

Is All FX Trading Created Equal?

by **Cornelius Luca**

Abstract: Trading in foreign exchange (FX) is hardly a new phenomenon. The FX interbank market has served the large institutions for years, and FX futures made their debut 35 years ago. But in recent years, scores of off-exchange retail firms have also appeared, appealing to retail investors with a desire to diversify their portfolios. This paper compares the differences between these markets – costs, leverage, regulatory oversight and financial safeguards – issues that will make investors more knowledgeable financial “consumers.”

By early in the 21st century, currencies came into their own by becoming a widely accepted investment class. Their low correlation with more “traditional” investments has made foreign exchange a good addition to individual investment portfolios.

For investors, this was not always the case. Prior to the breakdown of the Bretton Woods Accord in the early 1970s that allowed currency values to free float after years of being tightly controlled, the foreign currency (FX) business was the sole domain of institutions. However, both the advent of FX futures and the rapid expansion of electronic trading over the last ten years have had a profound effect on breaking down what once was the banks’ “monopoly” on FX trading. Funds, corporations and retail traders now trade as quickly and aggressively as banks do.

Foreign currency trading is hardly a new concept. Its origins can be traced to ancient times when coins became legal tender. Stocks and bonds took several millennia to come into existence, but FX in one tradable form or another is the oldest financial market.

Profitability in FX is legendary. George Soros' Quantum hedge fund remains the textbook example of realized profits in excess of one billion U.S. dollars for a couple of days' work in September 1992. Renowned investor Warren Buffett got the FX bug in 2004 and realized \$1.63 billion in the last quarter of that year by betting against the U.S. dollar.

Because of foreign currencies’ inherent profit potential, limited time exposure and, in some quarters, limited regulation, traders from around the globe now enter positions for weeks, days, hours or only seconds. The FX market can have explosive moves, steady flows, and like all markets, the inevitable flat periods. Money changes hands quickly for a staggering daily average of about \$1.9 trillion and growing. There are no geographic or temporal boundaries any longer. FX is a 24-hour market open to all eligible players.

However, access to FX markets for the general investing public is a bit more confusing. The long-standing interbank market, used by institutions to customize dealings in massive foreign currency holdings, is virtually closed to the typical retail trader wanting access to the FX market.

CME Group* is the largest regulated FX futures market, claiming about 90 percent of FX futures trading volume worldwide. The underlying value for these contracts averages \$80 billion daily. In contrast, the FX interbank market, as well as the off-exchange retail forex trading businesses that have sprung up in recent years, are loosely interconnected marketplaces where different currency instruments are traded. There is no single currency price, but rather a number of different prices depending on what a particular bank, market maker or forex firm is bidding or offering at a given moment.

Over the past five years, CME Group has seen explosive and sustained growth in FX futures and options products, making it the largest source of liquidity for the FX retail trader. It's not surprising, then, that others would want to capitalize on this success. Offerings by a new class of off-exchange forex firms aimed at individual investors have some similarities to FX futures traded at CME Group, but there are substantial differences between the two, as well.

The FX Futures Marketplace: Leveling the Playing Field

Though active exchange-traded futures markets in FX are 35 years old, the modern concept of a market in FX has been around for years. The huge interbank market, of course, constitutes the bulk of institutional FX trading worldwide. But "retail" traders (individual investors), regardless of their financial situation, as well as non-bank businesses that purportedly did not measure up to "international commercial" standards required by the banks, could neither speculate nor hedge FX in the interbank market.

Nobel Laureate Milton Friedman in 1971 attempted to short the British pound, but was refused the right to test his opinion in the interbank market because he "did not have

the necessary commercial interest to deal in foreign exchange."

Compared with agricultural futures products that have been traded for more than 100 years, FX futures are still relatively young, opening for trading at the Chicago Mercantile Exchange (CME)* International Monetary Market Division in 1972. This coincided roughly with the collapse of the Bretton Woods Accord and a series of moves by the exchange to make foreign currency futures available to those who had been left out of the interbank market.

By the mid-1980s, options on futures were added to futures offerings, and by 1984, CME launched options on Deutsche mark futures. Other currency options followed. By 1991, the exchange introduced the first non-dollar-denominated futures and options contracts on Deutsche mark/Japanese yen, British pound/Deutsche mark, and Deutsche mark/Swiss franc cross-rates. No longer did everything need to be traded solely against the U.S. dollar. Today, CME Group offers 41 individual FX futures and 31 options products on 19 currencies (see Appendix A), covering major currency pairs as well as a number of emerging market currencies.

A big boost for FX futures came in June 2000, when CME exchange members voted to transform the not-for-profit, membership-owned organization into a for-profit, shareholder-owned corporation. Since then, FX futures trading has become increasingly global as open outcry floor trading has been reduced to approximately 10 percent in favor of virtually 24-hour-a-day electronic trading from Sunday evening through late Friday afternoon. As a result, more than 90 percent of CME Group FX futures volume is now transacted on the CME Globex electronic trading platform.

Comparing Futures and Off-Exchange FX Markets

There are a number of characteristics that make FX trading particularly attractive to retail traders. Given that an emerging off-exchange retail forex business created on the heels of established FX futures markets has opened more opportunities for FX traders, it is helpful to highlight the distinctions between FX futures and off-exchange retail forex. Depending on a trader's risk appetite and need for security and regulation, these differences may be important in the decision-making process.

Centralized marketplace: FX futures are traded on a centralized futures exchange. Unlike the interbank and off-exchange retail forex markets, the price transparency of futures gives the retail trader the opportunity to trade directly in the live market with buy-side and sell-side traders. A first-in, first-out (FIFO) system of order matching on the CME Globex electronic trading system further levels the FX futures playing field for traders. They have access to the same prices – no matter the order size – as commercial and investment banks, hedge funds, commodity trading advisors, proprietary trading firms and currency overlay managers. Off-exchange retail forex, on the other hand, differs in that dealers and individuals determine price on an individual-deal basis, so no central marketplace exists. The non-transparent nature of the off-exchange forex market means that customers may not really know the bid/ask spread costs built into the FX rate quoted by their dealer.

Credit risk: The presence of a futures clearing house is a particularly important distinction to draw when comparing futures versus off-exchange retail forex. Transactions between two private parties, with no organization to stand between the buyer and seller to assure performance of an agreement, could potentially leave a trader at risk for default of the other party. Futures markets, on the other hand, offer some long-standing credit guarantees.

The futures clearing house also tracks traders' profits and losses daily and makes sure their accounts are credited and debited accurately. If losses bring a trader's futures account down to a certain predetermined level, the brokerage firm makes a margin call, and the trader is required to bring the account value up to the original margin level. This daily mark-to-market system gives FX futures traders an opportunity to take close stock of their money management sooner rather than later and helps them manage their risk. No trading losses are allowed to accumulate from day to day, adding an additional layer of risk protection. A number of off-exchange retail forex dealers do not require maintenance margins. Given the high leverage in this business, an unsuspecting trader's account funds could be quickly depleted without notice.

Regulation: Investor confidence is crucial to the success of financial markets, and one of the best ways to gain that confidence is to ensure that a high level of integrity is demanded of all market participants and intermediaries. U.S. futures markets are regulated by the Commodity Futures Trading Commission (CFTC), and all U.S. futures brokers are registered with the National Futures Association (NFA). Although off-exchange retail forex dealers must be regulated, firms and individuals who are not registered can solicit retail accounts for forex dealers and manage those accounts without being subject to any regulatory requirements. According to the NFA, there are more than 2,000 such firms and individuals. (See Appendix B for more information.)

Leverage: Leverage in the FX futures market is considered an important advantage for sophisticated, self-directed traders. It's important to know, though, that because futures markets are highly leveraged, the effect of price changes is also magnified. Because a futures contract requires only a small percentage – in the current FX futures market, about five percent margin (20:1) – of a contract's value to trade, traders can lose more than the amount of money they have deposited for a futures position. The 20:1

ratio would translate into leverage allowing \$20 dollars at risk for every one dollar traded, so risk management is important.

In the off-exchange retail forex market, a more typical level of leverage would be 50:1, 100:1, 200:1, or higher for smaller accounts. Although this may look appealing at first glance, and trading with that level of leverage may be beneficial for very seasoned traders, the risk for large losses is quite high as compared to the promise of large gains. Being able to leverage a great deal of money with very little margin money in a small account is, however, not a compelling reason to take extraordinary risks for investors.

Your money: In futures, a trader's funds are held in a segregated account. That means that the trader's money is not pooled with anyone else's money, but is independently held. If the trader's broker were to experience any kind of financial difficulty, it would not affect the trader's personal account. Because retail forex transactions are not traded on an exchange, under the U.S. Bankruptcy Code a trader's funds may not receive the same protections as funds used to margin or guarantee exchange-traded futures and options contracts. These receive priority in bankruptcy. Note that even customer funds deposited by a dealer in an FDIC-insured bank account may not be protected if the dealer goes bankrupt.

Comparing the FX Markets		
Exchange-traded FX futures	FX Interbank market	Off-exchange FX retail market
Market participants: Market participants consist of commercial banks, investment banks, hedge funds, proprietary trading firms, financial institutions and retail traders.	By and large, the participants are commercial and investment banks, along with large corporations, individuals or smaller corporations generally have limited participation.	Market participants are retail traders.
Market environment Trading takes place in a centralized market, generally electronic and marginally by "open outcry."	Trading is completely decentralized, being generally executed through dealing systems and on electronic platforms.	Trading is completely decentralized, being generally executed through dealing systems and on electronic platforms.
Customer counterparty risk: CME Clearing is the counterparty to all trades, freeing the trader from counterparty risk. CME Clearing is the seller to every buyer and vice versa. There's complete anonymity, so participants do not know who they are trading with.	The counterparties know their identities, either before the trade (Internet-based platforms and dealing systems) or after the trade (matching systems). There is some counterparty risk, but the Interbank market is liquid, and Interbank dealers know their customers well.	Counterparty risk could be an issue on a firm-by-firm basis. Customer accounts are not protected should a firm have a financial difficulty. There are no clearing house guarantees for customers of off-exchange retail FX firms. Under the U.S. Bankruptcy Code, customer funds may not receive the same protections as funds used to margin or guarantee exchange-traded futures and options contracts, which receive a priority in bankruptcy.
Trading units and leverage: Each FX future contract is a fixed, standardized size. The contract sizes generally are smaller than those in the Interbank market. Margins range from 5-15% of underlying value of contract.	Generally, the trading unit is \$1,000,000 (electronically); any standard or odd amount in any currency may be traded. Appropriate for Interbank market custom deals.	Range in size from very small to larger units. Very high leverage (extremely low capital outlay to control large FX units) is featured as a benefit. -- as much as a 200:1 ratio.

Exchange-traded FX futures	Interbank market	Off-exchange FX retail market
Regulation: Futures exchanges are regulated by the Commodity Futures Trading Commission; brokerage firms are regulated by the National Futures Assn.	Unregulated	Unregulated, although some firms have registered with National Futures Assn.
Fees: All exchange fees are public. Commissions charged by various brokerage firms differ.	Fees vary and are negotiated between the trading parties, and are not publicly disclosed; generally imbedded in the bid/ask spread.	Prior claims that transactions carry no commissions or account fees now are accompanied by wording that indicates that the firm is compensated for its services through bid/ask spread.
Quoting style: Both one-sided and two-way prices are quoted. Prices quoted only in American terms.	Both one-sided and two-way prices are quoted. Prices quoted in both European and American terms, conventions that institutional FX traders are accustomed to.	Both one-sided and two-way prices are quoted. Prices quoted in both European and American terms; retail customers usually don't have a preference.

Clearly, there are differences between the FX markets that will help traders make reasoned choices on a chosen instrument. But let's take just a few basic principles behind futures for those who see them as a possible choice.

Contract size: The size of a contract in the futures market differs among currencies, but the size remains constant. The specific amounts for the major currencies futures contracts are as follows:

Currency	Symbol	Contract Size
Euro	EC	125,000 euros
Swiss franc	SF	125,000 francs
British pound	BP	62,500 pounds
Japanese yen	JY	12,500,000 yen
Canadian dollar	CD	100,000 Canadian dollars
Australian dollar	AD	100,000 Australian dollars
New Zealand dollar	NE	100,000 New Zealand dollars
Brazilian real	BR	100,000 real
Mexican peso	MP	500,000 pesos

Currency	Symbol	Contract Size
Russian ruble	RU	2,500,000 rubles
Chinese renminbi	RMB	1,000,000 renminbi

Price information on foreign currencies futures is at:

<http://www.cme.com/trading/prd/fx/>.

The value of an FX futures contract: Each futures contract has what is known as a “notional value” – or an underlying value. This is the actual dollar value of the underlying product on which the futures contract is based. For example, the notional value of the Euro FX futures contract would be the current cash price of euro FX, multiplied by 125,000, the standard number of euros in one futures contract. If the cash price of euros was 1.2950, the notional value of the contract would be \$161,875. However, to buy or sell a Euro futures contract, the exchange-established margin required would be a little more than \$2,000. A broker may require more.

Minimum price change (also called a “pip” or a “tick”): This is the smallest price movement a futures contract can move up or down.

Most FX futures prices change in increments of one pip, with the exception of several Eastern European currencies, which move in increments of two pips, or the Mexican peso and South African rand futures, which move in increments of 2.5 pips. Every time a currency futures contract moves up or down, it generates a change in profit and loss equal to the value of one pip, which varies by currency:

- EC, SF and JY, one pip is \$12.50.
- For BP, one pip is \$6.25.
- For CD and AD, one pip is \$10.00.

In Appendix C, you’ll see an example of how both up ticks and down ticks in minimum price movement affect profit/loss.

Margins: To trade FX futures, you need to open an account and make a margin deposit with a registered futures broker, and those funds are held at the exchange’s clearing house. Minimum initiation margins are a percentage of a contract’s underlying value, and are determined by the exchange, typically between about five and 15 percent. The amount required for a margin varies according to the volatility of the product being traded – the more volatility, the larger the margin. This ensures that the margin will cover maximum losses that a contract could incur in a single day.

There are two types of margins: *initiation margins* and *variation or maintenance margins*. The *initiation margin*, which a trader covers in cash or with liquid government instruments, such as T-bills, entitles that trader to trade currency futures.

The *variation, or maintenance margin* must fully cover any unrealized loss and must be posted in cash by any trader holding an overnight position with a negative P&L (profit and loss statement). It must be kept on deposit at all times. Margins are applied differently to each currency contract and, within each currency, separately to speculative and hedging contracts.

Also, your brokerage firm determines if it needs to increase margins from exchange minimums, and they often do.

As of July 17, 2007, some of the exchange minimum initiation margins for speculative and hedging accounts were as follows:

	British Pound	Canadian Dollar	Euro Currency	Swiss Franc	Japanese Yen
Speculative	\$1485	\$1148	\$2025	\$1215	\$2430
Hedging	\$1100	\$850	\$1500	\$900	\$1800

Mark to market: Mark to market is an important feature of futures. It's a daily accounting of a trader's profits and losses. If a trader makes money today, the profit will be added to his account before tomorrow morning. If it's a loss, that amount will be deducted from the account before trading begins tomorrow morning. Here's how mark-to-market works, along with the calculations.

The calculation of the profit and loss (P&L) for currency futures is executed as follows:

$$\text{P\&L futures} = (\text{PS} - \text{PB}) \times \text{K} \times \$12.50^*$$

Where:

PS = average selling price

PB = average buying price

K = number of contracts traded

* = for EU, SF and JY

Example:

- You sold 10 Sep EC futures contracts at 13800 and 10 Sep EC futures contracts at 13750.
- You closed your short position by buying back 20 Sep EC futures contracts at 13700.
- Calculate P&L: $(13775 - 13700) \times 20 \times \$12.50 = \$18,750$

At the end of the day, when your account is marked to market, the \$18,750 is credited to your account. If you had a loss, your account would be debited. Of course, there would be commissions and fees deducted, as well.

The Look of Currency Futures

Some currency futures prices look different relative to the spot currency rates published in the newspaper. Currency futures are quoted in U.S. dollars per unit of foreign currency ("American" terms), whereas many spot currency rates quoted in the newspaper are in "European" terms of

foreign currency units per U.S. dollar (the simple "reciprocal" or 1/x of American terms). Exceptions are the euro, British pound, Australian dollar and New Zealand dollar versus the U.S. dollar, which normally are quoted in the American terms of U.S. dollars per foreign currency in both the spot market and currency futures market.

Also, at any point in time up until expiration of the futures contract, there is a price difference between the futures and the cash (or spot) quotes. This difference is determined by a mathematical relationship involving the levels of interest rates in the two countries of each currency pair (e.g., the interest rate for U.S. dollars in the U.S. and the interest rate for British pounds in the U.K.). The differences between the futures and spot currency prices can be either positive or negative depending on the interest rate differentials and are known in the foreign exchange market as "forward points." Forward points, added to or subtracted from the spot currency prices, equal the currency futures or forward outright.

In Appendix D, I offer formulas for calculating the futures price equivalents for currencies normally quoted in European terms. If you're interested in making calculations for yourself, it will be valuable. However, an easier route to making conversions may be CME Group's "E-equivalent" Web-based application that displays real-time electronic futures prices in spot equivalent terms. The application is designed to make FX futures markets more easily accessible to traders who may be accustomed to trading FX spot (www.cme.com/e-equivalent).

Taking a Closer Look

Profitability, technology and portfolio-trading style will continue to expand trading in FX for years to come, and investors have a number of opportunities to participate in these active markets. The key will be to fully understand the pros and cons of each of these markets, the differences in how they work, and the crucial aspect of money management as it relates to all-too-often promised rewards

with little regard to the associated risk. Compared with 25 years ago – or even five years ago -- there are volumes of educational resources that cover both the fundamental and technical aspects of the currency markets. Be aware that some are nothing more than a promotion for the writer or the company he or she represents. Others are practical, if laborious, discussions of obscure details related to FX, some of which will enlighten you. Nonetheless, if you can ferret out the helpful educators from the pretenders, you will be miles ahead of investors who think FX market profits are simply there for the taking with little effort involved.

Futures exchanges like CME Group are a good source of fairly unbiased information. Exchanges cannot really “sell” investors anything, because brokerage firms maintain the direct individual relationship with the customer. They are merely the marketplace on which FX futures and options are traded. Two online programs on FX – “Dynamics of Foreign Exchange,” and a more advanced course entitled “Advanced Trading Strategies for Foreign Exchange Traders” – offer investors a good look at FX futures and their applications.

Some brokerage firms also have information you can use,

but they vary in their ability to be unbiased. The CFTC and NFA also are excellent sources. The NFA, in particular has some information on off-exchange retail forex trading that would be a good primer.

Finally, one plug for FX futures: Anyone who has looked at the increase in FX futures trading volume over the last few years should realize that it’s not merely active or erratic FX markets driving the growth. CME Group’s success confirms the FX market’s appetite for a fully transparent, centrally cleared model to complement the bi-lateral model which has traditionally dominated the FX market. The exchange’s strength in product innovation and ability to put cutting-edge technology in the hands of a global customer base – hedgers and traders – sets it apart from other e-trading venues and other competing platforms.

Author Biography

Cornelius Luca heads research and marketing for the Americas at FX Concepts, a \$12.5-billion investment fund. He has spent his entire career in international finance and since 1983 has been a foreign currency trader in the major currencies. He also has traded all major currency crosses and exotic currencies. An advisor to numerous clients at Fortune 500 companies, Luca has been active primarily in the spot currency market but also has been directly involved in trading foreign currency futures, forwards and options.

Luca is the author of *Technical Analysis Applications* (McGraw-Hill, 2004), *Trading in the Global Currency Markets* (Penguin Books, second edition, 2000), *Technical Analysis Applications in the Global Currency Markets* (Penguin Books, second edition, 2000), and *Introduction to Technical Analysis* (Euromoney, 1997).

Appendices

Appendix A: CME Group FX contracts

<p>FX products traded against the dollar</p> <ul style="list-style-type: none">• Australian Dollar Futures and Options• Brazilian Real Futures and Options• British Pound Futures and Options• Canadian Dollar Futures and Options• Chinese Renminbi Futures and Options• Czech Koruna Futures and Options• Euro FX Futures and Options• E-mini Euro FX Futures• Hungarian Forint Futures and Options• Israeli Shekel Futures and Options• Japanese Yen Futures and Options• E-mini Japanese Yen Futures• Korean Won Futures and Options• Mexican Peso Futures and Options• New Zealand Dollar Futures and Options• Norwegian Krone Futures• Polish Zloty Futures and Options• Russian Ruble Futures and Options• Swedish Krona Futures• South African Rand Futures and Options• Swiss Franc Futures and Options	<p>Cross-rate products</p> <ul style="list-style-type: none">• Australian Dollar/Canadian Dollar Futures• Australian Dollar/Japanese Yen Futures• Australian Dollar/New Zealand Dollar Futures• British Pound/Japanese Yen Futures• British Pound/Swiss Franc Futures• Canadian Dollar/Japanese Yen Futures• Chinese Renminbi/Japanese Yen Futures and Options• Chinese Renminbi/Euro Futures and Options• Euro FX/Australian Dollar Futures• Euro FX/British Pound Futures and Options• Euro FX/Canadian Dollar Futures• Euro FX/Czech Koruna Futures and Options• Euro FX/Hungarian Forint Futures and Options• Euro FX/Japanese Yen Futures and Options• Euro FX/Norwegian Krone Futures• Euro FX/Polish Zloty Futures and Options• Euro FX/Swedish Krona Futures• Euro FX/Swiss Franc Futures and Options• Swiss Franc/Japanese Yen Futures <p>Currency index products</p> <ul style="list-style-type: none">• CME Index Futures and Options
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Appendix B: FX Educational Resources

CME Group resources

- FX Knowledge Center (www.cme.com/tradefx)
- FX products on cmegroup.com (www.cmegroup.com/fx)
- CME Group Web site (www.cmegroup.com)
- CME Group.com Education Center (www.cme.com/education)

National Futures Association resources

- Forex investor alert, February 2007 (http://www.nfa.futures.org/compliance/forexInvestorAlert_020107.asp)
- “An Educational Guide to Trading Futures and Options on Futures”
(<http://www.nfa.futures.org/investor/OppRisk/OppRisk.pdf>)
- “Trading in the Retail Off-Exchange Foreign Currency Market – What Investors Need to Know”
(<http://www.nfa.futures.org/investor/forex/forex.pdf>)

Commodity Futures Trading Commission Resources

- “Beware of Foreign Currency Trading Frauds” (<http://www.cftc.gov/enf/enfforex.htm>)
- Forex Information (<http://www.cftc.gov/enf/enfforex.htm>)

Appendix C: How Minimum Price Movements ("ticks"/"pips") Affect Profits

To demonstrate how a move of one tick affects the price of a CME Euro FX futures contract, let's imagine that you buy a contract at a price of 1.2960. In other words, you are buying Euro FX for \$1.2960 each. One "tick" or "pip" in Euro FX futures equals .0001, which equals \$12.50 for this contract. So, here is how the trade is affected when the contract trades one point higher or lower.

1.2960	Original purchase
+ .0001	Up one tick
<hr/>	
1.2961 =	New price of Euro FX contract trading one point higher; in CME terms, one tick
1.2960	
- .0001	Down one tick
<hr/>	
1.2959 =	New price of Euro FX contract trading one point lower; in CME terms, one tick

Calculating profit and loss

As seen, if you bought one contract at 1.2960 and sold one contract at 1.2961, your profit would be one point (.0001), or \$12.50.

$$1.2961 - 1.2960 = .0001 = 1 \text{ tick profit} = \$12.50$$

What happens if you buy five contracts at 1.2960 and then sell five contracts at 1.2965? You have made a profit. Here's how you determine that profit:

- The difference between the price at which you bought Euro FX and the price at which you sold is five points.
- Multiply those five points by the number of contracts traded – five – that equals 25 points.
- Finally, multiply those 25 points by the tick size -- \$12.50. The profit on that trade would then be \$312.50.

There's another side to that, of course. If you had sold those five contracts first and then bought them back at a higher price, you would realize a \$312.50 loss. So it works both ways.

- Step 1: $1.2965 - 1.2960 = 5 \text{ points}$
- Step 2: $\text{Multiply } 5 \text{ points} \times \text{number of contracts } (5) = 25 \text{ points}$
- Step 3: $\text{Multiply } 25 \text{ points} \times \$12.50/\text{per point} = \$312.50 \text{ profit (or loss)}$

Appendix D: Calculating FX Futures Price Equivalents

To calculate the futures price equivalents for currencies normally quoted in European terms, take the inverse of the outright price of the currency quoted in European terms. The outright price is calculated by adding or subtracting the forward points or “pips” to or from the spot price.

Example: An American terms quotation of the British pound/U.S. dollar currency pair, a move in the quote of US\$2.0514 per British pound to US\$2.0515 – equals an increase of US\$0.0001 per BP, defined as “one point” or “one pip.”

Forward points from spot (cash) typically will be more than one pip, and often several hundred pips for more deferred maturity dates.

Example: A European terms quotation of the U.S. dollar/Swiss franc currency pair, a move in the quote of SF1.1850 per U.S. dollar to SF1.1851 is equal to an increase of SF0.0001 per USD, which is one point or one pip. Similarly, forward points from spot will typically be more than one pip – again, potentially even hundreds of pips to deferred maturity dates. See the illustration that follows:

$$\text{Currency futures price} = 1 / (\text{Spot price in European terms} \pm \text{forward spread})$$

Example: If the spot USD/CHF (“CHF” is another abbreviation for Swiss francs or SFs) price is 1.1900, and the forward points are 0.0050, then the IMM dated USD/CHF forward outright will be:

$$1.1900 - 0.0050 = 1.1850, \text{ in European terms,}$$

and

$$1/1.1850 = .8439, \text{ in American terms}$$

Because futures are forward outright contracts, and the forward prices generally move more slowly than spot prices, the elimination of the forward points or spreads will easily transform the futures contracts into spot contracts. This is needed to compare the two types of contracts and is important to the traders for hedging and arbitrage, which are two uses of currency markets by professional traders.

Forward outright price calculation

The forward outright pips (or spread) is calculated as follows:

$$FP = S * (EFC - E\$) * (t/360)$$

Where

FP = forward outright pips

S = spot price

E\$ = Eurodollar rate

EFC = Euro-currency rate

t = days to delivery

The forward outright price is calculated as:

$$FWD\ PRICE = S \pm FP$$

Example:

USD/CAD spot = 1.0500

Eurodollar 2 month = 5.20%

Eurocanada 2 month = 4.60%

T = 60 days

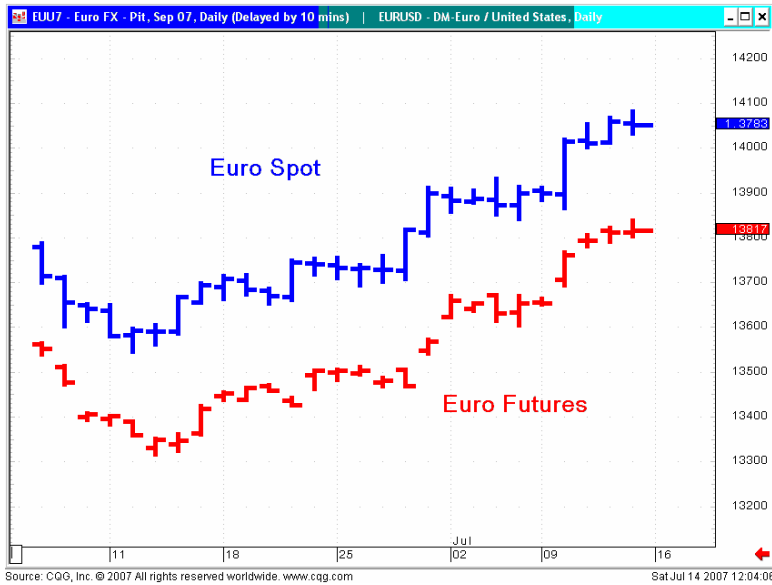
$$FP = 1.05000 \times (0.046 - 0.052) \times (60/360) = -0.00105$$

$$FWD\ price = 1.0500 - 0.00105 = 1.04895 \text{ (in European terms)}$$

The future price, or the forward outright price thus obtained and expressed in American terms, is:

$$1/1.04895 = 0.9533$$

The look of the American-style spot, such as euro FX/dollar, and futures prices is virtually indistinguishable. The two quotations track each other quite closely in their up and down price movements. The following chart illustrates this relationship between euro FX spot and euro FX futures.



The same goes when comparing the look of the futures prices and the inverse of the European style prices, such as the reciprocal of dollar/yen.

