The Modern Foreign Exchange Market

Key Concepts

- Foreign exchange (FX) is a global market in which any two currencies can be traded against each other (subject to convertibility and other rules) in any jurisdiction. There is no national marketplace for an individual currency and, as such, quotes and trading take place in a decentralized fashion.
- The foreign exchange market operates around the clock, from its "open" at 5:00am Sydney time on Monday morning until the "close" at 5:00pm New York time on Friday.
- In 2013, 71.1% of daily activity was handled in four jurisdictions: the UK (40.9%), the US (18.9%), Singapore (5.7%), and Japan (5.6%).
- The foreign exchange market has a close connection with the "real economy." Corporations use it to finance cross border trade, fund offshore subsidiaries and offices, as well as hedge future revenues or expenses. Asset managers generally use the FX market to finance international securities transactions, as well as hedge underlying portfolios against future currency movements.
- Foreign exchange is a largely cash-driven market. In the last global survey of market activity, over-the-counter (OTC) FX derivatives[1] volume represented 7.3% of daily turnover.

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The foreign exchange market is the largest financial market in the world as measured by average daily volume (ADV). In April 2013, ADV in the FX market was $5.3 trillion, up from $4 trillion in April 2010.[2]

Who Uses the Foreign Exchange Market?

Nearly all entities that engage in commerce rely on the FX market in some way. Recently, as markets have evolved, a more varied range of participants are accessing the market through an increasing number of trading venues.

Corporations use the FX market to hedge exposures arising from cross border trade and fund offshore operations, while investment managers use the market to finance international securities transactions and manage their global operations.

Government bodies also use the FX market for a range of reasons, including policy implementation (i.e., managing currency pegs) and commercial activity (i.e., fund offshore activities and import/export trade agreements).

In addition, a growing number of traders are involved in the FX market to generate risk-based return (called "Alpha"), including dedicated currency managers and retail investors.

1 Currency swaps and FX options.

2 The BIS survey is widely recognized as the most accurate measure of ADV in the foreign exchange market. The latest data and the calculation methodology is available here: http://www.bis.org/publ/rpfx13.htm

Banks have traditionally been at the center of the market, collectively filling the "liquidity provider of last resort" role. The banking sector typically sees the majority of FX trading volume in some shape or form;[3] however, more recently, the market has seen an increase in alternative liquidity providers from "non-banks."

How Do Foreign Exchange Transactions Take Place?

Although the structure of the market has changed, the foreign exchange industry maintains a close connection with the global economy.

Part of the reason for this is that unlike other financial markets, foreign exchange is not valuing or pricing an asset. Rather, it is a "relative" value market, where a currency is valued in terms of another currency, as opposed to an absolute value market. For example, if a corporation wants to transfer earnings in US dollars to euros, the bank will quote them a rate that expresses the value of the euro in US dollar terms (i.e., one euro = 1.1900 US dollars). This means that a single exchange rate is impacted by events in two separate economies, compared with a stock, which is generally impacted by events in a company or a segment of the economy.

The use of the FX market by corporations and asset managers to facilitate other financial and commercial transactions means that FX is often used as a hedging instrument, rather than an "asset class" that people invest in for benchmarked returns. By requesting quotes from liquidity providers or by entering orders to buy and sell currencies to facilitate trades in other assets or to fund cross border business, international corporations, asset managers, and other investors are constantly providing "new" liquidity to the market. This means that unlike equity or bond markets in which there is a finite supply of stock, the foreign exchange market receives an infusion of fresh liquidity, generated from end-users of the market on an ongoing basis.

Reflecting the diverse nature of foreign exchange, the majority of trading is executed over-the-counter (OTC). Unlike an exchange-based equity market, which is predominantly an order-driven market, an OTC trade is typically a bilateral trade in which two counterparties agree to trade at a settled rate quoted by the liquidity provider.[4] Trades can take place between two liquidity providers; between liquidity providers and customers; and, on certain trading venues, between two customers.

Transactions may be completed by telephone, fax, electronic trading platforms created and maintained by individual banks, and on third-party owned and operated, multi-participant platforms in which multiple customers interact with multiple liquidity providers on the same technology platform. OTC trading can take place in many forms across many venues. However, a significant minority of average daily volume (ADV) is transacted on exchange.[5]

OTC FX Products vs Exchange Traded

Over-the-counter products are customized and the terms of the contract are negotiated by the parties at the time of trade on a bespoke basis or executed anonymously via electronic trading platforms, where there may be some degree of standardization in the increments in which products can trade. By contrast, exchange traded FX products are standardized, regulated contracts, where the contract terms (i.e., size, settlement procedures, trading hours) are determined by and listed on the exchange and subsequently cleared through a clearing house.

3 In its latest Semi Annual FX Turnover Survey, the New York Foreign Exchange Committee reports that 81.6% of all spot FX turnover went through the top five dealers; however, this includes prime brokerage volumes which are not generated by the bank itself, but by its clients "borrowing" its credit lines http://newyorkfed.org/fxc/2015/mshare1014.pdf

4 A "quote driven" market is one in which a liquidity provider offers a price to trade to a customer, thus liquidity is accessed by means of a quoted price. An "order driven" market is characterized by all participants entering intentions to deal at a price and seeking a match for that interest. In the 2013 BIS triennial survey, quote driven activity represented 72% of all FX volume.

5 According to the BIS survey, exchange traded ADV was $160 billion in April 2013; by comparison, OTC ADV in spot FX products alone was $2.046 trillion. Available at: http://www.bis.org/publ/rpfx13fx.pdf.

As exchange traded FX products are predominantly futures contracts with physical delivery on standardized dates, sometimes the OTC market better meets the needs of those FX market participants such as corporations and asset managers that are hedging specific cash exposures and physical payments that fall outside the settlement futures markets offer.

OTC products are bilaterally traded, usually involving a bank at some point in the transaction. Even if the transaction was not done directly with a bank at the onset, bank(s) could still be involved as the trade could be booked via a prime broker (PB). Although parties are exposed to bilateral counterparty and settlement risk, the multi-currency cash settlement system, Continuous Linked Settlement (CLS), plays an important role in mitigating a majority of the settlement risk of its member banks and their customers in 17 major currencies. CLS is an industry utility designed to eliminate settlement risk between banks. Settlement risk is unique to the foreign exchange market, in which the two participants exchange payments on a given date, but at different times. CLS Bank operates several "Settlement Windows" throughout the day, during which times both sides of a transaction are settled, thus ensuring both parties receive payment.

Initial margin is not necessarily required in OTC trading and valuation margin may or may not be exchanged daily.

Exchange traded FX products are cleared and guaranteed by the exchange clearing house. The clearing house acts as the central counterparty for all transactions. The clearing house manages the counterparty and credit risk associated with holding FX positions with a variety of counterparties. With futures positions, initial margin is required and participants' profits/losses are marked-to-market on a daily basis net of the account portfolio.

In OTC liquidity pools, pricing between participants does not need to be disclosed to the entire market (creating "pools" of liquidity within even a single venue) and typically prices between counterparts can vary by "tier" of client or liquidity provider. Generally speaking, however, the "top of book" price in FX is highly visible to all participants. Within the exchange traded environment, all prices are seen by all participants barring some "off exchange" transactions that occur between eligible contract participants and typically account for a very small percentage of overall volume, though this may vary exchange by exchange.

How is the FX Market Regulated?

Exchange traded FX futures in the US are closely regulated by the Commodity Futures Trading Commission (CFTC). Participants in the futures industry are subject to regulation by the CFTC, as well as the National Futures Association (NFA). The CFTC has powers of enforcement and exchanges can levy fines and disciplinary action for violations of its rules. OTC markets currently rely on self-regulation and are governed by the contractual relationship between the parties via International Swaps and Derivatives Association (ISDA), PB agreement or some other documentation.

Various industry bodies have produced codes of conduct that recommend best practices throughout the global FX marketplace as a means of self-regulation. The central bank-sponsored (but not endorsed) FX committees of Australia, Canada, Japan, Singapore, the UK, and the US recently released a revised uniform code of conduct built from the six committees' individual best practice documents, Global Preamble: Codes of Best Market Practice and Shared Global Principles, which updates the original version published in 2013. Separately, The Model Code, created and managed by ACI – The Financial Markets Association – offers a global code of conduct that is endorsed by several local authorities.

However, these codes of conduct and/or guidelines are only recommendations and therefore have no formal legal standing. Participants are subject to local and regional laws governing financial markets, however, and a growing number of FX venues are beginning to be regulated. In the United States, this means that bank regulators, prudential regulators, and policymakers each play a role in the oversight of the FX market.

The FX industry is often referred to as "self-regulated" due to the provision of the aforementioned codes of conduct and/or guidelines, but also due to its historic ability to develop best practices that have been sufficient in lieu of regulatory requirements. An example of this was the creation of the settlement utility CLS in 2002. CLS was designed to eliminate FX settlement (or Herstatt) risk by centrally netting FX payments between counterparties using a central clearing bank (CLS Bank).

Historical Evolution of the Global FX Market

The modern foreign exchange market can be said to have grown out of the abandonment of Bretton Woods following the US moving off the Gold Standard in 1971. One of the outcomes of the Bretton Woods Conference of 1944 was the creation of a pegged exchange rate system that tied currency values to gold and minimized opportunities for competitive devaluations between competing economies. In August 1971, the US unilaterally abandoned the gold peg, allowing the US dollar to become a freely floating currency. Such action was swiftly followed by other nations.

Throughout the 1970s and ’80s, trading was executed primarily by banks either directly by telephone or telex with one another, or through inter-dealer voice brokers that would match orders in an anonymous environment, only revealing counterparty names once the trade had been completed.

In the 1980s, Reuters developed a conversational dealing platform that allowed banks to contact each other on a direct, electronic, bilateral basis to execute trades. In 1992, Reuters released a new mechanism, Matching, which sought to replicate the inter-dealer voice broker’s role in a fully electronic, screen-based environment.

One year later, a group of banks came together to develop and release the Electronic Broking Service (EBS), a rival to Matching, both of which were direct competition for the inter-dealer voice brokers. Matching and EBS were only open to banks, so customers were restricted to accessing the market via their bank providers, most often by telephone. In 2004, in response to competition from a new generation of technology providers allowing direct customer access to matching platforms, EBS launched EBS Prime, a service that allowed customers to access the interdealer platform for the first time, by means of their prime broker. Initially available to banks with lower credit ratings, the service was extended in 2005 to include hedge funds and proprietary trading companies. The broader market access provided by prime brokerage and electronic trading technology helped drive major growth in the FX market between 2001 (when both developments were in their infancy) and 2010 (when both were fully developed).

Demands for greater efficiency saw several banks develop proprietary electronic trading platforms for their customers in the late 1990s, and around the start of the current century a host of multi-dealer electronic trading platforms were introduced that allowed customers to connect with several liquidity providers simultaneously and receive competitive rates from each of them.

A feature of the FX market’s evolution has been the growth in influence of emerging markets currencies. In April 2013, these currencies accounted for 17% of ADV compared to 12% in 2007.[6]

A Changing FX Market Structure

During the previous three decades, the foreign exchange market’s structure had remained broadly unchanged: price was formed in the interbank market and non-banking participants had to access liquidity via a banking relationship.

As mentioned above, the proliferation of e-commerce providers has brought a range of new models to the FX market, including some that make use of prime brokerage services to allow customers to match with customers.

While there are now several regulated exchanges operating a true exchange model for listed FX derivatives (futures and options), the “all-to-all” and electronic communications network (ECN) models adopted by the FX industry for OTC products all operate under different rules and technology frameworks.

6 The Anatomy of the Global FX Market Through the Lens of the 2013 Triennial Survey by Dagfinn Rime and Andreas Schrimpf (p.33). Available at: http://www.bis.org/publ/qtrpdf/r_qt1312e.htm

A More Democratic FX Market

The modern market structure, largely driven by the easier availability of credit and stricter capital requirements, has seen the role of banks diminish as principal traders in foreign exchange.

A big driver of the growth in the other financial institutions segment has been the rise of non-bank trading firms, several of which entered the FX market from futures and equities markets where their high-speed models proved very profitable. The influence of automated, high-frequency traders (HFTs) in FX has been limited. To date, HFTs have had mixed experiences trying to trade with corporate end-users or asset managers, and have similarly faced reluctance from banks to allow them to fully engage on proprietary trading platforms. As a result, HFTs have largely been restricted to the professional, anonymous trading environments offered by ECNs. Several non-bank firms from the futures and equities markets have transferred their market making expertise into FX to become liquidity providers, rather than arbitrageurs.

Changing Dynamics – Risk Warehousing

One impact of regulations seeking to limit banks' risk-taking activities, as well as increased capital charges on trading businesses, has been to change the nature of liquidity and trading in the foreign exchange market.

Whereas previously, banks fulfilled the role of "risk warehouses,"[7] the speed of technology and the availability of liquidity through many more venues have resulted in it becoming much easier to diffuse risk in a shorter amount of time. This type of risk management has been referred to as "hot potato" trading, whereby a liquidity provider's holding time for a position is much lower than was previously the case.[8]

Over a shorter time period, liquidity providers still engage in "risk warehousing" through the practice of internalization. Predicated upon gaining a sufficiently large share of market activity, the use of electronic trading and risk management systems has seen liquidity providers understand that over a given time frame (often minutes), they will see activity on both sides of their price (bid/offer). This means they do not need to "cross the spread" and deal on other liquidity providers' prices, and as such they earn the spread for themselves. So internalized business means that liquidity providers don't have to go into the public market to offset risk as often, and as such, their costs are reduced and more of the spread retained.[9]

Conclusion

While the foreign exchange market has evolved greatly over the past decade, one constant is its vital role in allowing businesses and governments to enter into transactions around the world. The democratization of the market has resulted from the deployment of innovative technology that allows customers to hedge foreign exchange risk or speculate in the market in a more transparent, efficient manner.

The core of the market remains end users, such as corporations, pension funds, and investment managers that continue to use the market to efficiently manage multi-jurisdictional businesses and multi-currency investment portfolios. Although banks have seen their collective role in the market as principals and liquidity providers diminish, this group remains the largest individual segment of the market, especially through the influence of their prime brokerage businesses.

7 Part of a bank's FX service to its clients is to quote for large notional trades that typically would have a market impact. The customer transfers the risk to the bank by means of a single trade, the bank then "drip feeds" the risk into the market over a longer period of time, sometimes days, to reduce the market impact.

8 The Anatomy of the Global FX Market Through the Lens of the 2013 Triennial Survey. Available at: http://www.bis.org/publ/qtrpdf/r_qt1312e.htm

9 Major FX banks, in interviews with the author, have indicated that they can internalize up to 80% of spot FX flow in the EUR/USD, USD/JPY and EUR/JPY. Internalization rates for less liquid currency pairs are much lower.

In spite of its relative maturity, the FX market continues to face challenges, both at market and regulatory levels. Currently, the evolution of the market structure is a subject of much discussion, with the key themes being:

- The fairness of the practice of “last look,” whereby a liquidity provider can refuse a deal within a certain time horizon. Last look was created to help liquidity providers manage latency in their systems and to allow time for counterparty credit checking.
- Execution quality. Transaction Cost Analysis (TCA) is available in FX, but the absence of a national best bid-offer (NBBO) as exists in US equity markets makes the process significantly harder.
- The impact of higher capital charges and margin requirements for non-cleared transactions. Although this does not impact the spot FX market, the impact will be felt in the 62% of average daily turnover that is not spot.
- Ensuring any regulation is implemented globally, thus reducing opportunities for “regulatory arbitrage.”

FXPA’s Mission

The Foreign Exchange Professionals Association (FXPA) is a trade body uniquely comprised of a cross-section of FX industry participants. Based in Washington, DC, FXPA’s aim is to engage key US and international regulators, policymakers, the general public and news media, through a combination of education, research and advocacy to advance a sound, liquid, transparent and competitive global currency market.