

# UNDERSTANDING DXJ FROM A CAPITAL MARKETS PERSPECTIVE

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Over the past six months, the [WisdomTree Japan Hedged Equity Fund \(DXJ\)](#) has gone from a strategy that was receiving very little attention, to the fastest growing exchange-traded-fund (ETF), in terms of inflows YTD<sup>1</sup>. Many international equity ETFs provide local equity exposure *and* currency exposure to investors. DXJ is different: We strive to give investors access to the Japanese equities market while neutralizing the effect of the currency on the total return. Let's break down how we manage the yen hedge and how investors should think about the values being presented to them on a daily basis. **Fund Mechanics:** In the DXJ portfolio, we seek to neutralize the currency exposure of investing in Japanese equities. At the end of every month, the Fund portfolio manager enters into [non-deliverable forward contracts](#) to [hedge](#) the yen exposure in the portfolio. We enter into contracts that approximately equal the market value of the equities in the portfolio. Throughout the month, the yen moves up and down and the equities move up and down based on the Japanese equity and currency market. They will normally move independently of one another. When a creation of new shares occurs mid month, we take in more equities and we enter into new forward contracts to match the [notional](#) for the new creation of shares. At the end of the month, we roll all the forwards<sup>2</sup>, entering into new 30-day forward contracts to bring the currency hedge back in line with the notional amount of equities in the Fund. **ETF Valuation Metrics:** When looking at ETFs with international underlying securities, it is also important to understand what goes into each value you are observing. Are the underlying markets opened or closed at the time the ETF is trading? In DXJ's case, during U.S. trading hours, the Japanese equity market is closed. The different values published can help with your overall understanding of how the ETF trades and is priced on the [secondary market](#). **Net Asset Value (NAV):** For ETFs with international underlying securities, the NAV can sometimes seem far from where the Fund is trading in the market during U.S. trading hours. NAV depends on three factors: 1) when the NAV is struck, 2) how the NAV is struck (what components go into the NAV), and 3) when the NAV is officially published. For DXJ—the NAV is comprised of the price close of the Japanese stocks at 2:00 a.m. EST plus the profit or loss of the non-deliverable forward contracts in the portfolio taken from a [currency snap](#) at 11 a.m. EST. At the end of the U.S. trading day, there is an NAV published for DXJ based on those numbers. The U.S. stock market closes at 4 p.m. EST. The Japanese market closes at 2 a.m. EST. The DXJ NAV is struck off securities that closed in Japan 14 hours earlier. As you can see, there is a long period from 2 a.m. EST (plus 11 a.m. EST yen "snap") until 4 p.m. EST when U.S. stock markets and DXJ officially close. This NAV does not take into consideration anything happening during the U.S. trading day. This is similar for many international ETFs. By understanding what goes into the NAV, differences between the market price and the NAV can be more easily understood. **IV or IOPV:** The [indicative value \(IV\)](#), also known as [indicative optimized portfolio value \(IOPV\)](#), is a number that is published every 15 seconds during U.S. trading hours. This number is published on Google Finance, Yahoo Finance and other easily accessible financial news websites. The IV takes into account the last closing prices of the Japanese securities (2 a.m. EST) in the [creation unit](#) and also incorporates a real-time calculation of the currency—in this case, the Japanese yen. Remember, the Japanese market closes at 2 a.m. EST, and the currency market trades 24 hours a day. DXJ has forward contracts in the portfolio to hedge the currency exposure. This affects the indicative value, because as the yen moves, the forward contracts are pricing in the yen movement, which is reflected in the indicative value. As the yen moves, the profits and losses of the forward contracts are working to help offset that yen movement. The IV can also sometimes be away from the market price because the underlying stocks are closed. The indicative value typically starts publishing an hour before the U.S. stock market opens. **Fair Value:** [Fair value](#) is a number calculated by many market participants. It is not published by major data/news outlets. Fair value is the value that [market makers](#) typically use to create a "real-time" value for the ETF. In DXJ, a market maker would typically take the closing prices of the equities in Japan, factor in the movement in the yen (which trades 24 hours a day) and then incorporate some [beta](#) to the U.S. market. For instance, if the [S&P 500](#) is up plus or minus some factors, then Japanese stocks within DXJ will potentially

open up x +/- some factors the following day. Fair values are subjective and variable. Every market maker may have a different "fair value" estimate for DXJ. Market makers will typically provide liquidity to clients somewhere around their "fair value" estimate. **Bid/Offer:** The [bid/offer spread](#) is essentially the difference between what a buyer is willing to pay (bid) for the security vs. where a seller is willing to sell (offer). The bid/offer in ETFs is typically based around where the market makers feel "fair value" is for the ETF. The published IV and the bid/offer displayed on the screen<sup>3</sup> may sometimes seem distant from each other. That is because (as mentioned above) the market makers are incorporating market movements and market sentiments into their pricing. For example, if the S&P 500 is up 30 points at 10 a.m. EST, the DXJ bid/offer will likely be much higher than the published indicative value, because the indicative value does not take into account what is occurring in the marketplace and where market makers believe the Japanese stock market may open the next day. **Last Price:** Last price is simply the last price the security traded on the exchange. The last price is *not* what the ETF is currently worth. In addition, it is not indicative of where you can buy or sell the ETF in the future. It is the last price the security traded. In a fund such as DXJ, the last price is usually very recent, but in an ETF that trades infrequently, the last price could be several minutes or hours old. When evaluating ETFs with international underlying holdings, investors need to understand everything that goes into the values they are observing. Having the proper perspective on exactly how these values are derived is critical to understanding the bigger picture of how a fund acts on the secondary market. Make sure you take all the values presented to you, organize them and use them to your advantage to make the best decision about how you view an ETF during the U.S. trading day. <sup>1</sup>Source: Bloomberg, as of 6/1/2013. <sup>2</sup>Rolling the forward contracts means exiting the old contracts and entering into new contracts. <sup>3</sup>Displayed on the screen means the electronic bid/offer that an investors would see if they pulled up the quote on a brokerage website.

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## **DEFINITIONS**

**Non-deliverable forward currency contract** : An agreement to buy or sell a specific currency at a future date at an agreed-upon rate that is settled in U.S. dollars.

**Hedge** : Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

**Notional** : The dollar value of the derivative contract.

**Secondary market** : A market where investors purchase or sell securities or assets from or to other investors, rather than from issuing companies themselves—exchanges such as the New York Stock Exchange and the NASDAQ—are secondary markets.

**Currency snap** : A “snapshot” of the currency at a moment in time.

**Indicative Value (IV)** : The indicative value (IV) is the value that ETF issuers provide to offer a more real-time indication of the value of each ETF portfolio. It is also sometimes known as the indicative optimized portfolio value (IOPV) or intraday indicative value (IIV).

**Creation Unit (CU)** : A specified number of shares issued by an exchange-traded fund (ETF) in large blocks, generally between 25,000 and 200,000 shares. The authorized participants that buy creation units either keep the ETF shares that make up the creation unit or sell all or part of them on a stock exchange.

**Fair value** : Also known as “eNAV.” It is essentially an indicative value (IV) that is made in real time by calculating the basket value on every underlying tick and by adjustments that account for updated market news.

**Market maker** : Someone who quotes a buy and a sell price in a financial instrument.

**Beta** : A measure of the volatility of a security or a portfolio in comparison to a benchmark. In general, a beta less than 1 indicates that the investment is less volatile than the benchmark, while a beta more than 1 indicates that the investment is more volatile than the benchmark.

**S&P 500 Index** : Market capitalization-weighted benchmark of 500 stocks selected by the Standard and Poor’s Index Committee designed to represent the performance of the leading industries in the United States economy.