



# **The ICE U.S. Dollar Index<sup>®</sup> and US Dollar Index Futures Contracts**

**FAQ**

**June, 2012**

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### What is the U.S Dollar Index<sup>®</sup> ?

The U.S. Dollar Index (USD<sup>®</sup>X<sup>®</sup>) is a geometrically-averaged calculation of six currencies weighted against the U.S. dollar. The U.S. Dollar Index was created by the U.S. Federal Reserve in 1973. Following the ending of the 1944 Bretton Woods agreement, which had established a system of fixed exchange rates, the U.S. Federal Reserve Bank began the calculation of the U.S. Dollar Index to provide an external bilateral trade-weighted average of the U.S. dollar as it freely floated against global currencies.

### Which currencies are included in the U.S. Dollar Index?

The U.S. Dollar Index contains six component currencies: the euro, Japanese yen, British pound, Canadian dollar, Swedish krona and Swiss franc. Before the creation of the euro, the original USD<sup>®</sup>X<sup>®</sup> contained ten currencies—the ones that are currently included (but not the euro), plus the West German mark, the French franc, the Italian lira, the Dutch guilder, and the Belgium franc. The euro replaced the last five of these currencies.

Before the creation of the euro, which now accounts for 57.6% of the USD<sup>®</sup>X<sup>®</sup>, the weightings of the five historical European currencies were: German mark (DEM), 20.8%; French franc (FRF), 13.1%; Italian lira (ITL), 9.0%; Dutch guilder (NLG), 8.3%; and Belgium franc (BEF), 6.4%.

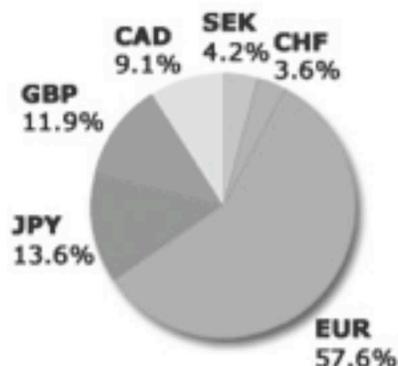
### What are the formula and the percentage weights of the component currencies?

The U.S.DX is calculated with this formula:  $USD<sup>®</sup>X<sup>®</sup> = 50.14348112 \times EURUSD^{-0.576} \times USDJPY^{0.136} \times GBPUSD^{-0.119} \times USDCAD^{0.091} \times USDSEK^{0.042} \times USDCHF^{0.036}$

Note that in the formula, when the U.S. dollar is the base currency, the value is positive; and when the U.S. dollar is the quote currency, the value is negative. The above value is compared against the U.S. dollar relative to March 1973, when the world's major trading nations allowed their currencies to float freely against each other.

Not all the currencies have the same weight. Below are the weightings of each currency, and the image shows weight of each currency graphically.

| Currency              | Weight |
|-----------------------|--------|
| Euro (EUR)            | 0.576  |
| Japanese Yen (JPY)    | 0.136  |
| British Pound (GBP)   | 0.119  |
| Canadian Dollar (CAD) | 0.091  |
| Swedish Krona (SEK)   | 0.042  |
| Swiss France (CHF)    | 0.036  |



**Is the ICE U.S. Dollar Index adjusted or rebalanced?**

There are no regularly scheduled adjustments or rebalancings of the ICE U.S. Dollar Index. The USDX has only been adjusted once, when the euro was introduced as the common currency for the European Union (EU) bloc of countries. Without any other adjustments, the combination of components and their respective weightings in the USDX have yielded performance results similar to other commonly used U.S. dollar indexes, whether those index methodologies are based on trade weights or capital flow weights.

**When did the USDX become available for exchange trading?**

Futures contracts based on the U.S. Dollar Index were listed on November 20, 1985. Options on the futures contracts began trading September 3, 1986. USDX futures and options are available only on the ICE electronic trading platform.

**How is the U.S. Dollar Index calculated?**

The ICE U.S. Dollar Index is calculated by Reuters in real time approximately every 15 seconds from a multi-contributor feed of the spot prices of the Index's component currencies. The price used for the calculation of the Index is the mid-point between the Reuters top of the book bid/offer in the component currencies. This real-time calculation is delivered to the Exchange and redistributed to all data vendors. The prices of the DX futures contracts are set by the market, and reflect interest rate differentials between the respective currencies and the U.S. dollar.

**What is the contract symbol for the U.S. Dollar Index?**

The Exchange symbol for its futures contract is DX, followed by the month and year code.

The ICE U.S. Dollar Index itself, on which the futures are based and which is sometimes referred to as the cash or spot index, is commonly called the USDX. Another popular reference to the "cash" US Dollar Index is DXY (pronounced "Dixie"), taken from the Bloomberg code for the USDX. The Exchange symbol for the value of the underlying Dollar Index is DXYO (without a month or year code, with YO being the generic "cash index" signifier after the index-specific code), although different data providers may use different symbols.

A list of the data vendor symbols for the U.S. Dollar Index is available at <http://data.theice.com/Services/DataDistribution/Vendor/VendorCodes.aspx>

**Given the foreign exchange market is a 24-hour marketplace, can I trade the U.S. Dollar Index futures contracts at any time?**

The DX contracts trade electronically on the ICE electronic trading platform from 8:00 pm through 5:00 pm. ET the next day Monday through Thursday. Trading ends at 5:00 p.m. ET on Friday afternoon. On Sunday evening, trading in DX futures begins at 6:00 p.m. ET; the trading session that begins on Sunday evening ends at 5:00 p.m. ET on Monday evening. The ICE trading platform is available for order entry thirty minutes before the opening of trading.

Exchange rules also allow EFP trades in U.S. Dollar Index futures contracts. If an EFP is executed during electronic trading hours, the deadline for reporting the transaction is thirty minutes after the close of the electronic trading session. If the EFP transaction occurs outside of electronic trading hours, the futures leg of the transaction should be reported by thirty minutes after the close of the next electronic trading session. EFPs can be entered by an ICE Futures

U.S. clearing member directly into the Exchange's trade processing system.

### **What are the contract specifications of the U.S. Dollar Index futures contract?**

The size (value) of the U.S. Dollar Index futures contract is \$1,000 times the index value—e.g., with the Index at 81.450, the value of the contract is \$81,450. Each full Index point is worth \$1000 (1.000=\$1000). The smallest price increment for trading in the U.S. Dollar Index futures contract is .005, which is worth \$5.

The futures contracts are listed for the March (H)/June (M)/September (U)/December (Z) quarterly cycle. The futures contracts settle daily to the volume-weighted average price of all transactions executed in electronic trading in the closing period (2:59 – 3:00 p.m. Eastern time). Even though the minimum tick size for the U.S.DX contracts is .005, the settlement prices for the contracts are expressed in .001 increments. For more information about the smaller settlement increment, please visit

[https://www.theice.com/publicdocs/futures\\_U.S./exchange\\_notices/exnot031810dxSTPR\\_3.pdf](https://www.theice.com/publicdocs/futures_U.S./exchange_notices/exnot031810dxSTPR_3.pdf)

The DX contract is settled quarterly. The quarterly settlement at the expiration of the contract is on the third Wednesday of the contract month. The last day of trading is the two business days prior to the third Wednesday of the contract month, and trading ends at 10:16 am ET on the last trading day. Unlike many index contracts, the U.S. Dollar Index contract is settled by the delivery of its six component currencies (see next question).

Full contract specifications for the U.S. Dollar Index futures contracts are available at:

<https://www.theice.com/productguide/productDetails.action?specId=194>

### **How is the U.S. Dollar Index contract settled at final settlement?**

Unlike many index futures contracts, the U.S. Dollar Index futures contract is a physically delivered contract. The contract settles by physical delivery of the Index's six component currencies in the percentages indicated in the composition of the Index (see above, percentages and weights of component currencies). If a Dollar Index contract is held through final settlement, the holder of a long position is required to deliver the basket of currencies in the Index in the weights specified and in turn receives U.S. dollars; the holder of the short position receives the basket of currencies and pays U.S. dollars.

### **How are the currency amounts to be delivered in a US Dollar Index futures contract final settlement determined?**

The US dollar amount for physical delivery in final settlement is determined by multiplying the settlement price of the US Dollar Index futures contract on the final trading day by \$1,000.

The delivery amount for final settlement for each of the currencies that compose the US Dollar Index first is calculated by multiplying the US Dollar Index weights by the US dollar delivery amount.

- If the price of the component currency futures contract is quoted in European terms, the delivery amount is calculated by **multiplying** the US dollar delivery amount by the final settlement price of the ICE Futures US currency futures contract based on the component currency. The only DX component currency futures contract quoted in European terms is the Swedish krona/US dollar contract (Exchange symbol KX).
- If the price of the component currency futures is quoted in American terms, the

delivery amount of the currency is calculated by **dividing** the US dollar delivery amount by the final settlement price of the ICE Futures US currency futures contract that is a component of the US DX. The US dollar/euro futures contract (KEO), the US dollar/Japanese yen futures contract (KSN), the US dollar/British pound futures contract (MP), US dollar/Canadian dollar futures contract (KSV), and the US dollar/Swiss franc futures contract (KMF) are quoted in American terms.

### Can you provide an example of the calculation of the final settlement of the US Dollar Index with physical delivery of the component currencies?

Let's use an example from the June 2012 US Dollar Index final settlement.

The date for the physical delivery of currencies for the final settlement of ICE Dollar Index futures contracts in the June 2012 expiration cycle was Wednesday, June 20, 2012. The final trading day for the June DX futures contract was the previous Monday, June 18. The final settlement price for the June DX futures contract on June 18 was 81.854

Any holder of a short June USDX futures position remaining in that position through the final settlement was required to pay \$81,854 in US dollars to the holder of a long June DX futures contract to satisfy the delivery obligation of the short futures contract.

In turn, at final settlement, the holder of an open long position in June USDX futures was required to deliver the foreign currency components of the US Dollar Index to the holder of the short position. The calculation of the amount of each currency is illustrated below.

The futures contracts that represent the currency components of the US Dollar Index settled at the following prices for final settlement:

|                           |                    |
|---------------------------|--------------------|
| USD/euro (KEO)            | 1.2597             |
| USD/Japanese yen (KSN)    | 0.012678           |
| USD/British pound (MP)    | 1.5667             |
| USD/Canadian dollar (KSV) | 0.975 <sup>1</sup> |
| Swedish krona/USD (KX)    | 7.019              |
| USD/Swiss franc (KMF)     | 1.0488             |

#### Calculation for currency delivery amounts for a currency quoted in American terms.

Let's use the USD/euro in this example of the way the calculation for the currency amount to be delivered is done for currencies quoted in American terms.

First calculate the dollar value of the euros to be delivered by multiplying the weight of the euro in the USDX (.576) by the final US dollar settlement amount for the June USDX contract (\$81,854). This means that \$47,147.90 worth of euros needs to be delivered by long June USDX position to the holder of the short June US Dollar Index position. To determine the euro amount to be delivered, the USD value of the euro position is **divided** by the settlement value for the June USD/euro futures contract (KEO), or  $\$47,147.90 \div 1.2597$ , or €37,427.88. So, in sum, the euro amount =  $(\$81,854 \times .576) \div 1.2597$ .

<sup>1</sup> The last trading day for June 2012 USD/Canadian dollar futures was Tuesday, June 19, not Monday, June 18, because the spot settlement for the USD/Canadian dollar currency pair takes only one day instead of the two days for the other USDX component currencies. For purposes of the physical settlement of the US Dollar Index futures contract, the calculation for the final settlement for the US Dollar Index futures contracts used the cash market price for USD/Canadian dollar taken at 10:16 AM ET on Monday, June 18.

The calculation for the delivery amounts of the other USDX component currencies quoted in American terms follows the same procedure.

Calculation of currency delivery amounts for a currency quoted in European terms.

The Swedish krona futures contract (KX) is the only one of the component currencies to be quoted in European terms, so the calculation of its delivery amount is slightly different. First calculate the dollar value of the Swedish krona to be delivered by multiplying the weight of the krona in the USDX (.0420) by the final US dollar settlement amount for the June USDX contract (\$81,854). This means that \$ 3,437.87 worth of Swedish krona needs to be delivered to the holder of the short June USDX position. To determine the Swedish krona amount to be delivered by long to the short, the USD value of the position is **multiplied** by the settlement value for the June Swedish krona/USD futures contract (KX), or  $\$3,437.87 \times 7.019$ , for a total of 24,130.41 krona to be delivered. So, in sum, the Swedish krona amount =  $(\$81,854 \times .0420) \times 7.019$ .

**Are the DX contracts liquid?**

The DX futures contract derives its liquidity directly from the over-the-counter forex market, estimated to have turnover of over \$2.8 trillion daily in the 2011 survey from the Bank for International Settlements (BIS). A market maker program has been established to support the electronic trading of the DX contracts, which helps to assure continuous liquidity. The wide distribution of the ICE electronic trading platform also helps to enhance liquidity.

**Can I trade calendar spreads? Are there implied prices?**

ICE Futures U.S. lists all combinations of the first four quarterly contracts of U.S. Dollar Index futures as calendar spreads. There are no implied prices for DX futures contracts.

**Are block trades allowed in the U.S. Dollar Index contracts?**

Yes, block trades are allowed in both U.S. Dollar Index futures and options. The minimum quantity requirement for a block trade for futures is 75 contracts and the minimum block quantity for options is 25 contracts. Spreads may also be executed as blocks; in the case of a spread transaction, each of the legs must meet the minimum quantity requirement. More information about block trades is available at

[https://www.theice.com/publicdocs/futures\\_U.S./exchange\\_notices/Block\\_Trade\\_FAQ.pdf](https://www.theice.com/publicdocs/futures_U.S./exchange_notices/Block_Trade_FAQ.pdf)

**TAS trading is available in many ICE commodities markets. Can I do a TAS trade in U.S. Dollar Index contracts?**

ICE supports Trade At Settlement (TAS) trading for DX futures contracts on the ICE electronic trading platform. TAS capability allows a trader to enter an order to buy or sell an eligible futures contract month during the course of the trading day at a price equal to the settlement price for that contract month, or at a price that is up to five minimum price fluctuations above or below the settlement price. In the case of DX futures, while the minimum price fluctuation is .005 index points, or \$5, settlement prices are expressed in .001 index points. The clearing price for Dollar Index TAS trades is calculated to the smaller increment; for example, a TAS trade price of +0.005 index points and a daily settlement price of 80.251 would generate a clearing price for the trade of 80.256. Additional information on TAS trades can be found at

[https://www.theice.com/publicdocs/futures\\_U.S./TAS\\_FAQ.pdf](https://www.theice.com/publicdocs/futures_U.S./TAS_FAQ.pdf)

TAS orders for DX futures may be entered from the start of the pre-open period, which begins

30 minutes before the DX futures begin trading, through the end of the futures contract settlement window each day. The end of the settlement window for DX futures is normally 3:00 p.m. ET each trading day, with the exception of the last trading day, holiday hours or other special circumstances. TAS trading is supported for the front three listed contract months at all times. TAS spread trading also is supported for two spread pairs at all times: the first listed month vs. the second listed month, and the second listed month vs. the third listed month.

### **Where can I get real time prices for the ICE U.S. Dollar Index?**

Real-time prices for the underlying cash U.S. Dollar Index and for the first two futures contract months are available at no charge on the ICE website at <https://www.theice.com/realtime/ICEUSPricesRealTime.action>. A one-time registration is required to access the real-time prices.

The real-time prices for the underlying cash U.S. Dollar Index and for futures contracts based on the U.S. Dollar Index are also available from market data vendors (<http://data.theice.com/Services/DataDistribution/Vendor/VendorCodes.aspx>), from conformed independent software vendors ([https://www.theice.com/publicdocs/technology/Independent\\_Software\\_Vendors\\_Conformance.pdf](https://www.theice.com/publicdocs/technology/Independent_Software_Vendors_Conformance.pdf)), on direct access user systems, and on WebICE<sup>sm</sup>.

### **Where can I find margin information for the DX futures contract? Are there margin offsets against other ICE Futures U.S. currency futures contracts?**

Margin levels are subject to change. The contract is cleared by ICE Clear U.S. (prior to June 1, 2007, known as the New York Clearing Corporation). You can check the most current margin requirements by visiting [https://www.theice.com/publicdocs/futures\\_U.S.\\_reports/all/Futures\\_U.S.\\_Margin\\_Requirements.pdf](https://www.theice.com/publicdocs/futures_U.S._reports/all/Futures_U.S._Margin_Requirements.pdf).

Margin credit is available for spread positions between the U.S. Dollar Index and the Euro currency contracts traded on ICE Futures U.S. Please see [https://www.theice.com/publicdocs/futures\\_U.S.\\_reports/all/Futures\\_U.S.\\_Margin\\_Requirements.pdf](https://www.theice.com/publicdocs/futures_U.S._reports/all/Futures_U.S._Margin_Requirements.pdf) for further information on the credit for this intra-market spread.

### **What regulatory body has oversight responsibility for trading in the U.S. Dollar Index contract?**

ICE Futures U.S. is a designated contract market (DCM), as defined by the U.S. Commodity Exchange Act. ICE Futures U.S. and its contracts are regulated by the U.S. Commodity Futures Trading Commission (CFTC).

### **What are the exchange fees for trading U.S. Dollar Index futures contracts?**

The fee for screen transactions is \$1.35 per contract per side for non-members. Please visit the ICE website ([https://www.theice.com/publicdocs/futures\\_us/Exchange\\_and\\_Clearing\\_Fees.pdf](https://www.theice.com/publicdocs/futures_us/Exchange_and_Clearing_Fees.pdf)) for transaction fees for other categories of market participants. There is no additional charge for EFPs or block trades.

### **Who can provide further information?**

Your usual ICE account manager can provide additional information and assistance in accessing electronic trading in the U.S. DX futures contract on the ICE platform. You may also

contact Ray McKenzie, Vice-President, ICE Futures U.S., at [ray.mckenzie@theice.com](mailto:ray.mckenzie@theice.com) if you have further questions.

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