STRATEGY SPOTLIGHT

Emerging markets overlays

Different solutions for different exposures

Emerging markets is an integral part of a diversified global equity allocation strategy. Investors may view their exposure to emerging markets as a separate allocation or as a policy allocation within a global equity benchmark (such as the MSCI ACWI Index or the Russell Global Index). When accessing emerging markets within the context of an overlay, investors must navigate the local regulations, increased transaction costs and greater volatility associated with this asset class. In order to better replicate the returns of emerging markets, investors must also ensure that currency exposure is managed in a manner consistent with the target investment strategy. There are various overlay solutions that can be designed and implemented in order to gain emerging markets exposure, and each can be tailored in accordance with a client's specific needs. An investor can obtain exposure to emerging markets through an overlay by using unfunded instruments, such as futures or swaps, or fully funded instruments, such as exchange-traded funds (ETFs).[1]

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Listed futures

The **MSCI Emerging Markets Future** provides broad-based emerging markets exposure in a single contract. Liquidity and open interest in the contract have risen dramatically over the past few years. This has helped reduce transaction costs and has allowed the contract to support larger overlays.

The futures contract provides currency exposure relative to USD, since the underlying index converts all local values to USD daily. No additional currency exposure is needed for USD-based investors who want the currency exposure of the benchmark (i.e., unhedged exposure). For non-USD-based investors, a currency forward may be used to hedge the USD portion of the exposure to the base currency. Investors seeking to remove the currency exposure would need to use a basket of forwards to hedge the currency exposure embedded in the futures contract. This applies for both USD and non USD-based investors.

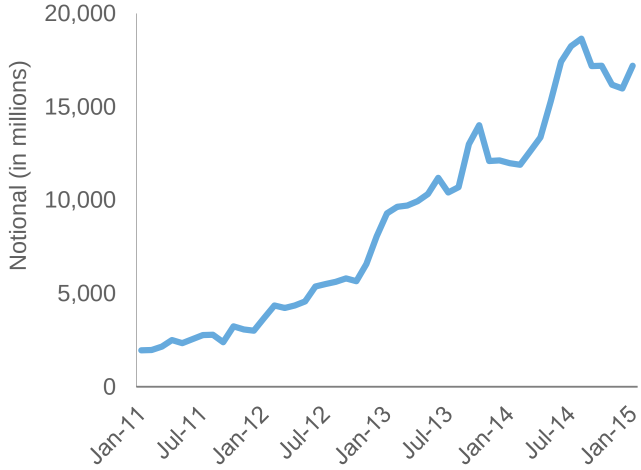
The annualized ex-post tracking error of the MSCI Emerging Markets Future is 5.0%.[2] It is important to note that most of the tracking error is due not to underlying exposure mismatches, but rather to differences between the closing times of local markets in the benchmark and the closing time of the futures contract. The benchmark uses the local closing prices of each security to value the index, while the futures contract trades during U.S. market hours and the closing price is set at 4 p.m. U.S. Eastern Time. While this tracking error is likely to be mean-reverting over extended periods of time, it can cause short-term performance deviations. The estimated annual transaction costs for the futures contracts is 4.9 basis points (assuming a USD-based investor with an unhedged benchmark).

[1] Investments where cash is required to buy the underlying securities are known as fully funded instruments. Exposures where there is no inital outlay of cash, such as futures or other derivative instruments, are known as unfunded instruments.

[2] All ex-post tracking error is measured vs. the MSCI Emerging Markets Net Dividends Index, using monthly returns observed from February 2010–January 2015, from the perspective of an unhedged USD investor.

Transaction costs would be approximately 6.4 bps for non-USD-based investors, due to the additional currency forward transactions needed to hedge USD exposure (the currency in which the contract is priced and traded).

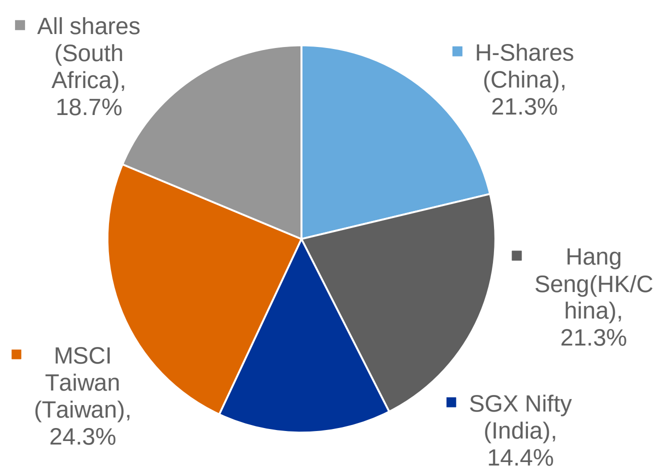
Exhibit 1: MSCI Emerging Markets Future – Open interest



Provided for illustrative purposes.

An alternative to the MSCI Emerging Markets Future is to create a futures basket that consists of individual emerging markets country exposures. Many futures contracts exist for emerging markets countries. The challenge is to evaluate the higher transaction costs and the local regulations of specific exchanges in order to create an optimal mix of futures. The basket must balance the need for lower tracking error versus higher transaction costs. A futures basket consisting of various individual country futures can be created as illustrated in Exhibit 2. This basket can be optimized to include additional contracts to suit the investor's needs.

Exhibit 2: Emerging Markets Futures basket



Provided for illustrative purposes.

The individual country futures do not provide local currency exposure, because they are unfunded instruments priced in the local currency. Currency forwards must be used in conjunction with the futures to provide unhedged benchmark exposure. However, for investors who want hedged exposure, the futures basket can be advantageous. The individual country futures provide hedged exposure, whereas the MSCI Emerging Markets Future would require a separate overlay to remove the currency component.

Another difference between the futures basket and the MSCI Emerging Markets Future is that the basket trades during local emerging market hours. For exposure shifts, such as a transition from physicals to derivatives or vice versa, futures contracts that trade during local emerging market hours is beneficial, because it allows exposure to be matched off intraday, which reduces risk.

The futures basket above has an annualized ex-post tracking error of 4.8% and an annual transaction cost of 22.9 bps. Basket weights are updated periodically to match the benchmark country exposures. This strategy is well suited to the needs of clients with hedged mandates or those who require trading during local market hours. The primary risks that must be considered with this strategy are the significant tracking error and the proxy risk that result from benchmark countries not having viable futures contracts (i.e., not all underlying countries in the benchmark can be represented in the basket).

Total return swap

Emerging markets exposure via a **total return swap** offers many advantages relative to futures and ETFs. The primary advantage is minimal tracking error, since the swap is priced directly off the close of the underlying benchmark index. Investors can gain long or short exposure to the returns of the index, and pay or receive a corresponding financing rate. The terms of an over-the-counter transaction, such as tenor and notional, can be customized based on an investor's needs.

One drawback to a total return swap is that adjusting or closing exposure prior to the negotiated expiration of the swap can be costly. Costs associated with a total return swap depend on the investor's internal financing rate (i.e., the rate received on the cash supporting the swap) relative to the defined financing cost of the swap. Investors can typically look to pay 25 to 35 bps above USD 3-month LIBOR for long exposure, and to receive zero to 10 bps below USD 3-month LIBOR for short exposure.[3] Emerging markets swaps are typically quoted against USD returns (and hence the financing rate quoted in USD LIBOR), but as with other OTC transactions, this can be customized for non-USD-based investors. Investors seeking hedged returns can structure the desired currency exposure within the terms of the swap. However, given the complexities and methodological nuances of benchmarks with hedged

[3] Indicative prices are as of February 2015. For illustrative purposes only.

currency exposure, it may be more cost-efficient to run the currency hedge separately from the swap.

Additionally, OTC transactions require specific documentation such as trading authorizations and ISDA agreements. Given that this is an OTC transaction, an investor has counterparty risk on gains that have been accrued on the swap. This risk can be managed through diversification of exposures across counterparties, daily mark-to-market and daily collateral exchange for any gains/losses – similar to a futures contract. Managing the collateral and counterparty diversification on behalf of clients is an important task for an overlay provider.

Total return swaps are best suited to the needs of investors seeking a core long or short position that requires minimal exposure adjustments.

Exchange-traded funds (ETFs)

ETFs provide liquid, broad-based emerging markets exposure. The **iShares MSCI Emerging Markets ETF (Ticker: EEM)** and the **Vanguard FTSE Emerging Markets ETF (Ticker: VWO)** are the two most commonly used by institutional investors. In 2013, VWO changed its benchmark from MSCI to FTSE. The major difference between these indexes is the classification of South Korea. FTSE classifies South Korea as a developed market, while MSCI and Russell classify it as emerging. This means that VWO does not have exposure to South Korea, which represents about 15% of the MSCI and Russell benchmarks.

Historically, annualized tracking error for EEM is 4.6% and for VWO, 4.7%. There are two important notes about this tracking error. First, it is measured using historical returns, which do not fully incorporate the benchmark change to VWO that was completed in mid-2013. For investors with MSCI or Russell benchmarks, it is reasonable to expect the tracking error of VWO to be higher, given its underweight to South Korea. Second, since both ETFs are traded only during U.S. market hours, there is additional tracking error that results from the timing differences between the closing times of local markets in the benchmark and the closing time of the ETF. This is analogous to the MSCI Emerging Markets Future and is likely to be mean-reverting over extended periods of time.

Another characteristic of both ETFs is that the holdings are priced daily in USD. This means the ETFs provide emerging markets currency exposure relative to USD. This is a characteristic of the MSCI Emerging Markets Future as well. The currency considerations (hedged/unhedged exposure, non USD-based currency, etc.) that apply to the MSCI Emerging Markets Future also apply to EEM and VWO.

Drawbacks to utilization of ETFs include embedded management fees, the need to be fully funded (i.e., cash must be committed to pay for the physical security) and, if short exposure is desired, the need for a prime brokerage relationship. Shorting ETFs may not be ideal in an overlay framework. The increase in liquidity of the MSCI Emerging Markets Future has made it a viable alternative to EEM and VWO. However, ETFs can still be a useful tool, especially for mandates that are fully funded. Investors who are sensitive about tracking error and are benchmarked to MSCI or Russell indexes should probably avoid VWO, due to the underweight of South Korea. If lower management fees are a greater concern than tracking error, then VWO may still be appropriate.

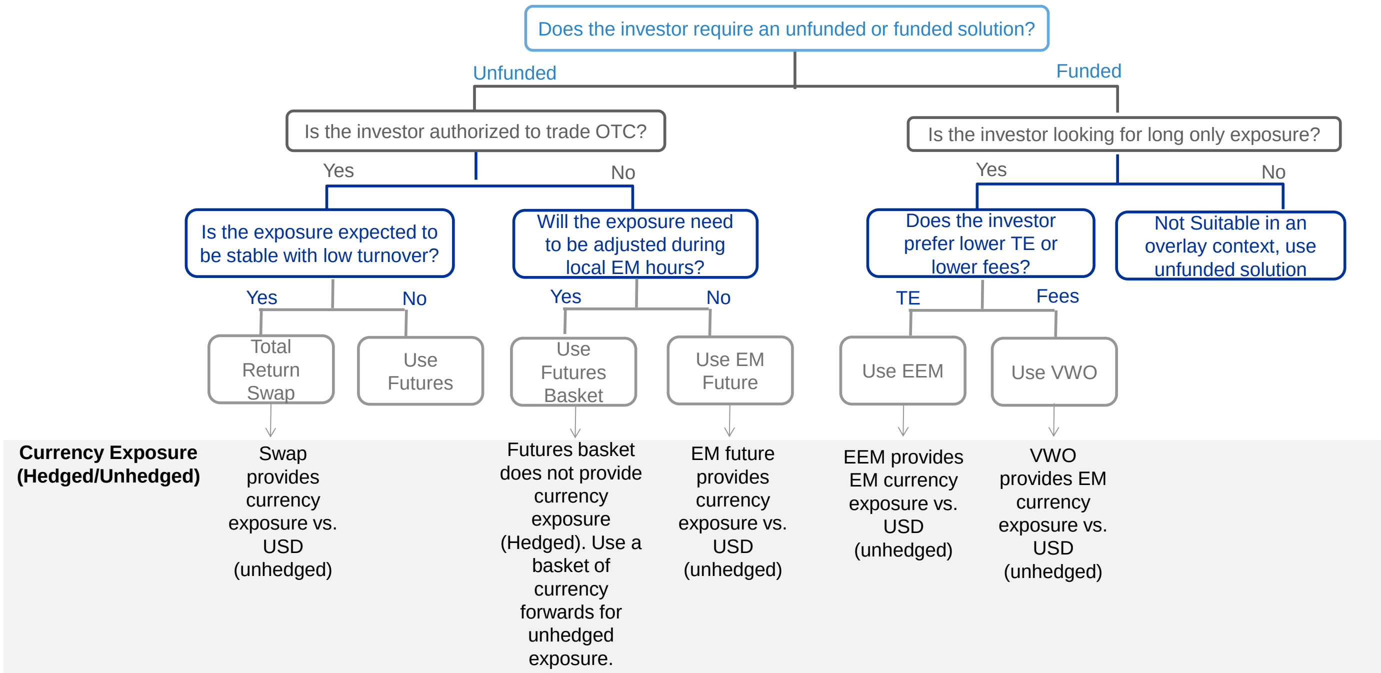
Final considerations

Emerging markets exposure is not a one-size-fits-all solution, given the complexities of accessing the underlying countries and the various vehicles available to investors. Primary considerations for choosing the optimal investment vehicle for an overlay include the desired currency exposure, size of the exposure, length of investment, expected turnover, tracking error, and transaction costs. A summary of tracking error and costs is provided in Appendix 1.

Considerations such as market liquidity may be more important to investors with large overlays or high turnover, while others may place a greater premium on lower tracking error or transaction costs. Depending on an investor's desired currency exposure (i.e., hedged or unhedged) and base currency, the overlay instruments chosen will require different means of effectively managing currency risk. An exposure manager such as Russell, with holistic knowledge of investors' exposures, can help navigate the trade-offs and identify the optimal solution to suit each client's unique requirements.

Appendix 1

Exhibit 3: Estimated tracking error and tracking costs (unhedged, USD investor)



For illustrative purposes only

	FUTURES		ETF		TR SWAP
	MSCI Emerging Markets Future	**5 Contract Futures Basket**	**iShares ETF (EEM)**	**Vanguard ETF (VWO)**	**MSCI Emerging Markets TR Swap**
Annualized Tracking Error	5.0%	4.8%	4.6%	4.7%	Near zero
Trading Cost – One Way	0.9 bps	2.5 bps	8.0 bps	8.0 bps	0.0 bps
Annual Holding Cost – ETF Mgmt. Fee/Roll	4.9 bps	22.9 bps	67.0 bps	15.0 bps	30.0 bps

Note: Tracking error and trading/holding cost estimates can be provided based on investor's base currency and hedging needs. Costs estimated as of February 2015.

FOR MORE INFORMATION:

Call Russell at **800-426-8506** or visit **http://www.russell.com/institutional**

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