CIBC Asset Management

INSTITUTIONAL

THE ROLE OF ACTIVE CURRENCY IN INVESTMENT PORTFOLIOS

By: Michael Sager and Walid Saab[1] November 2018

1. SUMMARY

Active currency is one of the least well understood asset classes. And yet it has many attributes that make it an attractive addition to investment portfolios. In this paper, we address client FAQs related to all aspects of Active Currency investing. These include what type of asset class Active Currency is, whether currencies are predictable, and if active currency returns are diversifying in a broad portfolio context. We also address what Active Currency fulfillment options are available to investors. Our key conclusions are:

- Active Currency is a liquid Alternative investment strategy
- It can be implemented as an unfunded strategy with no upfront requirement to allocate portfolio risk capital, or in a fully funded comingled vehicle
- Standalone returns to a skilled cohort of active currency managers have been strongly positive over an extended period, and comparable to the best active Global Equity Large-Cap managers
- Returns to Active Currency are diversifying to core and other Alternative asset classes
- Active Currency is appropriate for both Defined Benefit (DB) and Defined Contribution (DC) investment plans.

2. INTRODUCTION

The relevance of a portfolio allocation to Active Currency derives from a number of general features common to many institutional investment portfolios:

- Excessive exposure to equity risk
- Over-reliance for diversification upon a negative—and potentially transitory—equity/bond correlation
- Low expected returns from core equity and bond allocations, and many Alternative asset classes
- Relatively high allocations to illiquid Alternative asset classes, such as private equity.

In our answers to the FAQs below, we highlight how an active currency mandate can help mitigate each of these weaknesses, regardless of notional portfolio size.

2.1. What sort of asset class is Active Currency?

Active Currency is a tactical, liquid Alternative asset class. Developed Market currency exposure offers a positive expected return, but only as a result of skilled active investing. This contrasts with core asset classes, such as public equities and sovereign bonds, that have an associated market risk premium that can be harvested from long-only passive exposure without the need for skilled active investing. These passive premia represent compensation for accepting exposure to identified macroeconomic risk factors, including growth and inflation.

Many of the drivers of currency returns are specific to this asset class. As a result, the correlation of active

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currency returns with those from core, and other Alternative asset classes is typically relatively low. For instance, active equity investment decisions are often based upon microeconomic, bottom-up factors. By contrast, active currency returns are typically explained by top-down, macroeconomic drivers such as Balance of Payments flows, as well as persistent market inefficiencies and anomalies. And unlike many other Alternative asset classes that focus on illiquid beta exposures, active currency returns result from a combination of highly liquid Smart Beta and alpha strategies.

2.2. Are expected returns to Active Currency zero?

No. This conclusion is relevant only to inherited, passive Developed Market (DM) currency exposures. From an active perspective, future currency returns can be forecasted with appropriate accuracy to enable skilled currency managers to add significant value to investment portfolios.

2.3. Can active currency investing add value to a portfolio?

Yes. Figure 1 highlights that the CIBC Asset Management currency team is part of a skilled cohort of active currency managers that has generated strong outperformance over an extended period. CIBC AM's performance record—a 15-year Information Ratio (IR) of 0.54[2]—is in the top quartile of managers captured by the MercerInsight database over this sample period. From a statistical perspective, we can be 95% confident that the CIBC AM Active Currency team has demonstrated skill, over an extended period encompassing many different macroeconomic and market environments.[3] Portfolio team leadership has remained unchanged throughout this period, emphasizing the continuity and value of the reported performance. As the team uses the same investment process for all risk mandates, economically significant performance has been realized by appropriate risk allocation to an active currency mandate.[4] This performance track record also compares favorably to the most skilled active Global Large Cap equity managers (Figure 2).

Figure 1 – Active Currency Performance – Manager Universe, including CIBC Asset Management

INFORMATION RATIO	1 YEAR	3 YEARS	5 YEARS	7 YEARS	10 YEARS	15 YEARS
CIBC	-1.30	0.42	0.90	0.89	0.64	0.54
5th percentile	0.79	0.38	0.79	0.77	0.64	0.63
25th percentile	-0.07	0.17	0.56	0.43	0.44	0.54
Median	-0.77	0.08	0.41	0.31	0.34	0.30
75th percentile	-0.93	-0.32	0.13	0.23	0.26	0.20
95th percentile	-1.46	-0.91	0.03	0.12	0.24	0.15

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[2] IR measures the return per unit of risk generated by an active manager in excess of its benchmark.
[3] The associated t-statistic is 2.16, which is significant at the 95th percentile.
[4] The only difference in positioning between any two CIBC active currency mandates reflects client-imposed constraints, including the breadth of the currency investment universe, and the absolute size and symmetry of permissible active exposures. The underlying investment philosophy and process is identical across all mandates. Investors wishing to target higher expected returns from an active currency mandate need only to allocate a larger risk budget, with fewer investment constraints.

Figure 2 – Active Global Equity Large Cap Performance – Manager Universe

INFORMATION RATIO (As at September 30, 2018)	1 YEAR	3 YEARS	5 YEARS	7 YEARS	10 YEARS	15 YEARS
5th percentile	1.91	0.88	0.85	0.86	0.77	0.62
25th percentile	0.46	0.24	0.29	0.33	0.36	0.32
Median	-0.57	-0.23	-0.14	-0.06	0.07	0.15
75th percentile	-1.44	-0.70	-0.56	-0.41	-0.18	-0.04
95th percentile	-2.44	-1.23	-1.08	-0.96	-0.50	-0.37

Source: CIBC Asset Management Inc., Mercer. ©2018 Mercer LLC. All rights reserved. This output should be read in conjunction with, and is subject to, MercerInsight MPA™: Important notices and Third-party data attributions. See https://www.mercerinsight.com/importantnotices.aspx for details. Data as at September 30, 2018.

As well as attractive standalone performance, an allocation to Active Currency can be made on an unfunded basis, with positions typically implemented through liquid forward contracts. International Swap and Derivative Association (ISDA) agreements negotiated between CIBC AM and its Over-the-Counter (OTC) derivative counterparties do not generally require the exchange of collateral for currency forward contracts up to one year in tenor. We typically implement our active currency strategy through 3-month forwards. Consequently, an allocation to Active Currency is efficient in a wider portfolio context since it does not use any of a plan's available risk capital.

In the context of the current low expected return environment and time variation in core asset correlations, the ability of Active Currency to improve the risk-adjusted return profile of investment portfolios without the need for up-front capital funding makes it a particularly attractive, liquid alternative to traditional core asset allocations.

2.4. Are currencies predictable?

Yes. This answer may surprise. Starting with Meese and Rogoff (1983), the academic literature is replete with studies that conclude exchange rates resemble a random walk; the best forecast of next period's exchange rate is simply this period's value.

Our conclusion and academia's findings are not mutually exclusive. In the short term—in the next hour, tomorrow, or even over the next week—exchange rates are not forecastable with any accuracy, from a macroeconomic, fundamental perspective. Their outcome is essentially random.[5] But over longer horizons—those relevant to the CIBC AM Active Currency investment process—exchange rates are relatively predictable.

Active currency investors work to a less onerous definition of predictability than academia. The goal of many academic forecasters is to accurately forecast the future level of individual exchange rates. By contrast, active currency investors seek to rank-order expected returns to a cross-section of currencies, within the context of good risk controls. Profitable investing does not require active currency investors to beat a random walk; it just requires them to get the rank order of future returns approximately correct in most investment periods (Melvin, Prins, and Shand, 2013).

2.5. Why does Active Currency add value?

Exchange rate predictability reflects the existence of persistent market inefficiencies. It is these market

[5] Intra-day and daily price-based algorithmic trading platforms have demonstrated ability to forecast exchange rates at these horizons. This is not a space in which CIBC Asset Management participates.

inefficiencies that provide active currency managers with the opportunity to add value to investment portfolios.

The currency market is extremely liquid, with estimated daily turnover of approximately $5.0 trillion.[6] But it is important not to conflate liquidity and efficiency. The concept of market efficiency encompasses a joint hypothesis that market participants continuously behave rationally and seek to maximize profits. In the currency market, both parts of this hypothesis are invalid; currency market inefficiencies reflect the presence of heterogeneous market participants, behavioral traits, and investment horizons (Figure 3). It is typically expected that market inefficiencies will be arbitraged away in time. For currency, inefficiencies will likely endure as they reflect persistent institutional and individual biases.

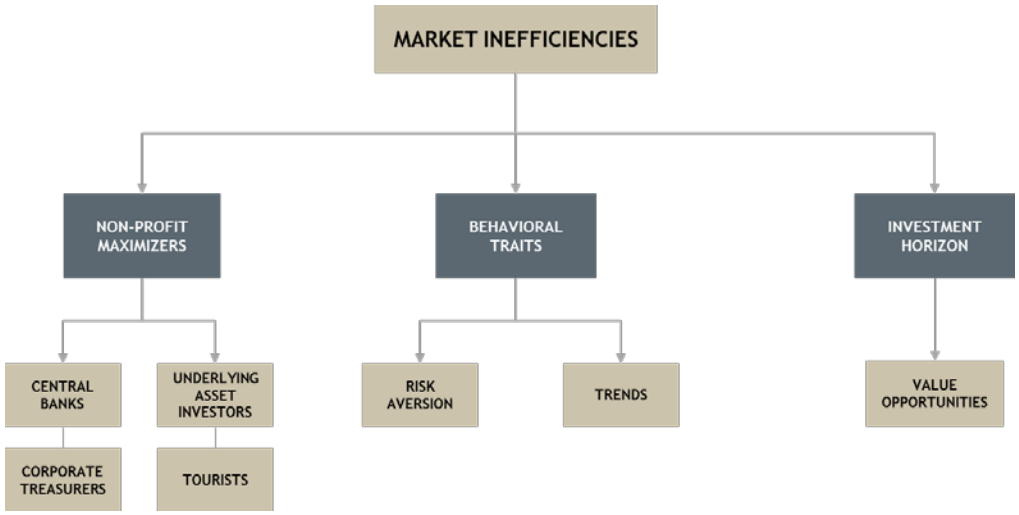
2.5.1. Non-profit maximizing participants

The presence of non-profit maximizing participants in the currency market is well established, and significant. Deutsche Bank (2018) estimates that non-profit maximizing activity accounts for around one half of all daily market flows. From Figure 3, neither central banks, corporate treasurers, investors in underlying foreign securities, or tourists are typically actively seeking profit from their participation in the currency market. All are likely acting rationally, but nonetheless provide liquidity and opportunity for profit-maximizing active currency investors.[7]

Dalio (2002) reports that central banks have persistently lost money as a result of currency market interventions. The primary objective of these interventions is to influence the behavior of the exchange rate in order to achieve desired macroeconomic outcomes; the expected profitability of these interventions is not a motivating factor.[8] Corporate treasurers are focused upon hedging away unwanted inherited currency risks that result from cross-border transactions in goods and services, as well as mergers and acquisitions; they do not seek an additional source of revenue by actively trading exchange rates. Underlying asset managers are focused primarily on the expected return of competing local investment opportunities, and not on the future path of associated currencies. And tourists typically do not seek to optimally time purchases of foreign currency; their primary focus is upon the logistics of vacation planning.

[6] BIS (2016). This estimate may exaggerate market liquidity a little, since it incorporates intra-bank trading that does not represent realizable liquidity to the wider market, as well as double-counting associated with trades involving a Prime Broker.
[7] In contrast to tourist currency demand, retail currency investors are certainly profit-seeking.
[8] For instance, ECB (2018). https://www.ecb.europa.eu/explainers/tell-me-more/html/ecb_profits.en.html.

Figure 3 – The FX market is extremely liquid, but also inefficient and heterogeneous. These characteristics generate profit opportunities for skilled active currency managers



Source: CIBC Asset Management Inc.

2.5.2. Behavioral traits

Trend-following investment strategies are a significant component of active investing in currency, as well as other asset classes. They capture the persistent—and therefore irrational, from an economic theory perspective—tendency of a subset of market participants to initially under-react, and then over-react to news flow, as well as to exhibit herding behavior. Trend-following active strategies have demonstrated a persistent ability to generate positive excess returns over time (Barberis et. al., 1998, 2003; Jegadeesh and Titman, 1993; Asness et. al., 2013). This includes time series trends that compare the price of an asset to its own recent history, as well as cross-sectional momentum signals that compare the strength and sign of time series trends across a set of assets.

2.5.3. Investment horizon

The universe of active currency managers is segmented. One sub-group is focused on exploiting short-term market opportunities, using algorithmic trading models that embrace elements of Artificial Intelligence, technical analysis, as well as market microstructure data on liquidity, flow, volume, and positioning.

Another sub-group of active currency managers is focused upon longer investment horizons, using top-down macroeconomic fundamental analysis. This is the domain in which the CIBC AM investment process resides. For longer horizon investors, the task of predicting returns is made relatively more straightforward by the existence of well-defined factor risk premia, such as Carry, Value, Cycle, and Momentum. These factors reward active managers for assuming exposure to systematic risks from other, more risk-averse market participants. For instance, the risk of unexpected economic or political events that temporarily force exchange rates away from intrinsic valuations. By allocating active risk only to currencies where the opportunity defined by these—and other fundamental—factors is significant and well understood, long horizon active currency managers can exploit relatively high probability opportunities to add value to investment portfolios.

2.6. Is Active Currency investing a zero-sum game?

Active investing in all asset classes is a zero sum game.[9] If two active currency managers trade with one another, and one introduces a tactical long yen versus a short Euro position into her portfolio, the other manager must be short yen and long Euro. Only one of the active investors can be right over the life of this trade.

But a zero-sum game in active investing does not preclude the existence of persistent, significant returns to a skilled cohort of active currency managers. This possibility reflects the presence in the currency market of heterogeneous participants with various motives, behaviors, and investment horizons. It is the market activity of these participants that gives skilled active investors the opportunity to generate excess returns.

2.7. How is active currency investing different from 'mere speculation'?

We understand 'mere speculation' to mean 'coin flipping', or a simple game of chance.[10] In a game of chance, every participant has an equal probability of winning or losing. No specialist knowledge is required, and certainly does not increase the probability of success in one's favor.

Active currency investing is very different from a game of chance. Specialist knowledge is at a premium, and its skilled use can significantly increase the probability of persistent success. This has been CIBC AM's experience, and is supported by the team's long-term performance track record.

2.8. Are returns to Active Currency just beta, or also alpha?

The CIBC AM Active Currency team has generated a mix of Smart Beta and skilled alpha returns.

As discussed in Section 2.1, Developed Market currencies do not have a passive, beta return. They offer a positive expected return, but only as a result of skilled active investing.

Smart Beta active currency returns can be harvested through a set of factor risk premium models that reward investors who accept exposure to one or more identified systematic risks. The most common currency factor risk premia are Carry—which compensates investors for assuming exposure to Skewness Risk, whereby episodic funding constraints inhibit market participants engaged in Carry trades, leading to abrupt negative exchange rate returns (Chernov et. al., 2014)—Value, Cycle, and Momentum. We explain the investment rational of each of these factor risk premia in Figure 4.

[9] We exclude the statistically insignificant positive returns due to Jensen's Inequality.
[10] Speculation, not 'coin-flipping', is actually a positive attribute of financial markets. Markets with a greater speculative presence typically exhibit higher liquidity, lower transaction costs, and more efficient price discovery.

Figure 4 – Active Currency Factor Risk Premia

Currency Factor	Investment Rationale	Investment Horizon	Information Ratio
Carry	- Higher-yielding currencies tend to outperform lower-yielding currencies. - Construction: yield derived from implied rates in currency forwards.	6-12 mths	0.48
Value	- Relatively cheap currencies tend to outperform relatively expensive currencies. - Construction: Purchasing Power Parity (PPP) adjusted for Terms of Trade and productivity differentials.	2-3 years	0.48
Cycle	- Currencies of cyclically strong countries tend to outperform those of weaker countries. - Construction: Trend extraction based on panel of leading and confirming variables	6-12 mths	0.75
Momentum	- A currency's recent relative performance tends to persist in the near future. - Construction: total returns over specified look-back period.	3 mths	0.40

Source: Bloomberg and CIBC Asset Management Inc. The performance of each factor is based on a hypothetical portfolio constructed by CIBC Asset Management Inc. on the basis of proprietary rules. Performance is gross of fees and net of transaction costs. Period: December 2002 to September 2018; Factors based on CIBC Asset Management Inc. research. This hypothetical scenario is shown for illustrative purposes only and is not indicative of future results. Please refer to the Disclaimer page for further information.

Many active currency managers utilize investment processes that simply aim to capture these Smart Beta returns. Another cohort of managers—which includes CIBC AM—has also demonstrated an ability to generate diversifying alpha returns from active currency risk. To generate this alpha, CIBC AM utilizes a range of quantitative and qualitative inputs other than factor risk premia during the portfolio construction process. The team uses these inputs to tilt active risk at each point in time towards highest conviction positions. These inputs also determine the appropriate level of overall active risk taken at any given time (Figure 5).

Figure 5 – Conditional Active Risk Varies Through Time Depending Upon Investment Conviction

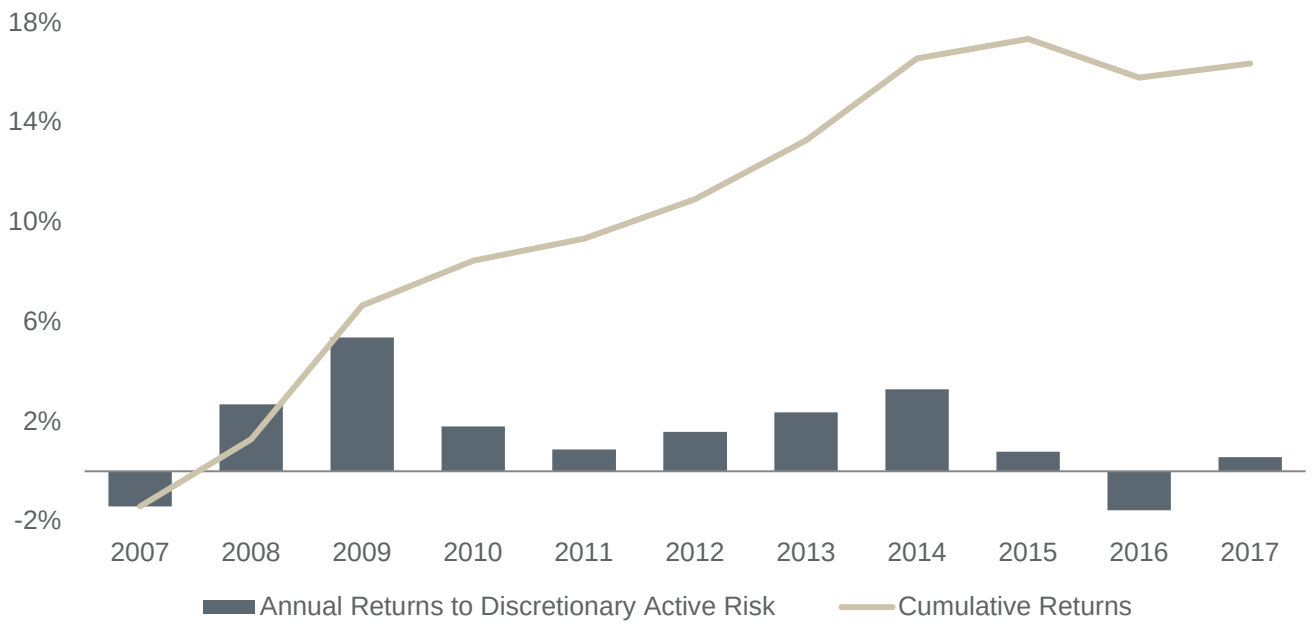
Source: CIBC Asset Management Inc. Illustrative Example Based Upon Hypothetical Data.

Figure 6 reports annual returns generated by the CIBC Asset Management currency team, based upon its top-down fundamental qualitative analysis. We consider these returns to be active currency alpha. They represent an important part of the total—quantitative plus qualitative—performance record achieved by the CIBC Asset Management Active Currency team (as reported in Figure 1 above).

2.9. Are returns to Active Currency diversifying?

Yes. Figure 7 reports average pairwise correlations for monthly returns to a set of core and Alternative asset classes over the sample December 2002 to September 2018. We have color-coded the matrix to emphasize the sign and magnitude of correlations; red (blue) signifies relatively high (low) correlations. The data emphasize the average diversification benefit that derives from an allocation of portfolio risk away from core asset classes and into Alternatives. But the matrix also highlights that pairwise correlations between many Alternative asset classes are often high. By contrast, the average correlation of returns to Active Currency with both core, and other Alternative, asset classes is consistently low over our sample as a whole (far right column in Figure 7).

Figure 6 – CIBC Asset Management Active Currency Alpha Returns from Discretionary Investment Decisions



Source: CIBC Asset Management Inc.. Returns rescaled to 2% Annualized Risk. Performance is based on a hypothetical portfolio constructed by CIBC Asset Management Inc. Performance is gross of fees and net of transaction costs.

Figure 7 – Average Pairwise Monthly Asset Class Return Correlations

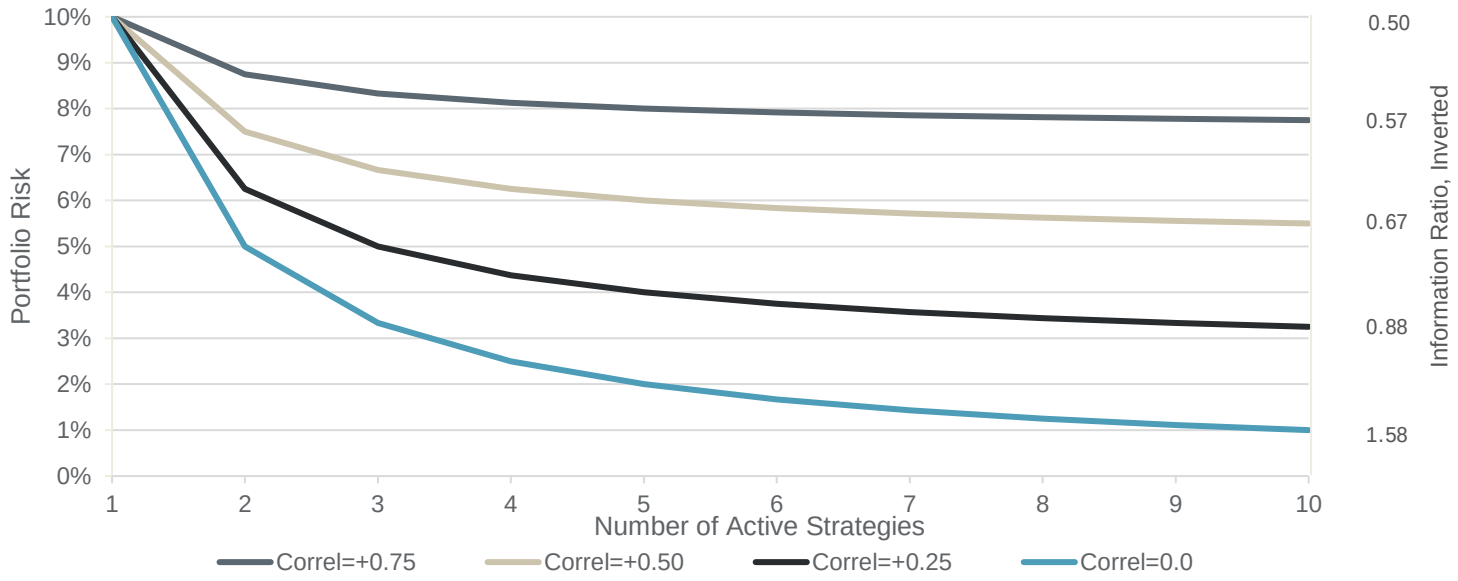
		EQUITY						FIXED INCOME				ALTERNATIVES						
		TSX	S&P 500	MSCI WORLD	EAFE®	Russell 2000	MSCI EMF	TSX FTSE UNIV	Barclays US AGG	Barclays Global AGG	Barclays Global HY	Commod.	Private Equity	Infra.	Real Estate	Hedge Funds	Emerging Markets	CIBC Active Currency
EQUITY	TSX	1	0.43	0.58	0.59	0.51	0.72	0	-0.52	-0.44	0.15	0.44	0.36	0.50	0.49	-0.06	0.39	0.26
	S&P 500		1	0.94	0.78	0.84	0.53	0.08	0.14	0.13	0.55	0.11	0.77	0.65	0.68	0.54	0.57	0.09
	MSCI WORLD			1	0.94	0.80	0.70	0.12	0.02	0.08	0.58	0.21	0.75	0.78	0.75	0.49	0.67	0.14
	EAFE®				1	0.65	0.76	0.16	-0.05	0.06	0.55	0.26	0.65	0.82	0.74	0.40	0.70	0.17
	Russell 2000					1	0.51	-0.01	-0.06	-0.07	0.41	0.08	0.64	0.50	0.65	0.38	0.43	0.10
	MSCI EMF						1	0.15	-0.26	-0.15	0.38	0.32	0.47	0.65	0.62	0.19	0.73	0.25
FIXED INCOME	TSX FTSE UNIV							1	0.46	0.54	0.37	0.06	0.11	0.37	0.32	0.23	0.22	-0.04
	Barclays US AGG								1	0.92	0.47	-0.03	0.04	0.10	0.04	0.76	0.29	-0.27
	Barclays Global AGG									1	0.48	0.07	0.01	0.24	0.13	0.67	0.31	-0.27
	Barclays Global HY										1	0.20	0.39	0.57	0.59	0.64	0.64	-0.04
ALTERNATIVES	Commod.											1	-0.08	0.26	0.16	0.20	0.36	0.02
	Private Equity												1	0.46	0.42	0.41	0.47	0.10
	Infrastructure													1	0.76	0.38	0.61	0.09
	Real Estate														1	0.29	0.50	0.14
	Hedge Funds															1	0.72	-0.13
	Emerging Markets																1	0.09

Source: Thomson Reuters Datastream, CIBC Asset Management Inc. All data expressed in Canadian dollars. Sample: December 2002 - September 2018.

Standalone positive and diversifying expected returns to a highly liquid tactical asset class makes Active Currency an attractive addition to investment portfolios, particularly in the current environment of low expected returns to core asset classes.

Figure 8 illustrates the benefit of combining diversified active—currency or other—investment strategies within portfolios. It assumes an initial, strategic portfolio with a 10% annualized risk and an expected IR of 0.5; we can arbitrarily think of this strategic portfolio as a simple passive 60/40 equity/Fixed Income allocation. Each line in Figure 8 traces the impact on portfolio risk and IR of incorporating active investment strategies into the strategic portfolio, assuming a specific correlation structure between each of these active strategies.[11] For instance, the fourth (lightest blue) line in the chart traces the impact of adding to the strategic portfolio between one and ten active strategies that have a correlation to each other of zero. In this case, portfolio risk declines from an initial 10% to as low as 1%, and portfolio IR rises from 0.5 to as high as 1.58. The main takeaway from Figure 8 is that as correlations fall, the positive impact upon portfolio risk and expected IR is striking.

Figure 8 – Diversification Benefit of Combining Uncorrelated Active Strategies

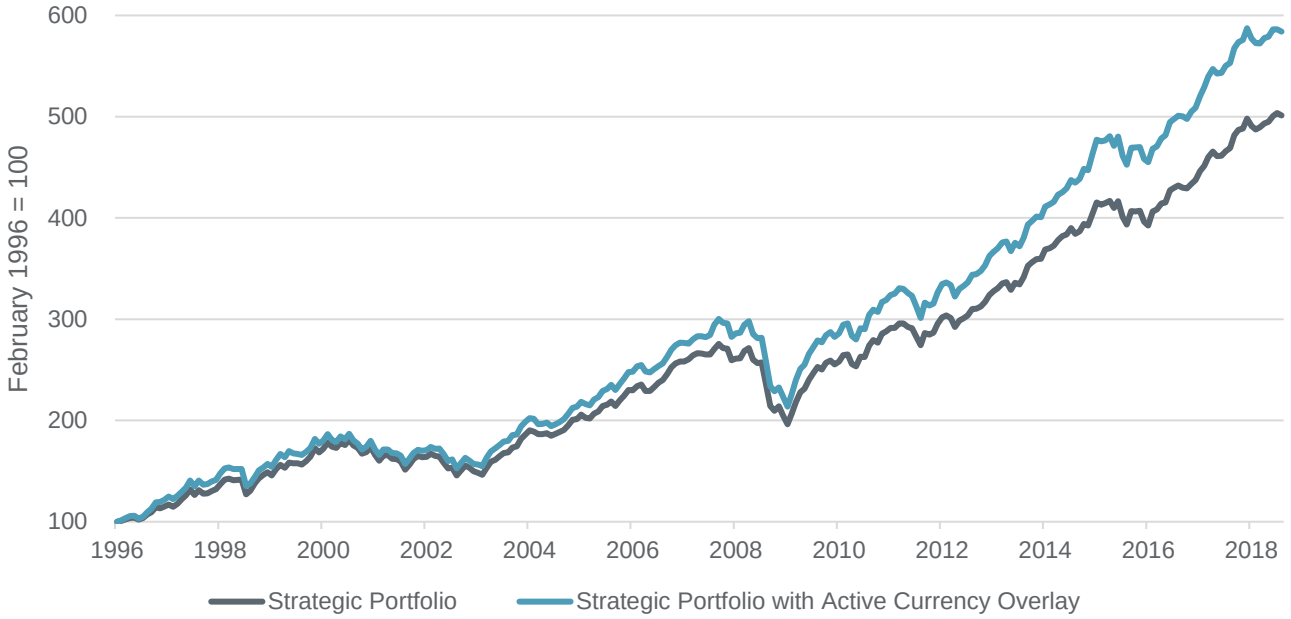


Source: Bridgewater (2009), CIBC Asset Management Inc. calculations using simulated data. Hypothetical scenario shown for illustrative purposes only, and not indicative of future results.

Extending this analysis, Figure 9 highlights the impact of overlaying a strategic investment portfolio with a risk allocation to Active Currency. The cumulative risk-adjusted return of the portfolio is noticeably improved, reflecting both the positive expected return from Active Currency, but also the diversification benefit that this allocation provides.

[11] We assume all active strategies have the same expected return and risk.

Figure 9 – Portfolio Performance Without and With Currency Overlay



Source: CIBC Asset Management Inc. calculations using simulated data. Hypothetical scenario shown for illustrative purposes only, and not indicative of future results. Strategic portfolio includes following allocations. Equities: 10% S&P TSX Composite; 20% S&P500; 15% MSCI EAFE; 10% MSCI Emerging Markets; 5% MSCI ACWI. Fixed Income: 20% FTSE TMX Canada All Govt.; 20% FTSE TMX Canada All Corp. Active Currency Overlay included with a 2% annualized risk budget and as an Unconstrained, Unfunded Overlay (see Section 3.5.2 below).

2.10. How is active currency risk measured?

We measure the risk of an active currency mandate in two ways:

- First, using a third-party risk model incorporating a 3.5 year equally weighted covariance matrix and monthly returns. A proprietary risk model incorporating a 10-year, exponentially weighted covariance matrix, with a 3 year half-life, and monthly returns is used to verify the accuracy of this analysis. Measured volatility is used to conduct pre-trade risk attribution to ensure total active currency risk, as well as the contribution to total risk of each active position, is commensurate with investment conviction on any given day.
- Second, scenario analysis based upon historical realized events, as well as hypothetical future event risk. In assessing portfolio performance under various scenarios, we consider both the asset volatility and correlation implications of identified event risks.

2.11. Are Emerging Market currencies too risky for my plan?

No. Emerging Market (EM) economies continue to evolve and are increasingly integrated within the global economy. As a result, EM currencies now represent a core component of global active currency mandates. Their inclusion can add additional breadth to investment processes. As with DM currencies, a significant component of the expected return to active EM currency exposures can be captured using an investment process built upon well-established factor risk premia—Carry, Value, Momentum, and Cycle—with no need for customization.

Also similar to DM currencies, a sub-set of risks inherent in EM currencies cannot easily be captured by a systematic quantitative framework. Fundamental macroeconomic judgment can add significant value by identifying the impact of idiosyncratic risks on EM currency returns. But the source of idiosyncratic risks that impact EM currencies is often different to those that affect DM currencies, requiring specialist knowledge to exploit.

EM trading volumes in normal market conditions are typically lower than volumes for DM currencies, and trading costs are commensurately higher. Nonetheless, EM liquidity continues to increase as a share of total market liquidity (BIS, 2016), and is more than sufficient to allow execution of CIBC AM active currency trades without market impact.

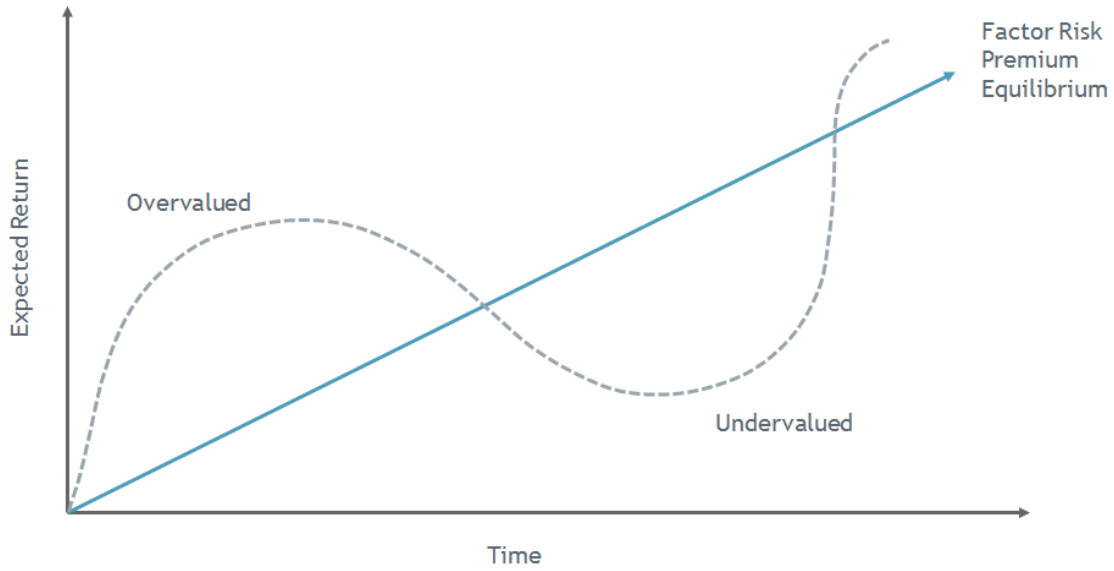
2.12. How will the active currency risk budget be used over time?

The use of active risk budgets within client mandates will be conditional on the investment team's conviction. This conviction varies through time, and is affected by a number of themes, including:

- The perceived investment opportunity of our four factor risk premia models, Carry, Value, Cycle, and Momentum.

As with an individual security or asset class, it is possible to identify a long-term equilibrium expected return to each of our four factor risk premia (Figure 11). Understanding where a factor is currently trading relative to its own intrinsic value can provide important insight into its expected performance in future periods. If the valuation of our combined factor portfolio is currently high—i.e. overvalued relative to equilibrium—the probability of a further increase becomes lower, as does the portfolio's expected return, and vice versa.

Figure 11 - Stylized Factor Risk Premium Through Time



- The level of investor risk appetite, which we gauge using a set of proprietary indicators, and fundamental assessment of the macroeconomic and market risk environment.

Factor risk premia tend to perform less well in periods of market stress. The conviction of our investment team will be commensurately lower during these periods, and so will active currency risk.

- The importance of idiosyncratic non-fundamental themes in determining expected currency returns.

Our investment process is built on the assumption that macroeconomic fundamentals are the primary determinants of currency returns. In periods when this is not the case, our investment process will be relatively unsighted, implying a commensurate reduction in investment conviction and active risk.

3. ACTIVE CURRENCY FULFILLMENT OPTIONS

3.1. Does an investor need to select the same manager for both passive and active currency hedging mandates?

No. The two mandates can be managed by the same manager, or by separate managers under separate Investment Management Agreements (IMAs). There is no inherent reason why passive hedging and active currency investing need to be connected. They have different objectives within a portfolio: one is a strategic decision focused exclusively on risk control; the other is part of a portfolio's Tactical Asset Allocation sleeve intended to generate an additional source of diversifying return.

3.2. Is my plan too small to access Active Currency?

No. This is a common misconception. There are many ways to access Active Currency. Smaller plans typically gain access through a capital allocation to a comingled pool, rather than an unfunded segregated account.

3.3. Is Active Currency relevant for DC plans?

Yes. Active Currency can be included in target date funds either as an overlay to core asset allocations or as a separate source of absolute return within a broader investment product offering.

We do not typically recommend that DC plans offer Active Currency as a standalone solution within the palette choice of plan participants. However, it could be considered an option for plans with a knowledgeable or sophisticated member profile.

3.4. If a plan selects an Active Currency mandate, how much risk should be allocated?

As with any risk allocation to an active investment strategy, plan sponsors should first determine the stand-alone and relative annualized risk-adjusted return they expect to realize from the mandate. They should also identify how returns generated by this mandate are expected to correlate with returns to other, active and strategic components of the plan. Active risk should only be allocated to an asset class—core or tactical—if it succeeds in competing for that allocation (Toner, 2011).

Plan sponsors should also ensure that selected risk and return parameters for the active currency mandate will allow it to make an economically significant, and proportionate, contribution to the overall goals and mission of the plan. Proportionality is often determined relative to active risk allocations to core assets, such as equities and bonds. For instance, a plan with a 4% annualized risk allocation to active equity strategies may consider allocating 1% annualized risk to an active currency mandate.[12]

CIBC AM has active currency clients with a myriad of benchmarks, risk and return objectives, and investment constraints. There is no 'one size fits all' solution. Some clients use Active Currency as an extension of their passive hedging program. The primary objective is to control currency risk, and clients typically realize a

[12] An alternative approach would be to define proportionality in relation to total, and not just active, core asset risk in a portfolio.

moderate positive return from currency hedging as a by-product. Active standalone annualized risk targets for this type of overlay mandate typically lie in a range of 0.5%-2.0%, and the expected annual Value-Add will be between 25bps-100bps.[13]

A second client group considers Active Currency to be a liquid Alternative asset class. Risk is allocated to a standalone, Absolute Return mandate whose exposures are unconnected to the underlying asset exposures in the portfolio. Annualized risk targets for this type of mandate typically lie in a range of 2%-3%, implying an expected annual return from Active Currency of 1%-1.5%. This type of currency mandate does not consume available portfolio risk capital; it is an unfunded strategy implemented via exchange rate forward contracts.

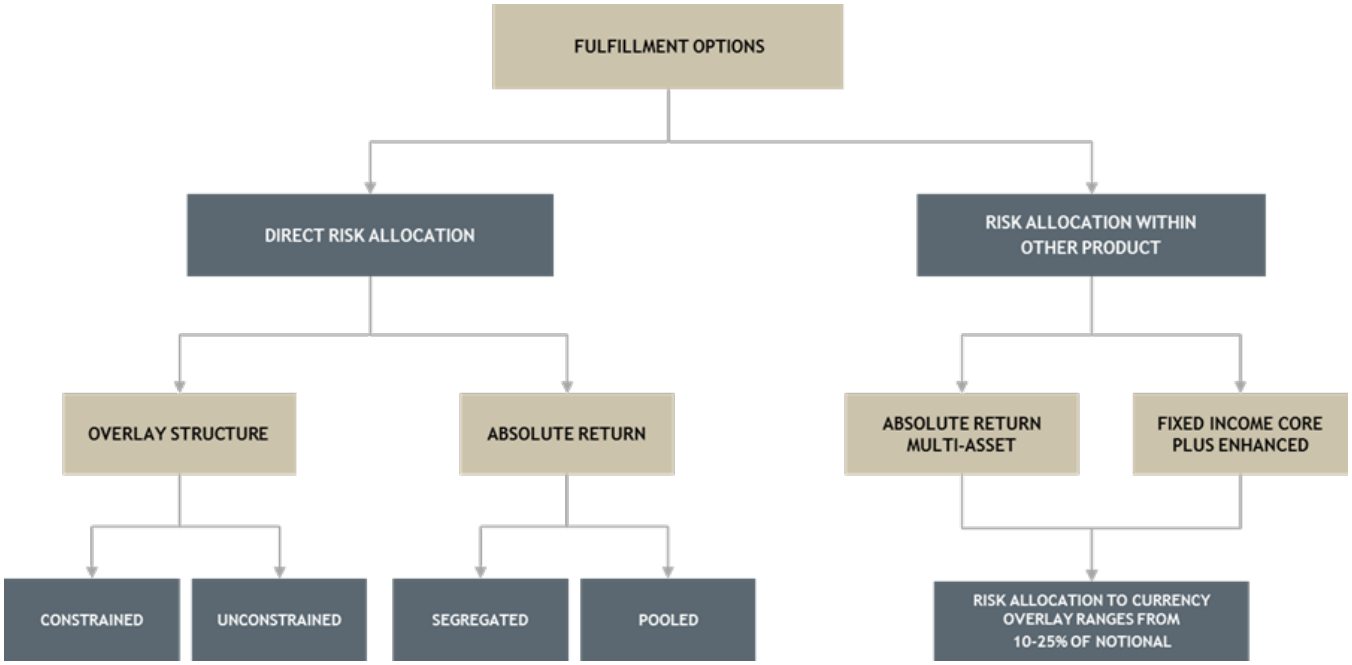
A third client group allocates to funded pooled vehicles that target a larger absolute return from active currency, in the region of 6% per annum, and allocate commensurately more risk (12% annualized risk).

3.5. What are the different Active Currency fulfillment options?

An active currency mandate can be implemented to accommodate different return and risk objectives, investment constraints, preferred investment style—relative to, or agnostic of, underlying benchmarks—as well as differences in plan investment resources and assets under management (Figure 12).

As with all investment mandates, a less constrained implementation affords managers more opportunity to generate risk-adjusted returns. In the following sub-sections, we walk through the various implementation options.

Figure 12 – Active Currency Mandate Fulfillment Options



Source: CIBC Asset Management Inc.

[13] CIBC AM assumes an expected Information Ratio for its active currency strategy of 0.5. This is consistent with our long-term historical performance.

3.5.1. A constrained overlay tied to exposures in the underlying portfolio.

The magnitude of permissible long and short active currency positions is linked to the underlying portfolio assets. Constrained currency overlay mandates are most commonly tied to equity exposures, but can equally be applied to bond exposures—for instance, by overlaying a Core Plus mandate—other asset classes, or across all foreign assets and liabilities of an investor. The return or risk target associated with a Fixed Income overlay will typically be lower, reflecting the lower expected return associated with underlying Fixed Income allocations. Other design features of the overlay will be identical.

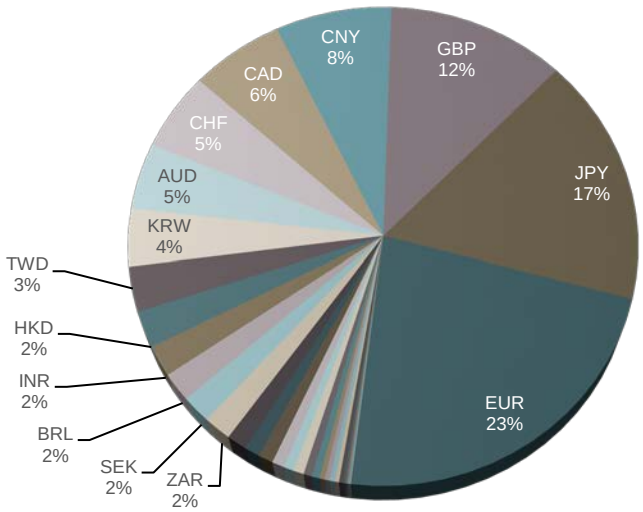
The opportunity to add value from a constrained overlay mandate is limited. Figure 13 highlights the example of an equity investor with a USD base perspective, and an MSCI All Country World ex-US benchmark. With a strategic currency hedge ratio of 50%, the maximum permissible active long or short currency exposure in this mandate will typically be no greater than 1%-2% of the mandate notional value for most currencies, reflecting their small weight in the benchmark. This makes it difficult for an active currency manager to express high conviction views, and to generate returns outside of the major four currencies (USD, EUR, JPY, and GBP).

3.5.2. An unconstrained, unfunded overlay on top of the underlying portfolio (or some part of it), but not tied to exposures in the underlying portfolio.

Unconstrained active currency mandates allow a manager the opportunity to add a diversifying source of return to portfolios by expressing the best ideas of its investment process commensurate to the level of investment conviction.

The currency manager can take active positions in a broad set of currencies to maximize the risk-adjusted expected return of the strategy. Long and short positions will typically be symmetrical, and exposure limits will be dictated by efficient portfolio construction considerations; these limits will often be +/-100% of currency mandate notional AUM for the most liquid DM currencies, and +/-50% in EM currencies.

Figure 13 – MSCI ACWI ex. US Country Weights



Source: MSCI as at September, 2018. Unlabeled country weights represent 7% of the overall Investment Universe.

3.5.3. A standalone, fully funded and unconstrained risk sleeve.

For instance, as an allocation to a commingled vehicle, such as the CIBC Asset Management Global Active Currency Pool. This fulfillment option most likely appeals to plan sponsors who have limited internal investment resources, or relatively low AUM, but who nonetheless want to make an allocation to an active currency program.

3.5.4. An allocation to Active Currency within a broader investment vehicle combining a mix of active strategies, or passive and active strategies.

This can include a Liquid Alternative Absolute Return multi-asset strategy that encompasses active risk allocations to a range of asset classes, including active currency. Active currency will typically contribute around 25% of total risk within such strategies over the course of rolling 3-year periods.

Similarly, Active Currency can form part of active LDI or Core Plus Enhanced Fixed Income strategies that seek to generate additional return from opportunistic allocations to Active Currency, and other active overlay strategies, as a complement to the core liability-matching function of the underlying product.

4. CONCLUSION

Active currency investing is often misunderstood and overlooked. In this paper, we determined that Active Currency is a liquid Alternative investment strategy offering skilled investors positive expected returns that diversify exposures to both core and other Alternative asset classes. Active currency returns can be accessed through a range of fulfilment options relevant to both large and small investment plans. These features make Active Currency an attractive addition to investment portfolios, particularly in the current environment of low expected returns for core asset classes.

CIBC Asset Management has a long history of successfully implementing impactful and customized active currency solutions for investors with a variety of risk and return objectives, portfolio AUMs, and investment constraints.

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