LOOMIS | SAYLES

LS FX Trading: Capabilities, Strategies & Solutions

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The foreign exchange (FX) market is the largest, most liquid financial market in the world, with daily turnover of $5.1 trillion.[i] For investors allocating outside of their home currency, there are infinite complexities, opportunities and risks to consider—starting with the decision to either take active currency exposure or hedge.

At Loomis Sayles, most products are involved in the FX market, whether that means taking active views and using currency to generate alpha or hedging to neutralize some or all currency exposure. Our centralized trading structure includes a team of experienced FX traders who effectively execute all FX for the firm using proprietary technology, third-party platforms and automated processes. The FX desk trades the highest notional volume at the firm.

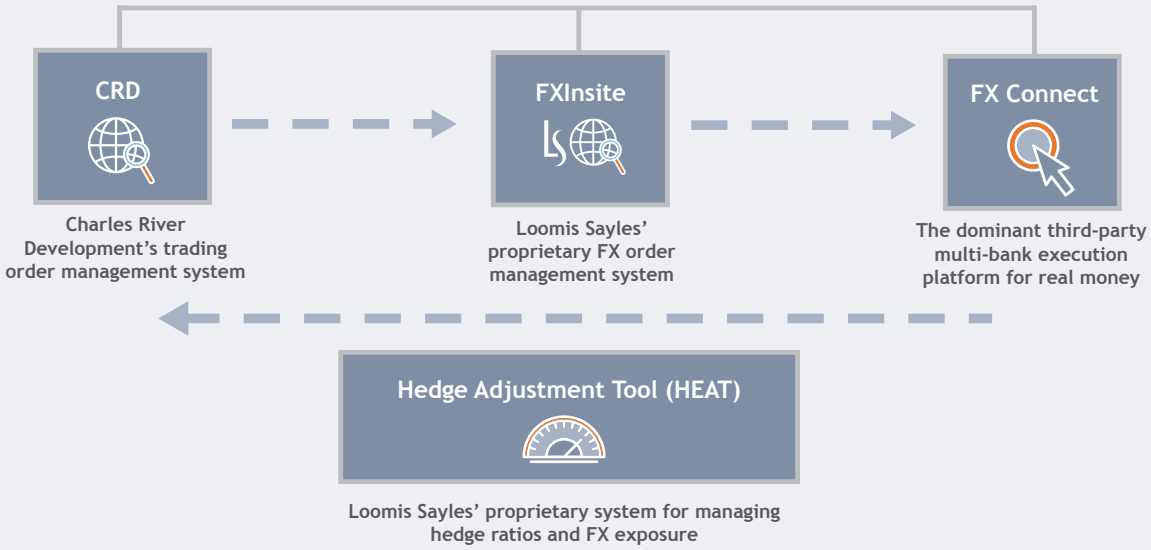
Describe Loomis Sayles' approach to FX trading.

Like all areas of trading at Loomis Sayles, our FX traders are asked to make meaningful contributions to alpha generation across all portfolios. Our approach to FX is:

- **Integrated:** FX traders are integrated within the investment process, collaborating with portfolio managers and research analysts on alpha-generating ideas.
- **Specialized:** The FX desk has specialized skills in active and hedged FX trading and management. We hedge at a portfolio level, country level and/or single security level. We strive to design FX and hedging solutions to meet all client or investment team requirements.
- **Continuous:** We provide 24-hour centralized FX trading for fixed income, equity, multi-asset and alternative strategies. The firm's high FX trade volumes enable us to net currency trades and minimize transaction costs where applicable.
- **Insightful and Dialed In:** Deep experience in the FX market gives us important insights on positioning, technicals, flows and sentiment. Extensive, well-established relationships in the marketplace afford us access to real-time information, greater liquidity and better pricing.

TRADERS' TOOL KIT

Nearly every Loomis Sayles strategy accesses FX markets in some way. Whether we are implementing an active currency strategy or neutralizing currency exposure through hedging, we rely on a sophisticated system of interconnected resources to run our FX book.



Electronic connections between our FX trading applications and automated processes minimize risk and increase efficiencies. Trades move from CRD to FXInsite to FX Connect and back into CRD, all without manual intervention—straight through processing. HEAT is used to monitor hedge ratios and FX exposure on a daily basis across the firm and by account.

You mentioned earlier that investors can take an active currency view or hedge. Can you explain more about the concept of hedging?

Hedging is an option for investors who want to own a security issued in a foreign currency but do not want the currency exposure. Investors may hedge because they do not take active currency positions or because they view a security positively but view the currency negatively. FX hedges neutralize currency risk, meaning investors will not participate in either depreciation or appreciation of a currency, which can lower portfolio volatility.

FX forwards are the most common way to hedge, but there are other methods including the use of FX options or cross-currency basis swaps. Each method has different risks, requirements and costs. The investor's objectives, concerns and risk tolerance should be used to determine the most appropriate method. Factors including the portfolio's underlying assets, base currency, foreign currency exposures, investment horizon and guidelines are all considerations.

What is an FX forward and are there cash requirements?

An FX forward is an agreement to exchange a predetermined amount of one currency for another currency at an agreed-upon rate and at an agreed-upon value date (or settlement date) sometime in the future.

In practice, it is common to "roll" forwards to maintain a hedge position and avoid exchanging large amounts of cash on the value date. Later, we will walk through an example of hedge trades and discuss how rolling is done, including related cash requirements.

CASE STUDY 1:

THE CHALLENGE

A PM team wants to invest in a euro-denominated bond but has concerns about the future performance of the euro and wants to decide whether to hedge the currency risk.

THE OUTCOME

The Europe sovereign analyst recently moved to a neutral rating from a bullish one, so the PMs called the FX trading team to discuss the near-term direction of the euro. The FX trading team's proprietary tools suggested the market was already very long the euro, a risk to future performance. Technical analysis also suggested caution, flows were biased toward selling and sentiment was wary of negative headline risks. Based on the near-term outlook, the PMs decided to hedge the currency risk.

How do you determine the forward's value date?

It is standard market practice to hedge in one- to three-month tenors. Under normal market conditions, we hedge to three-month (quarterly) International Monetary Market (IMM) dates. The IMM is a division of the Chicago Mercantile Exchange (CME). However, our FX traders have hedged from one month to ten years in order to meet the specific needs of a client or investment team, or because of technical factors in the market.

We regularly monitor hedge costs and forward curves to determine the most efficient tenor for a given currency pair.

How do you price an FX forward?

Today's forward prices combine covered interest rate parity and the cross-currency basis. But in the mid-1990s, we calculated forward rates using covered interest rate parity, Libor curves, a day-count calendar and our HP12C financial calculators. Two things have changed since then: Bloomberg automated the FX forward pricing calculation, and the global financial crisis increased the cross-currency basis. Here's a look at each factor:

1) **Covered interest rate parity** refers to a theoretical condition where the relationship between the interest rates, spot rates and forward rates of two countries are in equilibrium. It is used to calculate the forward exchange rate:

$$\text{FORWARD RATE} = \text{SPOT RATE} \times \frac{(1 + \text{FOREIGN RATE})}{(1 + \text{DOMESTIC RATE})}$$

DEFINITIONS
FORWARD RATE: The contracted forward exchange rate
SPOT RATE: The rates at which currencies trade for standard settlement (usually trade date + two days)
FOREIGN RATE: Short-term interest rate in the foreign market
DOMESTIC RATE: Short-term interest rate in the domestic market

2) The **cross-currency basis** is a rate that reflects the supply/demand dynamics of borrowing or lending one currency against another, and counterparty risk. Prior to the global financial crisis, the cross-currency basis was generally negligible. But the crisis generated massive US dollar demand and FX counterparty risk, which made the cross-currency basis significant in many cases. Post crisis, it is now incorporated into the price of FX forwards.

How does an FX hedge generate a cost or gain?

The cost or gain of a hedge is the price of the FX forward rate relative to the FX spot rate. This hedge cost/gain is set when the contract is initiated, and it is unavoidable. Generally, the higher the foreign interest rate versus the domestic interest rate, the higher the hedge cost.

$$\text{HEDGE COST/GAIN} = \frac{(\text{FORWARD} - \text{SPOT})}{\text{SPOT}}$$

Hedge costs/gains change with global interest rate differentials and the cross-currency basis, so there can be sizeable moves over time. For example, over the past 10 years for a US-based investor hedging euros back to US dollars, the hedge return has ranged from a gain of 2% to a cost of 2%. For a Japan-based investor hedging US dollars back to yen, the range over the past 30 years has been a cost of about 6.5% to a gain of nearly 2%.

Investors can make portfolio modifications to mitigate rising hedge costs. For example, extending fixed income duration (in upward sloping curves) or moving into higher-yielding bonds helps increase yield and offset hedge costs. Investors can also consider removing the hedge (taking active FX risk), or investing in local-currency assets.

CASE STUDY 2:

THE CHALLENGE

A client wants to efficiently hedge the FX risk of a 10-year buy-and-hold portfolio with the added complexity of limiting exposure to future hedge costs.

THE OUTCOME

FX traders analyzed the client's goals and proposed three potential solutions. Each solution contained different risks, mark-to-market volatility and pricing. The traders proposed replicating alternative instruments by using a stream of FX forwards to meet the client's needs.

Can you walk through an example of how you use FX forwards to hedge?

Our FX traders buy the foreign currency to pay for the security and simultaneously sell the currency to a value date in the future to hedge the currency risk. The investor is now long the foreign bond and short the FX forward. If the currency value goes down, the investor loses on the security but benefits from the forward—the FX risk is hedged.

To maintain the hedge and avoid exchanging potentially very large amounts of currency on the value date, we generally "roll" forwards as the value date nears. Rolling a forward involves closing out the existing forward and opening a new forward to a new value date. Closing the existing forward generates a profit or loss; on the value date, only the profit/loss associated with that forward is exchanged. Both trades are executed simultaneously using the same spot rate (to avoid crossing the bid/offer spread). The differences in prices are the forward points on the new position.

During the life of the forward, the size of the unrealized profit/loss is monitored so that we

HYPOTHETICAL EXAMPLE OF HOW WE USE FORWARDS TO HEDGE:

TRADE DATE	TRADE	WHAT IS THE FORWARD EXCHANGE RATE?	WHAT DOES IT MEAN?
5/1 INITIAL HEDGE	A PM team wants to buy €1 million of a euro-denominated bond and hedge the euro exposure to US dollars. The FX desk buys €1 million to purchase the bond and simultaneously sells a 1-month EUR/USD forward.	1.0930 (1.0913 + 0.0017). The forward includes the same EUR/USD spot rate used to buy euros for the bond. Forward points are added for the 1-month 6/1 value date.	The euro-denominated bond will be hedged until the forward value date of 6/1. If no further action is taken, on 6/1, the account will be obligated to deliver €1,000,000 and will receive $1,093,000.
5/27 ROLL	To maintain (roll) the hedge past the 6/1 value date, the FX desk buys €1 million at the current EUR/USD exchange rate (to close the 6/1 forward) and simultaneously sells a new 1-month €1 million EUR/USD forward (to open a new position).	**1.** 6/1 value date forward is closed at 1.0800. **2.** 7/3 value date forward is opened at 1.0820 (1.0800 + 0.0020).	The euro-denominated bond remains continuously hedged as the currency forward is rolled to a future date.
6/1 PROFIT/LOSS	The PM team and traders manage the profit associated with the 6/1 EUR/USD forward.		As currency forwards are rolled, the existing value date is closed and a new value date is opened. Every time a forward is closed, a profit/loss is generated and the account receives/delivers cash on the closed forward's value date. This account would receive a $13,000 profit on 6/1.

are prepared to raise cash for a loss or invest the proceeds of a profit. In periods of extreme market stress, like the financial crisis, or during times of very large moves, the cash flow requirements can be substantial. Variation margin or collateral may be required for accounts trading under an International Swaps and Derivatives Association (ISDA).

What is a restricted currency? What is an NDF? Do you trade both?

A restricted currency is a currency that cannot be freely traded because it has some form of controls around purchases and sales. The controls are generally imposed by a government. Typically, custodial banks execute spot transactions in restricted currencies on behalf of the client.

An NDF (non-deliverable forward) is a cash-settled forward, typically a restricted currency versus a freely traded currency, most commonly the US dollar. The profit/loss can be determined by the agreed-upon NDF rate at inception of the trade versus the spot rate at the time of settlement (published "fixing rate"). The gain/loss is then settled in the freely traded currency. Among the largest NDF markets are the South Korean won and Brazilian real. We actively trade NDFs.

Endnotes

[i] *Bank for International Settlements Triennial Central Bank Survey, data as of April 2016.*

Disclosure

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Currency hedging, like other investment techniques, carries risk. An adviser may decide not to engage in currency transactions if permitted by investment guidelines, and there is no assurance that any currency strategy used will succeed. In addition, suitable currency transactions may not be available in all circumstances and there can be no assurance that an account will engage in these transactions when they would be beneficial. Certain currency transactions also involve counterparty and liquidity risk.

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