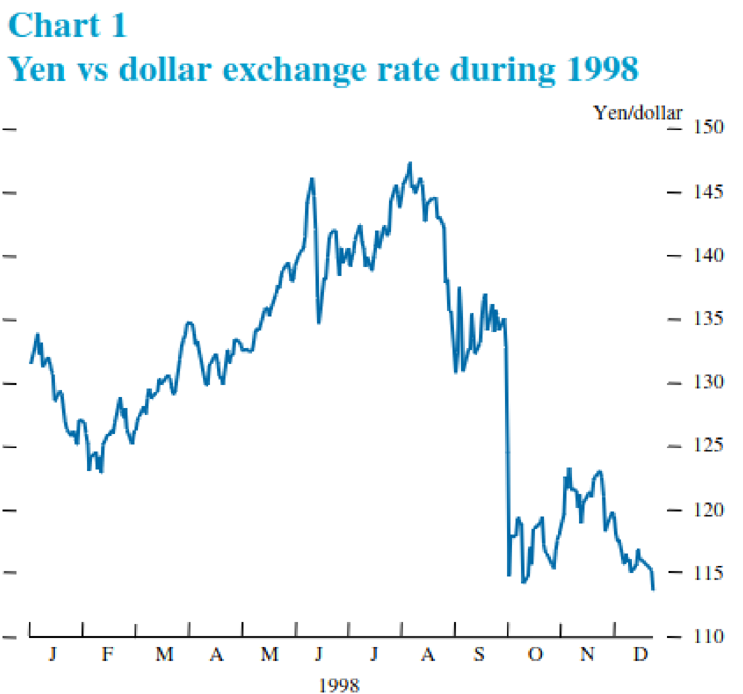
1. 2005-2007: As Japan kept interest rates low, the yen carry trade was popular. Investors borrowed yen and invested in higher-yielding assets such as U.S. stocks and emerging market bonds.

2. 2007-2008 Financial Crisis: When the crisis hit, market volatility increased. Investors unwound their positions, selling off riskier assets and buying back yen to repay their loans. This caused a surge in the yen's value.

3. Post-Crisis: The yen strengthened significantly against major currencies like the U.S. dollar, euro, and others, and global asset prices plummeted due to the unwinding of carry trades.

The 1998 yen carry trade episode is often highlighted as a significant example of the risks associated with this strategy. In October 1998, the Japanese yen appreciated sharply against the U.S. dollar, rising 17% within a week. This sudden appreciation meant that traders who had borrowed in yen and invested in higher-yielding assets faced severe losses, as the cost of repaying their yen-denominated loans surged.

The factors behind this sharp move included global market turmoil, specifically the Russian financial crisis and the collapse of Long-Term Capital Management (LTCM). These events triggered a broad flight to safety, causing traders to unwind their carry trades, which in turn increased demand for yen and accelerated its appreciation. This rapid, leveraged unwinding of positions led to a vicious cycle, amplifying the yen's rise and causing extreme volatility in the currency markets. The 1998 episode is a classic example of how quickly a carry trade can unravel when market conditions change and the risks of leverage become apparent.



Years of profitability in the Yen-USD carry trade were crushed within that one week. All profits were wiped clean.

Coming back to the present day, similar sentiments are triggered in the carry trade world with the recent JPY-USD movement.

The USD-JPY pair cracked nearly 7% in July 2024, backed by the possible interest hike by the Bank of Japan (BOJ) and perhaps a rate cut by the US Fed. The decision of both BOJ and the US Fed is expected around the last week of July 2024.

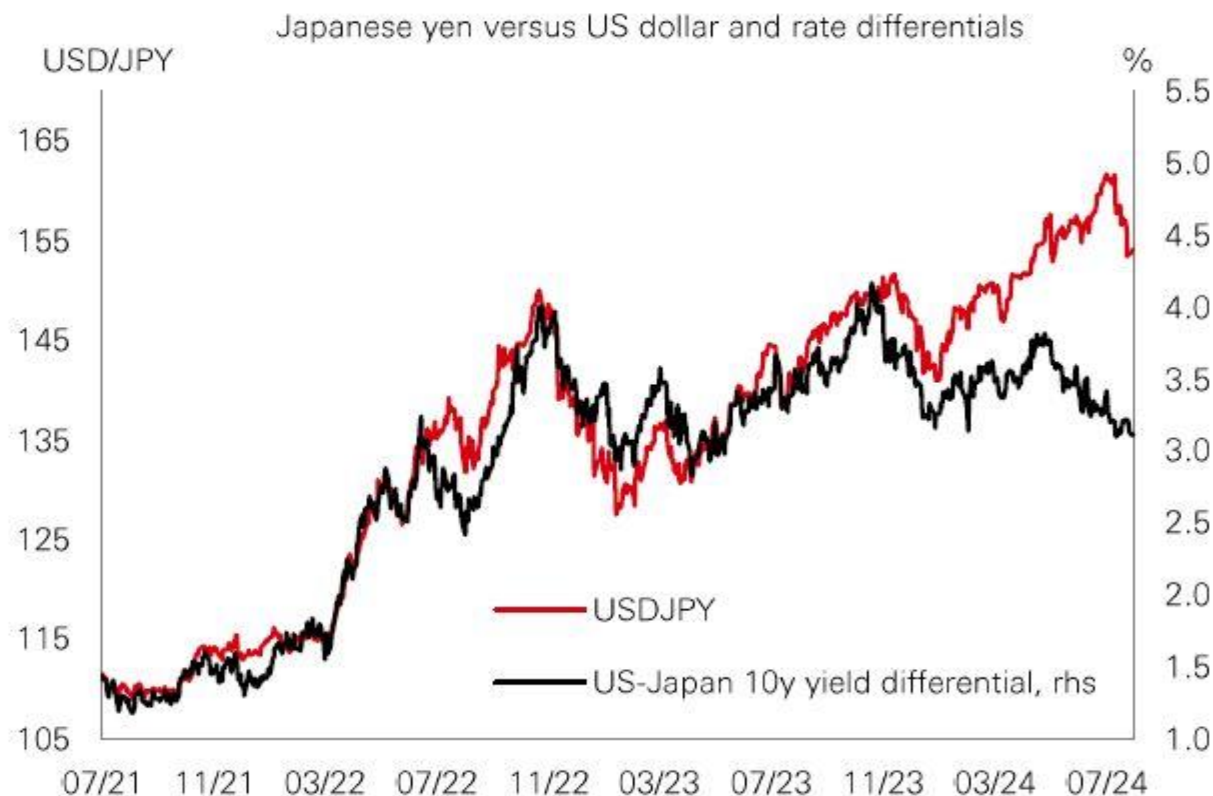
Why is the Trade Unwinding Now?

The yen carry trade is unwinding primarily due to the recent policy shifts by the Bank of Japan. For the first time in many years, the BOJ has signalled an end to its ultra-loose monetary policy by lifting its main interest rate. This move, aimed at combating inflation and stabilizing the economy, has had profound implications for the carry trade.

The recent sharp recovery in the Japanese yen is a big development for markets. The yen has been a major funding currency for carry strategies in recent years (where traders borrow yen to invest in higher-yielding currencies). But a strengthening yen – amid intervention by Japanese authorities – undermines the profitability of these trades, thus seeing them unwind. These carry trades may have also funded positions in other risk assets, possibly exacerbating the recent global tech sell-off. Stronger JPY is more of a topline problem than bottomline. Stronger currency is disinflationary thus profits should improve. However, Japan being export oriented economy equities sold off on sharp and quick JPY gains, which is one reason why Japanese stocks sold off sharply last week.

While the pace of the yen rally looks unsustainable, there are good reasons to expect further recovery in the coming months.

The Bank of Japan's gradual policy normalisation is important. But the more meaningful propulsion for the yen is likely to come from continued global disinflation. This could see interest rate differentials falling further in favour of the yen. 2024 promised to a be a good year for the yen – but maybe it'll just be the second half?



As Japan's interest rates rise, the cost of borrowing in yen increases, reducing the profitability of the carry trade. Consequently, investors are beginning to unwind their positions fear of loss due to anticipated exchange rate impact offsetting carry, as this is a play of interest rate diff (carry) vs fx movement, repaying yen-denominated debt and selling off foreign assets.

In detail, the BOJ's decision to raise interest rates is a response to rising inflationary pressures. Japan, historically plagued by deflation, is now facing inflationary trends similar to other advanced economies.

To curb inflation, the BOJ has started to tighten its monetary policy, which includes raising interest rates. This change increases the cost of borrowing in yen, thereby diminishing the appeal of the carry trade.

As the yen appreciates, the cost of repaying yen-denominated loans increases, prompting investors to close their positions.

Let's illustrate the cost dynamics of a carry trade with a numerical example.

Scenario

- A trader borrows 100 million Japanese yen (JPY) at a 0.5% interest rate (low borrowing cost).
- The trader converts this to U.S. dollars (USD) at an exchange rate of 100 JPY/USD, giving them $1 million USD.
- The trader invests the $1 million in an asset that offers a 5% return (higher yield compared to borrowing cost).

Interest Rate Differential and Profit Calculation

- Interest Cost on Borrowing in JPY:
  100 million JPY × 0.5% = 500,000 JPY per year.

- Investment Return in USD:
  $1 million × 5% = $50,000 USD per year.

- Net Profit (Ignoring FX Movement):
  Converting $50,000 to JPY at the same exchange rate of 100 JPY/USD gives 5 million JPY.
  Net profit = 5 million JPY - 500,000 JPY = 4.5 million JPY.

Impact of Exchange Rate Movement

Now, let's consider what happens if the exchange rate moves adversely.

1. Yen Appreciation Scenario:
   - Assume the yen appreciates to 90 JPY/USD.
   - To repay the 100 million JPY loan, the trader needs to convert the $1 million USD back to yen.
   - Converted Amount:
     $1 million × 90 JPY/USD = 90 million JPY.

The trader now falls short, as they need to repay 100 million JPY but only has 90 million JPY. The appreciation of the yen by 10% results in a loss of 10 million JPY, far exceeding the interest differential gains (4.5 million JPY).

2. Yen Depreciation Scenario:
   - Assume the yen depreciates to 110 JPY/USD.
   - Converted Amount:
     $1 million × 110 JPY/USD = 110 million JPY.

Now, the trader has more yen (110 million) to repay the 100 million JPY loan, allowing them to make an additional profit of 10 million JPY on top of the interest differential.

Summary of Risks

- Leverage Effect: The trader benefits from the interest differential, but if the exchange rate moves against them (i.e., yen appreciates), they face losses that can quickly exceed the differential gains, especially with leverage.

- Adverse Exchange Rate Movement: A 10% appreciation in the yen wiped out the profit and resulted in a significant loss, demonstrating the risk inherent in carry trades if FX moves adversely.

This example shows how the carry trade can be profitable as long as the exchange rate remains stable or moves favorably. However, adverse exchange rate movements can lead to amplified losses, particularly when high leverage is involved.

The rapid unwinding has created significant volatility in financial markets, particularly in assets that were popular targets of the carry trade, such as U.S. equities and emerging market currencies.

(comments: it may be noted that BOJ ended negative policy rates in mar24 and the tightening of policy commenced alongwith change in yield curve control stance much before aug24 when CT unwind jolted the financial markets. Also, the BOJ policy decision was on 31jul where policy rate was increased further from 0.1% to 0.25% and it was not the sole driver for this ramphant carry trade unwind, as the sell of started only after 3 working days on 5aug. It was the US employment report released on 2aug(Friday) that led to market meltdown on the back of fear of US recession in combination with narrowing carry. Thus, for conceptual understanding of CT unwind drivers, it is critical to bring out that any market perception of change in yield on the assets invested or fx rate which could more than offset the carry benefit can lead to unwind of carry trade in addition to increased cost of funds on the borrowing.
It may also be noted that the pace of monetary policy shifts matter and thus the unwind is not likely to be ramphant should there be gradual move in policy rates. Which is what is assured now by BOJ and market cooled off on account of this.)

Impact of the Yen Carry Trade on Global Markets

The impact of the yen carry trade unwinding is already being felt across various markets.
The rapid appreciation of the yen against the U.S. dollar has caught many market participants off guard. Over the last month, the yen has surged approximately 8% against the dollar, a stark contrast from its depreciation earlier in the year. This sudden rally has triggered a sell-off in U.S. equities, as investors unwind their carry trade positions, leading to downward pressure on asset prices.
This market reaction highlights the vulnerabilities in financial markets to changes in the yen exchange rate. The appreciation of the yen increases the cost of repaying yen-denominated debt, prompting investors to liquidate assets to meet these obligations. This selling pressure has led to declines in equity prices and increased volatility in financial markets.

The major impacts are:-

1. Capital Flows and Asset Price Inflation: The yen carry trade can drive large capital flows into higher-yielding assets and markets, inflating prices. For example, during periods when the carry trade is

2.

3. popular, global equities, bonds, and emerging market assets can see increased demand, leading to higher prices.

4. Currency Movements: The yen carry trade can significantly influence currency markets. As investors sell yen to buy foreign assets, this can weaken the yen. Conversely, if investors unwind carry trades (e.g., in times of market stress), they buy back yen, causing it to strengthen. This can lead to sharp movements in the exchange rate, particularly during periods of market volatility.

5. Market Volatility: The unwinding of the yen carry trade can cause sudden and severe market corrections. If global conditions shift (e.g., if interest rates rise in Japan, or if risk appetite decreases due to global uncertainty), investors may rush to unwind their positions. This can lead to a sell-off in the assets that were previously inflated by the carry trade, causing significant volatility.

6. Risk to Financial Stability: Large-scale yen carry trades can pose risks to global financial stability. If too many investors engage in this strategy, and it unwinds rapidly, it can trigger market turbulence, particularly in emerging markets that might have received significant inflows of speculative capital.

7. Global Interest Rates: The yen carry trade can also impact global interest rates, especially in countries where the capital flows. For instance, the influx of money into U.S. Treasuries might push yields lower, affecting borrowing costs and the broader economy.

Deep Dive on Specific Markets: -

1. Equities: Since CTs funded across the market including Ems, e,g. Taiwan's TOPIX had biggest fall (12%) on back of this, most market react including US. The relationship between the yen carry trade and U.S. equities is significant because many investors use borrowed yen to invest in U.S. stocks. When the yen strengthens, these investors face higher costs to repay their loans, leading them to sell their U.S. stock holdings. This selling pressure contributes to market declines and increased volatility.

2. U.S. Government Debt: The yields on U.S. government bonds have also been affected. As investors sell foreign assets to repay yen-denominated debt, there is a shift in demand dynamics for U.S. Treasuries, influencing yields and bond prices. Typically, during periods of financial stress, U.S. Treasuries are seen as a safe haven. However, the unwinding of the carry trade can lead to complex dynamics. While some investors may flock to Treasuries for safety, others may sell them to cover their yen-denominated liabilities, leading to fluctuating yields.

3. Global Currency Markets: The yen's rally has had a ripple effect on other currencies, particularly those that were heavily invested in carry trades. This includes higher-yielding currencies EM currencies like MXN, BRL, ZAR, etc., are the most impacted, reflecting high buildup of CT related

4. investments. The strength of the yen affects global currency markets by altering the dynamics of capital flows. Currencies that were favoured in carry trades may experience significant depreciation as investors unwind their positions. This can lead to heightened volatility and potential financial instability in countries reliant on these capital flows.

5. Commodities: Commodity markets are also impacted as the unwinding of the carry trade affects global liquidity and risk sentiment. On one side, speculative demand will ease with unwind of carry trade and thus prices could soften. However, on the other side, stronger currency led price fall in jpy terms, can create higher demand for consumption, which could support global prices. A stronger yen can lead to reduced commodity prices, as Japan is a significant importer of raw materials. Commodities are sensitive to changes in global liquidity and risk sentiment. The unwinding of the carry trade can reduce liquidity, leading to lower demand for commodities. Additionally, a stronger yen makes imports cheaper for Japan, potentially reducing the global prices of commodities such as oil and metals.

Key Risks:-

We will talk about the risks shortly, but to begin with, the implicit assumption here is that the costs of executing a carry trade are not prohibitive. The costs of a carry trade include the cost of borrowing, conversion charges, settlement charges, banker's fees, taxes, and lastly, brokerage. The carry trade should generate enough profits to pay off all these charges and still be profitable. For this reason, many carry trade opportunities appear profitable on paper but may not work out if you were to factor in the actual cost of running the carry trade.

For a carry trade to work, the interest rate differential should be large, like the Yen—USD carry trade that exists now.

As of July 2024, the interest rate in Japan is near zero, thanks to the prolonged deflationary economic environment, and the rate in the US is around 5.25% to 5.5%.

Forex traders borrow in Japanese Yen at near zero percent, convert to USD, invest in short-term US-denominated bonds and t-bills, upon maturity, convert back to Yen, repay, and pocket the interest rate differential.

Given the largish interest rate spread, the Yen-USD carry trade can easily absorb the costs. However, apart from costs, there are a few systemic risks involved in carry trade:

1. The economic winds can change overnight, and interest rates can fluctuate. Remember 2020, covid era?

2. Changes in Govt policies or political affiliations

3. Changes in interest rates impact currency rates. A weaker currency can strengthen, and a stronger currency can depreciate at the same time.
4. Speculations on economic prospects lead to currency volatility, thereby increasing the mark-to-market losses.
5. Changes in currency rates can impact the profitability of the carry trade.

Conclusion: -

The yen carry trade is a powerful financial strategy that can influence global markets by driving capital flows, impacting currency movements, and affecting asset prices. However, it carries significant risks, particularly in times of market stress, and can contribute to global financial instability if unwound rapidly. Investors and policymakers alike keep a close watch on the dynamics of the yen carry trade, given its potential to affect broader economic conditions.

The unwinding of the yen carry trade is a pivotal development in global financial markets, driven by the Bank of Japan's shift in monetary policy. Its effects are far-reaching, impacting equities, bonds, currencies, and commodities worldwide. As the yen appreciates, the vulnerabilities in global markets are laid bare, underscoring the interconnectedness of financial systems.

Investors and policymakers alike must navigate these changes with an understanding of the intricate dynamics at play, ensuring strategies are adapted to this new financial landscape.

Now that I have shared all about the Yen carry trade unwinding, here are some questions to ponder about:

- How might the unwinding of the yen carry trade influence the stability and valuation of emerging market currencies that were previously beneficiaries of this strategy?
- What potential long-term impacts could the shift in Japanese monetary policy have on global equity markets, particularly in terms of investment flows and asset allocation strategies?

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