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Global Macro Strategy

USD Capital Flows and the Cross Currency (XCCY) Basis

Uncertainty related to US tax and trade policy alongside significant US dollar weakness argues for debate about a global shift away from US dollar-denominated assets. We show how to use the cross-currency (XCCY) basis market to assess demand for US dollars and related assets.

Key Takeaways

- Investors use the cross-currency (XCCY) basis markets to borrow or lend USD over relatively longer-term horizons, e.g., greater than 1 year.
- The XCCY basis provides a window through which to see offshore demand for long-term USD funding, i.e., demand for USD-denominated assets from abroad.
- The XCCY basis also shows onshore demand for long-term foreign currency funding, i.e., demand for non-USD-denominated assets from USD-based investors.
- Recent XCCY basis movements suggest investors have less appetite to buy USD-denominated assets and more appetite to buy those denominated in EUR, JPY.
- We expect this tighter XCCY basis trend to continue until Fed rate cuts improved the attractiveness of USD-denominated assets on an FX-hedged basis.

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Executive Summary

In times of global market stress, investors seek solace in safe haven currencies to help hedge exposures less easily liquidated. The USD response to periods of such stress historically helped reinforce investor comfort in increasing exposure to both the USD and USD-denominated assets over recent years.

- The Great COVID-19 Recession (GCR) catalyzed a rush to secure liquidity amid concern of the unknown. Investors favored the USD as risk aversion reached extreme levels (see [Exhibit 1](#)). Heightened demand for USD triggered a surge in funding costs that was only alleviated after the Fed intervened in the market via its funds-supplying operations and asset-purchase program.
- This was in many ways reminiscent of the 2008 global financial crisis, when a breakdown of the financial intermediation caused a similar spike in USD funding costs as demand for liquidity increased dramatically.

The aftermath of April 2, 2025 – "Liberation Day" – witnessed a different outcome for funding markets and the USD. Corporate bonds, Treasuries, and equities all depreciated in price, but USD funding markets showed no clear signs of funding stress (see [Exhibit 2](#)).

Exhibit 1: DXY-weighted 5y RFR/SOFR basis during Covid-19 era

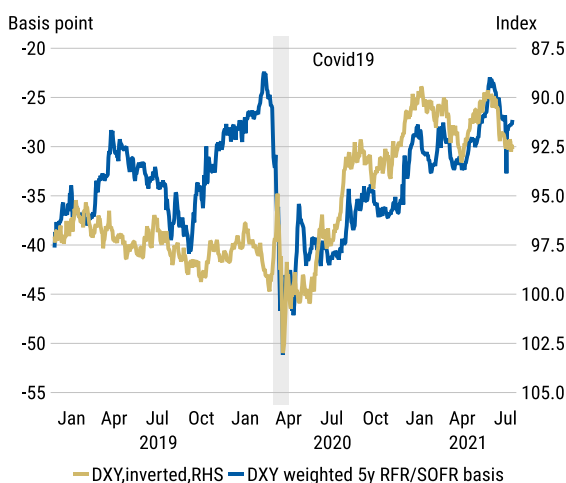
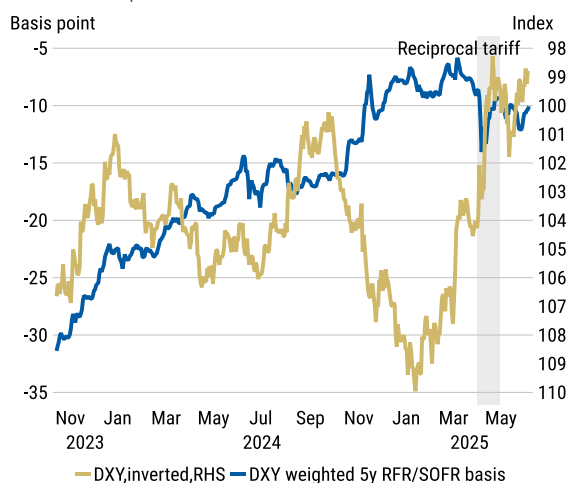


Exhibit 2: DXY-weighted 5y RFR/SOFR basis around reciprocal tariff announcement



The USD depreciated against a broad basket of currencies – contrary to its typical behavior as a safe haven. Meanwhile, other typical safe haven currencies – such as JPY and CHF – outperformed just after April 2. This unusual behavior led investors to question the USD's safe haven status.

Questions also arise about the willingness of investors to hold USD-denominated assets, given recent events. Will investors liquidate previously made investments and repatriate capital or diversify their investments away from the US over time?

Investors use the cross-currency (XCCY) basis markets to borrow or lend USD over relatively longer-term horizons, e.g., greater than 1 year.

As such, tracking long-term XCCY basis market behavior should provide a window through which to monitor offshore demand for long-term USD funding as well as onshore demand for long-term foreign currency funding, i.e., the demand for USD-denominated assets from abroad and non-USD-denominated assets from USD-based investors.

In this report, we discuss key drivers of XCCY basis markets, and why they should help investors assess the degree of diversification away from USD-denominated assets.

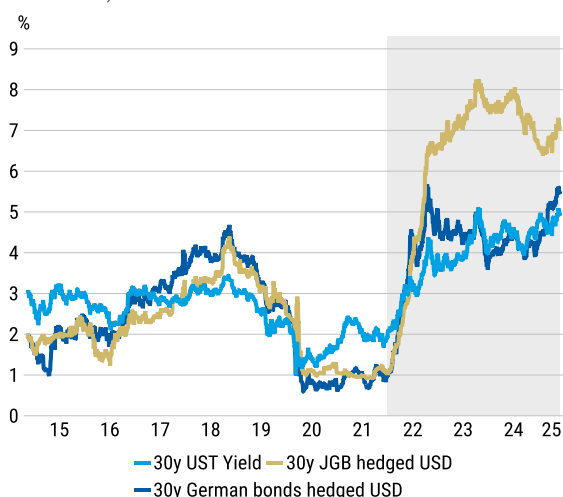
Recent XCCY basis movement suggests that investors might have had less appetite to invest in USD assets and increased their appetite to buy EUR- and JPY-denominated assets.

Investors can earn a yield pick-up by swapping USD into other currencies via FX swap or XCCY basis market when buying a non-USD asset class (see [Exhibit 3](#) and [Exhibit 4](#)).

If investors increasingly have less appetite to invest in USD-denominated assets and swap their USD into other currencies for non-USD-denominated asset investment, we would expect a tightening of CCY/USD basis swap spreads (i.e., less negative premium versus USD) – exactly the movement seen in the basis markets since April 2.

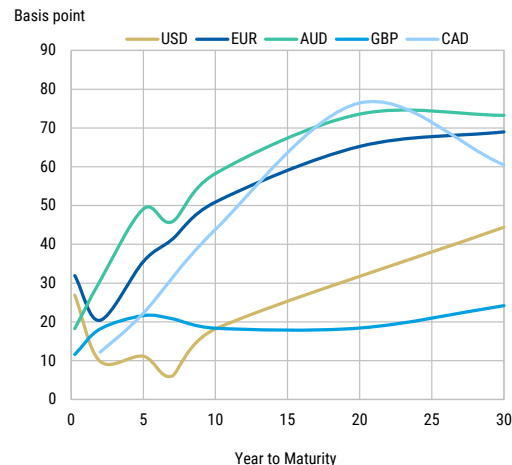
We expect this tighter XCCY basis trend to continue until a Fed rate cut becomes enough to attract demand for USD assets on an FX hedge basis.

Exhibit 3: JGB and Bund yields for USD investors versus UST yield (3m FX swap rolling assumed)



Source: Morgan Stanley Research, Bloomberg

Exhibit 4: Yield pick-up of foreign CCY denominated JGB versus matched maturity sovereign yield (FF-discounting assumed)



Source: Morgan Stanley Research, Bloomberg

Key Drivers of the XCCY Basis

XCCY basis swap spreads are determined mostly by supply/demand factors for both currencies. Spreads with USD on one side are negative for most currencies (with the Australian dollar one notable exception), which effectively means that investors need to pay an additional premium when borrowing US dollars.

The XCCY market is only highly liquid out to around the 10y sector, with liquidity dropping away markedly for longer tenors. Below, we describe what factors are the main drivers of XCCY basis across different tenors (see [Exhibit 5](#)).

Exhibit 5: Main XCCY basis drivers across the tenors

	Short-end (<=1y)	Medium (1-5y)	Long-term (5-10y)
USD supply	USD investors' foreign asset purchases Arbitrage activity with other US money market instruments	USD investors' foreign asset purchases Speculative carry demand Local issuers' USD issuance swapped back to local CCY Lower USD/CCY and less USD notional demand for MTM adjustments	USD investors' foreign asset purchases Local issuers' USD issuance swapped back to local CCY Lower USD/CCY and less USD notional demand for MTM adjustments
USD demand	Non-USD investors' USD asset purchases Arbitrage activity with other US money market instruments	Non-USD investors' USD asset purchases USD based issuers' local CCY issuance swapped back to USD Higher USD/CCY and USD notional demand for MTM adjustments	Non-USD investors' USD asset purchases USD based issuers' local CCY issuance swapped back to USD Higher USD/CCY and USD notional demand for MTM adjustments
Other factors	Dealers' balance sheet constraints (G-SIB surcharge, SLR etc)		

Source: Morgan Stanley Research

Short end

The main drivers at the short end include USD liquidity, regulations, and demand for foreign assets.

1. Liquidity: FX swaps tend to be used more widely than xccy swaps for tenors of a year or shorter, with the xccy basis spread very closely tied to other short-term US money market instruments. USD funding options for offshore investors differ by investor category, but include instruments such as commercial paper, repos, FX swaps, and FHLB (federal home loan bank) loans etc.

For example, demand for USD funding via FX swaps will tend to increase if the costs of other options surge due to (say) credit risk concerns or less USD supply from dealers to function as financial intermediaries, thereby causing CCY/SOFR basis swap spreads to drop deep into negative territory (see [Exhibit 6](#)).

Conversely, when USD liquidity is readily available cashed-up financial institutions will be keen to lend out USD funds in order to receive basis spread premiums, meaning that (negative) basis swap spreads will tend to tighten. The funds received by financial institutions in exchange for their USD will typically be invested in short-dated sovereigns or repos in the same currency.

2. Regulations: Balance sheet regulations such as the supplementary leverage ratio (SLR) requirement and GSIB surcharge (for globally systemically important bank holding companies) etc mean that dealers effectively have less capacity to use their balance sheets to serve as USD intermediaries (via, for example, repos or FX swaps) in cases where their balance sheets have expanded due to other activities.

In particular, US financial institutions have an incentive to shrink their balance sheets (including derivative exposure) ahead of GSIB scores being measured at the end of the calendar year, at which time the ability of banks to function as USD intermediaries will temporarily diminish. Supply of USD via FX swaps may then decline, with (negative) basis

swaps facing significant widening pressure as a result (see [Exhibit 7](#)).

Exhibit 6: 3mxcy basis versus other US money market instruments

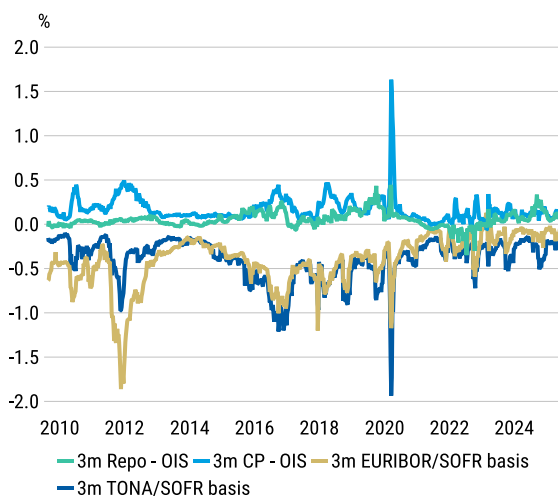
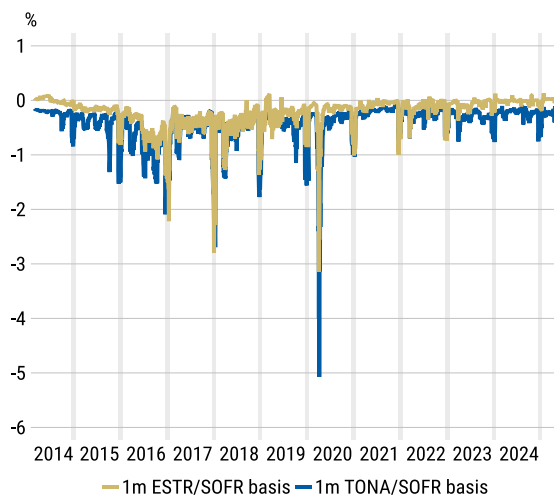


Exhibit 7: 1m CCY/SOFR basis around year-end

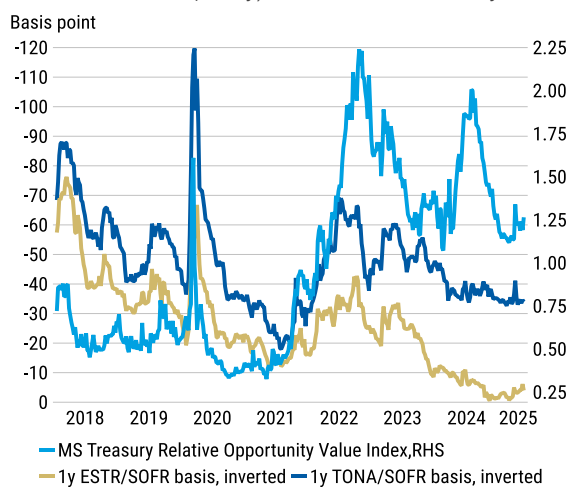


Moreover, demand for USD cash as a “safe asset” tends to increase during severe “risk off” phases, with the rush by investors to sell out of other assets leaving dealers holding heavy inventories. The resultant increase in their holdings of bonds may similarly leave them with less capacity to use their balance sheets to serve as USD intermediaries via repos and FX swaps (see [Exhibit 8](#)).

A prime example of this was seen during the COVID-19 pandemic, when the Fed stepped in to help dealers shrink their balance sheets (and thereby regain their ability to function as financial intermediaries) through a range of temporary measures including purchases of Treasuries (via quantitative easing) and exemption of Treasuries from the SLR requirement.

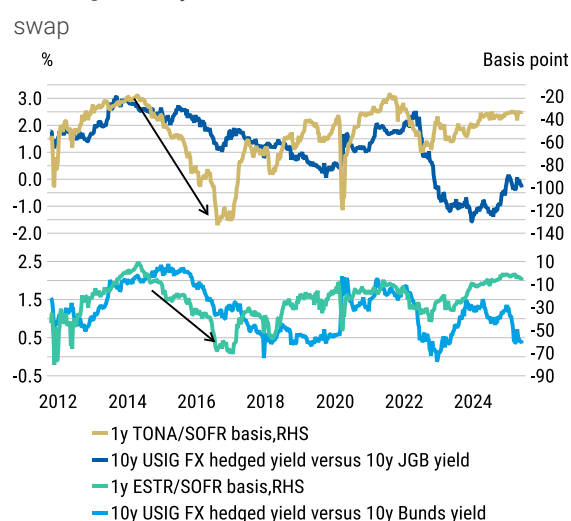
3. Demand for overseas assets: If the UST curve is upward sloping to the right (and an investor assumes that its shape will be maintained) then it will typically be cheaper to borrow USD (for the purpose of buying USD-denominated bonds) by rolling over short-dated FX swaps than using longer-dated xcy swaps. Demand for USD funding via FX swaps thus tends to increase when appetite for US assets is strong, with negative xcy basis swap spreads widening as a result (see [Exhibit 9](#)).

Exhibit 8: MS TVI index (proxy of dealer's intermediation capacity) versus short-end xccy basis



Source: Morgan Stanley Research, Bloomberg. Note: The MSTVI index suggests the sum of absolute difference between each UST issue and spline curve, and defines how the UST curve is dislocated. Higher value typically suggests the UST curve dislocated from the spline curve with little capacity for dealers to smooth out the curve.

Exhibit 9: 10y US IG FX hedged yield versus sovereign bond yield and short-end XCCY basis swap



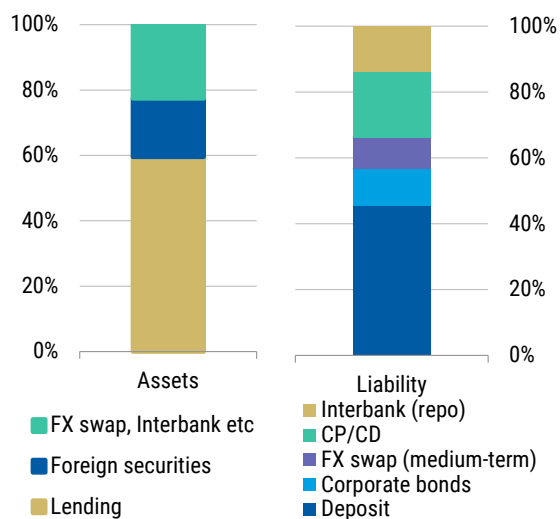
Source: Morgan Stanley Research, Bloomberg

Medium- to long-term zone

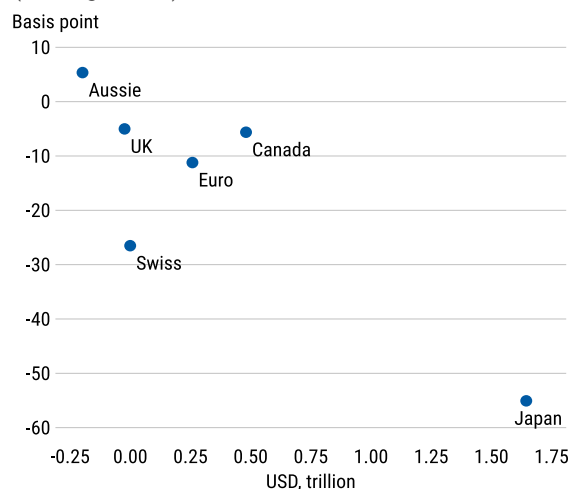
1. Demand for overseas assets: For example, an offshore institutional investor looking to hold USD-denominated assets for the long term (such as USD loans) may use xccy basis swaps as one tool for borrowing USD.

An offshore institutional investor will typically rely mostly on deposits or corporate bond issuance to fund long-term investments in USD-denominated assets, but will also generally tend to use long-term xccy basis swaps to cover any shortfall (see [Exhibit 10](#)).

As can be seen from [Exhibit 11](#), countries with larger net USD asset positions tend to have more deeply negative xccy swap spreads. USD borrowing for the purpose of making relatively long-term loans will tend to generate receiving pressure in medium-term xccy basis swaps.

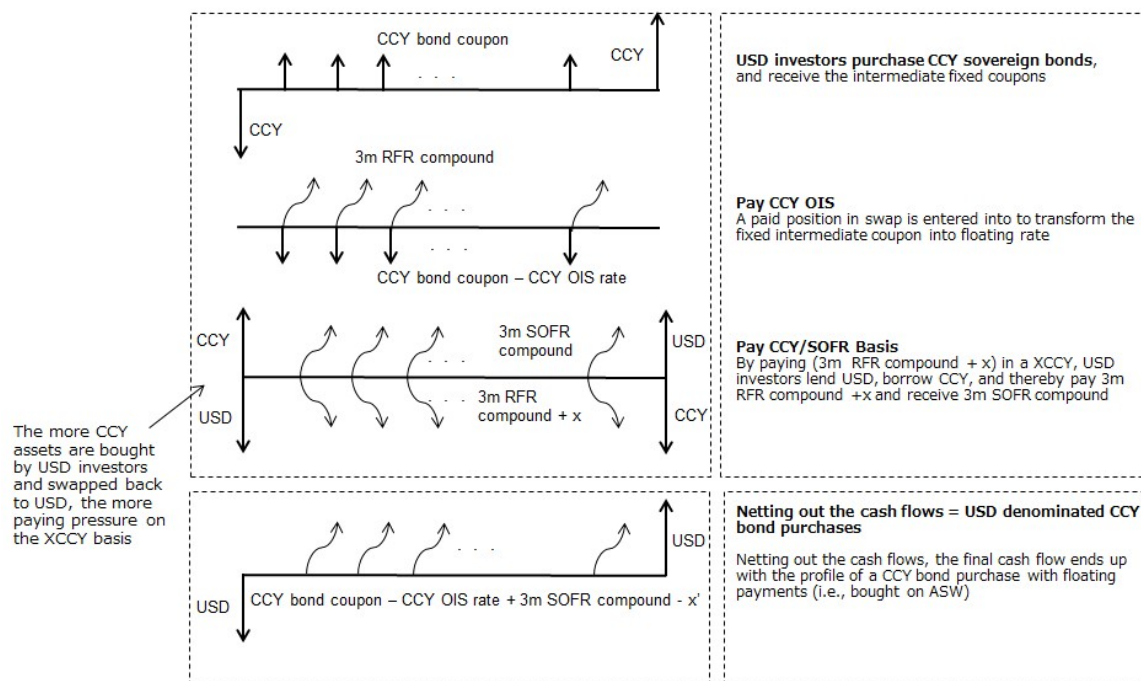
Exhibit 10: Typical offshore banks' USD balance sheet

Source: Morgan Stanley Research

Exhibit 11: Banking sector's net assets in USD balance sheet (X axis) versus 5y CCY/SOFR basis (3m avg, Y axis)

The opposite can of course also happen: if an investor holding USD uses FX swaps or xccy basis swaps to purchase sovereign bonds denominated in another currency, then they can earn yield "pickup" over USTs equal to the sum of the xccy basis premium and the difference between the two credit spreads (see [Exhibit 12](#)).

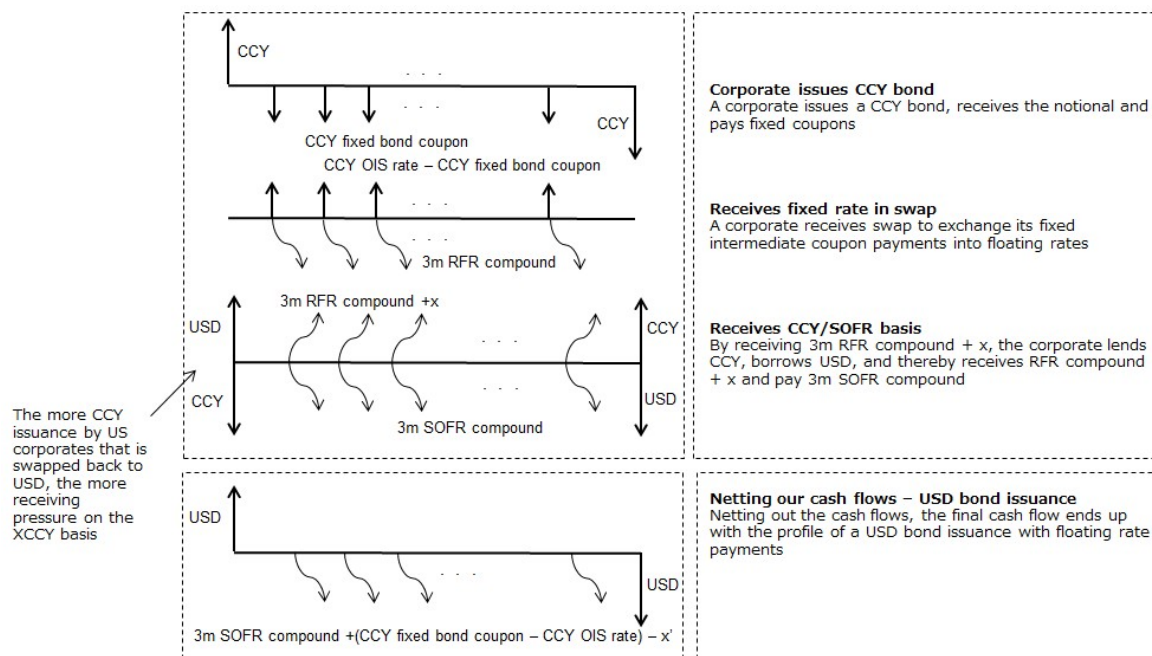
Reserve managers tend to be among the biggest exponents of this trade and will tend to favor short-dated sovereigns for liquidity reasons, as a result of which paying demand in CCY/SOFR basis swaps will tend to be strongest in the short- to medium-term sector.

Exhibit 12: Mechanism of USD based investors purchasing foreign assets via xccy basis funding

Source: Morgan Stanley Research

2. Issuance-related demand: A bond issuer looking to raise USD funds can either issue USD-denominated bonds in the first place or issue in a different currency and then use xccy basis swaps to convert the proceeds into USD (see [Exhibit 13](#)). They will of course tend to choose whichever option is cheaper for the desired tenor.

Exhibit 13: Mechanism of issuers to borrow CCY and swapped back to USD



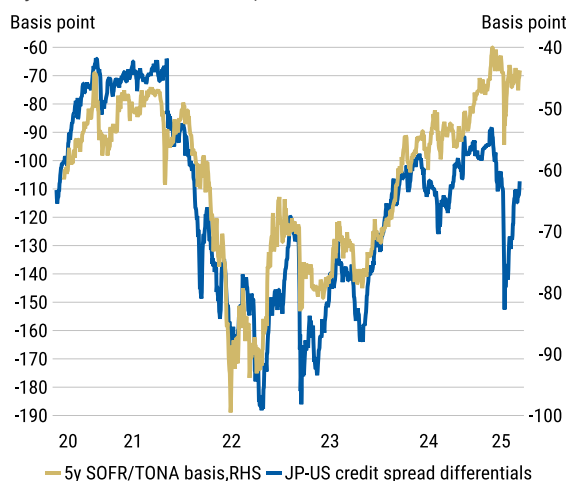
Source: Morgan Stanley Research

The arbitrage mechanism is thus likely to ensure that there is a close relationship between the difference in issuance costs between the two countries and xccy basis swap spreads for the two currencies (see [Exhibit 14](#)).

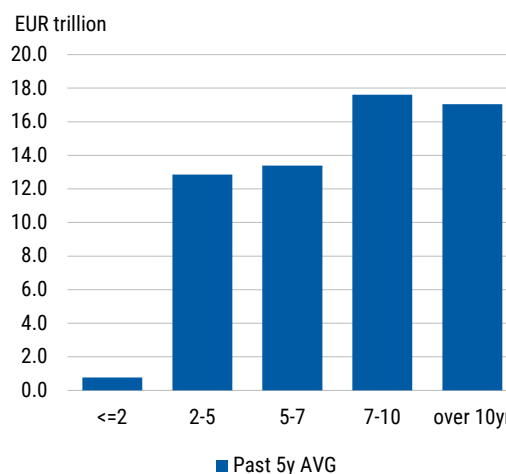
For example, a US issuer looking to borrow USD can choose between direct issuance of USD-denominated bonds in the US market and EUR-denominated issuance in the local market swapped back to USD via ESTR/SOFR basis swap.

If the latter option is cheaper (and thus likely to be chosen) then the resultant increase in ESTR/SOFR basis swap receiving positions will tend to generate widening pressure on (negative) spreads.

Correlation between xccy basis swap spreads and the difference in credit spreads is of course imperfect given that an issuer may in some cases choose the more expensive option for reasons of funding diversification. It is however generally quite strong, with issuance a particularly strong driver of xccy basis swap spreads in the 5y–10y sector where so much supply tends to be concentrated (see [Exhibit 15](#)).

Exhibit 14: JP-US credit spread differentials versus 5y TONA/SOFR basis spread

Source: Morgan Stanley Research, Bloomberg

Exhibit 15: Maturity breakdown of EUR denominated issuance by US entities

Source: Morgan Stanley Research, Bloomberg

3. FX: Negative correlation is sometimes seen between spot FX movements and xccy basis swap spreads (see [Exhibit 16](#)). This is because an investor looking to fund a USD-denominated asset purchase basically has a choice between converting the foreign currency into USD in the spot FX market or using the foreign currency on hand as collateral to borrow USD via (say) FX swaps or xccy basis swaps.

Stronger demand for USD is thus liable to generate either upward pressure on USD or widening pressure in xccy basis swap spreads depending on which option is chosen.

It is also common for correlation to strengthen when exchange rates are moving significantly. Xccy basis swap positions are typically marked to market with a three-monthly cycle, so if (for example) USD has strengthened sharply during a three-month period, the same amount of the home currency will be worth fewer dollars on the date of next interest rate exchange timing.

This will create a need for an additional xccy basis swap agreement to borrow USD by way of a principal “top-up” (see [Appendix: Mechanics of the XCCY Basis](#) for the detail), thereby generating widening pressure on negative CCY/SOFR basis swap spreads. It is thus understandable that xccy basis swap spreads tend to be quite volatile when exchange rates are making big moves within a short space of time.

4. Speculative demand: Xccy swap spreads tend to be deeper in negative territory further out the curve for many currencies. This is because USD borrowing flows tend to be more “unidirectional” for longer tenors (i.e., there tends to be more USD demand for longer tenors for FDI investment to US by offshore banks, etc, except for AUD) and offer hedge funds (for example) a means of generating carry by paying in xccy basis swaps in tenors where inversion of the basis curve is particularly pronounced (see [Exhibit 17](#)).

Exhibit 16: DXY versus DXY weighted 5y CCY/SOFR basis

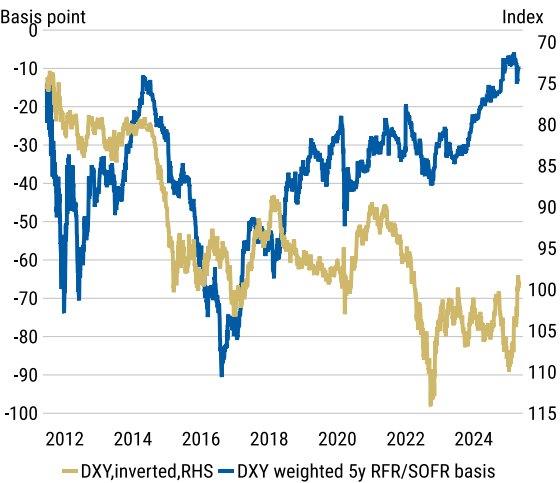
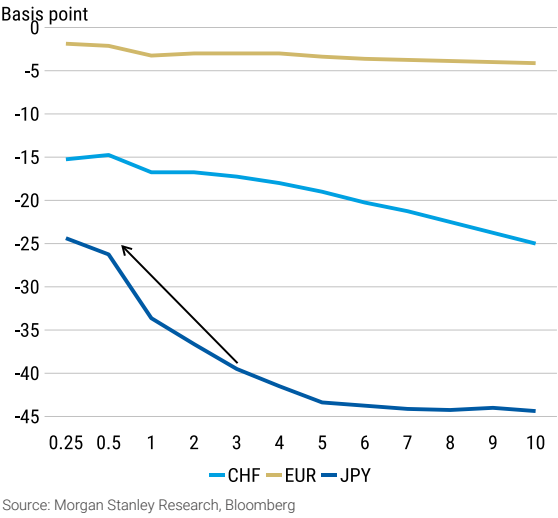


Exhibit 17: CCY/SOFR basis curve



By lending out dollars the holder of a paying position is able to earn not only a basis swap spread “premium” but also attractive rollup (under the assumption that curve inversion does not change over time). Such trades are often conducted using leveraged forward positions with a view to avoiding administratively complicated exchanges of principal and interest.

The negative slope of the TONA/SOFR basis curve is particularly steep from the short-term sector into the medium-term zone (due to demand for medium-term USD funding being so strong among Japanese banks), for which reason 1y1y or 2y1y paying positions are extremely popular (see [Exhibit 18](#)).

Negative spreads will thus tend to face gradually tightening pressure in an environment where USD can be borrowed without any real stress, or significant widening pressure towards the short end (due to unwinding of the aforementioned payer positions) if USD availability is being squeezed (see [Exhibit 19](#)).

Exhibit 18: 1y roll down of forward TONA/SOFR basis

		Forward									
		1	2	3	4	5	6	7	8	9	10
Tenor	1	-8.6	-4.7	-2.6	-0.5	1.0	1.0	2.4	1.2	1.6	0.6
	2	-6.7	-3.6	-1.5	0.3	1.0	1.7	1.8	1.4	1.1	1.3
	3	-5.3	-2.6	-0.7	0.5	1.4	1.5	1.7	1.1	1.4	2.2
	4	-4.1	-1.7	-0.3	1.0	1.4	1.5	1.5	1.3	2.0	2.5
	5	-3.1	-1.2	0.2	1.0	1.4	1.3	1.6	1.9	2.3	2.1
	6	-2.4	-0.6	0.4	1.1	1.3	1.4	1.9	2.1	2.0	1.8
	7	-1.8	-0.4	0.5	1.0	1.4	1.8	2.2	1.9	1.7	1.5
	8	-1.4	-0.1	0.6	1.1	1.7	2.0	2.0	1.7	1.5	1.4
	9	-1.1	-0.1	0.7	1.4	1.9	1.8	1.8	1.5	1.4	1.4
	10	-0.9	0.1	1.0	1.6	1.7	1.7	1.6	1.4	1.4	1.5

Source: Morgan Stanley Research

Exhibit 19: 2y1y TONA/SOFR basis around USD funding stress regime



Why Should the XCCY Basis Be Monitored?

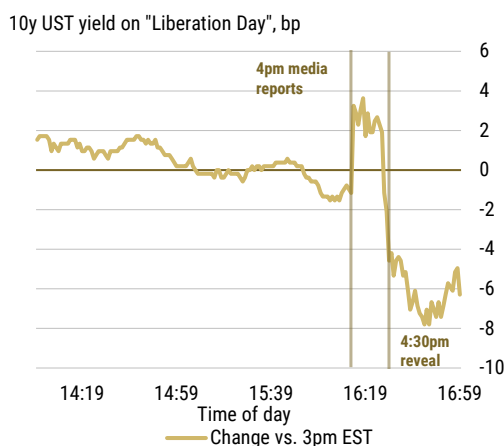
Investors should consider monitoring XCCY basis because it provides a high frequency and informative signal to analyze foreign demand for USD, and USD-denominated assets. In this section, we start by reviewing developments in US rates, FX, and XCCY markets on - and after - April 2. Next we analyze:

- Whether investors monitoring XCCY basis would have obtained - in real-time - a comparable signal to that they would have received - at a lag - from official demand data.
- The informational content that can be ascertained, ex-post, by comparing XCCY basis moves with since-released official data.

What happened on - and after - April 2?

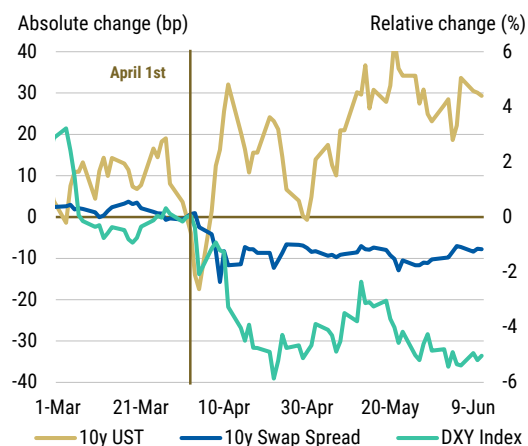
On "Liberation day" - April 2 - Treasuries initially sold off at 4pm, when media reports of across-the-board 10% tariffs came in below expectations. This trend reversed demonstrably after 4:30pm, however, when a chart held by President Trump revealed the 10% minimum tariff on all countries was accompanied by - in some cases - much higher country-specific reciprocal tariff rates (see [Exhibit 20](#)). The treasury market ended the day lower in yields, accompanied by wider swap spreads - signalling a flight to quality.

Exhibit 20: Intraday move in 10y UST on "Liberation Day", relative to 3pm EST



Source: Bloomberg, Morgan Stanley Research

Exhibit 21: Post-"Liberation Day" move in UST yields, swap spreads, and USD



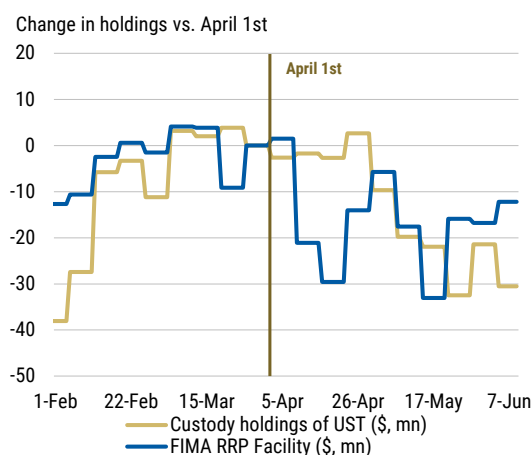
Source: Bloomberg, Morgan Stanley Research

After "Liberation day" - particularly on and after April 7 - the Treasury market sold off, with yields stabilizing above pre-"Liberation day" levels. Swap spreads tightened in the sell-off, signalling investor de-risking out of their safest USD assets. The dollar depreciated against a broad basket of currencies - contrary to traditional flight-to-quality dynamics - leading some market participants to speculate that offshore investors were shifting away from dollar assets (see [Exhibit 21](#)).

Investors tracking XCCY bases would have noted the "usual" flight-to-quality receiving from XCCY players following "Liberation day." However, these same investors would have interpreted the normalization of XCCY bases in subsequent weeks as a sign of weakening

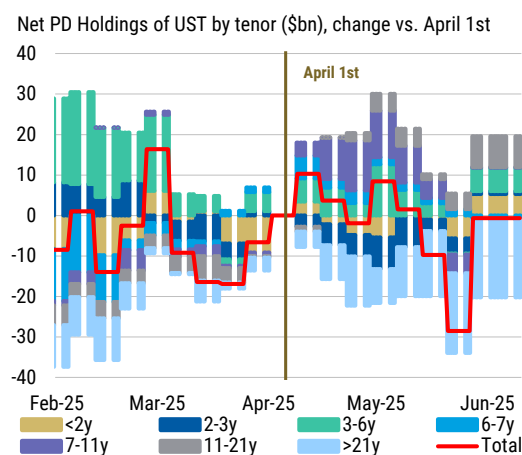
foreign USD demand - thereby linking the cheapening of US assets to a potential reduction in off-shore demand.

Exhibit 22: US Treasuries held in custody for foreign official institutions by FRB New York



Source: FRB New York, Morgan Stanley Research

Exhibit 23: Change in US primary dealer UST holdings vs. April 1



Source: FRB New York, Morgan Stanley Research

Did XCCY bases provide a comparable signal to since-released foreign USD demand data?

As discussed above, XCCY bases in April showed signs of diminishing foreign demand for USD. To assess whether this signal has proven informative, we compare XCCY bases to since-released official foreign-investor demand USD data (ranked from shortest to longest release lag):

- **Fed custodian data (released Thursdays for current week):** USTs held in custody for foreign official institutions at the Federal Reserve Bank of New York moved sideways shortly after "Liberation day," consistent with a wider XCCY basis. Since then, XCCY's normalization has coincided with decreased UST holdings - both pointing to reduced offshore investor demand for USD (see [Exhibit 22](#)).
- **Primary dealer (PD) UST holdings data (released Thursdays for prior week):** PDs' UST holdings were near flat the week of April 5, at odds with the initial quality-bid implied by XCCY. PDs' UST holdings dropped through May, as Fed custodian holdings also decreased. When paired with the normalization of XCCY, this suggests that May saw foreign investors selling USTs to domestic buyers (see [Exhibit 23](#)).
- **US Treasury Auction Allotments (released with 1-2w lag):** April UST auction participation statistics saw foreign investors' takedown decrease, in-line with the post-2022 trend. We do not think auction data can be directly compared with April's rapid XCCY normalization, given auction data marked the continuation of an established multi-year trend.
- **Treasury international capital (TIC) data (released with ~2m lag):** On June 18, the US Treasury will release foreign UST demand data for April. TIC data's lag makes apparent the value add of high-frequency XCCY signals. Given recent trends, it is likely that TIC data showed buying in fixed income markets (see [Exhibit 25](#)). The signal from XCCY markets suggests a deviation from the buying trend could materialize in the April data.

Exhibit 24: Foreign Auction Participation in UST auctions (1y rolling average)

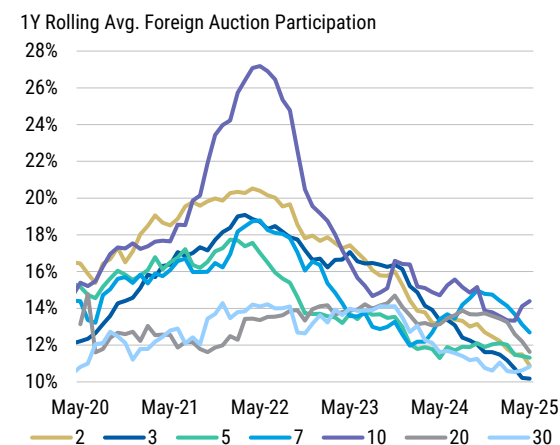
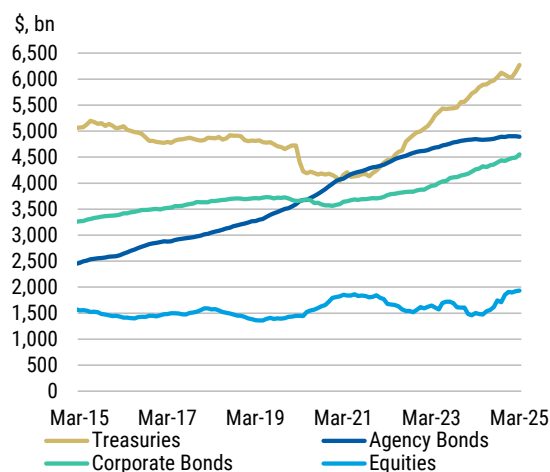


Exhibit 25: Cumulative net purchases of US securities by overseas domiciled investors: (indexed to January 1977)



To sum, XCCY basis provided investors with a high frequency signal reflected in Fed custodian data. While initially at odds with primary dealer holdings data, XCCY sheds light on potential post-"Liberation day" foreign-to-domestic UST selling dynamics. Treasury auction data is not immediately comparable to XCCY basis, given established foreign-participation trends. Finally, TIC data's multi-month lagged nature helps illustrate the value add of high-frequency foreign-demand signals.

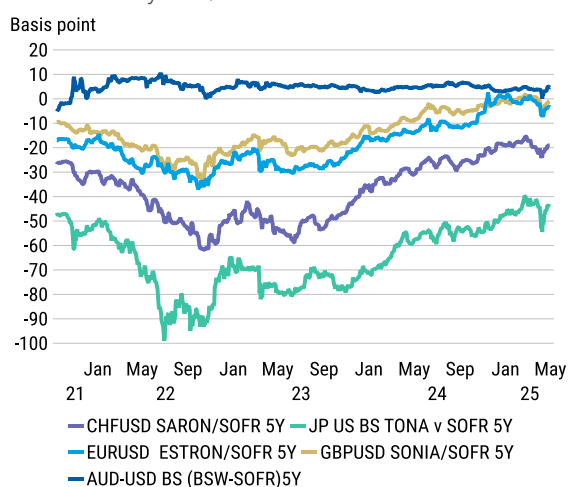
Given the importance of understanding foreign demand for US assets, we think that investors should include the XCCY basis in their toolkit, as it provides a high frequency and informative signal to analyze foreign demand for USD, and USD-denominated assets.

What's the XCCY Basis Market Telling You?

Negative CCY/SOFR basis swap spreads widened in the wake of the Trump administration's April 2 "reciprocal tariffs" announcement, but not all that significantly, and they were quick to recover to their previous levels (see [Exhibit 26](#)).

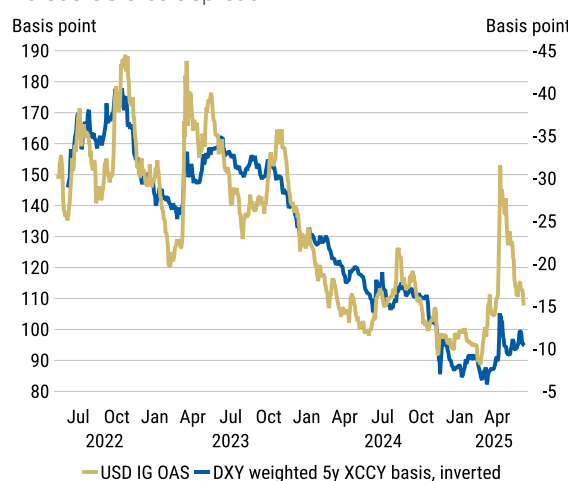
The overall reaction of xccy basis swap spreads was ultimately quite limited by comparison with (for example) credit spreads (see [Exhibit 27](#)).

Exhibit 26: 5y CCY/SOFR basis



Source: Morgan Stanley Research, Bloomberg

Exhibit 27: DXY weighted 5y CCY/SOFR basis versus US credit spread



Source: Morgan Stanley Research, Bloomberg

One key difference between now and (say) the COVID-19 shock is that we have not been seeing "flight to quality" demand for USD, with uncertainty about the US tariff impact instead appearing to be triggering a temporary withdrawal from USD assets (including the currency itself).

Negative xccy basis swap spreads should face widening pressure—that is, USD should command a higher premium—if offshore investors are hedging against the risk of their USD-denominated assets losing value due to depreciation of the greenback.

This should in turn cause USD hedging costs to rise due to selling pressure in the FX forward market (with forwards underperforming spot). **Hedging flows of this nature tend to be relatively short term and will thus impact mostly on short-tenor xccy basis swap spreads, but we have not recently been witnessing any particular stress in this zone** (see [Exhibit 28](#)).

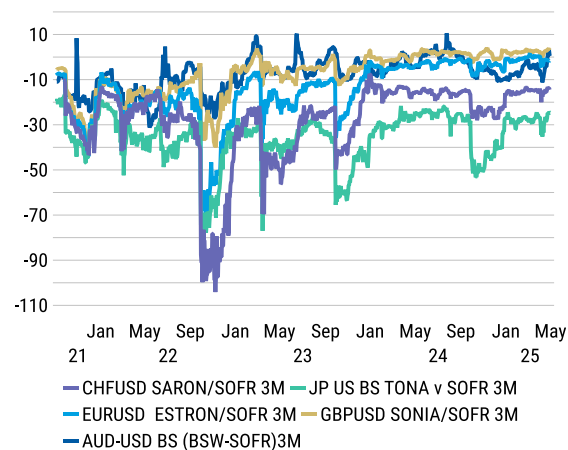
It thus seems reasonable to conclude that demand for USD has diminished among offshore investors and/or US investors have started to show more interest in overseas assets.

But as we discussed in "[JPY: Focusing on International Investment](#)", there is no obvious evidence of Japanese investors, who have one of the highest exposures to USD assets in the world, opting for significant "repatriation" of their very sizable US exposures.

Some US bonds seemingly have been sold off, but Japanese investors have meanwhile been net buyers of foreign equities (mostly US) (see [Exhibit 29](#)).

Exhibit 28: 3m CCY/SOFR basis

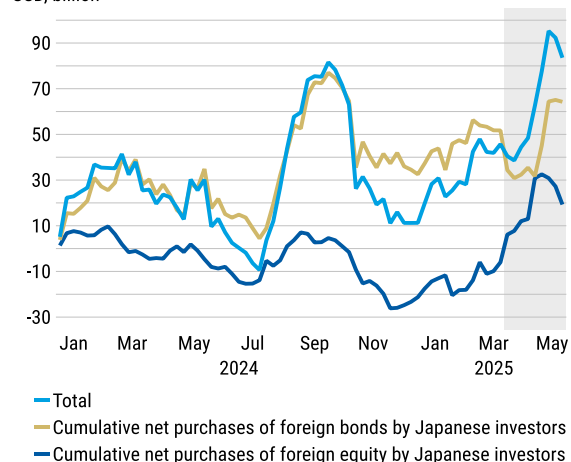
Basis point



Source: Morgan Stanley Research, Bloomberg

Exhibit 29: Cumulative net purchase of foreign assets by Japan based investors since 2024

USD, billion

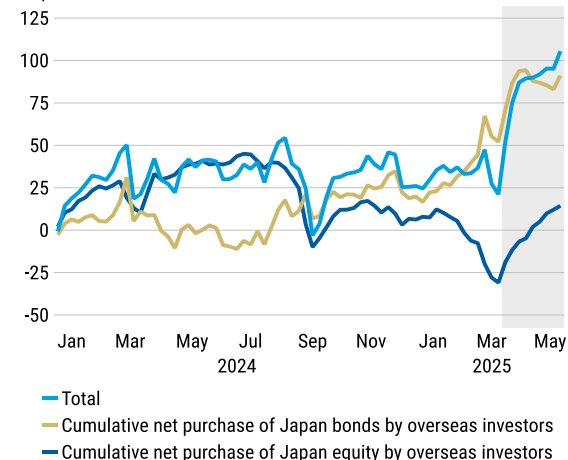


Source: Japan MoF, Morgan Stanley Research

Japanese assets have meanwhile been seeing very rapid inflows from overseas since the April 2 “reciprocal tariff” announcements (see [Exhibit 30](#)), as have ETFs investing in European assets (while as we discussed in [Tracking US outflows and FX implications](#), outflows from US-focused ETFs have not been especially noteworthy) (see [Exhibit 31](#)).

Exhibit 30: Cumulative net purchases of Japan assets by overseas investors since 2024

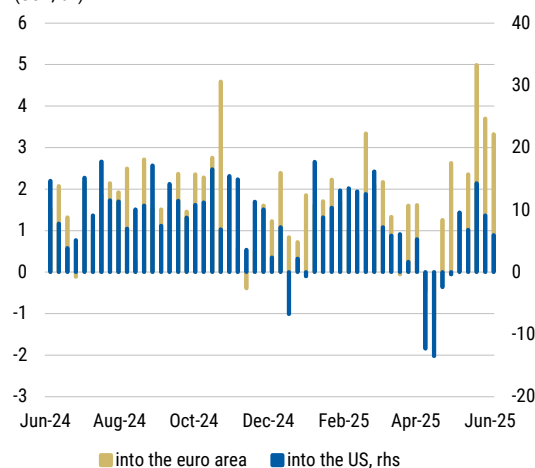
USD, billion



Source: Japan MoF, Morgan Stanley Research

Exhibit 31: Global Bond ETF and mutual fund flows into US and Euro Area

Weekly global bond ETF and mutual fund flows (USD, bn)

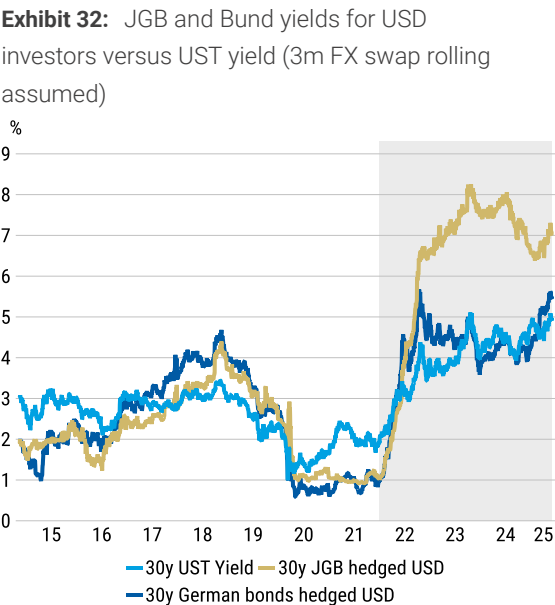


Source: Morgan Stanley Research, EPFR, Note: (i) The EPFR data and charts displayed here must not be extracted and republished (whether internally or externally). such use will violate the terms of Morgan Stanley's contract with EPFR which only covers named users

Our impression is thus that investors may have started to increase their exposures to European and Japanese assets. In particular, investors holding USD can earn a positive premium by swapping into other currencies via FX swap or XCCY basis and might thus have started to do so (as well as selling USD on spot FX market) when buying other asset classes (see [Exhibit 32](#) and [Exhibit 33](#)).

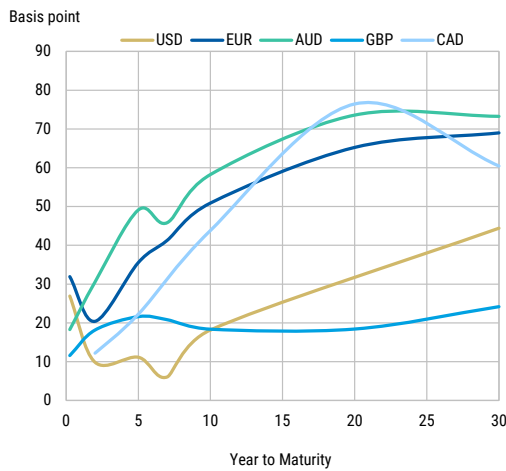
Such behavior would translate into diminished demand for USD in a way consistent with the recent tightening of the negative CCY/USD basis swap spreads that we have been witnessing.

We expect this tighter XCCY basis trend to continue until a Fed rate cut would become enough to attract the demand for USD assets on a FX hedge basis (see [Unravelling the SOFR/TONA basis demand](#)).



Source: Morgan Stanley Research, Bloomberg

Exhibit 33: Yield pick-up of foreign CCY denominated JGB versus matched maturity sovereign yield



Source: Morgan Stanley Research, Bloomberg

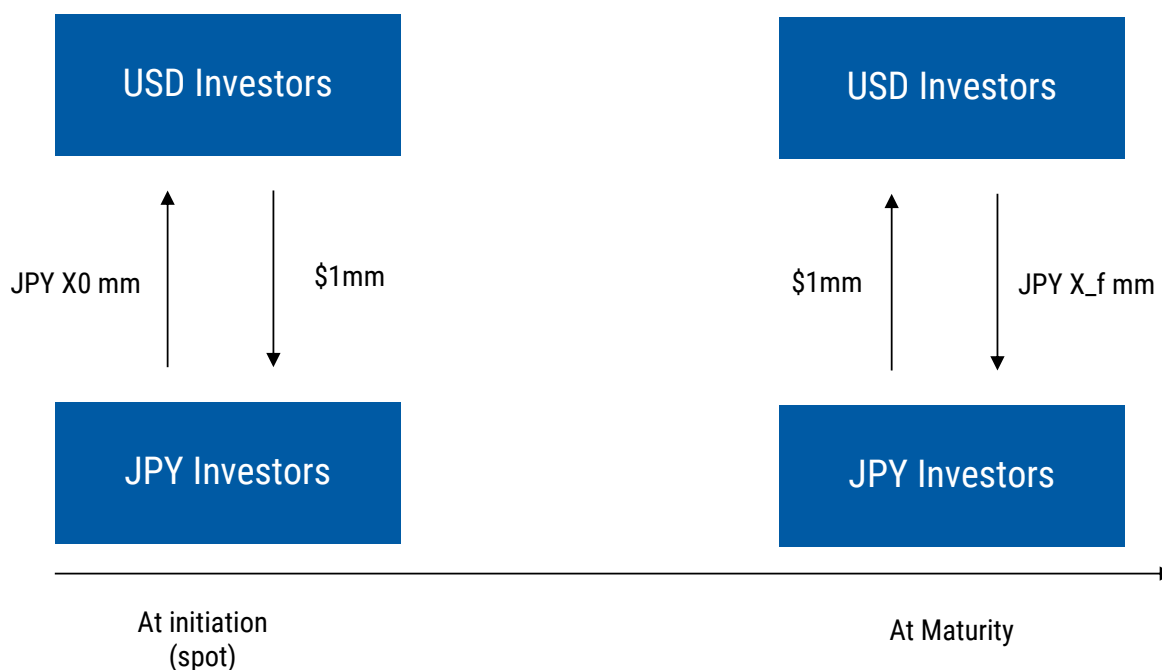
Appendix: Mechanics of the XCCY Basis

XCCY interest rate parity

Let us first begin with a brief review of FX swaps, which entail simultaneous execution of a spot transaction and a forward transaction. Taking the example of the USD/JPY currency pair, an investor holding JPY borrows dollars at an exchange rate of 1 dollar = JPY X_0 at the start of the contract, and then returns those dollars at the end of the contract in exchange for receiving the forward price X_f .

This effectively enables the investor to use its existing JPY funds as collateral when borrowing USD funds for a given period of time at a transaction cost of $X_f - X_0$. The exchange rate upon maturity is fixed at the start of the contract, meaning that neither counterparty is exposed to exchange rate fluctuation risk. But how is the forward price X_f set?

Exhibit 34: Schematic of an FX swap transaction



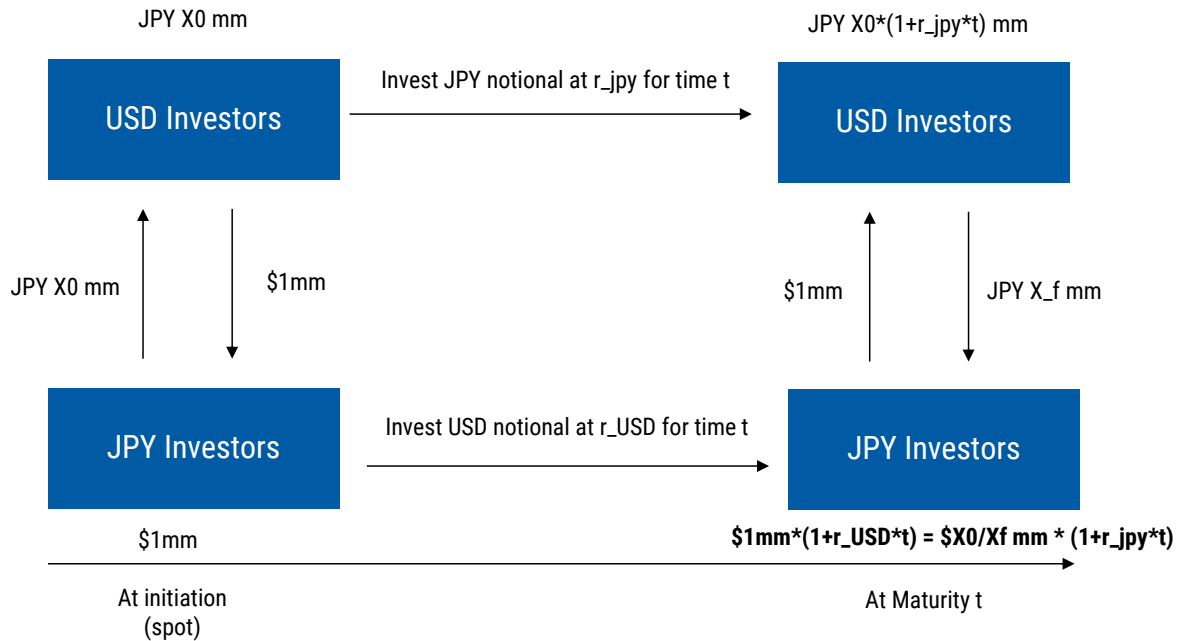
Source: Morgan Stanley Research

In a world with no arbitrage opportunities, the expected return should be identical irrespective of which currency is invested. Suppose that you hold \$1 today. Converting that at an exchange rate of USD/JPY = X_0 will give you ¥ X_0 of JPY principal.

Investing that for a period t at an interest rate of r_{JPY} will leave you with $X_0(1+r_{JPY}*t)$ in principal. Finally, suppose that you exchange the JPY principal back to USD at an exchange rate of USD/JPY = X_f , the eventual return would be calculated as $X_0/X_f (1+r_{JPY}*t)$.

Next suppose that you invest \$1 at r_{USD} for a period t , the return can be calculated at $(1+r_{USD}*t)$. Given that expected returns should be identical in the absence of arbitrage opportunities, we obtain the following equation:

$$X_0 / X_f * (1+r_{JPY}*t) = (1+r_{USD}*t) \quad (1)$$

Exhibit 35: Interest rate parity “no arbitrage” pricing

Source: Morgan Stanley Research

The spot USD/JPY price X_0 and the JPY and USD interest rates r_{JPY} and r_{USD} are known, meaning that we can solve for the forward USD/JPY price X_f . It is however quite rare for Equation (1) to hold in the real world.

FX forwards and FX swaps are traded directly in the market, meaning that we can treat X_f as a known quantity. Solving Equation (1) for r_{USD} gives us the following:

$$r_{USD}' = \{(X_0/X_f)[1+(r_{JPY})*t]-1\}/t \quad (2)$$

Comparing r_{USD}' – as implied by the market-traded USD/JPY forward price – with actual r_{USD} enables us to check whether USD funding is being traded at a premium in the FX market.

If we use the risk-free rates TONA OIS and SOFR OIS for r_{JPY} and r_{USD} , respectively, we can quantify the premium (or discount) at which r_{USD} is trading in the market relative to the risk-free rate SOFR OIS.

Rewriting Equation (1) to incorporate this premium α , we obtain:

$$X_0 * [1 + (r_{JPY} + \alpha) * t] = X_f * (1 + r_{USD} * t)$$

This can then be (approximately) solved for the FX swap cost:

$$X_f/X_0 - 1 = (r_{JPY} - r_{USD}) * t + \alpha * t$$

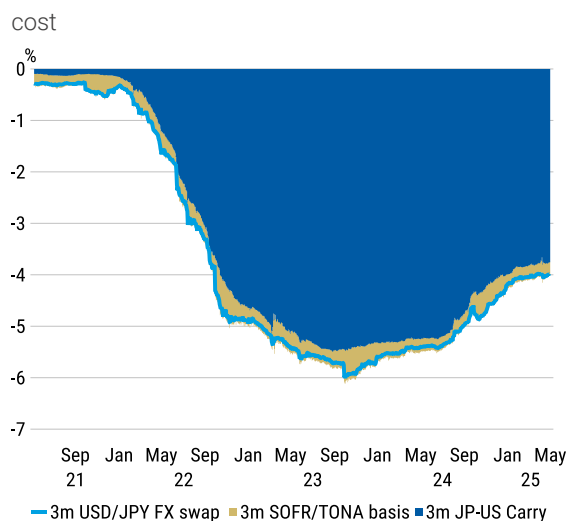
The first term on the right denotes the Japan-US carry differential over the period in question. **In other words, the premium “ α ” corresponds to that component of the FX swap cost that cannot be explained by the carry differential, and can be understood in terms of differing supply/demand balances for the two currencies** (see [Exhibit 36](#)).

Where α is negative, the USD/JPY FX swap cost will be higher (further below zero) than

would be consistent with interest rate parity. This would mean that JPY-funded investors are required to pay an additional premium when using FX swaps to borrow USD.

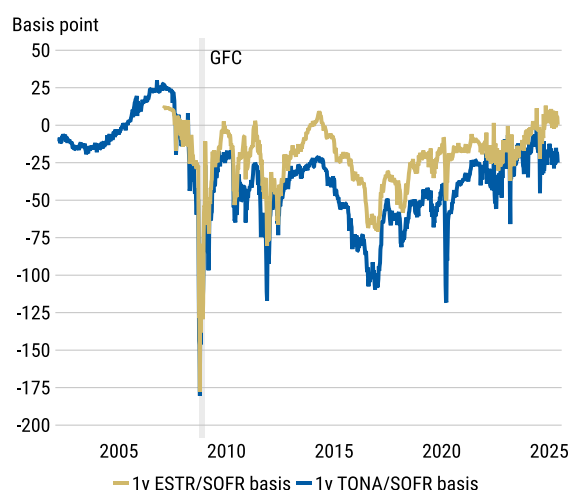
This sort of additional premium was not priced into most FX swaps (versus USD) prior to the global financial crisis, but it would appear that offshore investors subsequently became more mindful of the existence of such a premium (when borrowing USD) after witnessing a surge in demand for dollar liquidity (see [Exhibit 37](#)). This risk premium is known as the XCCY basis spread.

Exhibit 36: Breakdown of 3m USD/JPY FX swap



Source: Morgan Stanley Research, Bloomberg

Exhibit 37: Implied 1y RFR/SOFR basis swap after the GFC



Source: Morgan Stanley Research, Bloomberg

What is a XCCY basis trade?

FX swaps are only liquid out to around one year, with XCCY basis trades much more commonly used when borrowing USD funds for longer periods. A XCCY basis swap agreement entails simultaneous lending and borrowing of two different currencies along with periodic exchanges of interest.

It is typical for one floating interest rate to be exchanged for another, but fixed versus fixed and fixed versus floating swaps are also possible. XCCY basis swaps without any USD involvement tend to be quite illiquid, meaning that dealers will ordinarily end up using USD by way of an intermediary (for example, by using a combination of AUD/USD and USD/JPY basis instead of a single AUD/JPY basis).

[Exhibit 38](#) offers an overview of a “standard” XCCY basis swap. In this example, USD and other CCY principal are exchanged at the start of the contract, with the USD borrower (CCY lender) paying USD interest throughout the contract period while the USD lender (CCY borrower) pays the relevant CCY interest rate plus a premium α . The contract then concludes with a final exchange of interest along with a return of principal to each original lender.

This premium α is typically called a XCCY basis spread. This premium α would be decided by supply/demand imbalance between USD and other CCY.

This trade can be used by an offshore investor to borrow USD funds for a given period of time using other CCY funds as collateral. The exchange of interest has ordinarily been

based on SOFR and risk-free rate (RFR) for the other currency.

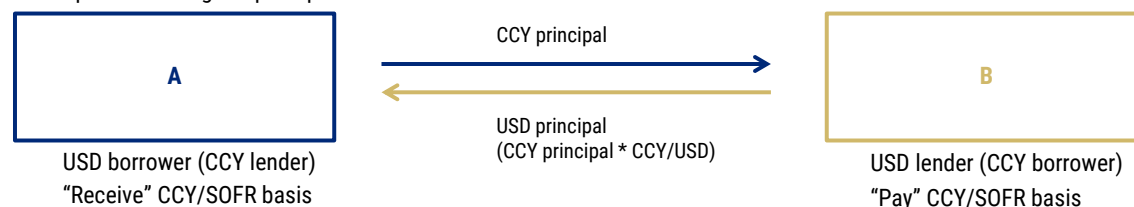
It is worth noting here that the CCY lender (USD borrower) receives 3m RFR compound+ α when interest is exchanged. This α is so-called the basis spread. A negative α will mean that the CCY lender (USD borrower) receives a lower rate than 3m RFR compound, and as such is effectively paying an additional premium to borrow dollars. The deeper α is in negative territory, the higher the premium that will need to be paid by USD borrowers.

XCCY basis trades are quoted in terms of this spread α , which by convention is applied to the non-USD currency. Receiving the floating rate with this spread added in is known as “receiving the CCY/SOFR basis”, while the opposite leg is referred to as “paying the basis”.

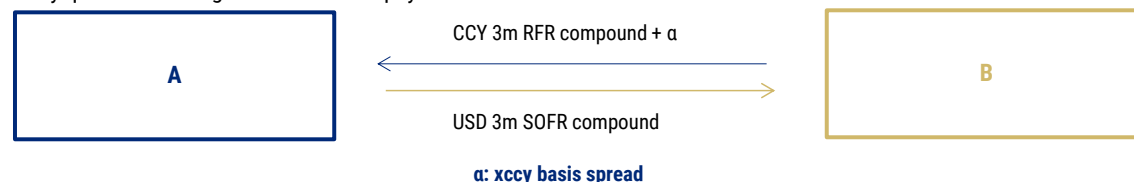
For example, receiving the TONA/SOFR basis when $\alpha = -40\text{bp}$ will mean receiving TONA compound -40bp and paying SOFR compound is customarily exchanged every three months. XCCY basis trades are bilateral contracts that are not centrally cleared, meaning that counterparty risk and balance sheet costs will naturally be greater for longer maturities (for non-MTM xccy basis).

Exhibit 38: Overview of a XCCY basis transaction

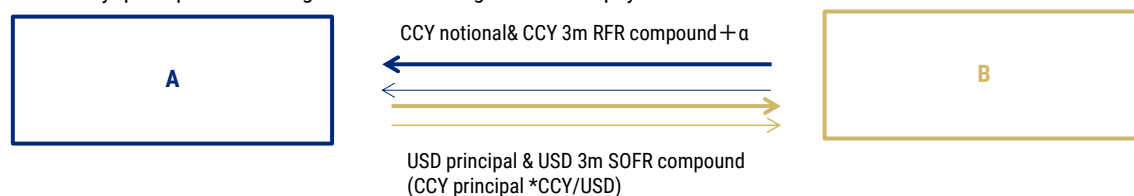
1. At inception: exchange of principal



2. Every quarter: exchange of interest rate payment



3. At maturity: principal re-exchanged + final exchange of interest payment



Source: Morgan Stanley Research

Differences between FX swaps and XCCY basis swaps

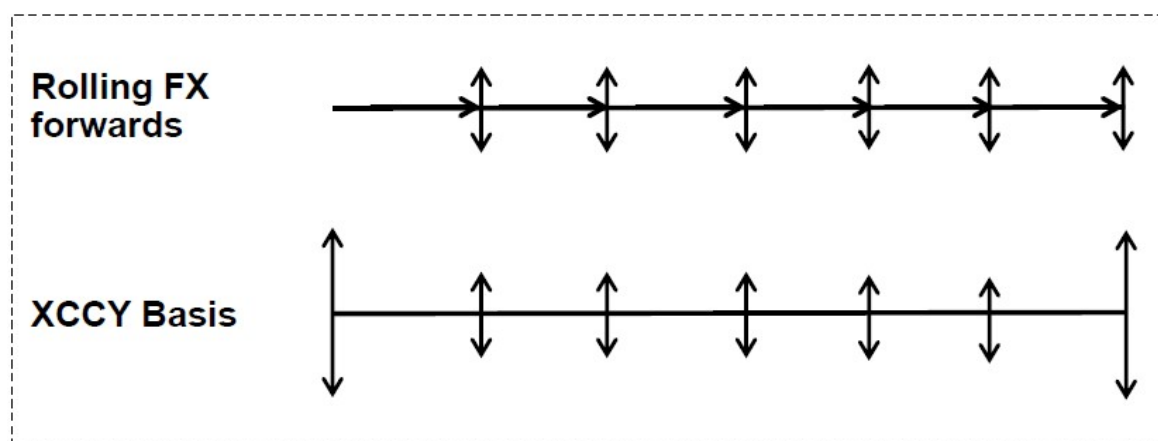
Investors can use XCCY basis swaps to lock in the basis swap spread when borrowing USD funds for a fixed period of time, but might instead opt to roll over shorter-dated FX swaps in order to achieve the desired funding duration.

The latter approach is often cheaper initially, but the basis spread priced into FX swaps will vary at each rollover date, which of course leaves future funding costs subject to uncertainty. The former approach allows for greater certainty and is perhaps more compatible with various regulatory requirements (such as those pertaining to the net

stable funding ratio).

However, it may make borrowing more costly. FX swaps are meanwhile cheaper from the perspective of balance sheet and (initial) borrowing costs, but less compatible with regulatory compliance needs and also riskier due to the need for repeated rollovers at unknown spread levels.

Exhibit 39: Comparison of FX swaps and XCCY basis swaps



Source: Morgan Stanley Research

Two types of XCCY basis: MTM basis versus non-MTM basis

A decision needs to be made as to whether or not any given xccy basis trade will be marked to market. As discussed above, a xccy basis trade entails an exchange of (notional) principal in two different currencies at the contract start date.

The exchange rate will obviously fluctuate over time, meaning that the value of 1 CCY in USD terms may differ between (say) the contract start date and the first interest payment date three months later.

For a mark-to-market (MTM) trade each interest payment will be computed using an adjusted principal amount reflecting the prevailing exchange rate. To put this another way, an investor borrowing USD funds will in effect see their interest payment cost adjusted to reflect fluctuations in the value of the CCY funds posted as collateral.

This sort of MTM approach is standard practice in the XCCY basis market, with adjustments of notional principal at each interest payment date generally serving to reduce counterparty risk charges.

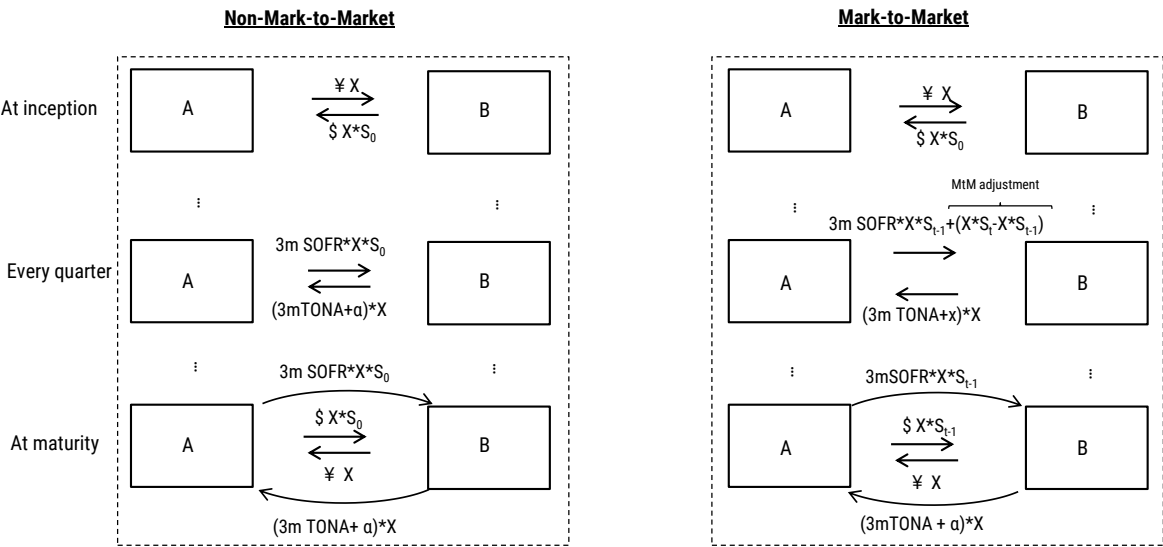
Each interest payment for a non-MTM XCCY basis swap will be based on the initial principal amount without any adjustment for subsequent exchange rate movements. This type of transaction is mostly used when converting the proceeds of a bond issue into another currency or when converting bond cash flow (such as for a repackaged note).

Counterparty risk charges tend to be larger due to the lack of adjustment for fluctuations in collateral value. Moreover, the exchange rate upon maturity will be the same as that used at the start of the contract. For currency pairs with sizable interest rate differentials such as JPY/USD and CHF/USD, the forward exchange rate (per USD) will decline over time.

However, in the case of a non-MTM swap the non-USD interest payment will be calculated using the notional principal amount determined by the initial exchange rate.

The non-MTM XCCY basis swap spread will thus end up incorporating a carry component, meaning that spreads will be further below zero than for MTM swaps (signifying higher USD borrowing costs) with the difference increasingly pronounced for longer maturities when it comes to pairs such as JPY/USD and CHF/USD.

Exhibit 40: MTM XCCY basis versus Non-MTM XCCY basis



Source: Morgan Stanley Research, Note: X suggests notional principal, St suggests spot CCY/USD at time t

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(as of May 31, 2025)

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	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1493	40%	379	46%	25%	698	41%
Equal-weight/Hold	1650	44%	372	45%	23%	782	46%
Not-Rated/Hold	4	0%	0	0%	0%	2	0%
Underweight/Sell	602	16%	74	9%	12%	235	14%
Total	3,749		825			1717	

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