White Paper

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Currency Investing:

Mutual Funds, ETFs & ETNs

MERK FUNDS™
The Authority on Currencies™

2012 has shown that the landscape for currency investment vehicles has considerably changed. While growth in the previous years was largely driven by currency ETFs and ETNs, the market proved to be challenging for these vehicles. Assets in currency ETFs and ETNs have decreased by almost 40% in 2012, yet actively managed mutual funds experienced a growth of more than 14%.

Increased Focus on Currency Asset Class

Low correlations to traditional asset classes, inherent market inefficiencies and potential profit opportunities, relatively low volatility and high levels of liquidity may explain the increase in investor demand for currency exposure.[1] Global currency market turnover has risen substantially, from $3.3 trillion in average daily turnover in April 2007 to $4.0 trillion in 2010. This increase has been largely driven by increased trading activity in a category of investors including hedge funds, pension funds, mutual funds and insurance companies, where turnover rose by 42% during this same time period.[2]

The absolute number of listed currency investment vehicles available, along with the total size of assets managed, has grown significantly over recent years. This has occurred amid a global financial crisis and subsequent crash in the value of many financial assets. The financial crisis which began in 2008 may have acted as a catalyst in increasing demand for currency exposure: many investors came to the harsh realization that their portfolios were not adequately diversified to protect against downside risks. Indeed, finding uncorrelated asset classes has proven increasingly difficult: most asset classes moved up in tandem approaching the credit crisis; most asset classes moved down together as the credit crisis took hold; and most asset classes continue to move in lock-step today. In an environment with increased correlations across many asset classes, portfolio diversification is of the utmost importance. The currency asset class may help meet this objective. There are three types of listed currency investment vehicles commonly available to investors: currency mutual funds, currency exchange traded funds (ETFs) and currency exchange traded notes (ETNs).

As a result of the increased investment demand, many new currency mutual funds, currency ETFs and currency ETNs have been launched over the past few years. Investors now have greater options available for currency investing, a trend that is likely to continue as the currency asset class becomes an evermore-established component of investors portfolios. Currency mutual funds, ETFs and ETNs all share similarities, and each vehicle also displays unique characteristics and distinct risk and return profiles. Investors should be cognizant of these differences when considering a currency investment.

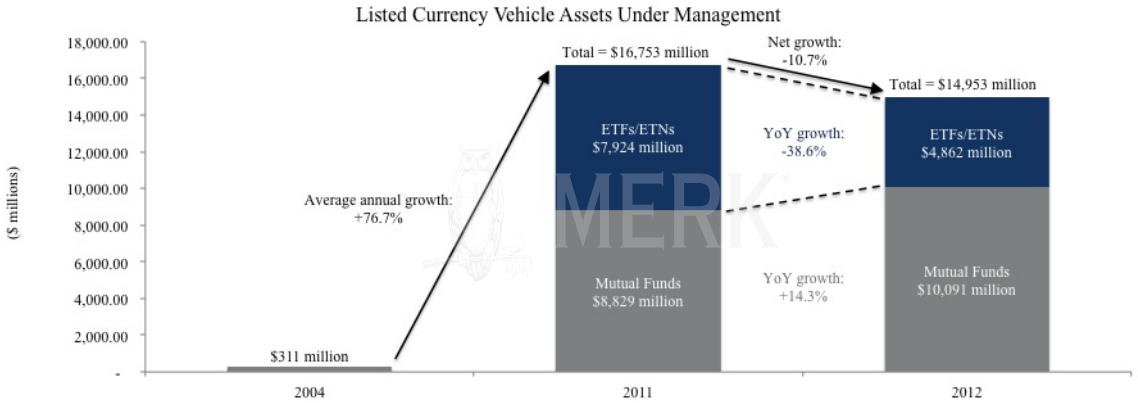
Growth of Listed Currency Investment Vehicles

Aggregate assets under management for listed currency investment vehicles grew at an annualized pace exceeding 62% between December 2004 and December 2012[3]. As of December 31, 2004, total assets managed in listed currency investment vehicles totaled $311 million; in contrast, aggregate assets managed as of December 31, 2012 stood at $15.0 billion.

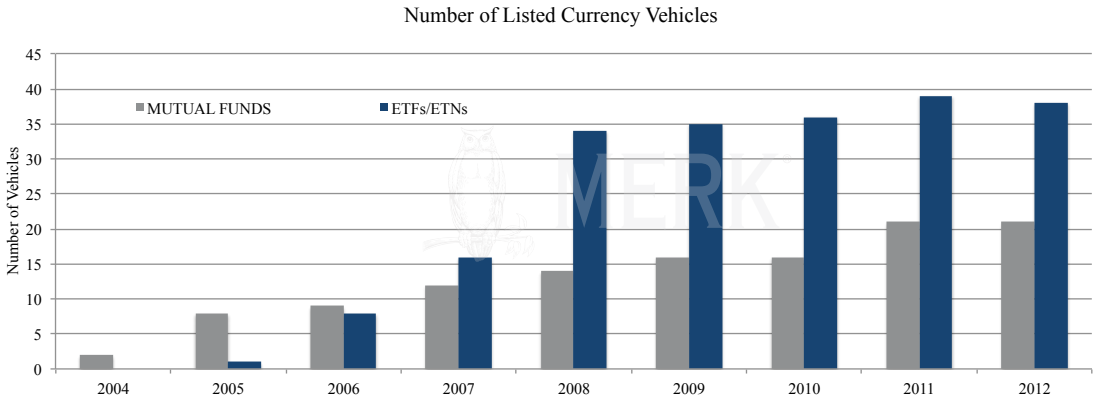
As of December 31, 2004, only two currency mutual funds were available for investment. The first currency ETF was launched in 2005 and the first ETN was launched in 2007. Until the end of the year 2011, the number of

1 For a detailed description of the unique attributes displayed by the currency asset class, please see our White Papers titled "Portfolio Benefits of The Currency Asset Class" and "The Currency Asset Class: A New Era of Investment Opportunity"
2 Bank For International Settlements (BIS) Triennial Central Bank Survey, April 2010
3 Data source: Bloomberg, Morningstar. Calculation based on total assets under management as of 12/31/04 and 12/31/12.

currency investment vehicles expanded rapidly but experienced overall negative growth for the first time in 2012. A total of four ETFs and one mutual fund were delisted in 2012, with an additional mutual fund liquidation in the first quarter of 2013. Assets under management in ETFs and ETNs decreased by $3.1 billion in 2012, while mutual funds assets continued to grow by $1.3 billion last year. As of December 31, 2012, there were a combined total of 59 listed currency investment vehicles (21 currency mutual funds; 25 currency ETFs; 13 currency ETNs).



Source: Bloomberg, Merk Investments



Source: Bloomberg, Morningstar, Merk Investments

Currency Mutual Funds

Mutual funds are open-end funds, regulated primarily under the Investment Company Act of 1940.[1] The specific objectives of any currency mutual fund will differ from one fund to another, and will be outlined in its prospectus. However, its investment approach can generally be classified as one of two types: directional or non-directional. Directional approaches generally take a specified position in a managed basket of currencies relative to one currency, typically either long or short vs. the U.S. dollar. In contrast, a non-directional strategy has no pre-determined view on any one currency; non-directional strategies may take long or short positions in a variety of currencies.

Currency mutual funds typically invest in wide baskets of currencies and typically do not track a predefined index. Therefore the portfolio rebalancing and management of currency exposures tends to be driven by the portfolio manager of the mutual fund, who invests according to the investment objectives outlined in the prospectus. Spe-

1 The full text of the Investment Company Act of 1940 can be found on the SEC's website. Please see: http://www.sec.gov/about/laws/ica40.pdf

cific holdings are required to be reported semi-annually, though many report more frequently. Investors typically do not purchase mutual fund shares in the secondary market. Rather, shares are purchased from the fund itself or via a broker. The price investors pay for a share is the NAV per share plus any commissions if applicable. The NAV for a mutual fund is typically calculated at the close of the trading day, therefore the price an investor pays for a share will be determined at the close of the trading day in which the investor places their order. As such, a mutual fund generally does not trade at a premium or discount to its NAV, nor does it typically trade continuously throughout the trading day.

Currency ETFs and ETNs

The objective of most ETFs or ETNs, currency or not, is to reliably track an underlying index, less any expense ratio. This is not the case for actively managed ETFs; as of December 31, 2012, there were no actively managed currency ETFs.[2] Generally speaking, a currency ETF or ETN will have a defined index before it is launched. This index, its structure and rebalancing, if any, will be outlined in the prospectus. An ETF is an open-ended investment company or unit investment trust that is registered under the Investment Company Act of 1940. An ETF allows investors to buy and sell shares that represent a fractional ownership of a portfolio of securities. This portfolio of securities typically tracks, as closely as possible, an underlying index, such that the investment return produced reflects, as closely as possible, the investment return that would be produced by investing directly in the underlying index.

As opposed to an ETF, an ETN is not a fund, nor registered under the Investment Company Act of 1940. Rather, an ETN is a debt instrument. This is an often overlooked, yet critical aspect of an ETN. Notably, there is counterparty risk with ETNs; investors should understand that while the objective of an ETN is to provide returns that track some definable benchmark or index, ultimately the financial health of the issuer may have a marked effect on whether coupons, or even the principle of an ETN, will actually be paid. Essentially, an ETN is another way that a financial organization can access debt financing. For these organizations, an ETN is treated the same way as any other issued debt instrument: it is a liability for the issuer. From an investor's standpoint, buying an ETN is essentially the same as purchasing a bond of that financial organization; an ETN could be considered a special case floating rate note, with the coupons, if any, and principal typically linked to an underlying index or benchmark, less any fees. As such, investors may want to consider assessing the financial health of any ETN issuer before investing.

A key similarity between currency ETFs and ETNs is that both are typically designed to track a defined index or benchmark. Generally speaking, the simpler the index, the easier it is for any ETF or ETN manager to track it. In this respect, many currency ETFs and ETNs tend to take a simple directional approach to currency investing. A simpler index also makes it easier to communicate to investors the objective of the investment vehicle, and may give investors a greater level of clarity surrounding what they should expect in terms of a risk-return profile. For currencies, the simplest index is often to track the value of one currency, as measured in U.S. dollars. As such, many single currency ETFs and ETNs have been launched in recent years – from the Australian dollar to the euro to the Japanese yen. As of December 31, 2012, 30 of the 38 listed currency ETFs and ETNs were aimed at tracking a single currency.[3] In addition, leveraged currency ETFs and ETNs have also been launched. The aim of a leveraged ETF or ETN is to replicate some multiple of the underlying index, such as 200% (2x). As of December 31, 2012 there were six leveraged ETFs and four leveraged ETNs.

2 In February, 2013 an actively managed currency ETF was launched by PIMCO (not included in this analysis).
3 Effective April 30, 2013 Morningstar will distinguish currency mutual funds in their category classification system as "Multicurrency" and "Single Currency".

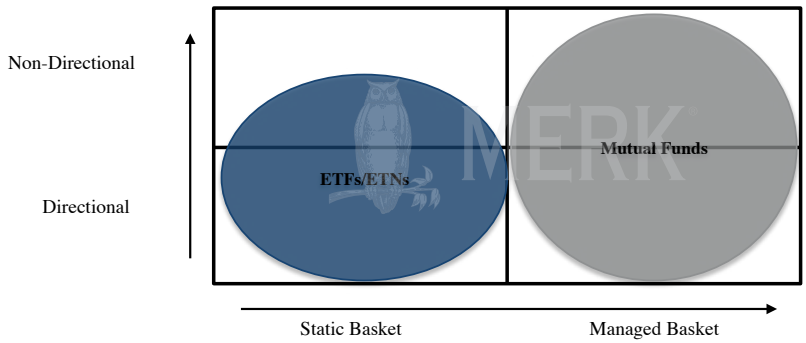
Both ETFs and ETNs are listed on an exchange and can be bought and sold throughout the trading day. This allows investors to take advantage of very short movements in price; indeed, some investors may trade an ETF or ETN multiple times a day. There may, at times, be a mismatch between supply and demand for the securities, which may cause the price of each vehicle to deviate from the net asset value (NAV) of the underlying portfolio of securities (in the case of an ETF) or the asset value underlying the debt obligation (in the case of an ETN). In fact, some investors trade on this unique attribute alone; devising trading rules based upon whether an ETF or ETN is trading at a premium or discount.

Which Investment Vehicle?

There are numerous factors that may ultimately impact a currency investment decision. Investors may want to consider the following issues when assessing the various listed currency investment vehicles.

Investment Comparison

Generally speaking, currency investment vehicles can be classified as either static baskets or managed baskets, and directional or non-directional in investment approach. Static baskets refer to set positions in a defined basket of currencies, or a basket which is predetermined by some set formula (in many cases the basket is a single currency), whereas a managed basket vehicle refers to an actively managed basket of currencies, oftentimes having no predetermined allocation. Typically, currency ETFs and ETNs tend to be static baskets, with many vehicles following a directional investment approach. On the other hand, mutual funds tend to follow a managed basket investment approach, and may be both directional and non-directional. These dynamics are visually depicted in the chart below:



Investment Style

In many ways, the decision of whether to invest in a currency ETF or ETN, or a currency mutual fund, parallels the decision of whether to invest in an individual equity or an equity mutual fund. In general, when investing in an ETF or ETN, one must first understand the underlying index, and then formulate an opinion on that index. In many instances the underlying index is a single currency, so investors must ask themselves whether or not they believe that particular currency will appreciate or depreciate, and over what timeframe. This is similar to how an investor might assess the future price direction of an individual stock. It logically follows that many currency ETFs and ETNs are better suited for short-term, tactical investors who have strong convictions on one currency or another, or a small basket of currencies, over a specified time frame. Oftentimes the holding period may be quite small, sometimes intra-day, so the ability to trade ETFs and ETNs multiple times a day may be advantageous for such investors. Unlike currency mutual funds, ETFs and ETNs specifically aim to track a particular currency or

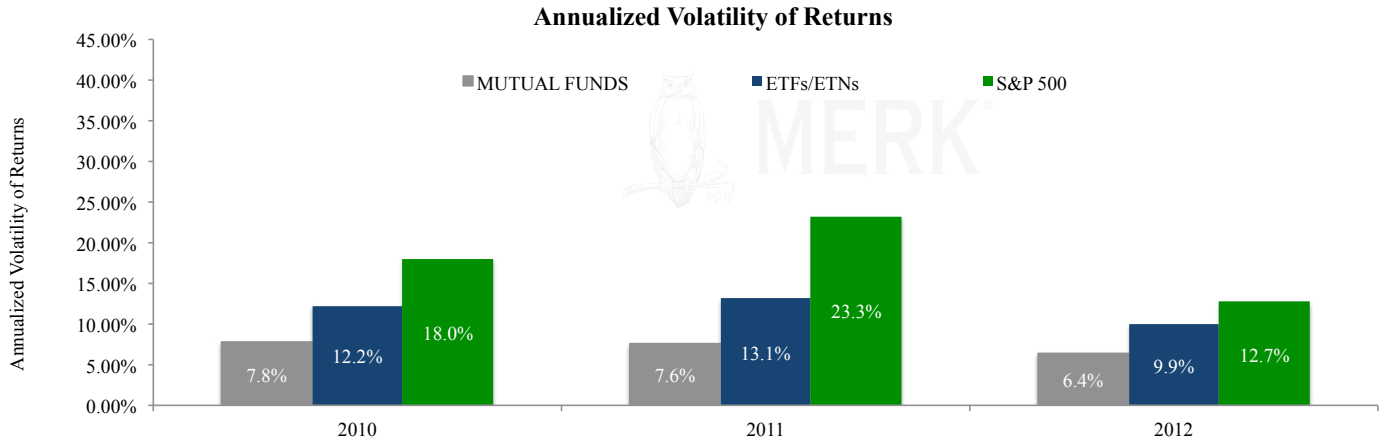
a basket of currencies intra-day with a minimum tracking error, whereas mutual funds typically have investment objectives that seek longer-term exposure of currency risk through active management.

On the other hand, because mutual funds typically invest in an actively managed basket of currencies, often take long and short positions, and do not typically track a pre-determined index, mutual funds may not lend themselves as well to short-term, high-turnover investors. Rather, the mutual fund's portfolio managers typically rebalance and update portfolio allocations based on specialized investment processes and perceived implications of market dynamics. Moreover, because currency mutual funds are generally priced only once per day, they do not lend themselves to very short term trading strategies (day trading currency mutual funds, for example, is not possible). As such, mutual funds may be more suited to an investor who is seeking the diversification aspects of the currency asset class over the medium to long-term, and who personally does not wish to speculate on the short-term price movements of specific currencies.

Another consideration is the flexibility the different vehicles have with respect to trading currencies. Currencies can be traded 24 hours every business day, yet ETFs and ETNs typically rebalance during U.S. trading hours. Currency mutual funds are often able to trade while the U.S. markets are closed. This can be beneficial should significant news flow occur overnight, and with regards to some of the less liquid currencies available, which may exhibit higher levels of liquidity at times when the U.S. markets are closed (for example, select Asian currencies are often more liquid during Asian trading hours).

Volatility

Because the value of currency ETFs and ETNs are typically tied to a one-way directional view on one currency, or a small basket of currencies, whereas mutual funds typically invest in a larger basket of currencies, the return series generated by ETFs and ETNs have historically often been more volatile than those exhibited by currency mutual funds. Importantly, currency mutual funds have the ability to adjust currency allocations in such a way that minimizes expected volatility of returns. In fact, many currency mutual funds specifically employ such a strategy in the overall allocation process. The following chart depicts annualized volatility of returns for unleveraged currency mutual funds and ETFs/ETNs for calendar years 2010, 2011 and 2012. For comparison purposes, we have also included the annualized volatility exhibited by the S&P 500 index. Note that leveraged vehicles have been excluded from the below comparison.

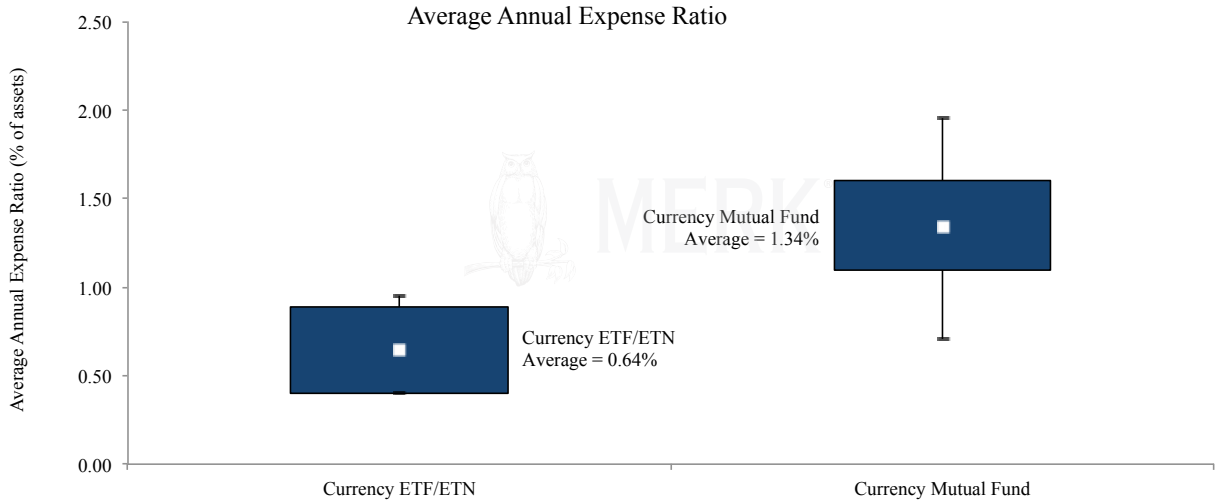


Source: Bloomberg, Merk Investments
Calculations based upon average volatility of unleveraged listed currency vehicles for which data is available.

It is also possible that a currency ETF does not track its underlying index, commonly referred to as "tracking error". This can be caused when the manager is unable to invest in securities such that the NAV of the fund does not reliably track the underlying index. Currency mutual funds, because they generally do not track a pre-defined index, are not subject to "tracking error" in this respect.

Expenses

As outlined above, currency ETFs and ETNs tend to follow simpler, more easily communicated investment approaches relative to mutual funds. As such, currency ETFs and ETNs tend to have lower fee structures. As of December 31, 2012 many currency ETF and ETN expense ratios were approximately 0.6%, whereas the average fee charged by currency mutual funds was approximately 1.3%. Some currency mutual funds have front-end and/or back-end sales loads in addition to a management fee, although no-load funds are also available. These additional fees and higher expense ratios are generally representative of the active management approach employed by many mutual funds, which often requires a higher level of process specialization and resources. Leveraged funds tend to have higher expense ratios, as the use of leverage typically generates interest expenses, which tends to be reflected in the overall expense ratio. Investors should be cognizant of the fee structure charged by any currency investment vehicle before investing. The below chart outlines the average and range of expense ratios for the various listed currency investment vehicles:



Source: Bloomberg, Merk Investments
Calculations based upon Class A or Investor Class shares.

Summary

In conclusion, when considering a listed currency investment, investors may want to first consider the type of investment style they wish to pursue. An investor's style has a large bearing on which type of listed currency vehicle they may ultimately choose, given the attributes unique to each vehicle outlined above. Generally speaking, when an investor takes a more tactical, short-term approach to investing, with a higher level of turnover and short expected holding period, and is willing to accept a higher level of volatility, they may wish to consider ETFs or ETNs. On the other hand, investors seeking the portfolio diversification benefits of the currency asset class over the medium and long-term, with a longer anticipated holding period may wish to consider currency mutual funds.

If investors have the time and expertise to pick specific currencies, currency ETFs or ETNs may be the better option; if investors wish to access the benefits of the currency asset class, but do not have the time to pick specific currencies, then currency mutual funds may be more feasible.

Investors should however not ignore the current market dynamics when evaluating this generalized decision rule for their investment choice. ETFs and ETNs, although generally demonstrating lower expense ratios in comparison with mutual funds, have historically exhibited higher volatility. Since the focus of mutual funds is not merely intra-day tracking but an active management of currency exposure, mutual funds have higher fees but in turn produce returns with lower volatility when compared to ETFs and ETNs. The potentially added value of this active management approach of mutual funds, which besides long-term strategic components is often designed to also react to medium or short term market developments, should therefore be critically evaluated by the investor when making his or her investment decision. Market data suggests that investors are increasingly willing to pay to pay a premium for active currency management, as assets in currency mutual funds continue to grow throughout 2012.

The following list of securities were used in the analysis of the report:

Currency mutual funds

	Fund Name	Vehicle Type	Launch Date	Annual Expense Ratio (%)
1	Ashmore Emerging Markets Ccy A	Mutual Fund	5/12/11	1.15
2	Columbia Absolute Ret Ccy & Inc A	Mutual Fund	6/15/06	1.42
3	Direxion Mthly Dollar Bull 2X Inv	Mutual Fund	6/1/08	*Liquidated*
4	Eaton Vance Diversified Currency Inc A	Mutual Fund	6/27/07	1.1
5	Franklin Templeton Hard Currency A	Mutual Fund	11/17/89	1.06
6	FX Strategy A	Mutual Fund	8/3/11	1.57
7	Invesco FX Alpha Plus Strategy Fund A	Mutual Fund	8/15/07	*Liquidated*
8	Invesco FX Alpha Strategy A	Mutual Fund	8/15/07	*Liquidated*
9	JHancock2 Currency Strategies A	Mutual Fund	7/30/10	1.6
10	JPMorgan Ex-G4 Currency Strategies A	Mutual Fund	11/30/11	0.71
11	Lord Abbett Emerging Markets Currency A	Mutual Fund	9/30/88	1.01
12	Merk Absolute Return Currency Inv	Mutual Fund	9/9/09	1.3
13	Merk Asian Currency Inv	Mutual Fund	4/1/08	1.3
14	Merk Currency Enhanced US Equity Inv	Mutual Fund	9/12/11	1.3
15	Merk Hard Currency Inv	Mutual Fund	5/10/05	1.3
16	Oppenheimer Currency Opportunities A	Mutual Fund	6/30/10	0.97
17	Parametric Currency Investor	Mutual Fund	12/30/11	0.9
18	PIMCO Emerging Markets Currency A	Mutual Fund	5/31/05	1.25
19	ProFunds Falling US Dollar Investor	Mutual Fund	2/17/05	1.83
20	ProFunds Rising US Dollar Investor	Mutual Fund	2/17/05	1.73
21	Rydex Strengthening Dollar 2x Strategy A	Mutual Fund	5/25/05	1.68
22	Rydex Weakening Dollar 2x Strategy A	Mutual Fund	5/25/05	1.7
23	Samson STRONG Nations Currency Investor	Mutual Fund	8/31/12	1.35
24	The Currency Strategies Fund	Mutual Fund	4/30/09	1.95*

** Liquidated as of February 28, 2013*

Source: Bloomberg, Morningstar

Currency ETFs and ETNs

	Fund Name	Vehicle Type	Launch Date	Annual Expense Ratio (%)
1	CurrencyShares Australian Dollar Trust	ETF	6/20/06	0.4
2	CurrencyShares British Pound Sterling Tr	ETF	6/20/06	0.4
3	CurrencyShares Canadian Dollar Trust	ETF	6/20/06	0.4
4	CurrencyShares Chinese Renminbi Trust	ETF	10/4/11	0.4
5	CurrencyShares Euro Trust	ETF	12/12/05	0.4
6	CurrencyShares Japanese Yen Trust	ETF	2/13/07	0.4
7	CurrencyShares Mexican Peso Trust	ETF	6/20/06	*Delisted*
8	CurrencyShares Russian Ruble Trust	ETF	11/10/08	*Delisted*
9	CurrencyShares Swedish Krona Trust	ETF	6/20/06	0.4
10	CurrencyShares Swiss Franc Trust	ETF	6/20/06	0.4
11	iPath Asian & Gulf Currency Reval ETN	ETN	5/8/07	0.89
12	iPath EUR/USD Exchange Rate ETN	ETN	5/2/07	0.4
13	iPath GBP/USD Exchange Rate ETN	ETN	5/2/07	0.4
14	iPath GEMS Asia 8 ETN	ETN	4/2/08	0.89
15	iPath GEMS Index ETN	ETN	1/2/07	0.89
16	iPath JPY/USD Exchange Rate ETN	ETN	5/2/07	0.4
17	iPath Optimized Currency Carry ETN	ETN	1/31/08	0.65
18	Market Vectors Chinese Renminbi/USD ETN	ETN	3/17/08	0.55
19	Market Vectors Double Long Euro ETN	ETN	5/7/08	0.65
20	Market Vectors Double Short Euro ETN	ETN	5/7/08	0.65
21	Market Vectors Indian Rupee/USD ETN	ETN	3/17/08	0.55
22	PowerShares DB 3x Long US Dollar Fut ETN	ETN	5/24/11	0.95
23	PowerShares DB 3x Shrt US Dollar Fut ETN	ETN	5/24/11	0.95
24	PowerShares DB G10 Currency Harvest	ETF	9/18/06	0.81
25	PowerShares DB US Dollar Index Bearish	ETF	2/20/07	0.8
26	PowerShares DB US Dollar Index Bullish	ETF	2/20/07	0.8
27	ProShares Short Euro	ETF	6/27/12	0.95
28	ProShares Ultra Australian Dollar	ETF	7/19/12	0.95
29	ProShares Ultra Euro	ETF	11/24/08	0.95
30	ProShares Ultra Yen	ETF	11/24/08	0.95
31	ProShares UltraShort Australian Dollar	ETF	7/19/12	0.95
32	ProShares UltraShort Euro	ETF	11/24/08	0.95
33	ProShares UltraShort Yen	ETF	11/24/08	0.95
34	WisdomTree Australia & NZ Debt	ETF	6/25/08	0.45
35	WisdomTree Brazilian Real	ETF	5/14/08	0.45
36	WisdomTree Chinese Yuan	ETF	5/14/08	0.45
37	WisdomTree Commodity Currency	ETF	9/24/10	0.55
38	WisdomTree Emerging Currency	ETF	5/6/09	0.55
39	WisdomTree Euro Debt	ETF	5/14/08	0.45
40	WisdomTree Indian Rupee	ETF	5/14/08	0.45
41	WisdomTree Japanese Yen	ETF	5/21/08	*Delisted*
42	WisdomTree South African Rand	ETF	6/25/08	*Delisted*

Source: Bloomberg, Morningstar

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The Merk Funds ("Funds") may be appropriate for you if you are pursuing a long-term goal with a currency component to your portfolio; are willing to tolerate the risks associated with investments in foreign currencies; or are looking for a way to potentially mitigate downside risk in or profit from a secular bear market. For more information on the Funds and to download a prospectus, please visit www.merkfunds.com.

Investors should consider the investment objectives, risks and charges and expenses of the Funds carefully before investing. This and other information is in the prospectus, a copy of which may be obtained by visiting the Funds' website at www.merkfunds.com or calling 866-MERK FUND. Please read the prospectus carefully before you invest.

Since the Funds primarily invest in foreign currencies, changes in currency exchange rates affect the value of what the Funds own and the price of the Funds' shares. Investing in foreign instruments bears a greater risk than investing in domestic instruments for reasons such as volatility of currency exchange rates and, in some cases, limited geographic focus, political and economic instability, emerging market risk, and relatively illiquid markets. The Funds are subject to interest rate risk, which is the risk that debt securities in the Funds' portfolio will decline in value because of increases in market interest rates. The Funds may also invest in derivative securities, such as forward contracts, which can be volatile and involve various types and degrees of risk. If the U.S. dollar fluctuates in value against currencies the Funds are exposed to, your investment may also fluctuate in value. The Merk Currency Enhanced U.S. Equity Fund may invest in exchange traded funds ("ETFs"). Like stocks, ETFs are subject to fluctuations in market value, may trade at prices above or below net asset value and are subject to direct, as well as indirect fees and expenses. As a non-diversified fund, the Merk Hard Currency Fund will be subject to more investment risk and potential for volatility than a diversified fund because its portfolio may, at times, focus on a limited number of issuers

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