Adrian Lee & Partners

ACTIVE ASSET AND CURRENCY MANAGEMENT

Currency for Institutional Investors

Contents

- Internationally diversified portfolios have an equal exposure to currency as to assets.
- Historically, currency risk is significant.
- Expected long-run return to passive currency is about half of the forward rate bias; this is the International Risk Premium.
- Currency return is not systematically related to asset return.
- Currency is driven by different economic fundamentals than those that drive assets.
- Currency markets are not efficient, and therefore can be managed actively to add long term return to international portfolios.
- Investors should separately manage these exposures to add return and manage risk.

Currency exposure – risk, an illustration

ACTIVE ASSET AND CURRENCY MANAGEMENT

Portfolio

	Weight
Domestic Bonds	15%
International Bonds	5%
Domestic Equity	35.0%
International Equity	25.0%
Real Estate	10.0%
Alternative	7.0%
Cash	3.0%

= foreign asset

Regional Currency Exposures

Northern Europe	12.8
EMEA	0.6
Emerging Asia	6.3
LatAm	0.6

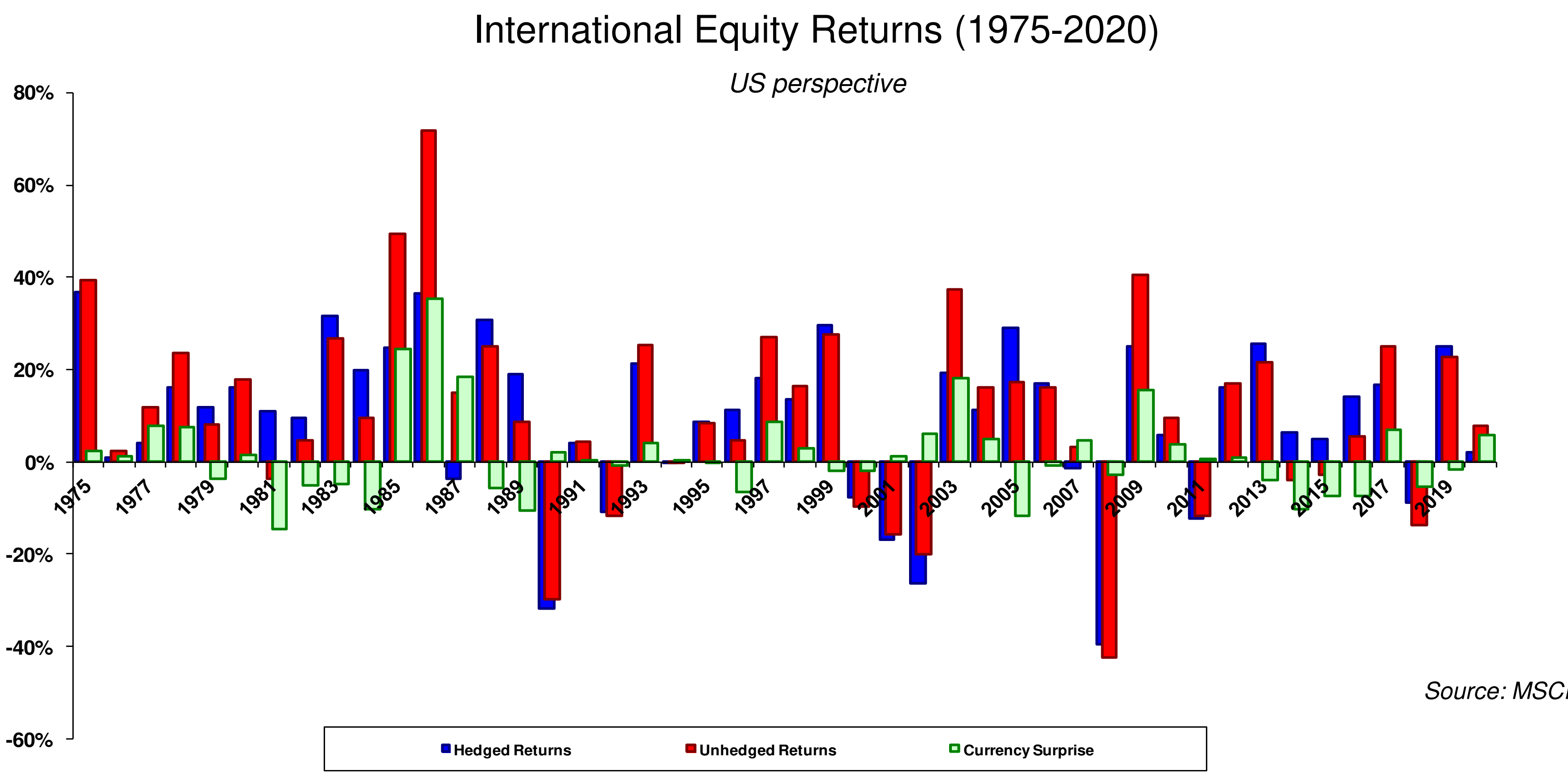
Total Developed	22.5
Total Emerging	7.5
Total Foreign Currency	30.0

	Typical Exposures (%)	Currency Risk (%)
USD	-	-
JPY	18.9%	9.3%
EUR	25.9%	9.6%
GBP	9.6%	10.5%
CHF	5.1%	10.3%
CAD	5.8%	9.5%
AUD	4.3%	13.0%
SEK	1.8%	11.2%
NOK	0.3%	11.6%
NZD	0.2%	13.9%
SGD	0.5%	5.8%
CZK	0.0%	11.9%
HUF	0.1%	14.3%
ILS	0.3%	8.1%
PLN	0.2%	13.7%
RUB	0.8%	15.3%
ZAR	0.9%	16.2%
TRY	0.1%	15.1%
CNY	10.2%	5.0%
IDR	0.3%	9.7%
INR	2.4%	8.3%
KRW	3.5%	8.9%
MYR	0.4%	7.4%
PHP	0.2%	5.8%
THB	0.5%	6.0%
TWD	3.3%	4.9%
BRL	1.3%	16.1%
CLP	0.1%	12.0%
COP	0.1%	14.2%
MXN	0.5%	11.7%
PEN	0.1%	5.6%
Other	2.3%	10.0%
	100%	6.3%

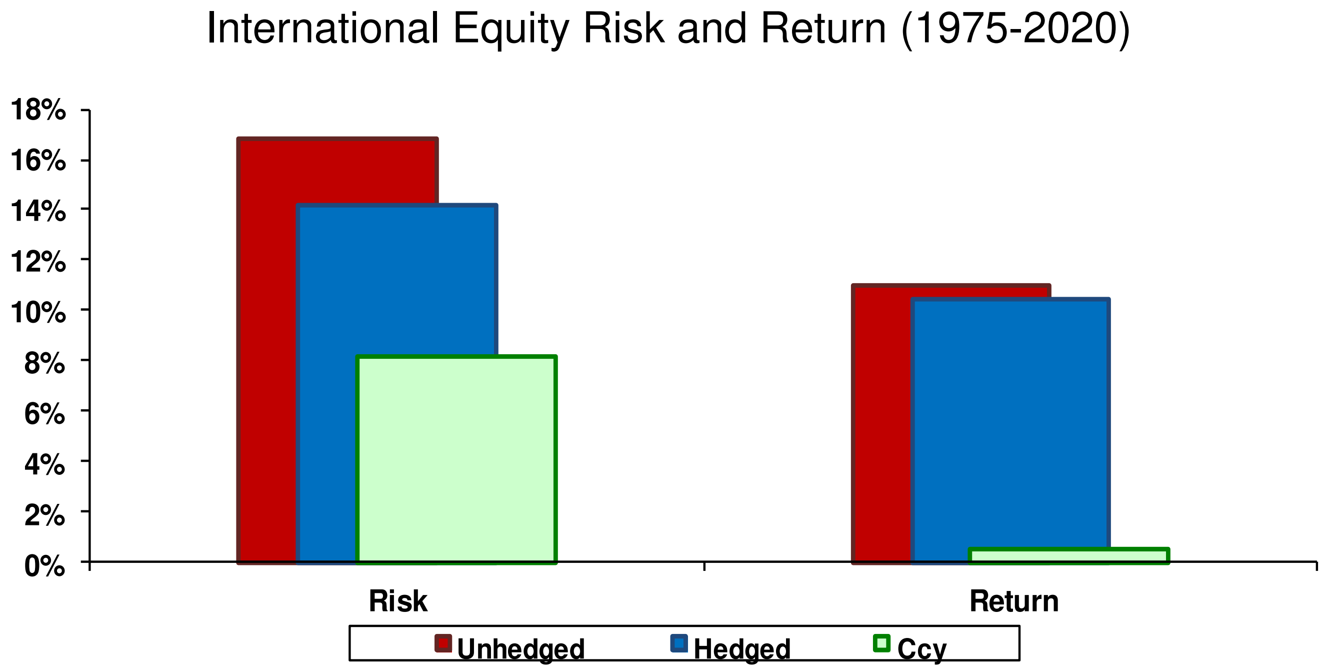
Proxies: stocks, MSCI ACWI ex US; bonds, JPM GBI Global ex US as at 31st Dec 2020

Total Portfolio Risk due to 30% Foreign Currency Exposure
1.9%

International returns significantly impacted by currency



In the long run, currency has virtually no return, high risk, and low correlation with equity



Source: MSCI

- Hedged equity and currency correlation: 0.06

Currency markets are driven by different fundamentals than asset markets

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Equity market drivers:
Local asset yields
Corporate earnings growth
Dividend yields
Domestic growth

Bond market drivers:
Local monetary policy
Inflation expectations
Credit spread
Local real yields

Currency market drivers:
Relative price levels
Relative quality of traded goods
Relative expected return on assets

Currency has low correlation with assets

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Correlation Between Equity Markets and Currency (2002 – 2020)

	JPY	EUR	GBP	CHF	CAD	AUD	SEK	NOK	NZD	SGD	CZK	HUF	ILS	PLN	RUB	ZAR	TRY	CNY	IDR	INR	KRW	MYR	PHP	THB	TWD	BRL	CLP	COP	MXN	PEN
Japan	-0.50																													
Europe	-0.25	0.18																												
UK	-0.17	0.23	0.08																											
Switzerland	-0.33	0.07	0.18	-0.16																										
Canada	-0.15	0.30	0.35	0.16	**0.54**																									
Australia	-0.19	0.21	0.24	0.10	0.41	0.41																								
Sweden	-0.29	0.09	0.18	0.00	0.35	0.37	0.16																							
Norway	-0.20	0.26	0.33	0.13	**0.51**	**0.51**	0.33	0.39																						
New Zealand	-0.10	0.10	0.16	0.01	0.27	0.24	0.21	0.23	0.19																					
Singapore	-0.14	0.30	0.37	0.17	**0.58**	**0.57**	0.39	0.40	**0.52**	0.47																				
Czech Republic	-0.11	0.22	0.26	0.10	0.42	0.45	0.30	0.37	0.33	0.35	0.27																			
Hungary	-0.15	0.28	0.29	0.13	0.48	0.50	0.37	0.43	0.42	0.42	0.32	0.45																		
Israel	-0.20	0.07	0.19	0.02	0.31	0.34	0.14	0.16	0.31	0.15	0.11	0.16	0.19																	
Poland	-0.13	0.24	0.22	0.12	0.43	0.47	0.34	0.36	0.34	0.40	0.26	0.38	0.25	0.48																
Russia	-0.06	0.37	0.39	0.29	**0.55**	**0.56**	0.46	0.47	0.47	0.43	0.40	0.46	0.28	**0.50**	0.39															
South Africa	-0.03	0.32	0.26	0.20	0.43	0.48	0.39	0.39	0.38	0.43	0.34	0.34	0.24	0.42	0.30	0.23														
Turkey	-0.12	0.15	0.20	0.03	0.41	0.42	0.22	0.24	0.31	0.27	0.20	0.28	0.23	0.34	0.23	0.44	0.50													
China	-0.09	0.44	0.44	0.31	**0.57**	**0.64**	0.46	0.45	**0.55**	**0.54**	0.40	0.45	0.30	**0.51**	0.40	0.48	0.35	0.24												
Indonesia	0.00	0.36	0.26	0.29	0.43	**0.55**	0.43	0.42	0.46	0.45	0.39	0.42	0.28	0.45	0.27	0.44	0.49	0.14	**0.58**											
India	-0.10	0.29	0.26	0.17	0.48	0.49	0.34	0.33	0.41	0.38	0.28	0.35	0.30	0.38	0.24	0.39	0.36	0.09	0.45	**0.53**										
Korea	-0.12	0.19	0.24	0.09	0.46	0.48	0.31	0.33	0.40	0.38	0.23	0.25	0.30	0.38	0.31	0.35	0.38	0.19	0.39	0.35	0.39									
Malaysia	-0.07	0.26	0.32	0.16	0.43	0.48	0.29	0.35	0.38	0.38	0.24	0.35	0.23	0.38	0.27	0.36	0.36	0.11	0.36	0.37	0.34	0.37								
Philippines	-0.11	0.15	0.17	0.09	0.33	0.38	0.23	0.24	0.33	0.26	0.16	0.24	0.21	0.29	0.24	0.29	0.30	0.13	0.36	0.36	0.25	0.29	0.35							
Thailand	-0.05	0.36	0.32	0.32	**0.53**	**0.60**	0.42	0.44	0.49	0.48	0.37	0.43	0.34	0.42	0.35	0.49	0.41	0.12	0.49	0.39	0.39	0.38	0.38	**0.52**						
Taiwan	-0.13	0.29	0.28	0.21	0.46	**0.53**	0.35	0.36	0.48	0.39	0.30	0.33	0.27	0.41	0.32	0.34	0.28	0.16	0.36	0.40	0.42	0.34	0.22	0.33	0.47					
Brazil	0.01	0.39	0.35	0.23	**0.62**	**0.61**	0.44	**0.52**	0.49	0.50	0.41	0.46	0.32	**0.52**	0.46	**0.55**	0.43	0.17	0.43	0.37	0.36	0.43	0.30	0.44	0.40	**0.59**				
Chile	-0.12	0.23	0.30	0.12	0.41	0.43	0.29	0.37	0.35	0.33	0.26	0.32	0.27	0.34	0.31	0.36	0.35	0.15	0.35	0.37	0.28	0.32	0.23	0.34	0.30	0.48	0.33			
Colombia	0.02	0.31	0.29	0.18	0.40	0.40	0.32	0.38	0.37	0.39	0.33	0.38	0.22	0.35	0.29	0.41	0.39	0.12	0.39	0.27	0.27	0.30	0.25	0.33	0.27	0.31	0.34	0.43		
Mexico	-0.04	0.32	0.24	0.18	**0.51**	0.50	0.36	0.35	0.41	0.41	0.32	0.39	0.32	0.46	0.34	0.43	0.44	0.12	0.43	0.33	0.39	0.34	0.28	0.36	0.37	0.44	0.42	0.50	0.45	
Peru	0.15	0.46	0.32	0.35	**0.61**	**0.66**	0.49	**0.53**	**0.57**	**0.58**	0.43	0.44	0.27	0.47	0.40	**0.50**	0.38	0.21	0.45	0.39	0.44	0.45	0.35	0.50	0.39	**0.51**	0.43	0.49	0.40	0.31

Correlation > 0.5

Correlation of monthly local returns of MSCI country indices and currency

Three separate currency policy decisions are required of a plan sponsor – explicit vs. implicit

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1. The amount of long-run, strategic, currency exposure in the portfolio?

- Unhedged
- Partially hedged
- Fully hedged
- Option hedged

2. Active or passive currency management?

3. Who is responsible for managing currency?

- Underlying asset manager
- Specialist currency manager

Status quo: unhedged and actively managed by international equity manager

Decision 1: Strategic currency exposure

Total portfolio asset allocation methodology is appropriate

Total Portfolio

	Weight
Domestic Bonds	**15%**
International Bonds	**5%**
Domestic Stocks	**35.0%**
International Stocks	**25.0%**
Real Estate	**10.0%**
Alternative	**7.0%**
Cash	**3.0%**

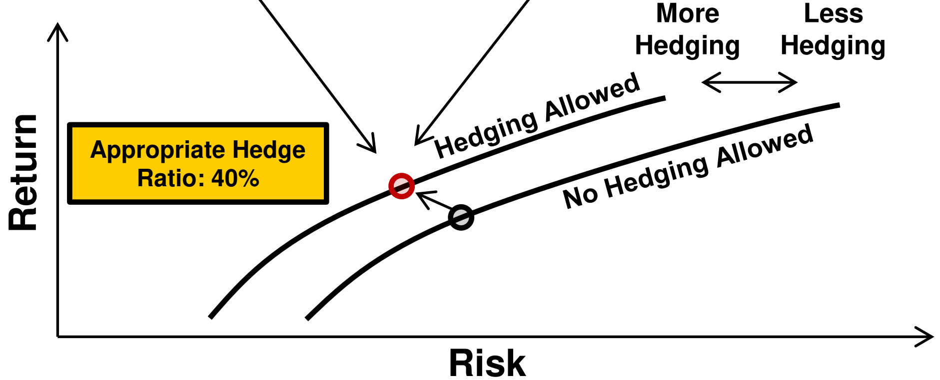
= foreign asset

Investor Expectations

	Return	Risk	Correlation						
Domestic Bonds	4.0%	4.0%	1.00						
International Bonds	4.2%	4.5%	0.60	1.00					
Domestic Stocks	8.0%	16.0%	0.00	000	1.00				
International Stocks	8.5%	17.0%	0.00	0.00	0.80	1.00			
Real Estate	6.0%	12.0%	-0.15	-0.15	0.10	0.10	1.00		
Alternative	9.0%	19.0%	0.00	0.00	0.40	0.40	0.00	1.00	
Cash	1.5%	0.5%	0.10	0.10	0.00	0.00	0.00	0.00	1.00
Foreign Currency	0.0%	8.0%	0.10	0.00	0.00	0.00	0.00	0.00	0.00

Investor risk appetite inferred from portfolio construction

Effect of strategic currency exposure on total portfolio judged using investor expectations



Decision 2: Active versus passive currency management – the case for active

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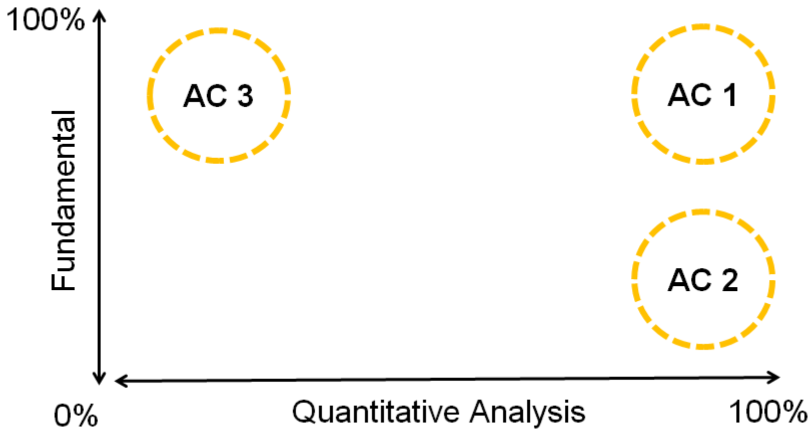
Theory:	Conditions for efficiency <u>do not</u> exist - not many buyers and sellers - no common information - no common objectives - barriers to entry exist
Academic evidence:	Several approaches have been shown to consistently produce abnormal returns - differences in inflation - differences in interest rates - technicals
Proprietary	Adrian Lee & Partners' performance and research confirms active management works. Other experienced managers' track records show high excess return

AL&P Investment Process

AL&P diversifies its approach to positioning through its three Alpha Centres



- **AC1** takes a proven **fundamental** quantitative approach
- **AC2** is our proven **trend** following model
- **AC3** is our diversified **discretionary** strategy of team members based on our economic outlook

Decision 3: Who is responsible for managing currency?
- the case for a currency specialist

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Assets and currencies are driven by different fundamentals and need to be managed separately

Currency is severely under managed by most international equity managers

- Traditionally, asset managers invest equally in assets and the associated currency
- Even the best asset managers are unlikely to be currency specialists as well

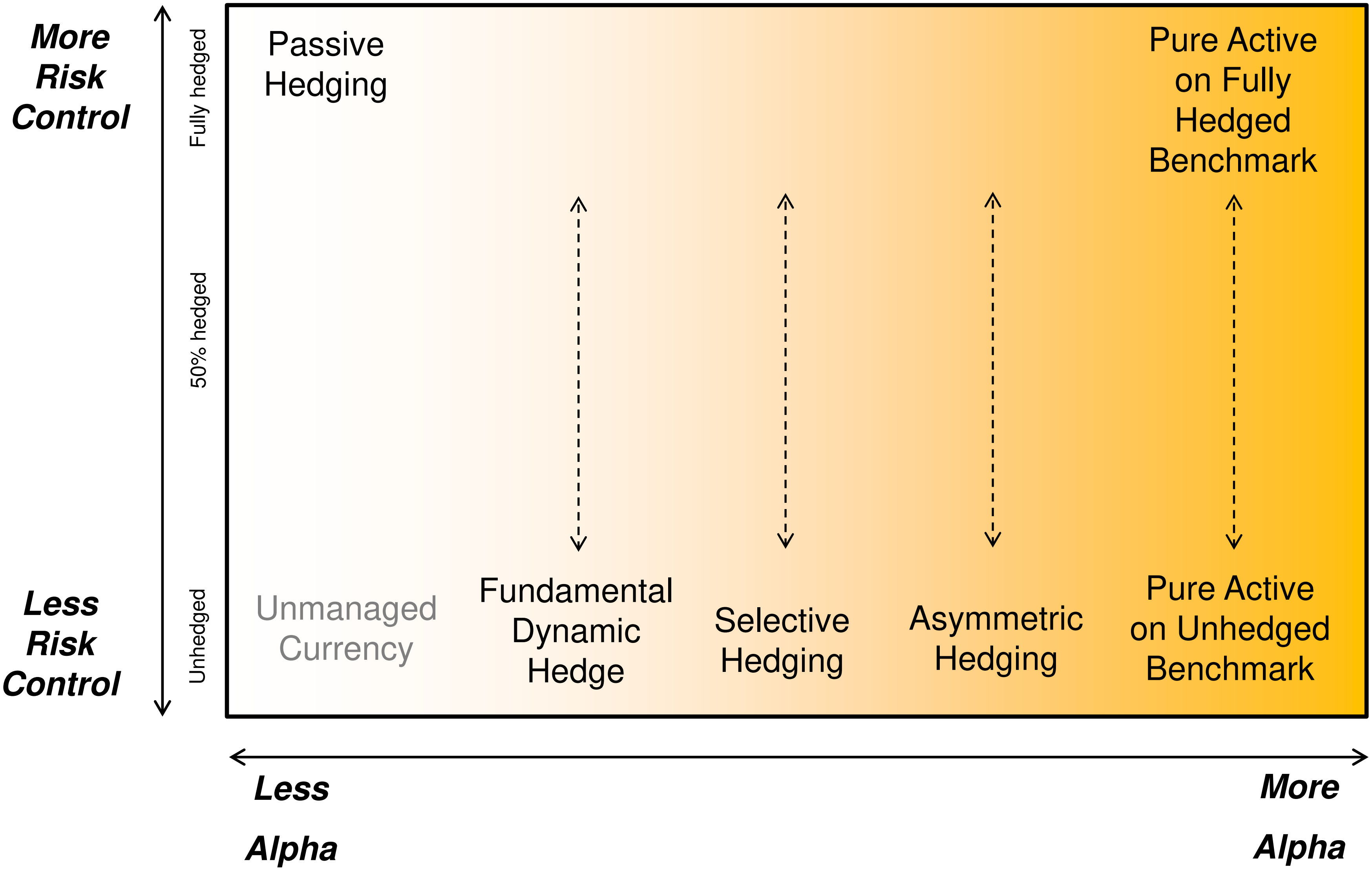
Currency overlay – a logical specialist activity

- Separates the two decisions and allows the "best of both worlds"
- Adds return from currency and controls currency risk
- Has no impact on underlying manager activity

The performance of all international portfolios can be enhanced by the use of a currency overlay specialist

If no decision is taken on currency management, responsibility defaults to the underlying asset manager

Range of currency management approaches



Managing currency risk – alternative approaches to unhedged benchmark. Scenario A: bullish US dollar

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	Asset Exposures (%)	50% Hedge	Net	Pure Alpha (11th October 2016)	Net	Asymmetric Hedging* ($ based)	Net	Selective Hedging	Net
USD	0.0	50.0	50.0	16.0	16.0	22.7	22.7	30.8	30.8
JPY	18.9	-9.4	9.4	-8.6	10.3	-8.7	10.2	-8.6	10.3
EUR	25.9	-13.0	13.0	-4.7	21.3	-5.4	20.5	-4.7	21.3
GBP	9.6	-4.8	4.8	-4.7	4.9	-4.8	4.8	-4.7	4.9
CHF	5.1	-2.5	2.5	-5.0	0.0	-5.3	-0.2	-5.0	0.0
CAD	5.8	-2.9	2.9	-1.9	4.0	-1.9	3.9	-1.9	4.0
AUD	4.3	-2.1	2.1	-0.8	3.4	-1.1	3.2	-0.8	3.4
SEK	1.8	-0.9	0.9	-1.6	0.2	-1.6	0.2	-1.6	0.2
NOK	0.3	-0.2	0.2	-2.4	-2.1	-2.4	-2.1	-0.3	0.0
NZD	0.2	-0.1	0.1	-1.7	-1.5	-2.5	-2.3	-0.2	0.0
SGD	0.5	-0.3	0.3	-2.1	-1.5	-2.1	-1.5	-0.5	0.0
ILS	0.0	0.0	0.0	-1.9	-1.9	-1.9	-1.9	0.0	0.0
CZK	0.1	0.0	0.0	-1.4	-1.4	-1.8	-1.7	-0.1	0.0
HUF	0.3	-0.2	0.2	-0.5	-0.2	-0.9	-0.5	-0.3	0.0
PLN	0.2	-0.1	0.1	0.2	0.4	0.2	0.4	0.0	0.2
RUB	0.8	-0.4	0.4	4.0	4.8	3.5	4.3	0.0	0.8
ZAR	0.9	-0.5	0.5	3.5	4.4	3.3	4.2	0.0	0.9
TRY	0.1	0.0	0.0	1.7	1.8	1.6	1.7	0.0	0.1
CNY	10.2	-5.1	5.1	-0.6	9.6	-0.6	9.6	-0.6	9.6
IDR	0.3	-0.2	0.2	1.7	2.0	1.2	1.6	0.0	0.3
INR	2.4	-1.2	1.2	5.3	7.7	4.5	7.0	0.0	2.4
KRW	3.5	-1.8	1.8	-1.0	2.5	-2.0	1.5	-1.0	2.5
MYR	0.4	-0.2	0.2	0.8	1.2	0.8	1.2	0.0	0.4
PHP	0.2	-0.1	0.1	-1.9	-1.7	-2.3	-2.1	-0.2	0.0
THB	0.5	-0.2	0.2	2.0	2.5	2.0	2.4	0.0	0.5
TWD	3.3	-1.7	1.7	-0.3	3.0	-0.8	2.6	-0.3	3.0
BRL	1.3	-0.7	0.7	2.7	4.0	2.5	3.9	0.0	1.3
CLP	0.1	-0.1	0.1	0.0	0.1	-0.1	0.1	0.0	0.1
COP	0.1	0.0	0.0	1.6	1.6	2.3	2.4	0.0	0.1
MXN	0.5	-0.2	0.2	1.6	2.0	1.3	1.8	0.0	0.5
PEN	0.1	0.0	0.0	0.2	0.2	0.1	0.2	0.0	0.1
Other	2.3	-1.2	1.2	0.0	2.3	0.0	2.3	0.0	2.3
Risk	**7.3**	**3.6**	**3.6**	**2.0**	**6.4**	**2.2**	**5.8**	**2.2**	**5.1**

* USD may not be net short, may not exceed 100%

Asset exposures as on page 3

Managing currency risk – alternative approaches to unhedged benchmark. Scenario B: bearish US dollar

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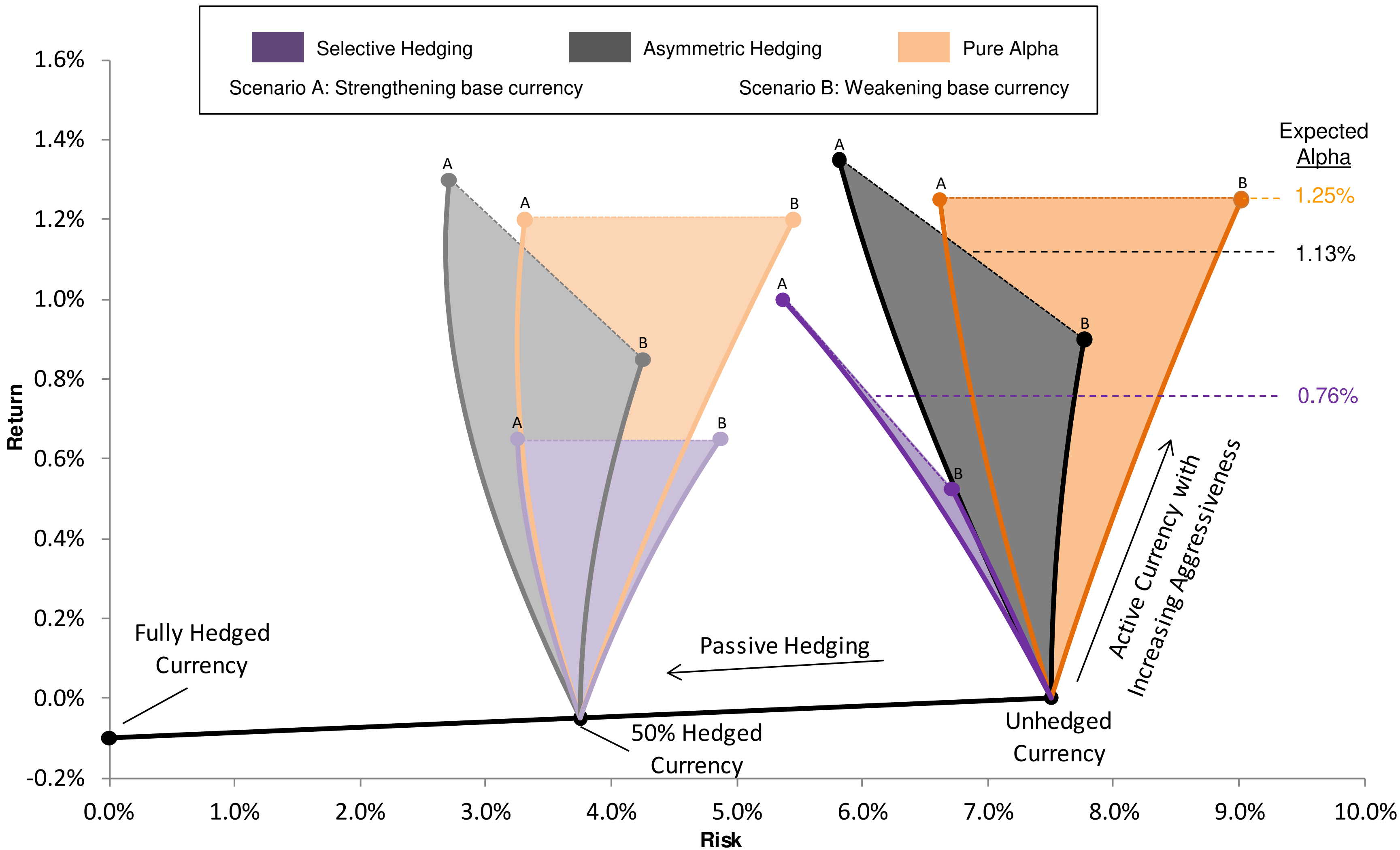
	Asset Exposures (%)	50% Hedge	Net	Pure Alpha (1st November 2013)	Net	Asymmetric Hedging* ($ based)	Net	Selective Hedging	Net
USD	0.0	50.0	50.0	-13.6	-13.6	0.0	0.0	13.6	13.6
JPY	18.9	-9.4	9.4	-9.2	9.7	-9.6	9.3	-9.2	9.7
EUR	25.9	-13.0	13.0	0.4	26.3	-0.3	25.6	0.0	25.9
GBP	9.6	-4.8	4.8	1.2	10.8	0.8	10.4	0.0	9.6
CHF	5.1	-2.5	2.5	-3.1	2.0	-3.5	1.6	-3.1	2.0
CAD	5.8	-2.9	2.9	-0.3	5.5	-0.6	5.2	-0.3	5.5
AUD	4.3	-2.1	2.1	1.3	5.6	0.7	5.0	0.0	4.3
SEK	1.8	-0.9	0.9	-0.2	1.6	-0.5	1.3	-0.2	1.6
NOK	0.3	-0.2	0.2	0.0	0.3	-0.3	0.0	0.0	0.3
NZD	0.2	-0.1	0.1	-0.8	-0.7	-0.9	-0.8	-0.2	0.0
SGD	0.5	-0.3	0.3	-1.6	-1.0	-2.0	-1.4	-0.5	0.0
ILS	0.0	0.0	0.0	-1.3	-1.3	-1.7	-1.7	0.0	0.0
CZK	0.1	0.0	0.0	-2.1	-2.0	-2.3	-2.2	-0.1	0.0
HUF	0.3	-0.2	0.2	0.4	0.7	0.0	0.4	0.0	0.3
PLN	0.2	-0.1	0.1	1.4	1.6	1.0	1.2	0.0	0.2
RUB	0.8	-0.4	0.4	1.2	2.0	0.7	1.4	0.0	0.8
ZAR	0.9	-0.5	0.5	2.4	3.3	1.9	2.9	0.0	0.9
TRY	0.1	0.0	0.0	2.0	2.1	1.5	1.5	0.0	0.1
CNY	10.2	-5.1	5.1	1.2	11.5	0.7	10.9	0.0	10.2
IDR	0.3	-0.2	0.2	2.1	2.5	1.7	2.1	0.0	0.3
INR	2.4	-1.2	1.2	3.8	6.2	3.1	5.6	0.0	2.4
KRW	3.5	-1.8	1.8	2.1	5.6	1.6	5.1	0.0	3.5
MYR	0.4	-0.2	0.2	0.0	0.4	-0.4	0.0	0.0	0.4
PHP	0.2	-0.1	0.1	1.6	1.8	1.0	1.2	0.0	0.2
THB	0.5	-0.2	0.2	1.9	2.4	1.3	1.8	0.0	0.5
TWD	3.3	-1.7	1.7	0.4	3.8	-0.1	3.2	0.0	3.3
BRL	1.3	-0.7	0.7	5.1	6.4	4.3	5.6	0.0	1.3
CLP	0.1	-0.1	0.1	0.8	0.9	0.4	0.5	0.0	0.1
COP	0.1	0.0	0.0	0.3	0.3	-0.1	0.0	0.0	0.1
MXN	0.5	-0.2	0.2	1.5	1.9	1.1	1.5	0.0	0.5
PEN	0.1	0.0	0.0	1.1	1.1	0.4	0.5	0.0	0.1
Other	2.3	-1.2	1.2	0.0	2.3	0.0	2.3	0.0	2.3
Risk	**7.3**	**3.6**	**3.6**	**2.3**	**8.6**	**1.6**	**7.6**	**1.1**	**6.6**

* USD may not be net short, may not exceed 100%

Asset exposures as on page 3

Effect of active and passive currency management



Benefits of a currency specialist

1. Higher return and lower volatility from currency
2. Clear delegation of responsibility to a specialist
3. Better execution of currency
4. Better credit risk distribution
5. Better performance measurement

Appendix – How currency overlay works in practice

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ACTIVE ASSET AND CURRENCY MANAGEMENT

- Separate account set up, no funding necessary
- Trade forward exchange contracts with counterparty in name of client
- Cash flow at settlement (e.g. 6 months, tailored dates)
- Any strategic benchmark possible e.g. 0%, 50%,100% hedge
- Any level of active management can be combined with any benchmark – risk control gratis
- Guidelines can be tailored to allow symmetric or asymmetric alpha and beta patterns
- Weekly reporting of positions, performance and expected cash flow

Appendix – Optimal currency weight

- The optimal weighting, **w**, for active currency is:

$$w = \frac{2V_p p\alpha - 2p^2 Cov(p, \alpha)}{p^2 V_\alpha - \alpha^2 V_p}$$

Where,

α = expected return to currency alpha
V_α = variance of currency alpha
p = expected return to portfolio without currency alpha
V_p = variance of portfolio without currency alpha

- This means that the active currency weight should be greater than zero if the correlation between currency alpha and the portfolio, **ρ** is:

$$\rho < \frac{\frac{\alpha}{\sqrt{V_\alpha}}}{\frac{p}{\sqrt{V_p}}}$$

E.g., if,

currency IR = portfolio IR

then currency alpha is appropriate when,

ρ < 1

Appendix – Correlation of pure alpha with assets

	Correlation of Monthly Returns (1994 – 2020)
	Pure Alpha
Domestic Fixed Income	0.01
International Fixed Income (Unhedged)	-0.12
Domestic Equity	0.26
International Equity (Unhedged)	0.27
Domestic Real Estate*	0.05

** Correlation of Quarterly Returns*

Proxies: Dom FI, Barclays US Agg; Int.FI, Barclays Global Agg Ex US; Dom. Equity, Russell 3000; Int. Equity, MSCI World ex US; Dom. Real Estate, US NCREIF Index

- **What is currency overlay?**

Currency overlay refers to the specialised management of currency exposures inherent in an international asset portfolio, by a separate firm or entity from the asset manager.

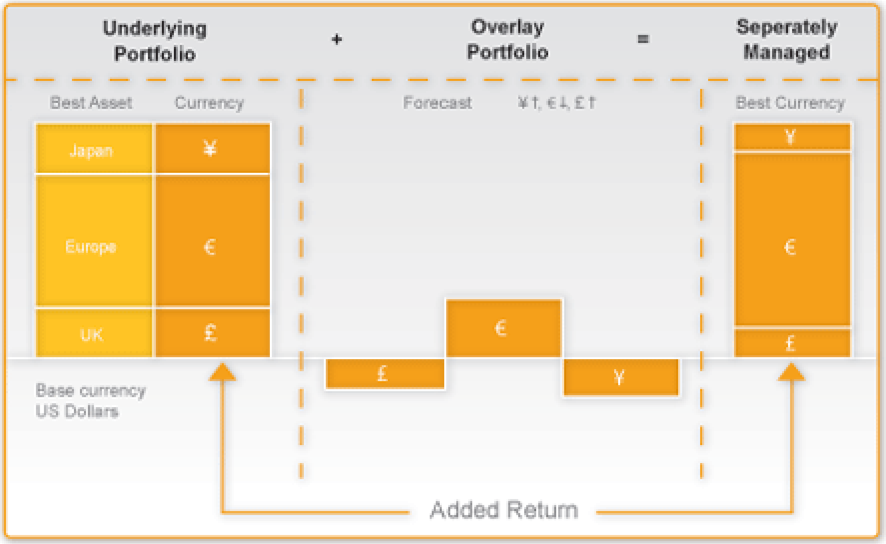
Every investment in an international asset requires an equal investment in foreign currency. A currency overlay manager is dedicated exclusively to managing these 'accidental' currency exposures generated by the asset manager, separately from, but in parallel with, the underlying asset manager.

The underlying asset manager is not disturbed by the use of an overlay manager, and still manages currencies in the same manner as before. However, the overlay manager replaces the currency bets of the underlying manager with the deliberate investment position of the specialist overlay manager.

The resulting combination of managers facilitates the optimal combination - best currency decisions from the currency specialist, and best asset decisions from the asset manager.

A currency overlay programme usually reduces pre-existing unmanaged currency risk, as it hedges pre-existing exposures.

What is currency overlay? (continued)



<u>How it works</u>

Through the application of a portfolio of forward contracts, known as the overlay portfolio, the underlying currency exposure of the assets is altered to a deliberately intended portfolio of currency exposures. This separately managed currency exposure can be expected to have a higher return than the original set of exposures, generated accidentally by the asset manager.

<u>In Practice</u>

Custodian sends currency exposure to overlay manager regularly.

Overlay manager enters forward currency contracts in client's name.

Custodian settles contracts upon instruction of overlay manager.

Client provides any cash needed at settlement.

Frequently asked questions

- **I consider investing in currencies as speculation. We are long-term investors and this is not our policy**.

Currency exposure from an unleveraged overlay program never exceeds the unmanaged exposures, and never goes below zero. It cannot be speculation if it is reducing an existing portfolio risk.

- **My underlying manager favours 'naturally hedged' assets, so the currency exposure is already hedged.**

Individual assets may be naturally hedged, but the portfolio of assets denominated in each currency is not. A natural hedge means that there is a big negative correlation between the asset and the currency, this has rarely been observed. Also, correlations are volatile and natural hedges often fail. It is a risk to consider the portfolio hedged.

- **My equity manager includes currency in his investment process, so why do I need overlay?**

The answer here is one of who is the most appropriate. Ask the equity manager the following three questions:

What is your currency benchmark?

What is the currency investment process?

What has been the currency performance?

Also, ask an equity manager the following two questions:

How much can currency impact on the portfolio?

Who is responsible for these impacts?

- **An overlay program adds too much complication from an administrative side.**

Contrary to popular opinion, overlay programs are relatively simple to establish and maintain.

The majority of funds choose to have their master custodian collate the data from each of their individual asset managers, and then forward the cumulative data to the overlay manager. These data can be forwarded as frequently as the custodian is confident that the data are correct, but it is recommended that the reporting frequency be no less than monthly.

Any strategy positions are implemented through the use of currency forward contracts. At the inception of the account a 'rollover date' is chosen for the account, which is typically 3 months in the future. All currency trades on the account will settle on that date, which means that only one cash flow takes place on the account.

- **What are the most common ways of dealing with cash flows that arise when forwards settle?**

While not absolutely necessary, many clients set aside a cash pool of typically 5% of the value of the net value of the outstanding forward contracts to deal with any cash flows that may arise.

Until the cash flow is realised, the cash pool is equitised with futures, ensuring that the funds earn an appropriate return. The level of cash within the account fluctuates with the cash flow of the overlay account. If the level of cash within the corridor account falls below 3% of the portfolio, it must be replenished to the 5% level.

Conversely, if the cash level rises above 8%, the client can withdraw funds down to the 5% level. Alternatively, clients can also leave standing instructions for the custodian to sweep cash in and out of a STIF account (a cash-type account used to settle transactions) to fund currency gains and losses. Instructions are confirmed 3 days in advance between manager and custodian.

Frequently asked questions

- **Why don't all funds run overlay programs?**

Eventually they will!

The advisability of running an overlay program depends to a large extent on the size of the international portion of the fund. As a rule of thumb, we would advocate that funds consider an overlay program if the size of their international exposure is over US$100 million or equivalent, or accounts for over 10% of their total portfolio. Smaller funds tend to find that the required investment of time and expertise in running an overlay program does not reap sufficient rewards to justify the investment, however each fund should evaluate this from their own perspective.

- **What is the size of the overlay industry?**

Although there are no official figures available, it is estimated that there is currently US$100 billion overlaid in the United States alone.

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