



CAMRADATA

funds europe

Emerging Markets Seminar

Coming of Age

13th September 2018



Welcome

Sean Thompson
Managing Director, CAMRADATA



CAMRADATA

funds europe

Event Sponsors . . .



Long-term growth opportunities

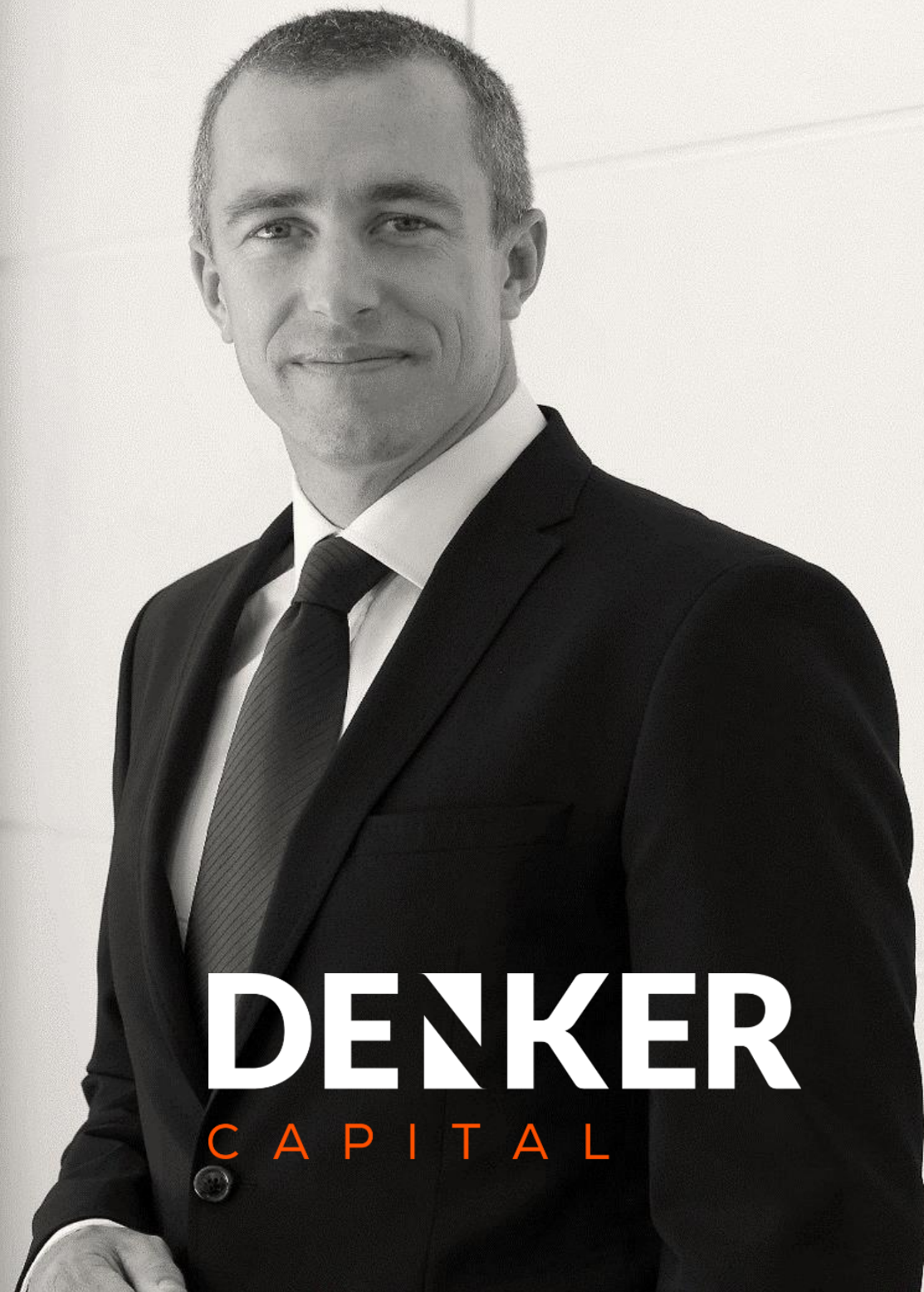
Emerging market equities

Neal Smith

Portfolio manager

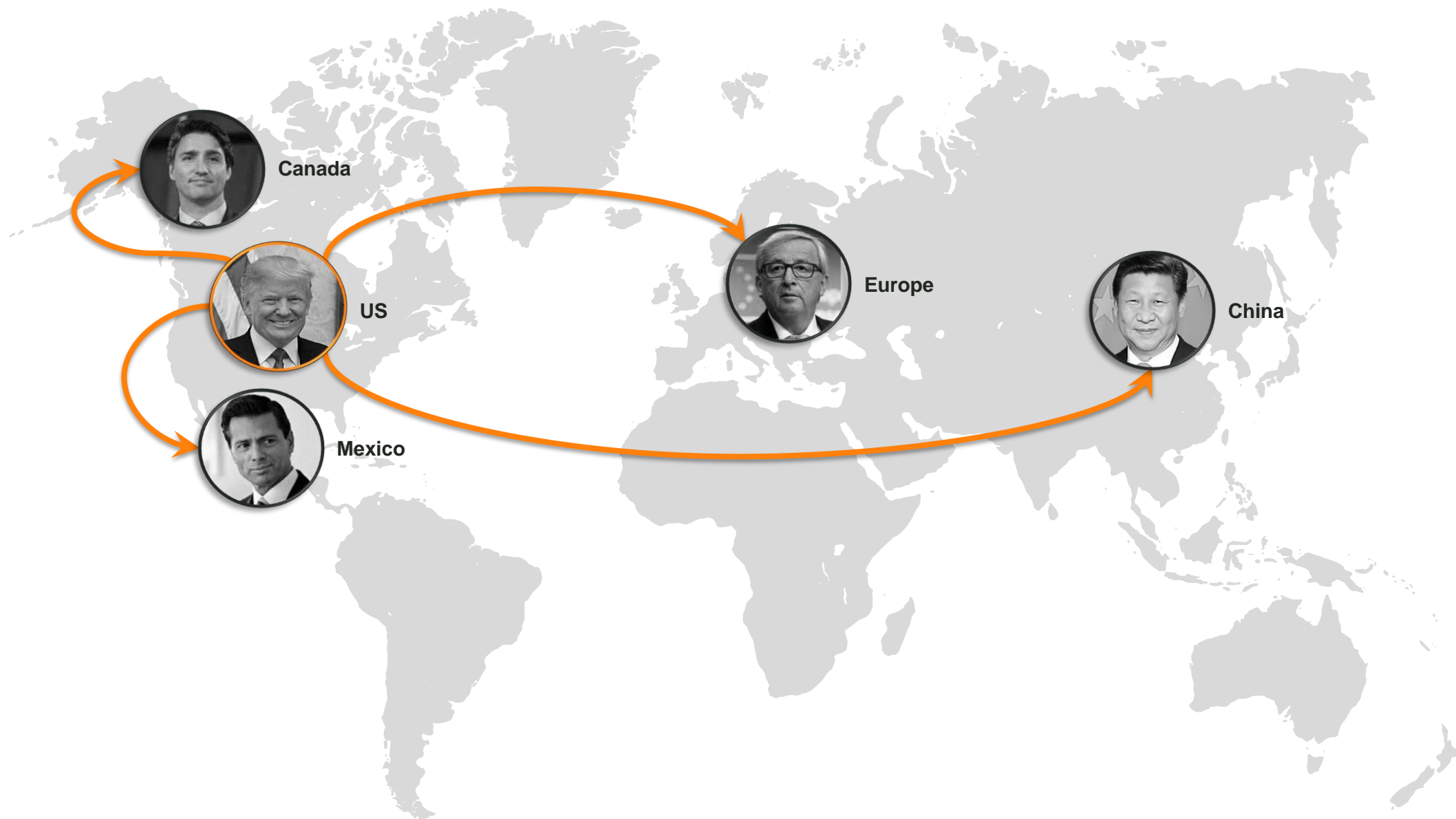
DENKER

CAPITAL



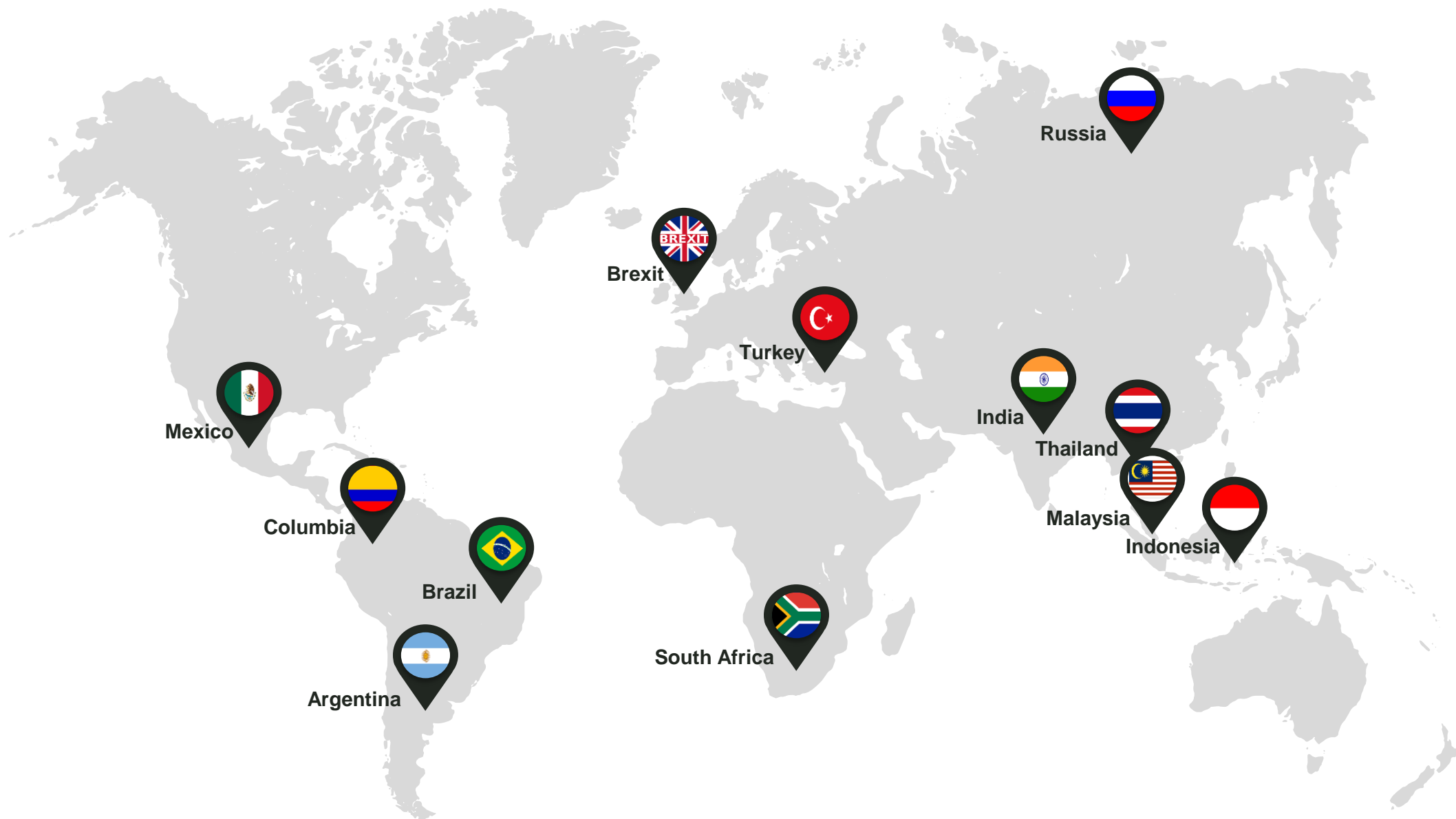
Geopolitical events causing investor fear

1. Trade wars



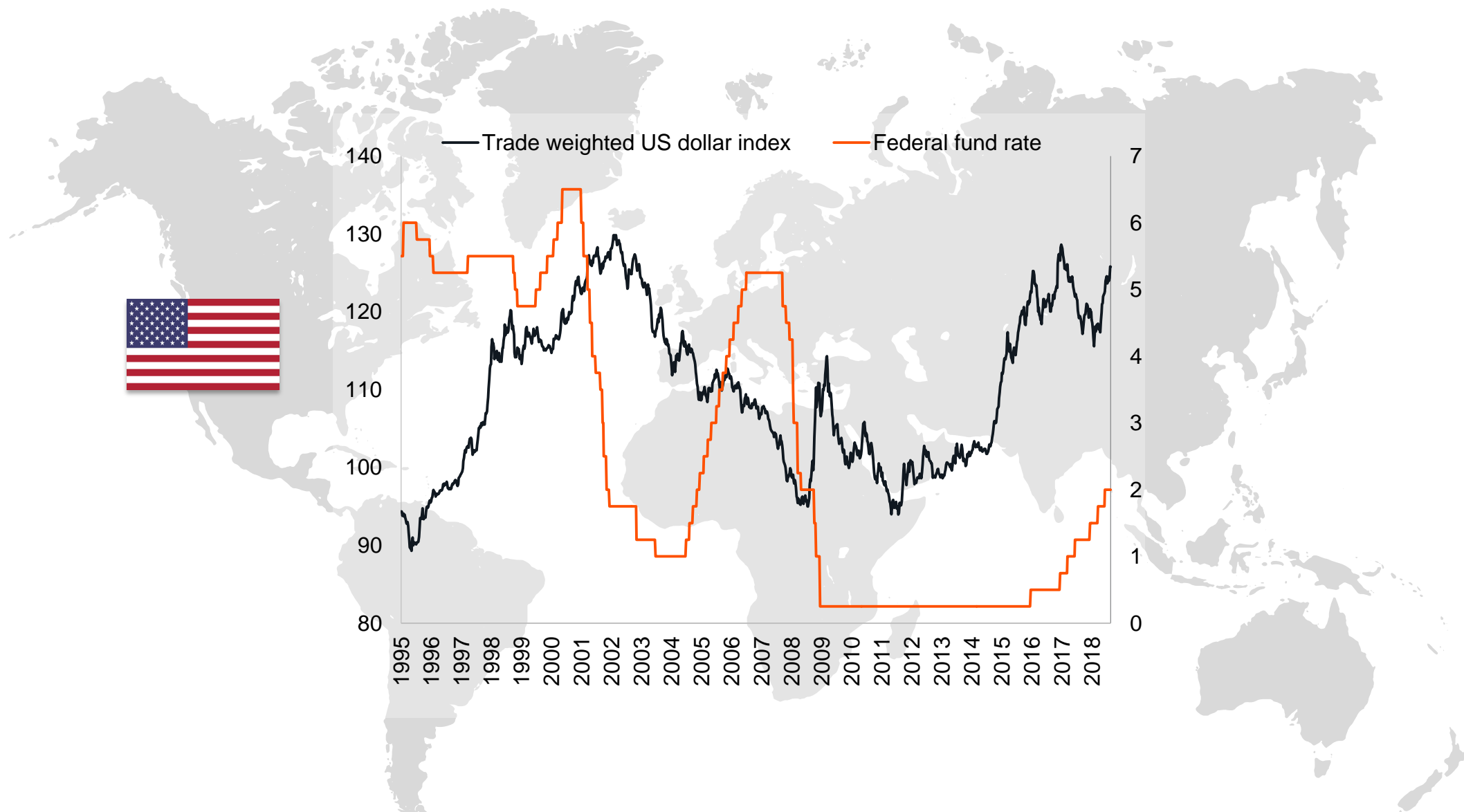
Geopolitical events causing investor fear

2. Political uncertainty



Geopolitical events causing investor fear

3. US rising interest rate environment



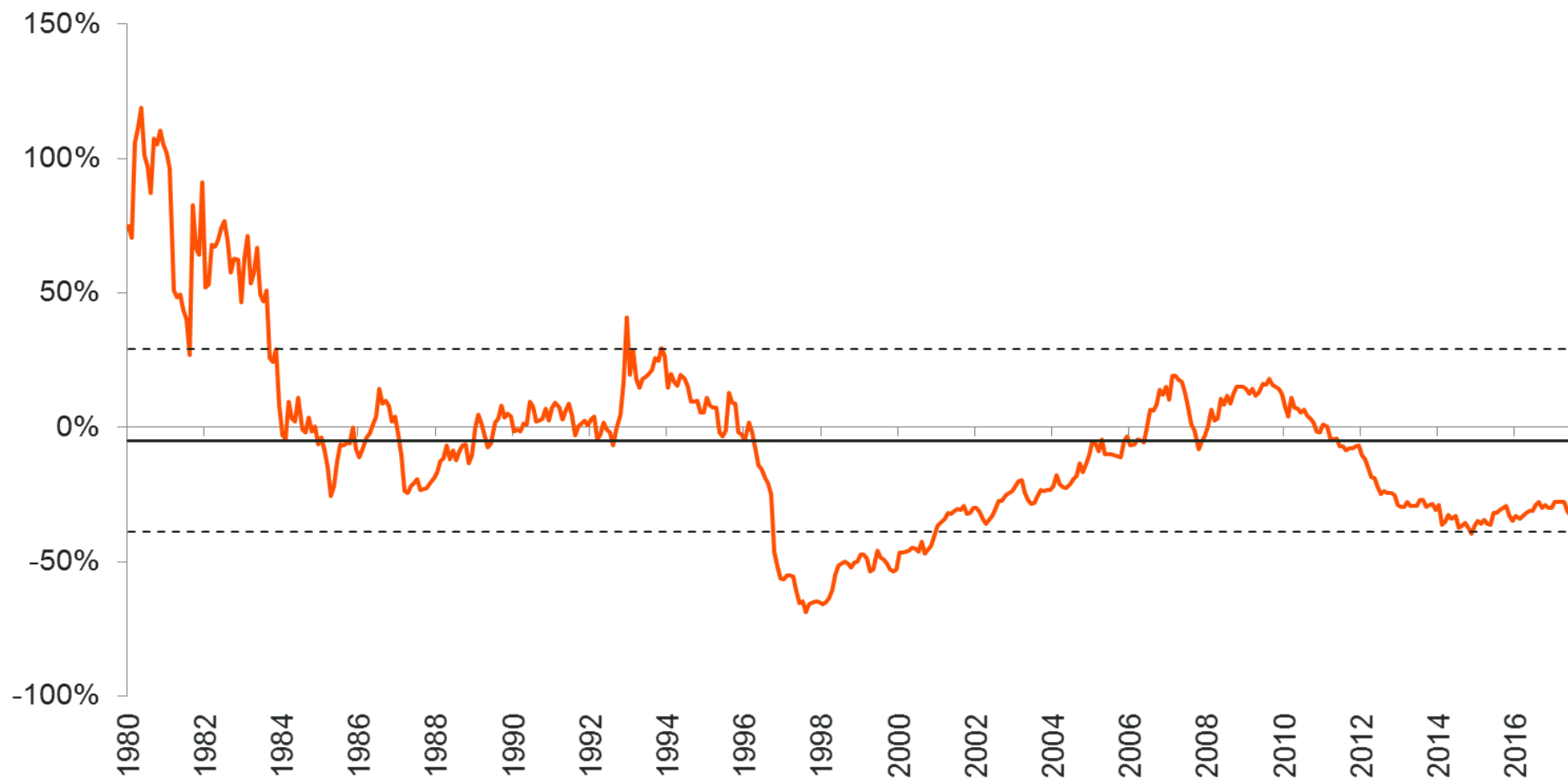
Source: FactSet, Federal Reserve Economic Data, Federal Reserve Bank of St. Louis. 22 August 2018

Averages of daily figures. A weighted average of the foreign exchange value of the US dollar against the currencies of a broad group of major US trading partners.

Historically, valuations have been attractive

Amid the fear

EM compared to DM: Price to NAV



Country returns for the last 18 years

There have been geopolitical events in the past too

Look past the fear

			China	India	Indonesia	Korea	Taiwan	Thailand	Brazil	Mexico	Russia	South Africa	Turkey
Geopolitical events	Political populism	2018 YTD	-11.4%	-3.0%	-19.1%	-14.6%	1.2%	-1.7%	-12.9%	0.2%	-2.4%	-22.9%	-49.9%
		2017	54.3%	38.8%	24.8%	47.8%	28.5%	34.9%	24.5%	16.3%	6.1%	36.8%	39.1%
	Global growth	2016	1.1%	-1.4%	17.5%	9.2%	19.6%	27.0%	66.7%	-9.0%	55.9%	18.4%	-8.1%
		2015	-7.6%	-6.1%	-19.1%	-6.3%	-11.0%	-23.3%	-41.2%	-14.2%	5.0%	-25.1%	-31.6%
	Taper tantrum	2014	8.3%	23.9%	27.2%	-10.7%	10.1%	16.8%	-13.7%	-9.2%	-45.9%	5.7%	19.1%
		2013	4.0%	-3.8%	-23.1%	4.2%	9.8%	-14.3%	-15.8%	0.2%	1.4%	-5.8%	-26.5%
	European crisis	2012	23.1%	26.0%	5.2%	21.5%	17.7%	34.9%	0.3%	29.1%	14.4%	19.0%	64.9%
		2011	-18.2%	-37.2%	6.5%	-11.8%	-20.2%	-2.4%	-21.6%	-12.1%	-19.3%	-14.4%	-35.2%
	Global recovery	2010	4.8%	20.9%	34.6%	27.2%	22.7%	56.3%	6.8%	27.6%	19.4%	34.2%	21.2%
		2009	62.6%	102.8%	127.6%	72.1%	80.2%	77.3%	128.6%	56.6%	104.9%	57.8%	98.5%
	Financial crisis	2008	-50.8%	-64.6%	-56.2%	-55.1%	-45.9%	-48.3%	-56.1%	-42.9%	-73.8%	-37.9%	-62.1%
		2007	66.2%	73.1%	55.0%	32.6%	9.1%	46.6%	80.0%	12.2%	24.8%	18.1%	74.8%
	US Fed hiking cycle	2006	82.9%	51.0%	74.8%	13.2%	20.9%	11.6%	45.8%	41.4%	55.9%	20.5%	-7.0%
		2005	19.8%	37.6%	15.8%	58.0%	7.3%	9.2%	57.0%	49.1%	73.8%	28.3%	56.9%
	Commodity boom	2004	1.9%	19.1%	52.2%	22.9%	9.8%	-0.9%	36.5%	48.3%	5.7%	44.9%	42.0%
2003		87.6%	78.4%	78.2%	35.9%	42.5%	144.6%	115.0%	32.8%	75.9%	45.9%	125.9%	
Terror attacks	2002	-14.0%	8.4%	42.8%	8.6%	-24.5%	27.6%	-30.7%	-13.3%	15.7%	28.0%	-35.7%	
	2001	-24.7%	-19.5%	-8.5%	48.7%	10.5%	5.3%	-17.0%	18.5%	55.9%	-17.2%	-32.7%	

Source: FactSet, Bloomberg. YTD as at 31 July 2018. Previous years as at end of year. Countries represent country MSCI indices.

Opportunities amongst the turmoil

Alibaba Group Holding Ltd

Core business e-commerce

Market cap \$449.9 billion

Active users 617 million

Market share (core) 79%

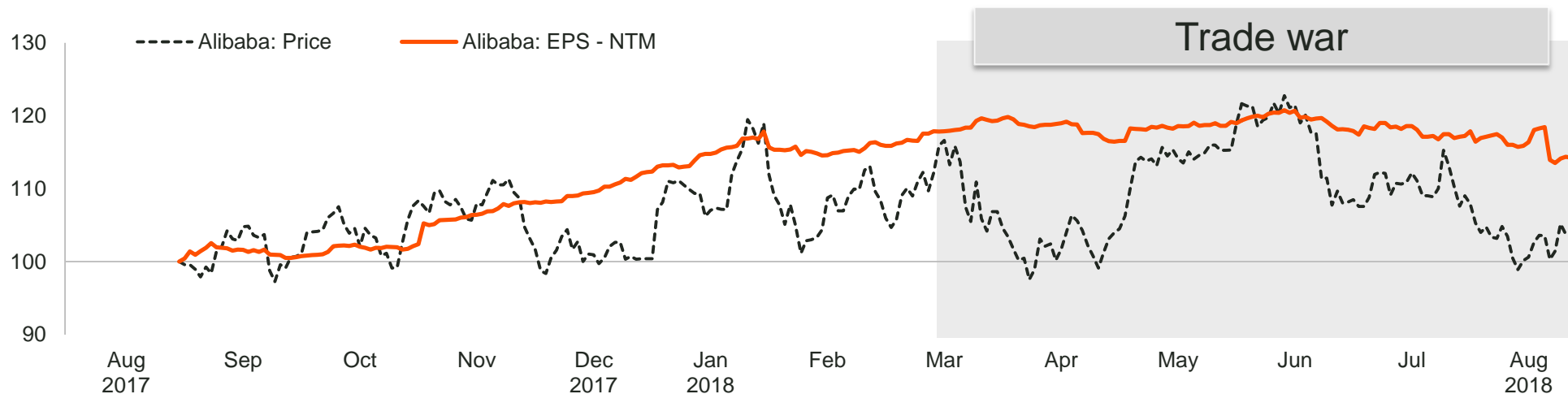
Growth areas payments, cloud, AI, travel, logistics, O2O, entertainment, advertising

Revenue growth (CAGR 2020) >40%

PE 26.9x

PB 5.9x

RoE 17.6%



Opportunities amongst the turmoil

Tencent Holdings Ltd

Core business social and gaming

Market cap \$411.5 billion

Active users 1,058 million

Core market share 51%

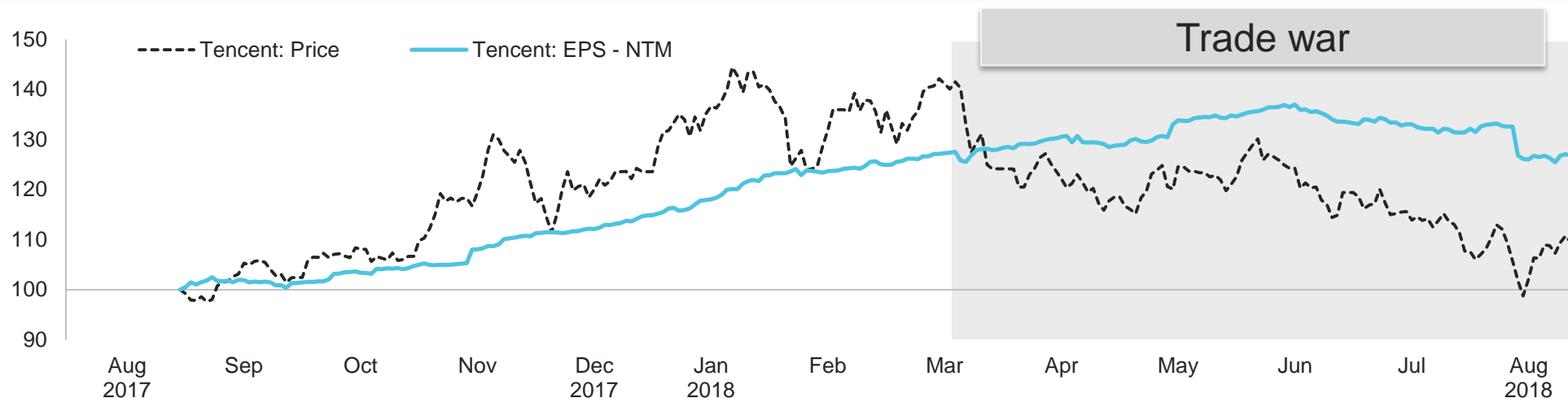
Growth areas payments, cloud, entertainment, advertising

Revenue growth (CAGR 2020) >28%

PE 28.6x

PB 6.8x

RoE 32.3%



Opportunities amongst the turmoil

TCS Group Holding Plc

Core business credit card

Market cap \$3.3 billion

Market share (core) 12%

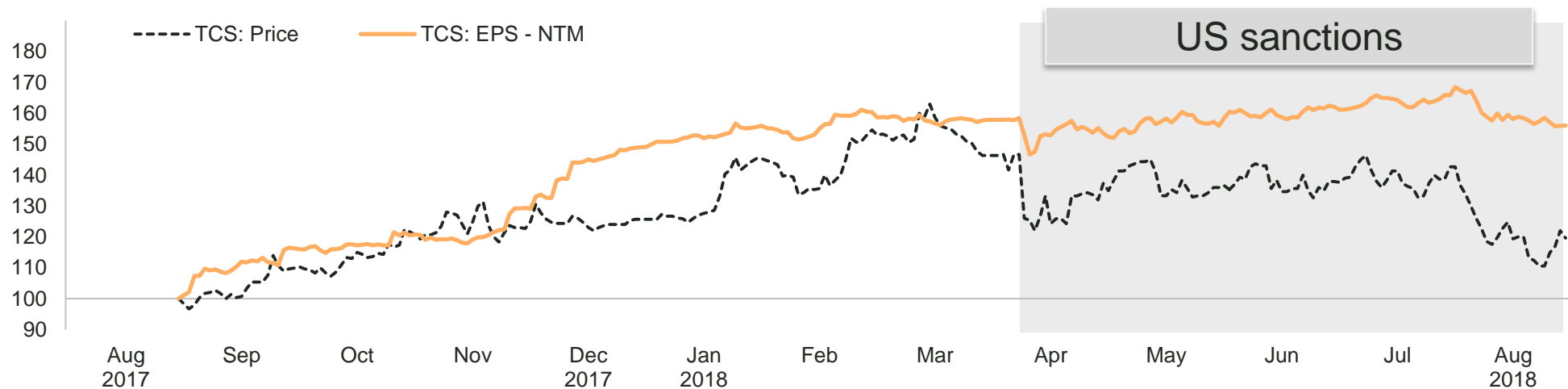
Growth areas loans, SME services, current acc, insurance, mortgages, investments

Revenue growth (CAGR 2022) >18%

PE 7.4x

PB 3.8x

RoE 61.1%



Opportunities amongst the turmoil

OdontoPrev SA

Core business dental insurance

Market cap \$1.7 billion

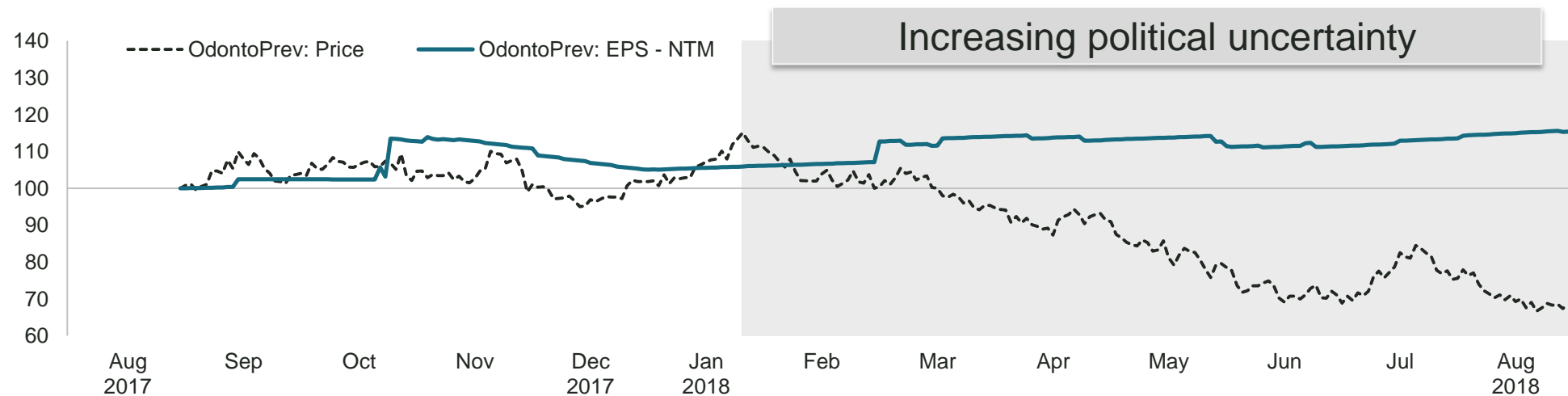
Market share (core) 27%

Revenue growth (CAGR 2022) >8.5%

PE 21.8x

PB 6.6x

RoE 34.1%



Opportunities amongst the turmoil

Our average estimate of intrinsic value of the four stocks



101% upside
to current price

Long-term growth opportunities

Summary



Geopolitical events have caused fear in the past too



Emerging markets have **outperformed** regardless



There are **investment opportunities** in good companies



Focus on **company fundamentals** instead of macro noise

Contact details



Nigel Barnes

Denker Capital
Head of business development

nigel@denkercapital.com
+27 72 281 1200



Cathy Fleming

Denker Capital
Business development specialist

cathy@denkercapital.com
+27 74 193 0088



Carole Costello

Sanlam FOUR
Head of consultant relations

carole.costello@sanlamFOUR.com
+44 20 3116 4040

To receive regular updates and insights from Denker Capital

email us at service@denkercapital.com or follow us



www.denkercapital.com



+27 21 950 2603



service@denkercapital.com

Denker Capital is an authorised financial services provider (FSP number 47075) and an appointed investment advisor to Sanlam Investment Management (Pty) Ltd, an authorised financial services provider (FSP number 579).

EXECUTIVE DIRECTORS RJH Friedrich, CS Kooyman, CE van Cuyck | **NON-EXECUTIVE DIRECTORS** CC Roothman, R Roux | **COMPANY SECRETARY** LJ du Plessis

FSP NUMBER 47075 | **REGISTRATION NUMBER** 2015/174919/07

ADDRESS 6th Floor, The Edge, 3 Howick Close, Tyger Falls, Bellville 7530, South Africa

The information in this communication or document belongs to Denker Capital (Pty) Ltd (Denker Capital). This information should only be evaluated for its intended purpose and may not be reproduced, distributed or published without our written consent. While we have undertaken to provide information that is true and not misleading in any way, all information provided by Denker Capital is not guaranteed and is for illustrative purposes only. The information does not take the circumstances of a particular person or entity into account and is not advice in relation to an investment or transaction. Because there are risks involved in buying or selling financial products, please do not rely on any information without appropriate advice from an independent financial adviser. We will not be held responsible for any loss or damages suffered by any person or entity as a result of them relying on, or not acting on, any of the information provided.

END.



An outline of the current over-riding themes affecting Emerging Markets

Presented by: Dr Jan Dehn, Head of Research and Member of Investment Committee, Ashmore

13 September 2018

Summary: Q4 2018 outlook

- Protectionism, fiscal stimulus and a hawkish new Fed Chairman keen to establish his credibility coincided with a pullback in EUR and profit-taking in EM to fuel a **temporary bounce in USD**. However, the Dollar momentum is unlikely to be sustained.
- **Elections** in Mexico, Turkey and Colombia as well as **Turkey's financial troubles** kept nervous EM investors on the side-lines over the summer months, but after October's Brazil election the main idiosyncratic EM events are behind us.
- Profit-taking in EM local markets in 2018 after strong performances in 2016 and 2017 has **not been accompanied by large redemptions**, so technicals are solid.
- The **pull-back in EM** in H1 2018 now looks very overdone; EM asset prices should **bounce back strongly** ('puppy effect') as global circumstances become more benign and a small number of country-specific EM risks begin to fade.
- **Over the next few years, EM growth is set to accelerate** relative to growth rates in developed economies due to rising net exports and a burgeoning pick-up in domestic demand.
- EM central banks are likely to **hike faster**, by more and for longer than central banks in developed markets due to **stronger cyclical dynamics as investor flows return**.
- The combination of stronger growth, higher rates, better valuations and solid technicals sets up **EM local markets for strong returns in 2019** much like in 2016 and 2017.
- Valuations in **developed markets** remain highly distorted as populism continues to worsen: this bodes poorly for returns. Events in developed markets continue to pose the largest source of volatility for EM investors.

Global backdrop: Distorted QE sponsored markets

QE was the largest and most distortionary intervention ever made in financial markets

- USD 15trn vs. USD 100trn global fixed income
- QE central banks only bought their own (mainly government) bonds

Markets quickly adopted three basic views about the effects of QE

- Bullish US view based on expectation of strong growth, inflation and rate normalisation
- Bearish EU views on weak growth, no inflation and very low rates
- Reduce EM on zero sponsorship from QE central banks

Result was FOUR consensus QE trades

- Long USD vs EUR and EM FX
- Long US stocks
- Long European bonds
- Short everything in EM

KEY INSIGHT: The unwinding of QE over the next several years will favour EM over DM

The H1 2018 pullback is overdone and good entry point

Asset class returns (% USD terms)

Sub-asset class	% return (USD terms)			
	2016	2017	2018 ytd	2016-2018 ytd
Government bonds				
EM local currency bonds	9.94%	15.21%	-10.14%	15.02%
<i>3-5yr UST</i>	1.33%	0.98%	-0.50%	1.80%
EM external debt (USD)	10.15%	10.26%	-4.40%	16.01%
<i>7-10yr UST</i>	1.04%	2.59%	-1.73%	1.91%
Corporate credit				
EM corporate debt (USD)	9.65%	7.96%	-2.55%	15.07%
EM HY (USD)	16.21%	10.45%	-4.31%	22.35%
<i>US HY</i>	16.96%	7.50%	1.56%	26.02%
<i>EU HY</i>	5.91%	6.18%	0.14%	12.23%
Currencies				
EM spot FX	0.54%	5.69%	-9.36%	-3.13%
EM FX forwards	3.57%	11.54%	-5.28%	9.83%
<i>DXY Index</i>	0.53%	-9.87%	4.46%	-4.88%
<i>EURUSD</i>	-0.55%	14.12%	-4.86%	8.70%
<i>USDJPY</i>	0.58%	-1.89%	-1.89%	-3.20%
Stocks				
EM stocks	11.27%	37.51%	-9.99%	38.79%
EM Small cap	0.27%	33.90%	-11.28%	22.89%
Frontier Markets	-1.28%	31.80%	-10.94%	19.58%
<i>US stocks</i>	11.95%	21.82%	7.92%	41.69%

Source: Ashmore, JP Morgan, Bloomberg, MSCI. Data as at 20-Aug-18. EU HY returns in EUR.

EM interrupted: temporary factors weighing on EM in 2018

US events:

- **Growth** 'sugar high' from tax cut – peaked in Q2
- **Fed Governor Powell** establishes his credibility and independence – now priced
- **EURUSD** profit-taking after slowdown in Europe in Q1 – over
- **Protectionism** – slowly getting priced in

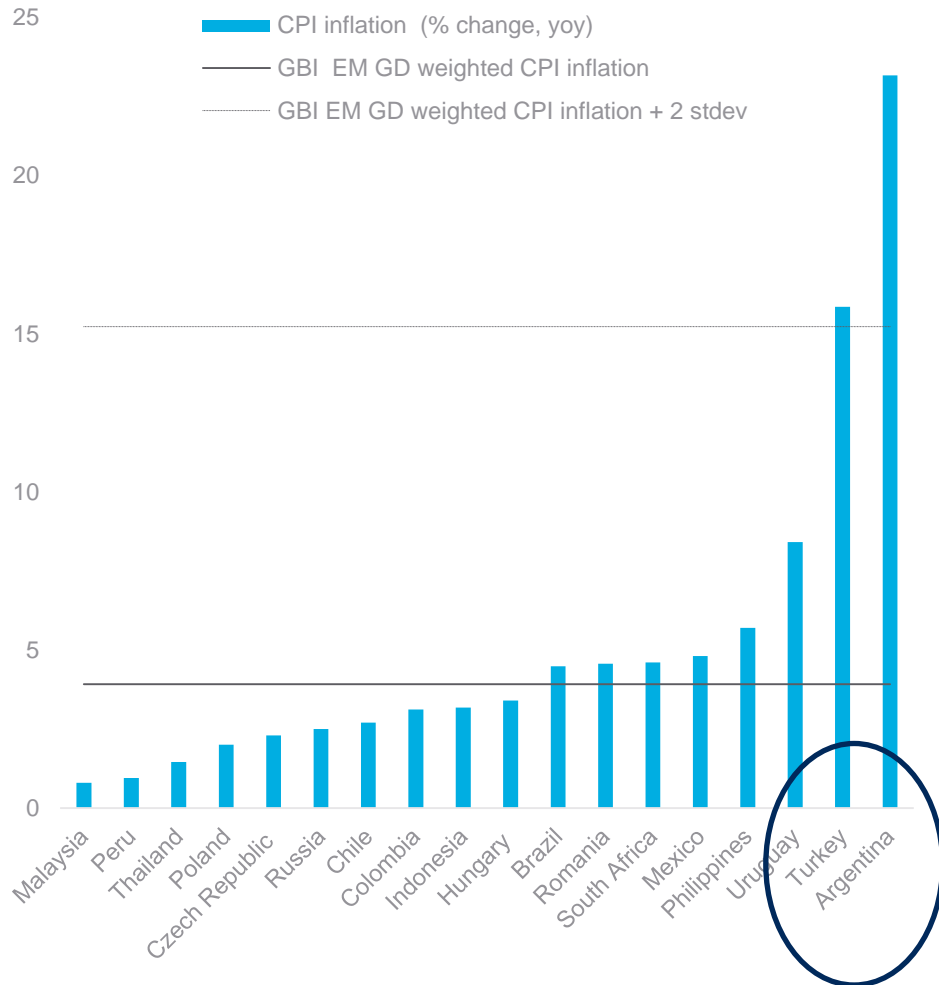
EM events:

- **Profit-taking** after strong returns in 2016 and 2017
- **Elections** in Mexico, Colombia, Turkey and Brazil – only Brazil left
- **Argentina** macro problems - IMF now on the case
- **Turkey** macro problems - Work in progress, but idiosyncratic
- **China deleveraging** – plenty of room for fiscal support

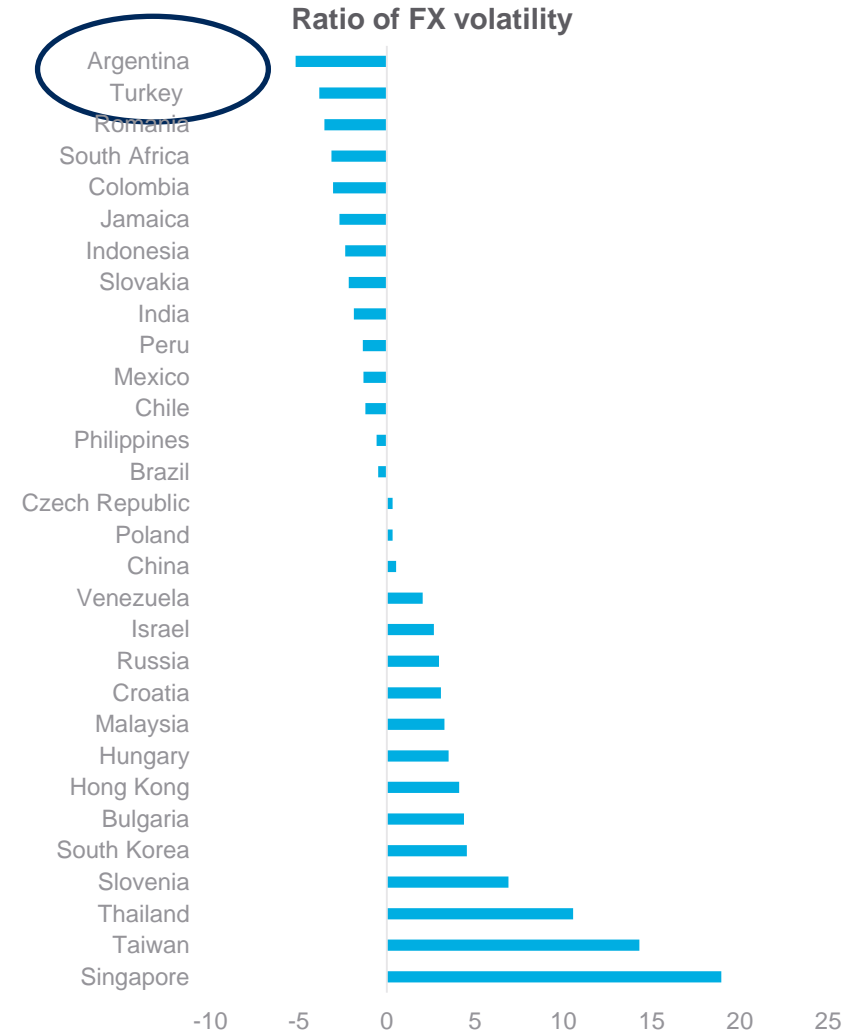
Turkey is EM, but not typical of EM

Most EM countries have stable macroeconomic conditions

Inflation rates (July 2018)



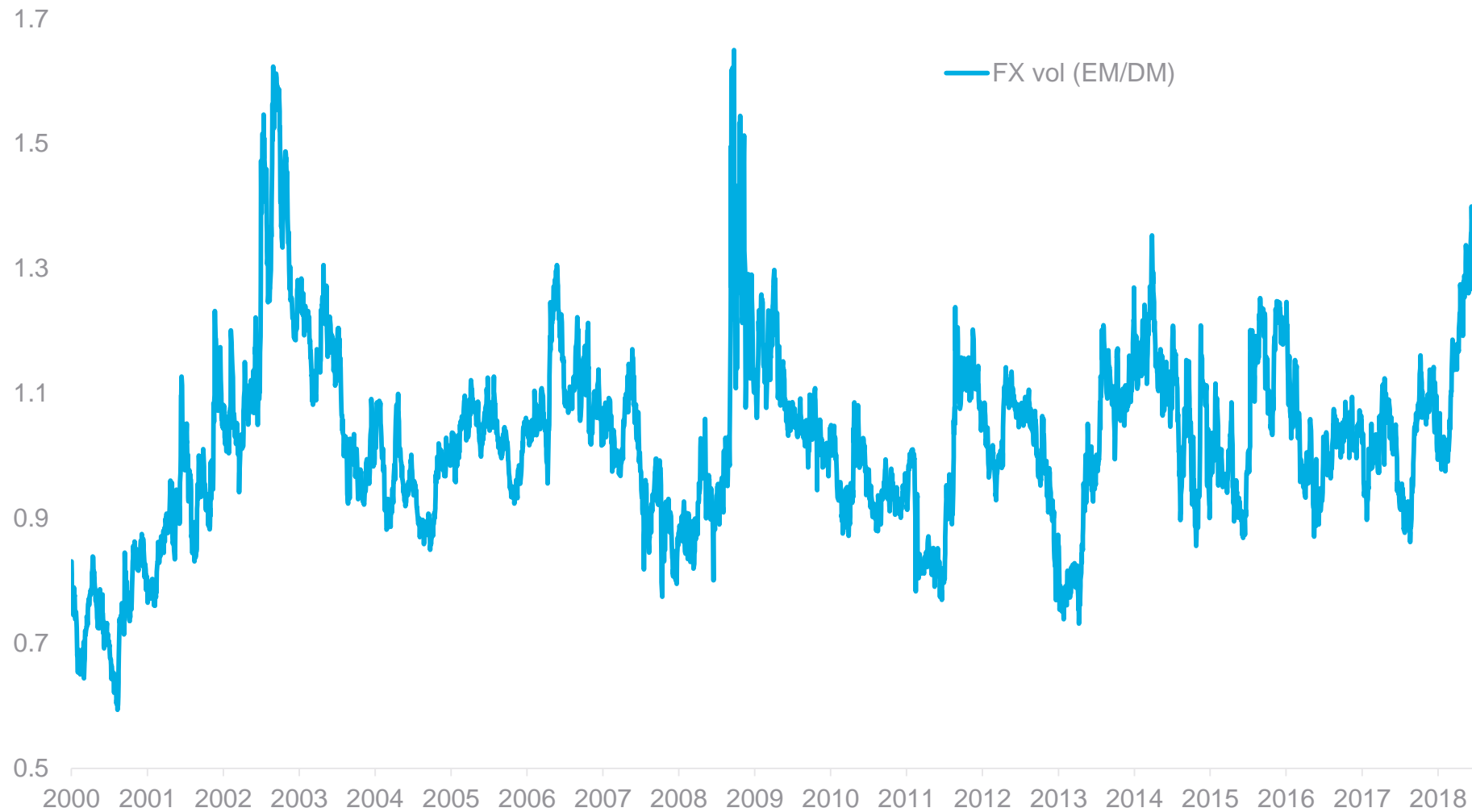
Current account balance (% of GDP)



Source: Bloomberg, JP Morgan, Ashmore Data as of 21 August 2018.

Spot the opportunity

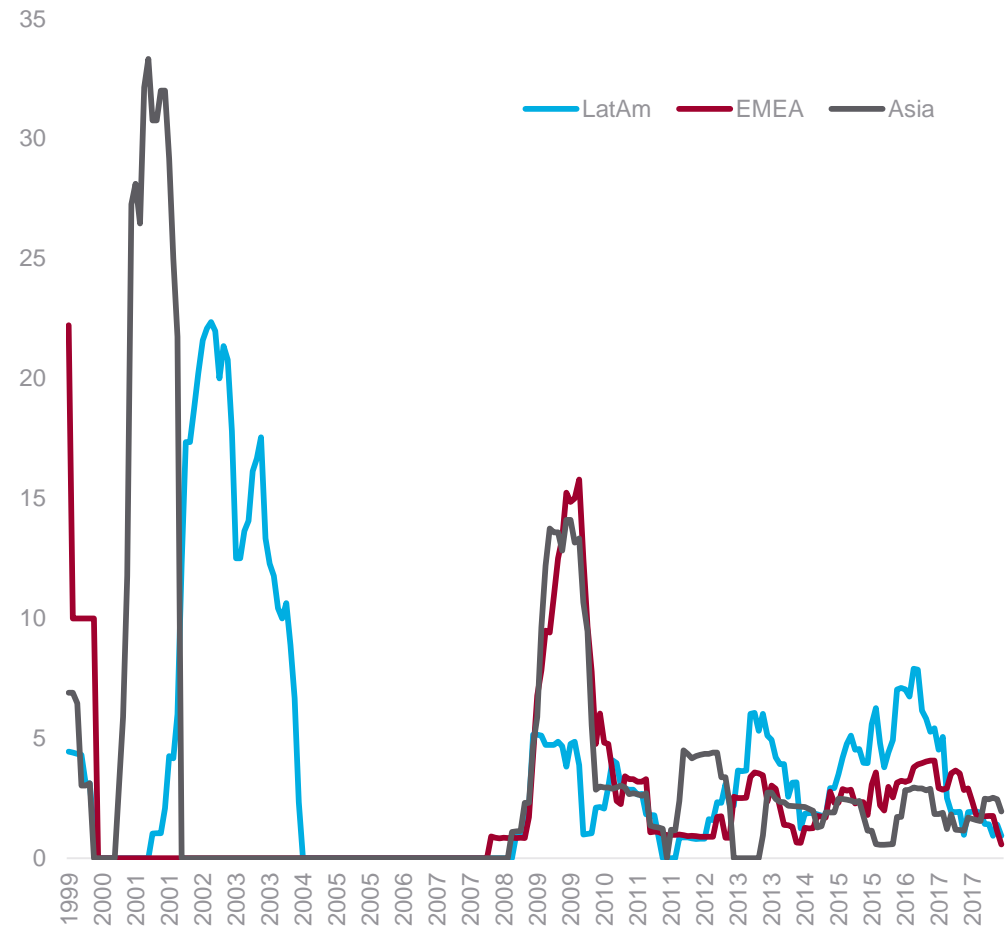
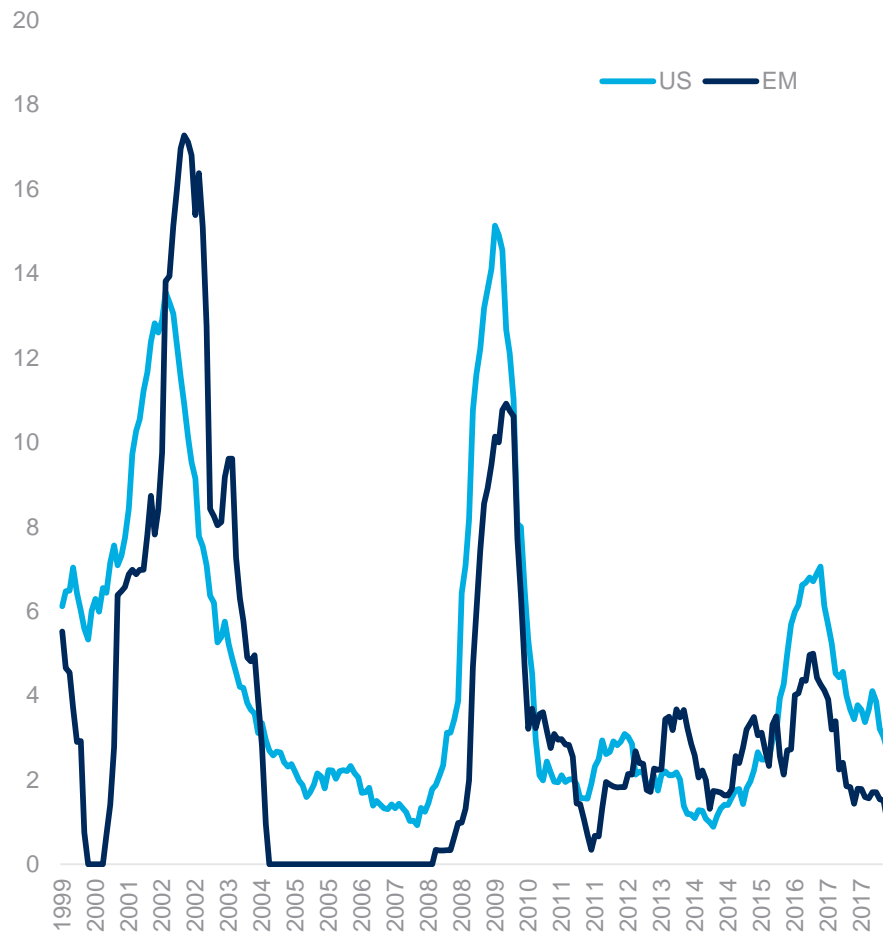
FX volatility: EM versus G7



Source: Bloomberg, JP Morgan, Ashmore Data as of 21 August 2018.

Volatility not reflected in credit fundamentals

High yield corporate default rates (%)



Source: BAML, Ashmore. Data as at August 2018.

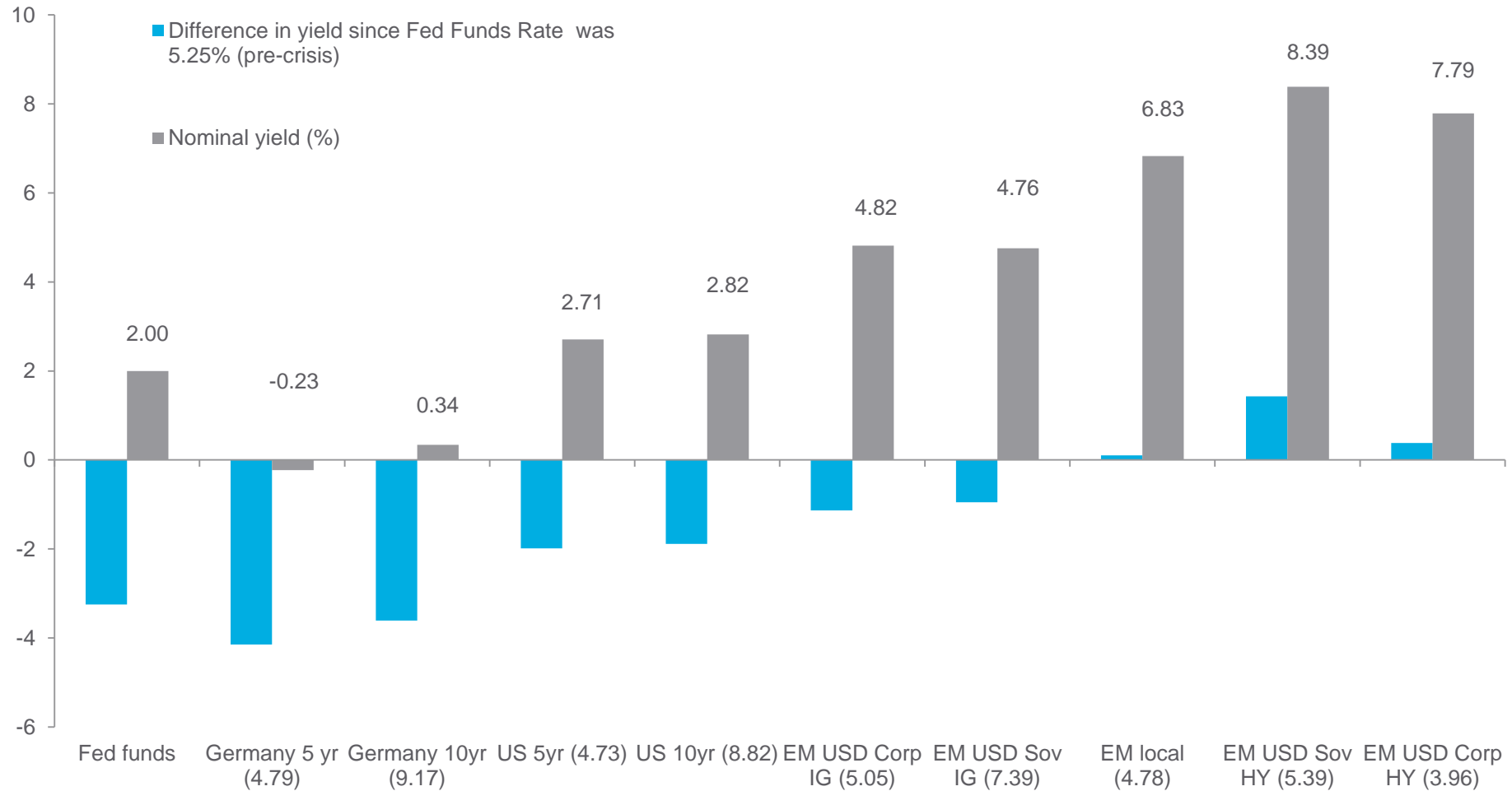
The EM FX pullback is unlikely to be sustained...

EM FX versus USD



EM bonds yields have priced in the Fed...

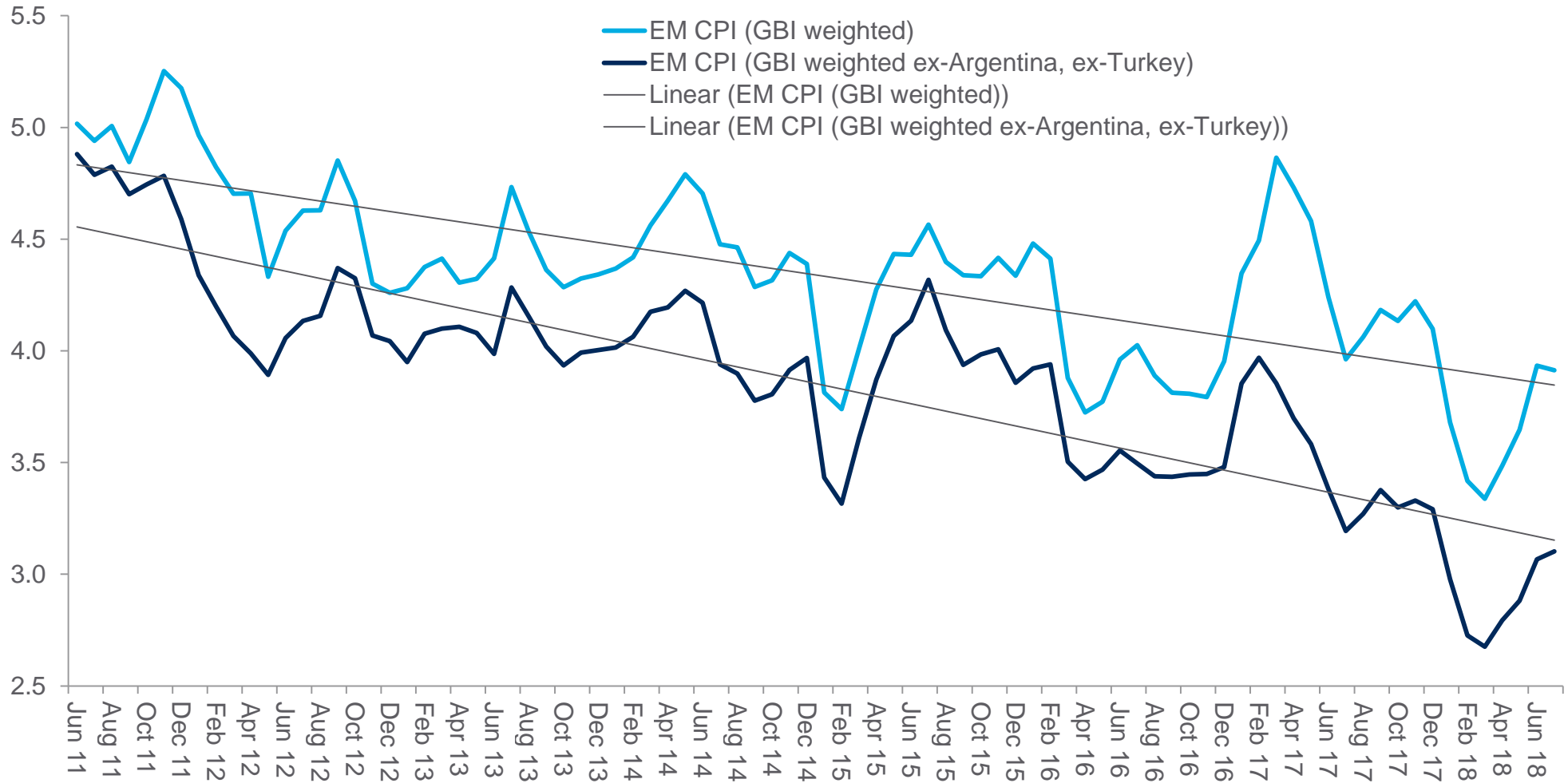
Nominal bond yields (%), duration in parenthesis



Source: Bloomberg, JP Morgan, Ashmore. Data as at 23 August 2018. Duration in brackets.

...while EM inflation is on a declining trend...

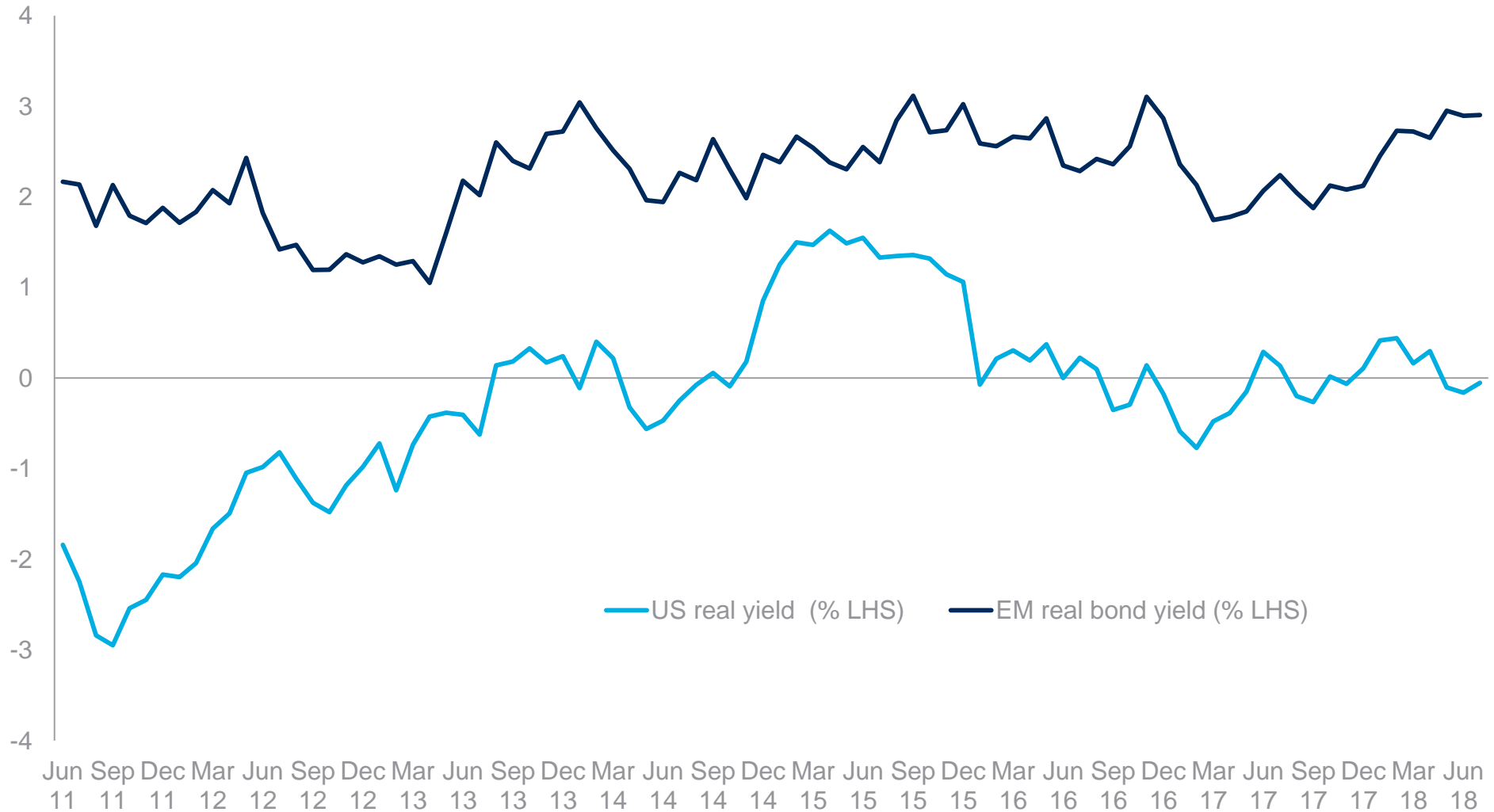
EM inflation (GBI EM GD weighted)



Source: Ashmore, JP Morgan, Bloomberg. Data as at 31-Aug-18.

Real yields are close to previous peaks...

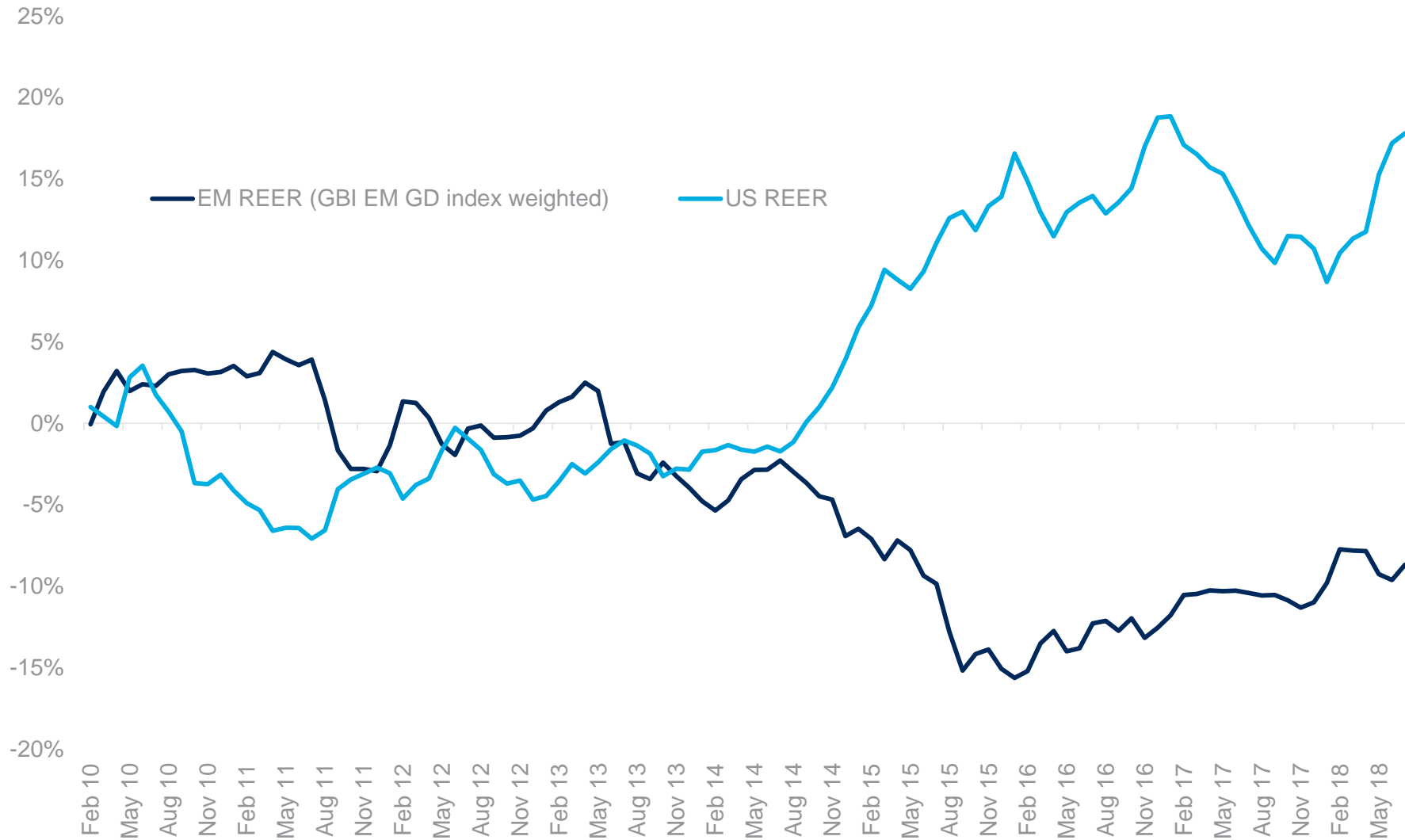
GBI EM GD weighted government bond yield and US 5 year (both real)



Source: Ashmore, JP Morgan, Bloomberg. Data as at 21-Aug-18.

...and EM REERs look stretched...

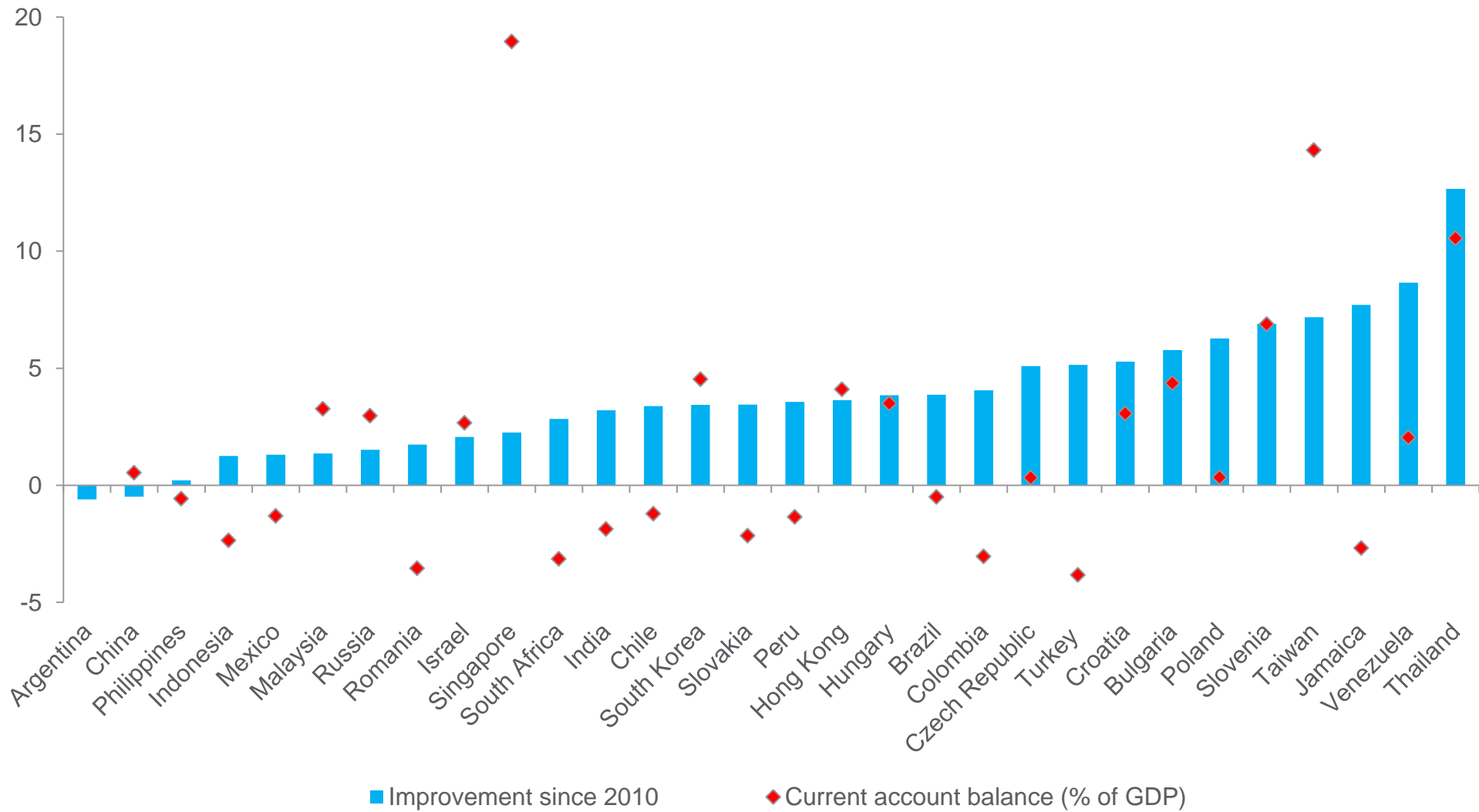
Cumulative Real Effective Exchange Rates changes since 2010



Source: Ashmore, BIS. Data as at 20 August 2018.

...so net exports are picking up...

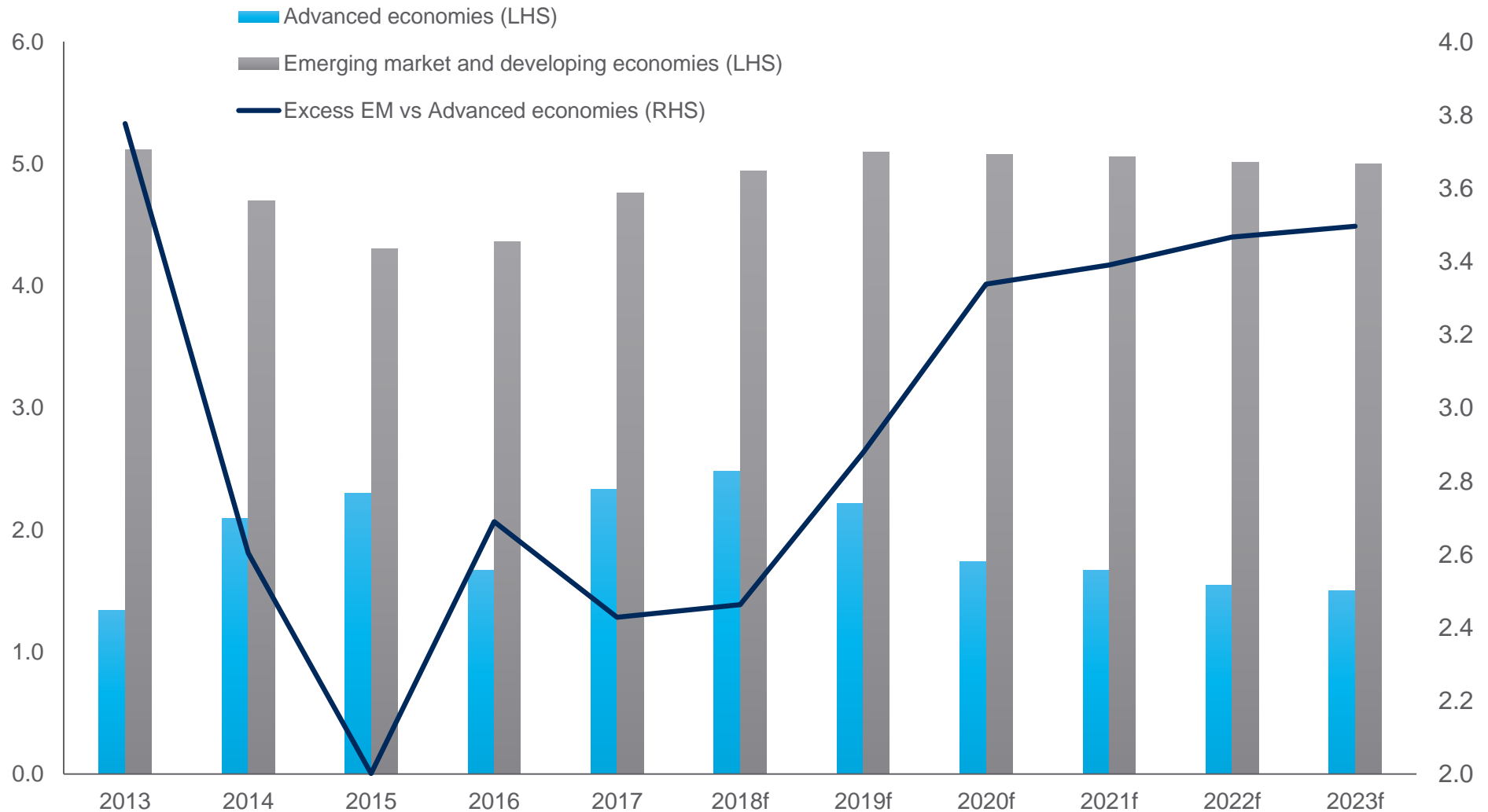
% of GDP



Source: Bloomberg, Ashmore Data as of 21 August 2018.

...which supports a positive EM growth outlook...

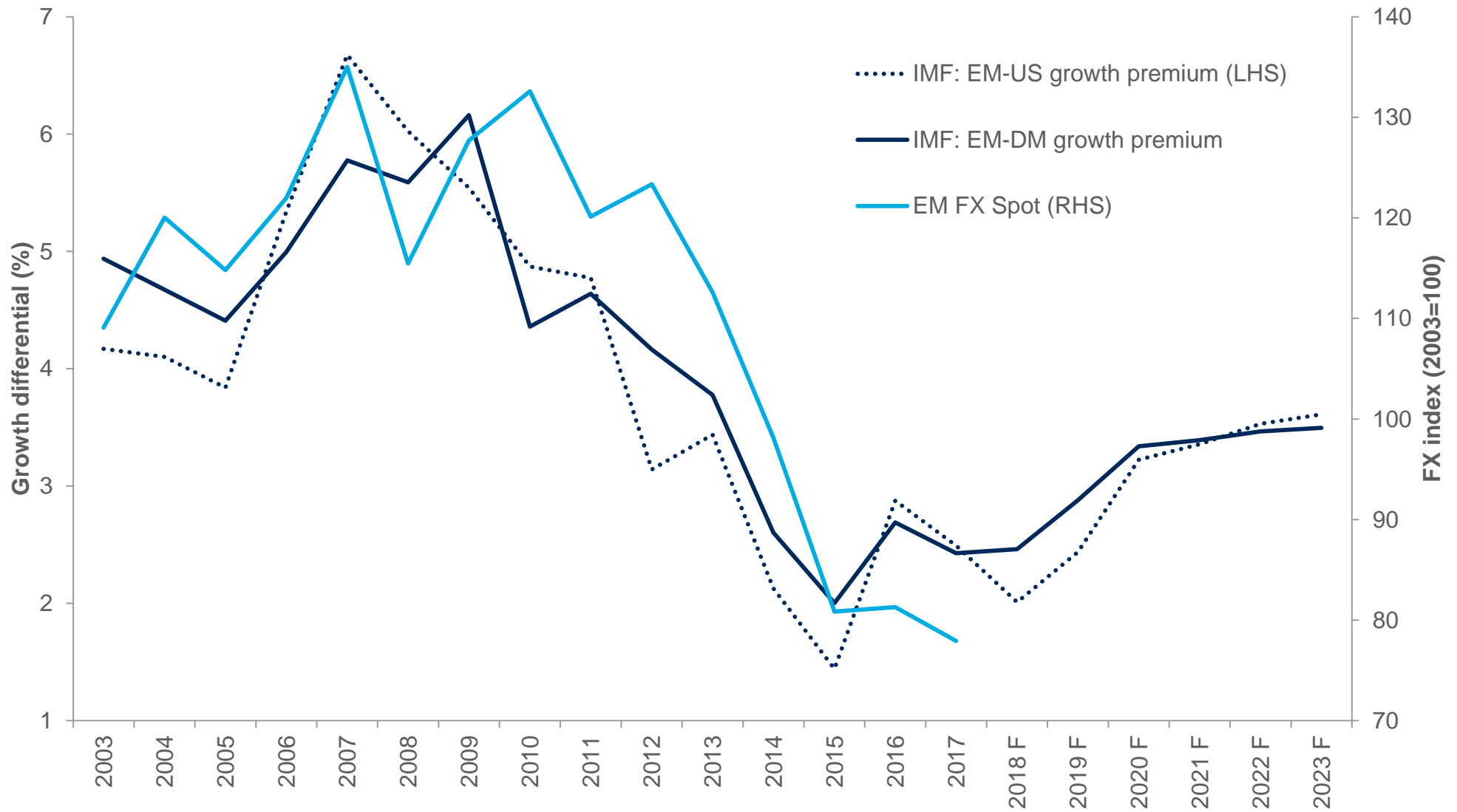
Real GDP growth (%)



Source: Ashmore, IMF, Bloomberg. Data as at 30-Apr-18. "f" indicates IMF projections.

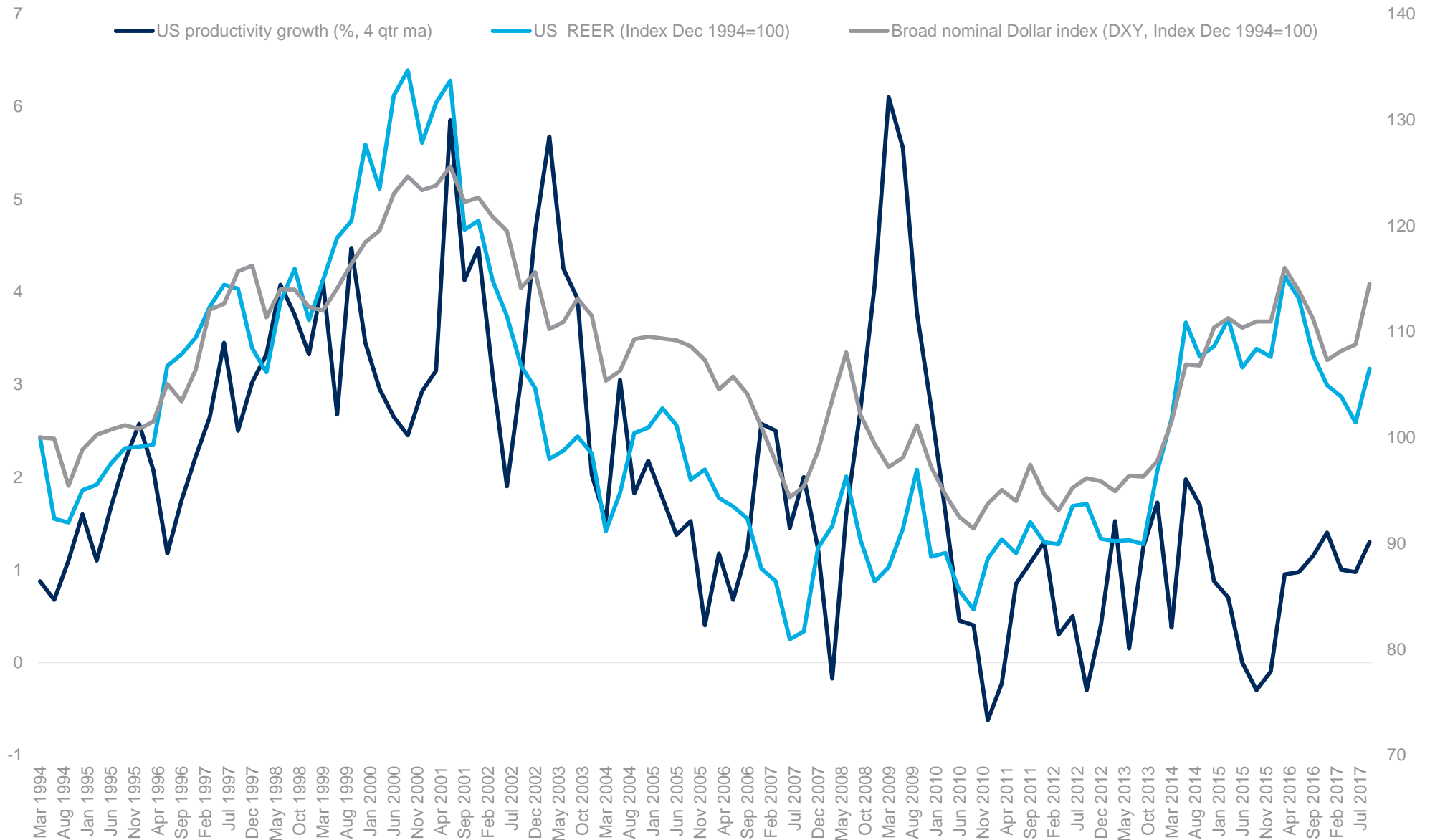
...which should in turn push up currencies...

Relative real GDP growth and EM FX



Source: Ashmore, IMF, Bloomberg. Data as at 20 August 2018. "F" indicates IMF projections.

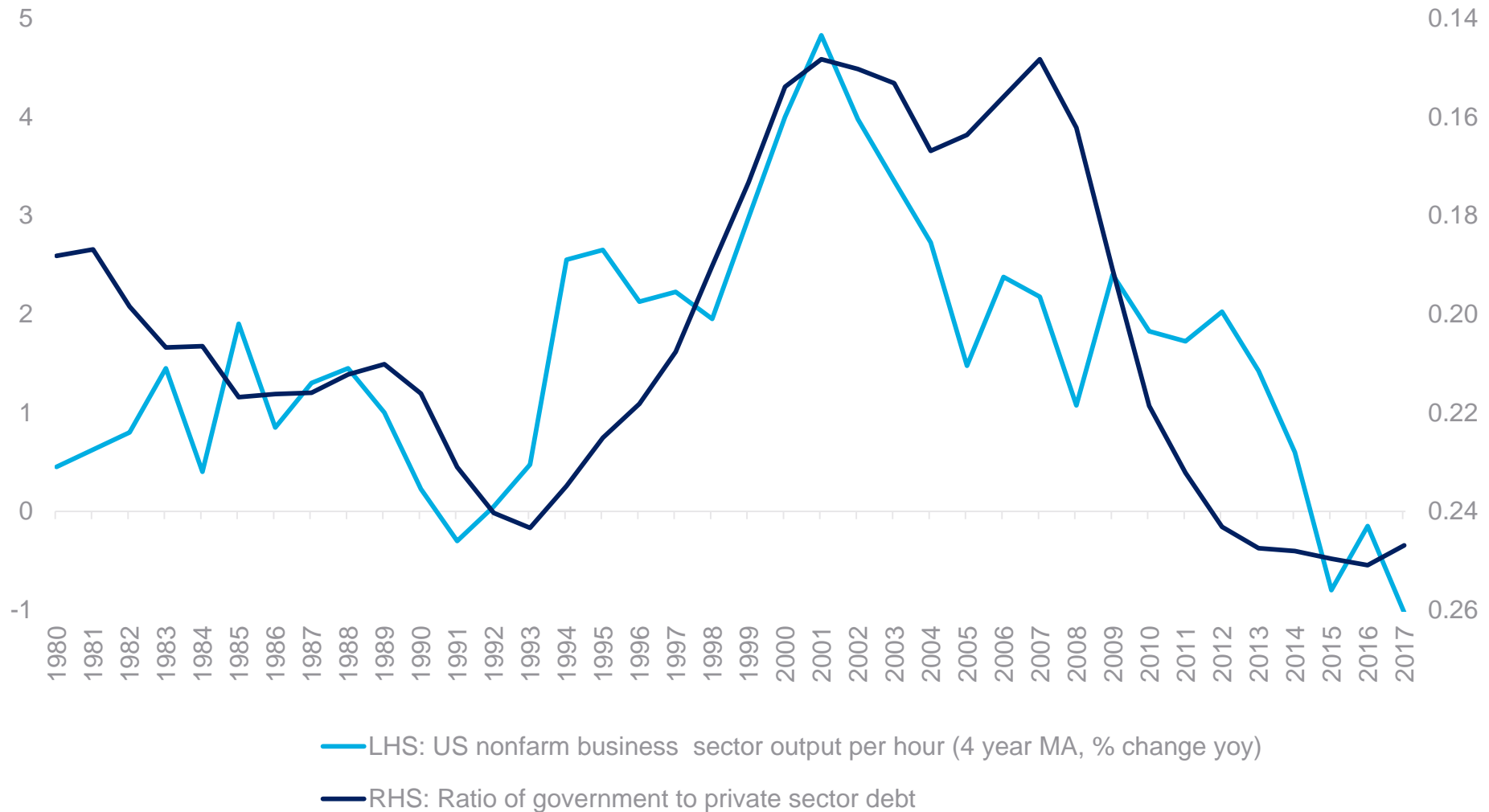
Dollar detaching from productivity



Source: Ashmore, BIS, Bloomberg (data as of end-August 2018)

US: Worsening fiscal outlook hurts productivity growth

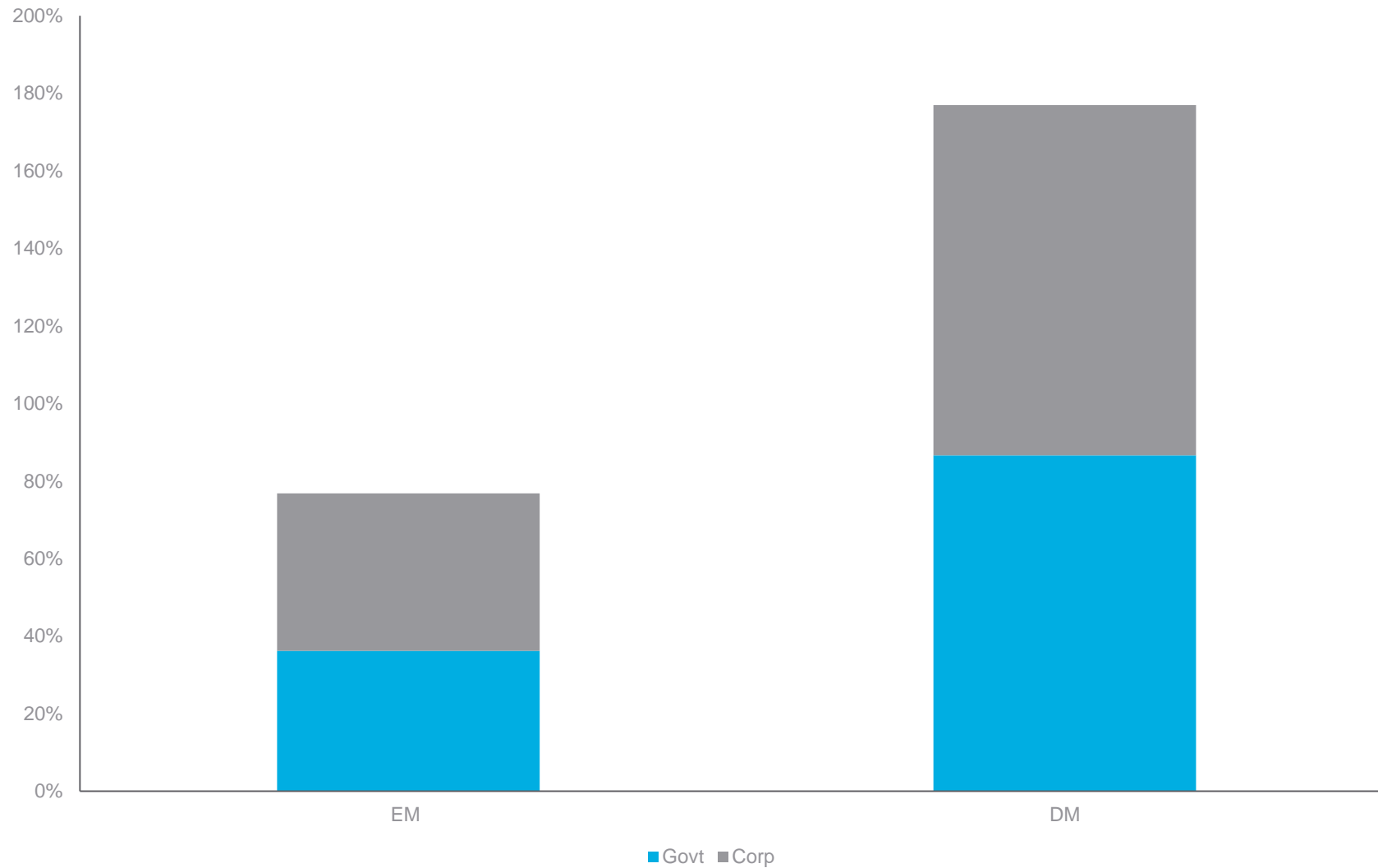
US productivity declines with rising government debt share



Source: Ashmore, Bloomberg, US Treasury (data as of August 2018).

Case for EM: EM debt profiles dramatically superior to DM

Debt to GDP (%)



Source: IMF, BIS, Ashmore, data as of August 2018.

Case for EM: Inefficiency

12m returns when entering markets during +10pts VIX spikes vs. passive investing

Strategy	Alpha (bps)	Active returns (%)	Passive returns (%)	Years
Fixed Income	299	11%	8%	
External Debt (EMBI GD)	234	12%	9%	24
External Debt IG (EMBI GD IG)	304	11%	8%	24
External Debt HY (EMBI GD HY)	216	13%	11%	24
Corporate Debt (CEMBI BD)	296	10%	7%	16
Corporate High Grade (CEMBI BD HG)	221	9%	7%	16
Corporate High Yield (CEMBI BD HY)	599	15%	9%	16
Local Currency Bonds (GBI EM GD)	246	10%	8%	15
FX Forwards (ELMI+)	276	9%	6%	24
Stocks	253	7%	5%	
Equities (MSCI EM)	383	7%	4%	24
EM Small Cap (MXEFSC Index)	501	9%	4%	24
Frontier Equities (MXFM Index)	-126	5%	6%	16

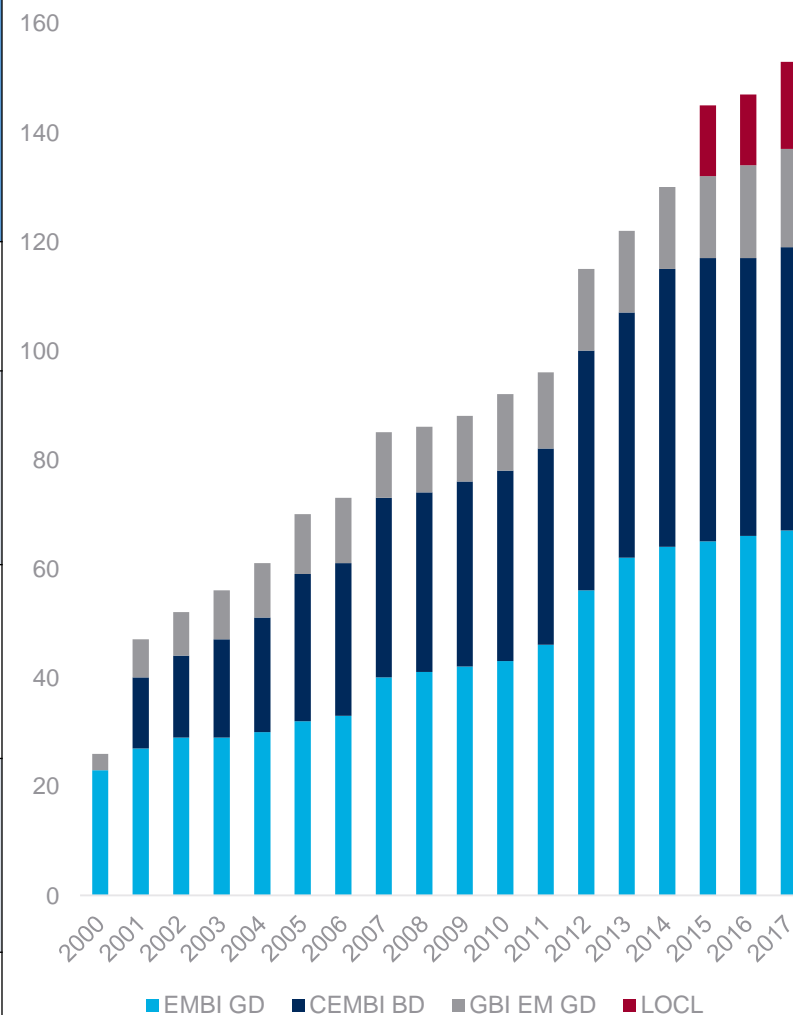
Date of VIX spike	Trigger event
Apr 1994	Fed hikes
Oct 1997	Asian crisis
Aug 1998	Russian crisis
Oct 2000	Fear of slowing US economy
Sep 2001	9/11
Jul 2002	Fear of slowing US economy
Jun 2006	Hike triggering recession fears
Aug 2007	BNP Paribas gates funds over sub-prime losses
Sep 2008	Lehman
May 2010	Greece
Mar 2011	Japan earthquake
Aug 2011	US debt ceiling and Eurozone crisis
Oct 2014	Rate hike fears
Aug 2015	Fed hike fears
Jun 2016	Brexit
Feb 2018	US inflation fears

Source: Bloomberg, Ashmore. Data as at 6 February 2018. Past performance is not a reliable indicator of future results.

Case for EM: Off and on-benchmark opportunities

				As of end-2017					
Asset class	Index name	Index acronym	Index provider	Number of countries	Number of issuers	Number of issues	Index market cap (USD bn)	Asset class (USD bn)	Index as % of asset class
External sovereign debt	EMBI Global Diversified	EMBI GD	JP Morgan	67	152	643	541	1,185	46%
External corporate debt	CEMBI Broad Diversified	CEMBI BD	JP Morgan	52	609	1,331	454	2,011	23%
Local currency government debt	GBI EM Global Diversified	GBI EM GD	JP Morgan	18	18	214	893	10,289	9%
Local currency corporate debt	Local EM non-sovereign	LOCL	ICE	16	147	298	199	10,859	2%
All EM fixed income							2,087	24,343	9%

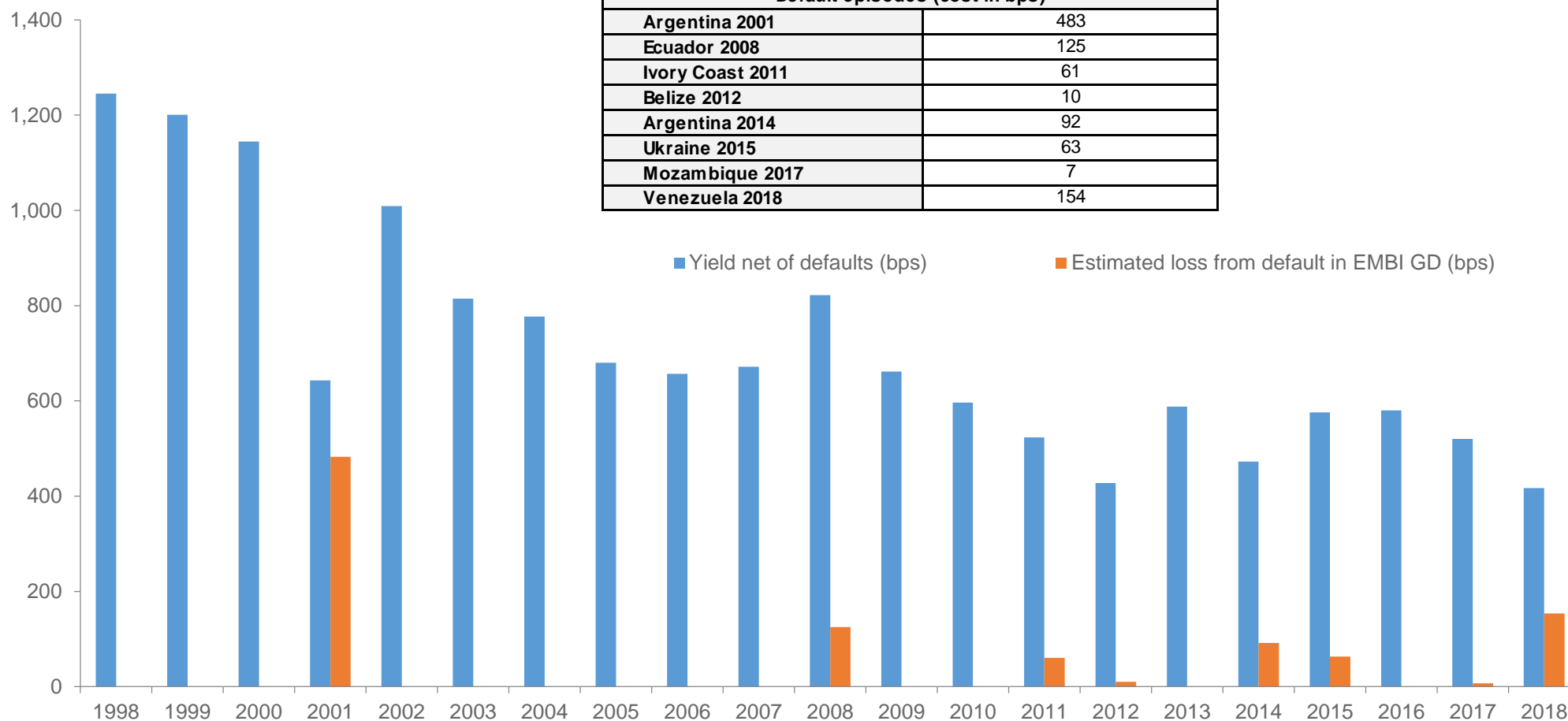
Number of markets covered by an index



Source: JP Morgan, Ashmore, BIS, ICE as at end 2017.

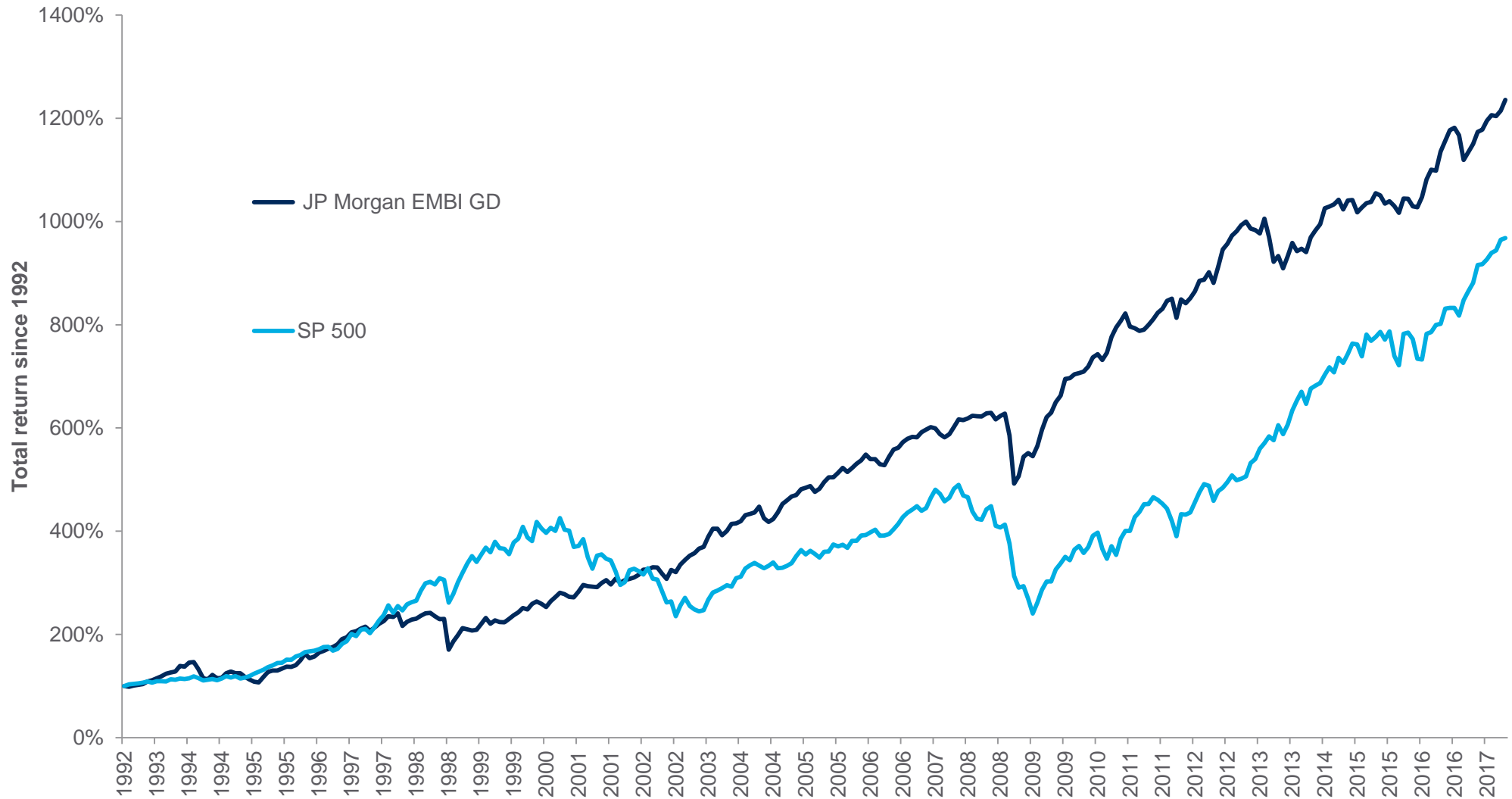
Case for EM: very high 'risk free spread'

	Payout to investors (bps)	
	1998-2018	Average per annum
EM 'risk free spread'	7,545	359
EM net of defaults (bps)	15,027	716
US 10yr bond (bps)	7,483	356
Default episodes (cost in bps)		
Argentina 2001	483	
Ecuador 2008	125	
Ivory Coast 2011	61	
Belize 2012	10	
Argentina 2014	92	
Ukraine 2015	63	
Mozambique 2017	7	
Venezuela 2018	154	



Source: Ashmore, Bloomberg, JP Morgan, Moody's. Data as of 28 February 2018. Venezuela recovery rate assumed to be 40%.

Case for EM: Excellent returns in the long-term



Source: Bloomberg, Ashmore as at end 2017.

Ashmore offices



Ashmore Head Office

61 Aldwych, London WC2B 4AE U.K.
T: +44 20 3077 6000

Ashmore Colombia

Carrera 7 No. 75 -66, Office 702
Bogotá, Colombia
T: +57 1 316 2070

Ashmore India

507A, Kakad Chambers
Dr. Annie Besant Road, Worli
Mumbai 400 018, India
T: +91 22 6269 0000

Ashmore Indonesia

Pacific Century Place, 18th Flr SCBD Lot 10
Jalan Jendral Sudirman Kav 52-53
Jakarta 12190
T: + 62 21 2953 9000

Ashmore Japan

11F Shin-Marunouchi Building
1-5-1 Marunouchi, Chiyoda-ku, Tokyo, Japan 100-6511
T: +81 0 3 6860 3777

Ashmore Peru S.A.C

Av. Circunvalación Golf Los Incas No. 134
Torre 1, Oficina: 601, Surco
Lima, Perú
T: +(511) 3910396

Ashmore Investment Saudi Arabia

3rd Floor, Tower B, Olaya Towers,
Olaya Main Street, Riyadh, Kingdom of Saudi Arabia
T: + 966 11 483 9100

Ashmore Singapore

1 George Street #15-04
Singapore 049145
T: +65 6580 8288

Ashmore UAE

1st Floor, Gate Village 3,
Dubai, UAE
T: +971 440 195 86

Ashmore USA

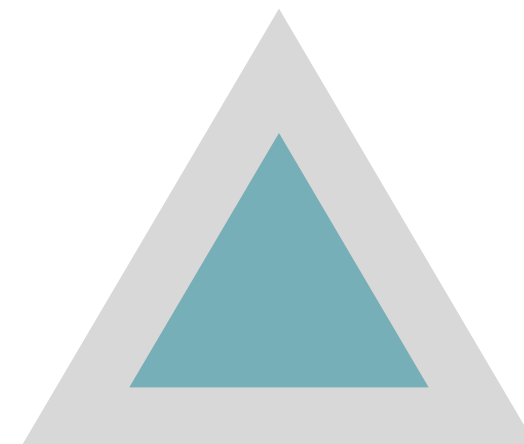
475 Fifth Avenue 15th Floor
New York, NY 10017, USA
T: +1 212 661 0061

This confidential document is issued by Ashmore. The term "Ashmore" used in this document refers to Ashmore Group plc and its subsidiaries and associated entities, including Ashmore Investment Management Limited, which is authorised and regulated by the Financial Conduct Authority and Ashmore Investment Advisors Limited, which is also authorised and regulated by the Financial Conduct Authority. Any information on or reference to "Unregulated Collective Investment Schemes" in this document are only suitable for use with Eligible Counterparties, Professional Clients or investors meeting the FCA's COBS 4.12 categories as the promotion of these Schemes either within the UK or from the UK is severely restricted by statute. Shares in any Unregulated Collective Investment Scheme are not available for sale in any jurisdiction in which such a sale would be prohibited and may only be purchased by persons with professional experience of participating in unregulated schemes, and who understand the high degree and variety of risk involved in Emerging Market investment. The information and any opinions contained in this document have been compiled in good faith, but no representation or warranty, express or implied, is made as to their accuracy, completeness or correctness. Except where otherwise indicated, the information in this document is based on matters as they are believed to exist as of the date this document was prepared and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available or changes occurring after such date. Save to the extent (if any) that exclusion of liability is prohibited by any applicable law or regulation, Ashmore, its officers, employees, representatives and agents expressly advise that they shall not be liable in any respect whatsoever for any loss or damage, whether direct, indirect, consequential or otherwise however arising (whether in negligence or otherwise) out of or in connection with the contents of or any omissions from this document. This document does not constitute an offer to sell, purchase, subscribe for or otherwise invest in units or shares of any Fund referred to in this document. The value of any investment in any such Fund may fall as well as rise and investors may not get back the amount originally invested. Past performance is not a reliable indicator of future results. All prospective investors must obtain a copy of the appropriate offering documents relating to the relevant Fund prior to making any decision to invest in any such Fund. For Swiss Investors, the prospectus, the key investor information documents (KIIDs), the articles of incorporation as well as the annual and semi-annual reports may be obtained free of charge from the representative in Switzerland. The representative and paying agent in Switzerland is BNP Paribas Securities Services, Paris, succursale de Zurich, Selnaustrasse 16, 8002 Zurich, Switzerland. This document does not constitute and may not be relied upon as constituting any form of investment advice and prospective investors are advised to ensure that they obtain appropriate independent professional advice before making any investment in any such Fund. The distribution of this document in certain jurisdictions is likely to be restricted by law, and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions.



MANAGER ANALYTICS
EMD LOCAL CURRENCY

Nick Samouilhan, Ph.D., CFA, FRM
SEPTEMBER 2018



Australia

Level 27
101 Collins Street
Melbourne VIC 3000
Australia
+61.3.9653.7402

Italy

5th floor
Via San Prospero 1
20121 Milan
Italy
+39.023.0300.200

Sweden

Kungsgatan 8
114 423 Stockholm
Sweden
+46-85-025-65-93

Australia

Level 50, Governor Phillip Tower
1 Farrer Place, Suite 50B
Sydney NSW 2000
Australia
+61.2.8667.5700

Japan

GranTokyo South Tower 7F
9-2, Marunouchi 1-chome,
Chiyoda-ku, Tokyo
100-6607, Japan
+81.3.6758.3800

Switzerland

Talstrasse 65, 6th Floor
8001 Zurich
Switzerland
+41.44.227.1550

Canada

Suite 4240, 77 King Street West
TD North Tower
P.O. Box 87
Toronto, ON M5K 1G8
Canada
+1.416.360.5777

Luxembourg

35 Boulevard Prince Henri
3rd Floor
L-1724 Luxembourg
Grand Duchy of Luxembourg
+352.27.47.251

United Arab Emirates

Dubai International
Financial Centre
The Gate, Level 15, Office 24
PO Box 482023
Dubai
United Arab Emirates
+971.4.4019266

Denmark

Axeltorv 2F, 7th. Floor,
1609 København V
Denmark
+45.33.36.05.00

Netherlands

Strawinskylaan 1433
WTC Tower B Level 14
1077 XX Amsterdam
Netherlands
+31.20.333.6200

United Kingdom

60 Queen Victoria Street
London, EC4N 4TZ
United Kingdom
+44.20.7651.8200

Germany

Neue Rothofstrasse 19
60313 Frankfurt
Germany
+49.69.24437.1900

Singapore

501 Orchard Road
10-02 Wheelock Place
Singapore 238880
+65.6836.0098

United States

100 East Pratt Street
Baltimore, MD 21202
United States
+1.410.345.2000

Hong Kong

21/F Jardine House
1 Connaught Place
Central, Hong Kong
+852.2536.7800

Spain

Torre Europa
Paseo de la Castellana 95-15
28046 Madrid
Spain
+34.91.418.69.50

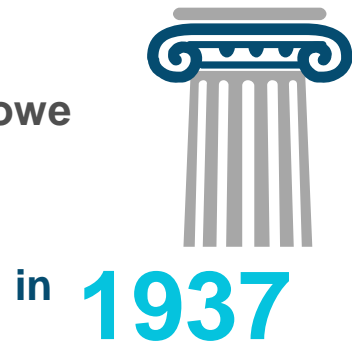
WHY T. ROWE PRICE

OVERVIEW

As of 30 June 2018

Solely focused on asset management

Founded in
Baltimore
by Thomas Rowe
Price, Jr.



Local presence in

16

countries



A highly stable organisation
with



over
6,800
associates

Listed company
included
in the
S&P 500 Index



US\$1,044.1 billion¹



Assets
Under
Management

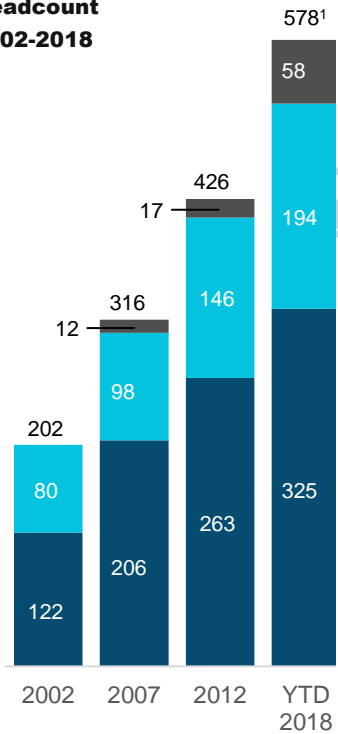
¹The combined assets under management by T. Rowe Price Associates, Inc. and its investment advisory affiliates as of 30 June 2018.

FOCUSED ON ATTRACTING AND RETAINING TOP INVESTMENT TALENT THROUGH ALL MARKET CYCLES

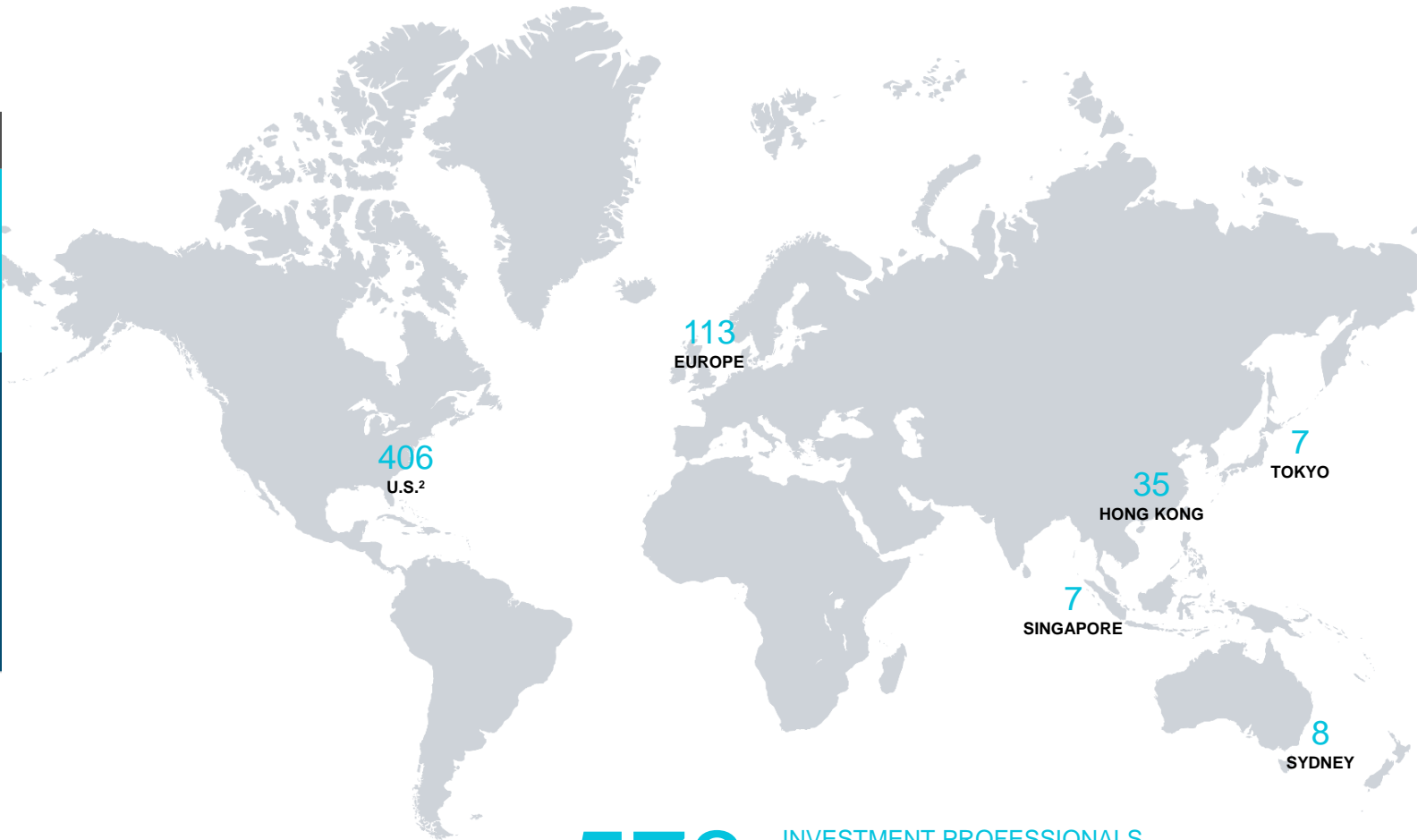
As of 30 June 2018

Investment Professionals

Headcount
2002-2018



- Multi-Asset Professionals
- Fixed Income Professional
- Equity Professionals



578 INVESTMENT PROFESSIONALS
WORLDWIDE¹

¹ 85 portfolio managers, 23 associate portfolio managers, 10 regional portfolio managers, 12 sector portfolio managers, 155 investment analysts/credit analysts, 44 quantitative analysts, 13 solutions associates, 50 associate analysts, 32 portfolio specialists/generalists, 2 strategists, 6 specialty analysts, 59 traders, 15 trading analysts, 2 economists, 47 portfolio modeling associates, and 23 management associates.

² Count includes 395 Baltimore-based associates, 5 San Francisco-based associates, and 6 Philadelphia-based associates. Philadelphia-based associates joined the firm through a U.S. high yield fund acquisition in May 2017, and their research remains fully separate and distinct from T. Rowe Price's existing high yield platform.

MULTI-ASSET INVESTING AT T. ROWE PRICE

OUR CREDENTIALS

As of 30 June 2018

EXPERIENCE

Over **25 years** of experience managing multi-asset portfolios

SIZE

\$304.1 billion USD¹ managed in multi-asset strategies

RESOURCES

Team of 59² dedicated multi-asset investment professionals

GLOBAL

Locations in **Baltimore, London and Hong Kong**

RESEARCH AND DEVELOPMENT

- Strategic asset allocation
- Strategy design and modelling
- Economic and market analysis
- Views across and within asset classes
- Glide path design

PORTFOLIO MANAGEMENT

- Target date and target allocation
- Global solutions
- Liquid alternatives
- Overlay strategies

IMPLEMENTATION AND ANALYTICS

- Implementation of tactical shifts
- Portfolio and risk analytics
- Trading and rebalancing

MULTI-ASSET SOLUTIONS

- Solutions based on specific client objectives and constraints
- Global and regional focus
- Access across all T. Rowe Price investment, research and quantitative resource teams

- 23 professionals
- 14 advanced degrees
- 10 CFA® charterholders
- Average 10 years industry experience

- 14 professionals
- 12 advanced degrees
- 9 CFA® charterholders
- Average 18 years industry experience

- 7 professionals
- 7 advanced degrees
- 4 CFA® charterholders
- Average 9 years industry experience

- 13 professionals
- 6 advanced degrees
- 7 CFA® charterholders
- Average 11 years industry experience

¹The combined assets under management by T. Rowe Price Associates, Inc. and its investment advisory affiliates as of June 30, 2018.

² Includes Management and Strategists.

CFA® and Chartered Financial Analyst® are trademarks of CFA Institute.

MULTI-ASSET SOLUTIONS

WHAT WE DO



1

THE ASSET CLASS AND ITS COMPONENTS

2

MARKET GEARING AND TRUE ALPHA

3

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

THE ASSET CLASS AND ITS COMPONENTS

TOTAL RETURN OVER TIME

For the Period of 31 December 2002 Through 30 June 2018

Figures are Calculated in Pounds Sterling

EMERGING MARKET EQUITIES	EMERGING MARKET BONDS	EMERGING MARKET CREDIT
EMERGING MARKET EQUITIES	EMERGING MARKET BONDS	EMERGING MARKET CREDIT
EMERGING MARKET EQUITIES	EMERGING MARKET BONDS	EMERGING MARKET CREDIT



Past performance is not a reliable indicator of future performance.

Data: Emergong Markets Debt – Local Currency (EMD LC) represented by JP Morgan GBI-EM Global Diversified Traded Index.

Sources: JP Morgan Chase & Co. and FTSE.

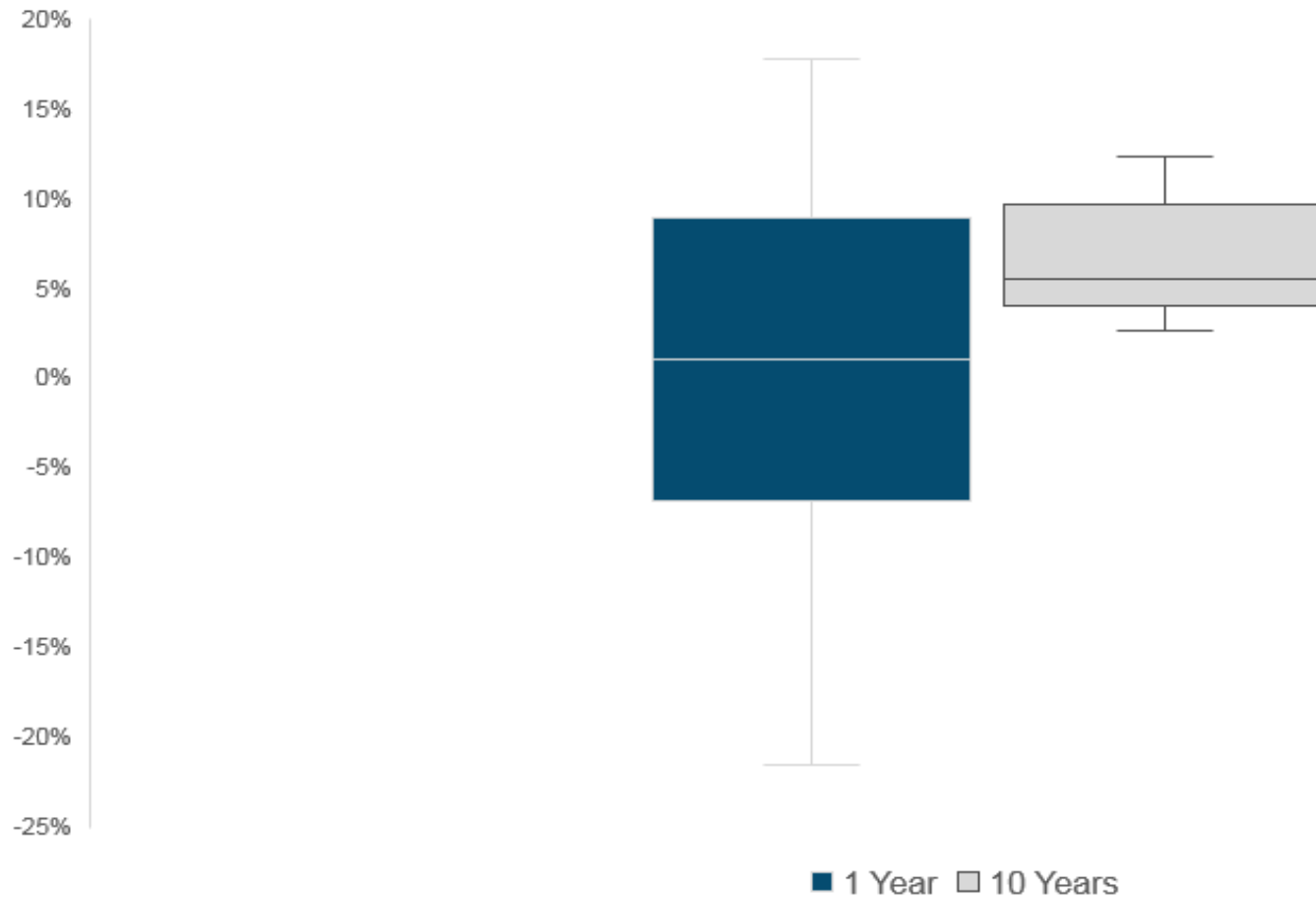
THE ASSET CLASS AND ITS COMPONENTS

ASSET CLASS DISTRIBUTIONS AND TIME HORIZON

For the Period of 31 December 2002 Through 30 June 2018

Figures are Calculated in U.S. Dollars

ASSET CLASS DISTRIBUTION	ASSET CLASS PERFORMANCE	ASSET CLASS RISK
ASSET CLASS DISTRIBUTION	ASSET CLASS PERFORMANCE	ASSET CLASS RISK
ASSET CLASS DISTRIBUTION	ASSET CLASS PERFORMANCE	ASSET CLASS RISK



Past performance is not a reliable indicator of future performance.

Data: Annualised returns for specific window period, rolled monthly. JP Morgan GBI-EM Global Diversified Traded Index used to represent EMD local currency.

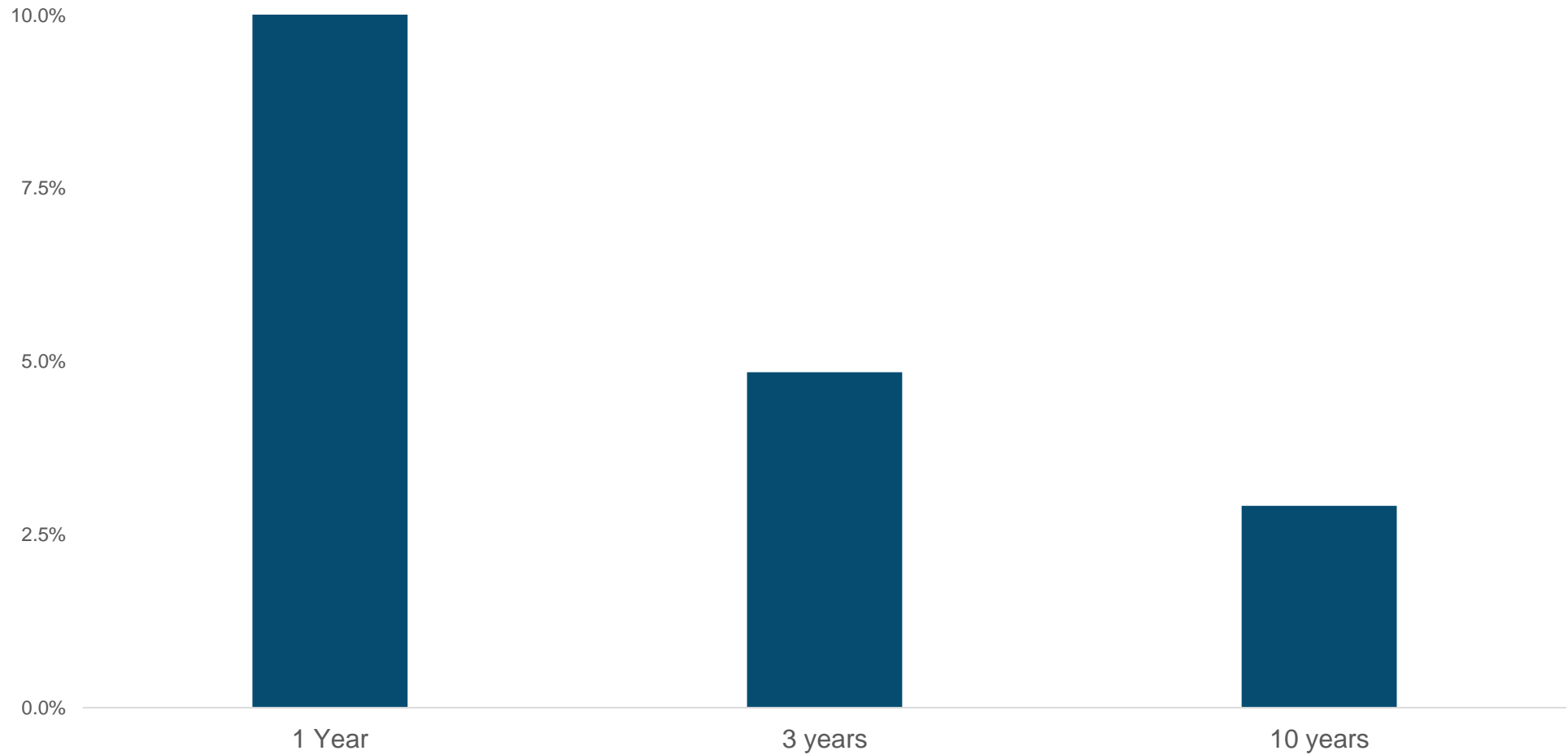
Source: JP Morgan Chase & Co.

THE ASSET CLASS AND ITS COMPONENTS

VOLATILITY AND TIME HORIZON

For the Period of 31 December 2002 Through 30 June 2018
Figures are Calculated in U.S. Dollars

EMD ASSET CLASSIFICATION	EMD INVESTMENT	EMD LIABILITY & OTHER
EMD ASSET CLASSIFICATION	EMD INVESTMENT	EMD LIABILITY & OTHER
EMD ASSET CLASSIFICATION	EMD INVESTMENT	EMD LIABILITY & OTHER



Past performance is not a reliable indicator of future performance.

Data: Annualised returns for specific window period, rolled monthly. JP Morgan GBI-EM Global Diversified Traded Index used to represent EMD local currency.

Source: JP Morgan Chase & Co.

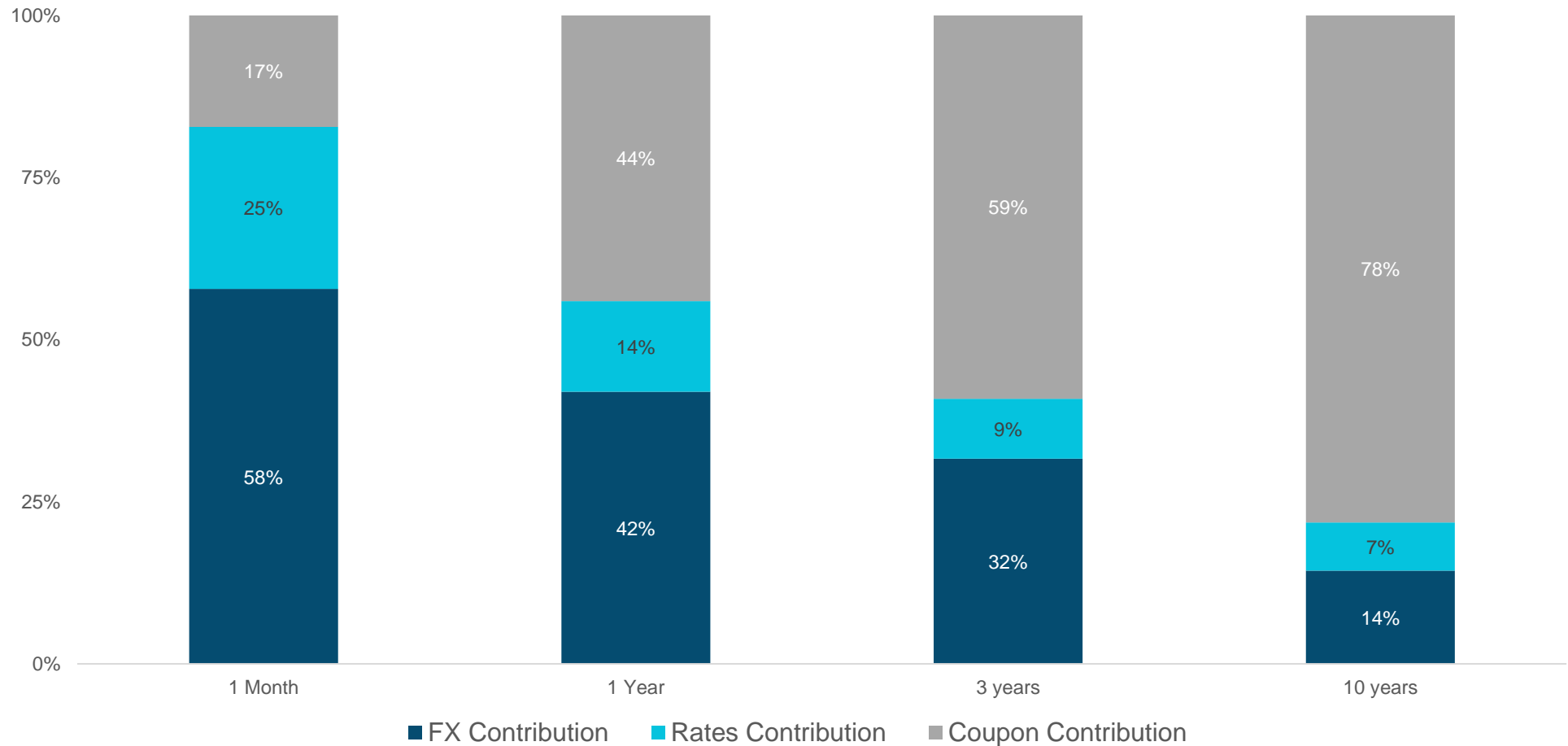
THE ASSET CLASS AND ITS COMPONENTS

ASSET CLASS DRIVERS AND TIME HORIZON

For the Period of 31 December 2002 Through 30 June 2018

Figures are Calculated in U.S. Dollars

ASSET CLASS	ASSET CLASS	ASSET CLASS
ASSET CLASS	ASSET CLASS	ASSET CLASS
ASSET CLASS	ASSET CLASS	ASSET CLASS



Past performance is not a reliable indicator of future performance.

Data: Percentage of the squared returns for each component, over specified window.

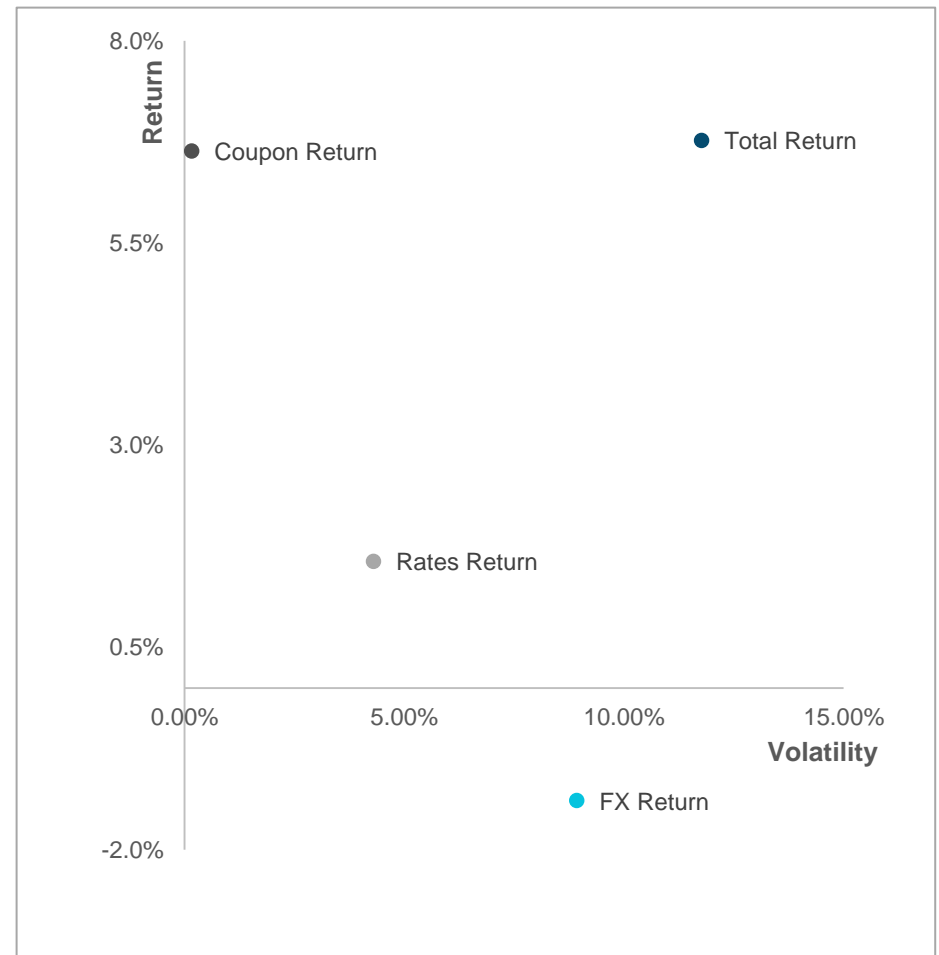
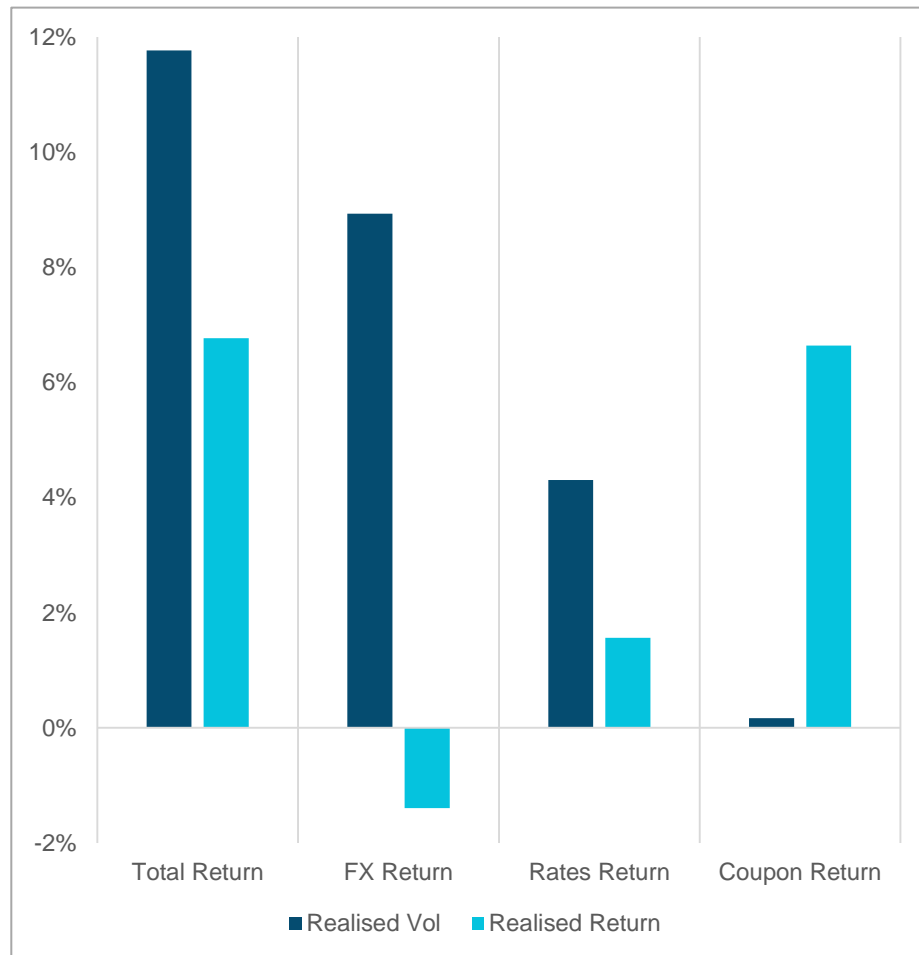
Source: JP Morgan Chase & Co. - JP Morgan GBI-EM Global Diversified Traded Index.

THE ASSET CLASS AND ITS COMPONENTS

THE COMPLEX RISK-RETURN RELATIONSHIP

For the Period of 31 December 2002 Through 30 June 2018

Figures are Calculated in U.S. Dollars



Past performance is not a reliable indicator of future performance.

Data: Annualised total returns and volatility of underlying components of JP Morgan GBI-EM Global Diversified Traded Index based on monthly data for given period.

Source: JP Morgan Chase & Co.

THE ASSET CLASS AND ITS COMPONENTS

COMPONENT CHARACTERISTICS

For the Period of 31 December 2002 Through 30 June 2018
 Figures are Calculated in U.S. Dollars



	ASSET CLASS	FX COMPONENT	COUPON COMPONENT	RATES COMPONENT
REALISED RETURN	6.77%	-1.39%	6.64%	1.56%
REALISED VOLATILITY	11.77%	8.93%	0.17%	4.30%
REALISED SKEW	-0.59	-0.75	0.96	0.28
MAX DRAWDOWN	-29%	-45%	0%	-9%

Past performance is not a reliable indicator of future performance.

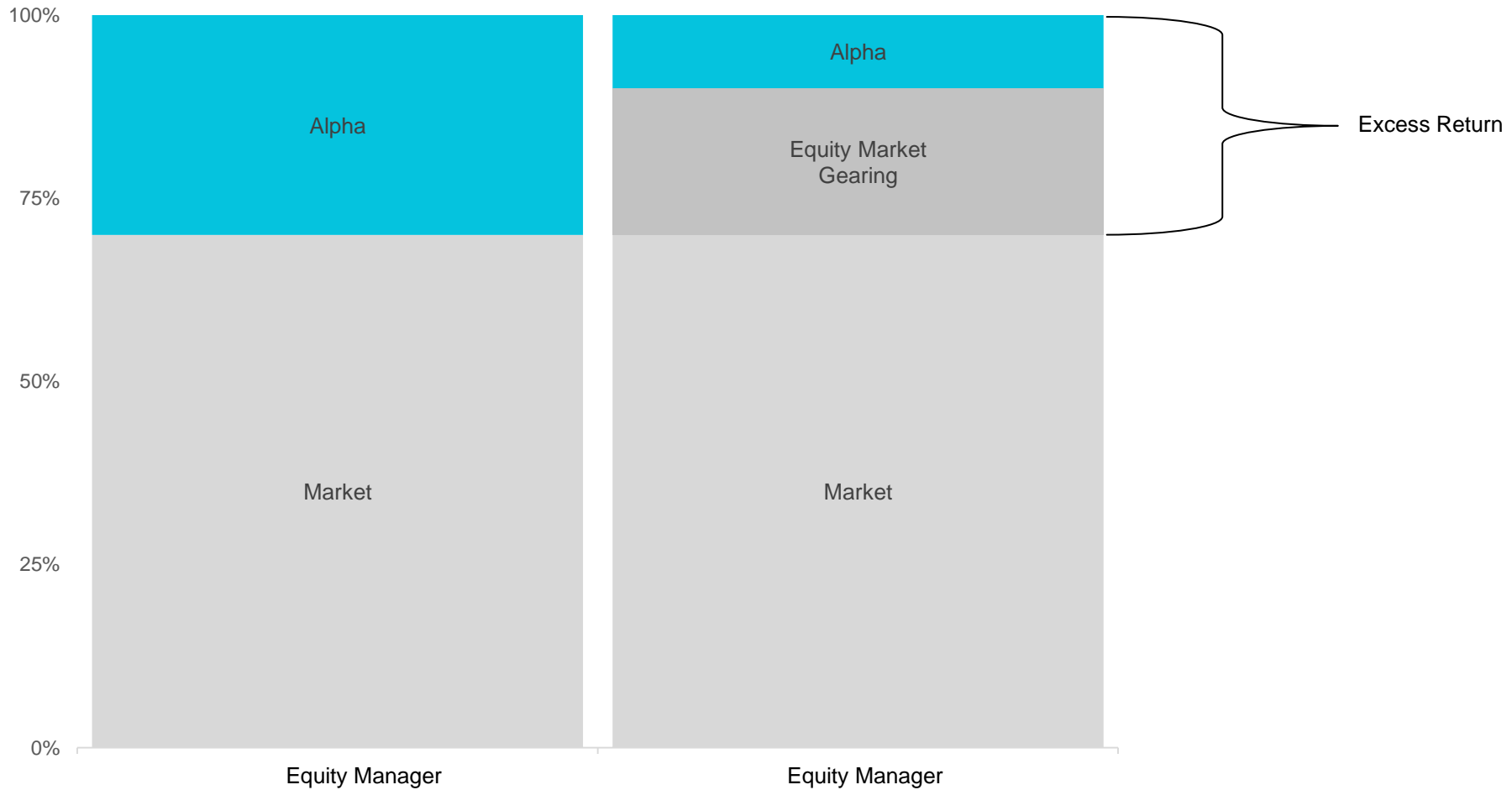
Data: Statistics of underlying components of JP Morgan GBI-EM Global Diversified Traded Index based on monthly data for given period. Realised return and volatility have been annualised.

Source: JP Morgan Chase & Co.

MARKET GEARING AND TRUE ALPHA

IMPORTANCE OF ADJUSTING FOR GEARING

MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION
MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION
MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION

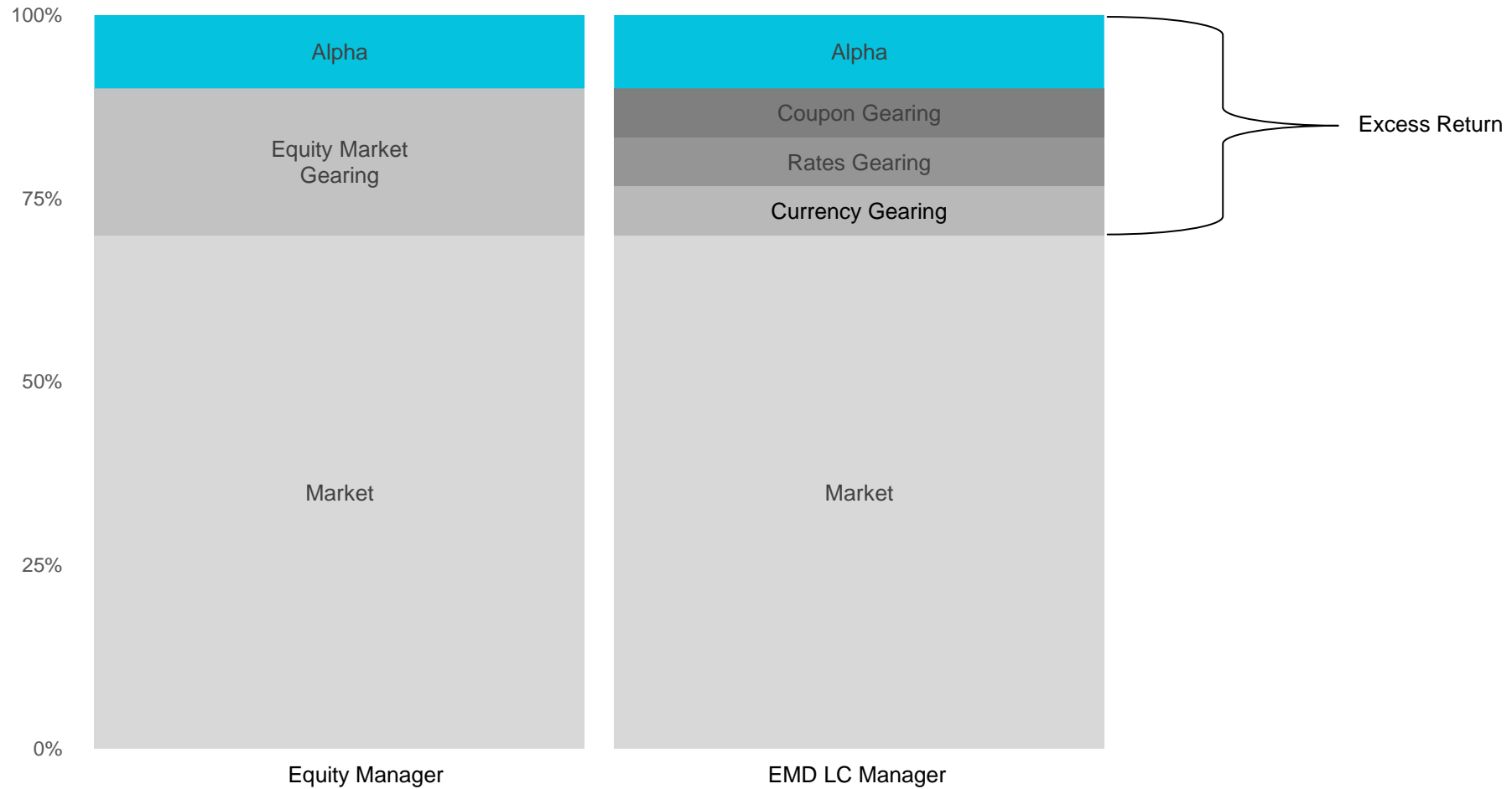


An equity manager's market exposures can be different than the benchmark, and this gearing should be taken into account when evaluating alpha. For illustrative purposes only.

MARKET GEARING AND TRUE ALPHA

GEARING IN EMD LOCAL CURRENCY

MARKET GEARING	MARKET GEARING	MARKET GEARING
MARKET GEARING	MARKET GEARING	MARKET GEARING
MARKET GEARING	MARKET GEARING	MARKET GEARING



For Emerging Markets Debt – Local Currency Managers, the concept of gearing can be applied to the three components of return. For illustrative purposes only.

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

TRUE ALPHA AND COMPONENT SENSITIVITIES

MARKET RISK	CREDIT RISK	CURRENCY RISK
MARKET CLASH RISK	LIQUIDITY RISK	COMMODITY RISK
TRUE ALPHA	PORTFOLIO MANAGER	LIQUIDITY RISK

True alpha or geared component?

- True alpha requires idiosyncratic returns to be generated by the fund manager
- However, excess returns from different component sensitivities can mask the “true alpha”
- In EMD LC there are three components (FX, Rates and Coupon), which makes this adjustment complicated

Identifying manager styles

- The component sensitivities help us to understand the manager’s style
- Does the manager take more or less risk with the Coupon, FX or Rates component?
- Is the manager’s excess returns due to having a high sensitivity to a particular component when that component did very well?

Modelling the sensitivities

- Can be handled within a standard “Ordinary Least Squares” framework
- By definition, benchmark components must have coefficients of one to the benchmark total return
- We can therefore regress the same benchmark components onto the manager’s total return to understand the manager’s style

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

ANALYTICAL FRAMEWORK I: SENSITIVITIES AND TRUE ALPHA

MARKET RISK	CREDIT RISK	LIQUIDITY RISK
MARKET CLASH RISK	MARKET RISK	MARKET RISK
MARKET CLASH RISK	MARKET RISK	MARKET RISK

A: REGRESS BENCHMARK COMPONENTS ONTO BENCHMARK RETURN:

$$R_{BM,i} = \beta_1 FX_{BM,i} + \beta_2 Coupon_{BM,i} + \beta_3 Rates_{BM,i} + \varepsilon_i$$

By definition $\beta_1 = \beta_2 = \beta_3 = 1$ as these three components sum to total return...

...so we can now use these estimated coefficients to adjust for timing issues etc

B: REGRESS BENCHMARK COMPONENTS ONTO MANAGER RETURN:

$$R_{Man,i} = \beta_4 FX_{BM,i} + \beta_5 Coupon_{BM,i} + \beta_6 Rates_{BM,i} + \varepsilon_i$$

Estimate the unadjusted manager sensitivities to the three components

C: NORMALISE MANAGER COEFFICIENTS BY BENCHMARK COEFFICIENTS:

$$B_{FX} = \beta_1 / \beta_4 \Rightarrow \text{Adjusted Manager Sensitivity to FX component}$$

Adjust the manager coefficients using the estimated benchmark coefficients to account for timing etc

$$B_C = \beta_2 / \beta_5 \Rightarrow \text{Adjusted Manager Sensitivity to Coupon component}$$

$$B_R = \beta_3 / \beta_6 \Rightarrow \text{Adjusted Manager Sensitivity to Rates component}$$

D: CALCULATE "TRUE ALPHA" AS THE RESIDUAL AFTER ACCOUNTING FOR THE COEFFICIENT ADJUSTED COMPONENT RETURNS

$$\alpha_{Man} = R_{Man} - (\beta_{FX} FX_{BM} + \beta_C Coupon_{BM} + \beta_R Rates_{BM})$$

This is the excess return by the manager over the benchmark after accounting for the component gearing

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

ANALYTICAL FRAMEWORK II: IMPORTANCE



Substitute the summed components in place of the estimated model to find base fit

Portion of manager total variation explained by benchmark = $1 - \frac{\sum_{n=1}^k ((FX_n + Rates_n + Coupon_n) - TR_{Man,n})^2}{\sum_{n=1}^k (TR_{Man,n} - \bar{TR}_{Man})^2}$

Total manager variation unexplained by ungeared benchmark components

Calculate difference in fit between estimated and summed exposures to isolate component gearing impact

Portion of manager total variation explained by component gearing = $\frac{\sum_{n=1}^k ((FX_n + Rates_n + Coupon_n) - TR_{Man,n})^2}{\sum_{n=1}^k (TR_{Man,n} - \bar{TR}_{Man})^2} - \frac{\sum_{n=1}^k ((\beta_{FX}FX_n + \beta_R Rates_n + \beta_C Coupon_n) - TR_{Man,n})^2}{\sum_{n=1}^k (TR_{Man,n} - \bar{TR}_{Man})^2}$

Total manager variation unexplained by ungeared benchmark components *Total manager variation unexplained by geared benchmark components*

Calculate idiosyncratic variation through removing variation explained through estimated model

Portion of manager total variation not explained by geared benchmark = $\frac{\sum_{n=1}^k ((\beta_{FX}FX_n + \beta_R Rates_n + \beta_C Coupon_n) - TR_{Man,n})^2}{\sum_{n=1}^k (TR_{Man,n} - \bar{TR}_{Man})^2}$

Total manager variation unexplained by geared benchmark components

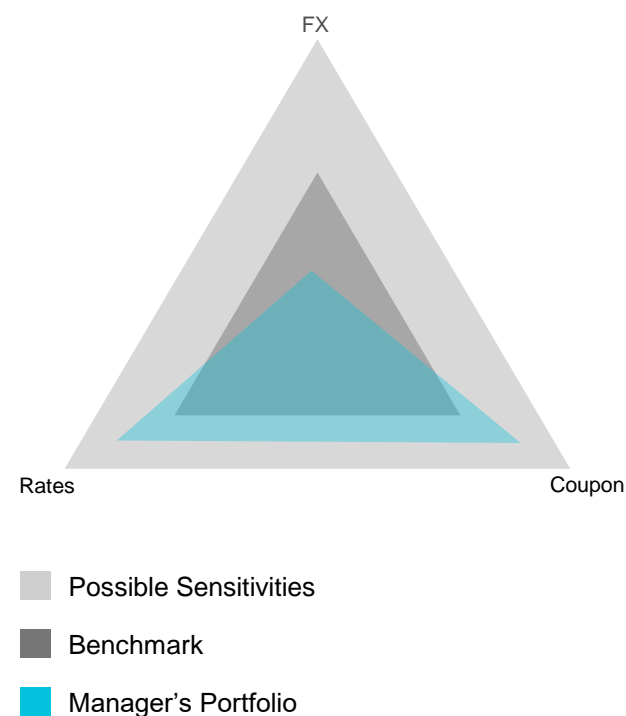
PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

ILLUSTRATIVE EXAMPLE



CHARACTERISTIC	MANAGER
Percentage of manager's excess return variation explained by geared benchmark	20%
Percentage of manager's excess return variation not explained by geared benchmark	80%
β (FX)	0.70
β (Coupon)	1.40
β (Rates)	1.40

DECOMPOSITION	MANAGER
Benchmark Total Return	1.00%
Manager Total Return	1.50%
Excess Return	0.50%
ATTRIBUTION	
FX Gearing	-0.30%
Coupon Gearing	0.70%
Rates Gearing	-0.10%
True Alpha	0.20%



For illustrative purposes only.

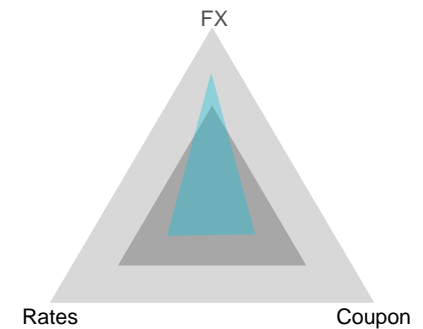
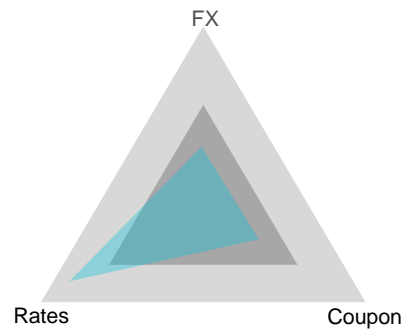
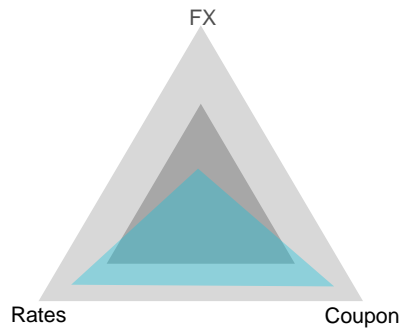
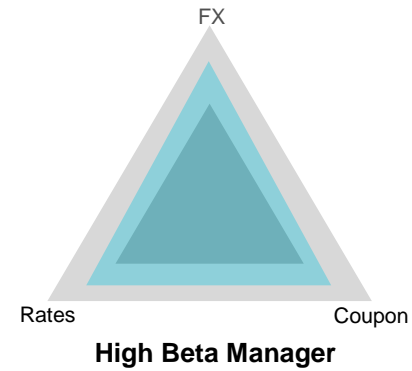
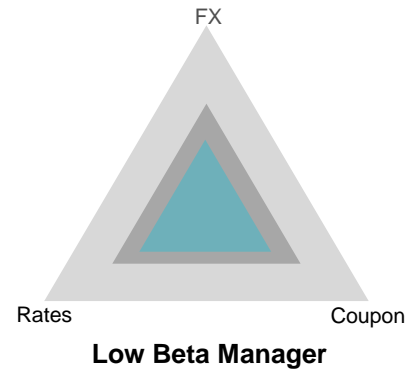
Source: JP Morgan Chase & Co.

In the charts above, the dark grey area represents the sensitivities of the benchmark, JP Morgan GBI-EM Global Diversified Traded Index, the light grey area shows the range of possible sensitivities, and the light blue area shows the sensitivities of the indicated manager. If a point of the blue triangle appears inside the dark grey the manager is less sensitive to that component than the benchmark, but if the point is within the light grey it is more sensitive than the benchmark.

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

STYLED GRAPHICAL DEPICTION

ISSUES TO CONSIDER	ISSUES TO CONSIDER	ISSUES TO CONSIDER
ISSUES TO CONSIDER	ISSUES TO CONSIDER	ISSUES TO CONSIDER
ISSUES TO CONSIDER	ISSUES TO CONSIDER	ISSUES TO CONSIDER



Managers With Differing Component Sensitivities

- Possible Sensitivities
- Benchmark
- Manager's Portfolio

For illustrative purposes only.

Source: JP Morgan Chase & Co.

In the charts above, the dark grey area represents the sensitivities of the benchmark, JP Morgan GBI-EM Global Diversified Traded Index, the light grey area shows the range of possible sensitivities, and the light blue area shows the sensitivities of the indicated manager. If a point of the blue triangle appears inside the dark grey the manager is less sensitive to that component than the benchmark, but if the point is within the light grey it is more sensitive than the benchmark.

PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION

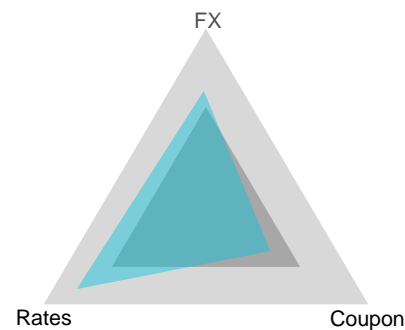
EXAMPLE

For the Period of 1 March 2010 Through 30 June 2018
 Figures are Calculated in U.S. Dollars

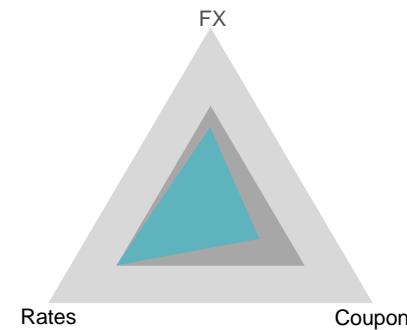


CHARACTERISTIC	MANAGER A	MANAGER B
Percentage of manager's excess return variation explained by geared benchmark	25%	15%
Percentage of manager's excess return variation not explained by geared benchmark	75%	85%
β (FX)	1.07	0.93
β (Coupon)	0.97	0.76
β (Rates)	1.12	0.99

DECOMPOSITION	MANAGER A	MANAGER B
Benchmark Total Return	1.85%	1.85%
Manager Total Return	1.01%	0.35%
Excess Return	-0.84%	-1.50%
ATTRIBUTION		
FX Gearing	-0.35%	0.37%
Coupon Gearing	-0.20%	-1.55%
Rates Gearing	0.06%	0.00%
True Alpha	-0.35%	-0.31%



Manager A



Manager B

- Possible Sensitivities
- Benchmark
- Manager's Portfolio

Past performance is not a reliable indicator of future performance.

Data: Manager's monthly total returns net of fees regressed against components of JP Morgan GBI-EM Global Diversified Traded Index.

Sources: JP Morgan Chase & Co., Morningstar and T. Rowe Price.

In the charts above, the dark grey area represents the sensitivities of the benchmark, JP Morgan GBI-EM Global Diversified Traded Index, the light grey area shows the range of possible sensitivities, and the light blue area shows the sensitivities of the indicated manager. If a point of the blue triangle appears inside the dark grey the manager is less sensitive to that component than the benchmark, but if the point is within the light grey it is more sensitive than the benchmark.

©2018 Morningstar, Inc. All rights reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete, or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results.

MULTI-ASSET SOLUTIONS

SUMMARY

MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION
MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION
MARKET CLASSIFICATION	MARKET CLASSIFICATION	MARKET CLASSIFICATION

- 1 THE ASSET CLASS AND ITS COMPONENTS**
- 2 MARKET GEARING AND TRUE ALPHA**
- 3 PROPOSED FRAMEWORK FOR MANAGER DECOMPOSITION**

MULTI-ASSET SOLUTIONS

WHAT WE DO



Important Information

This material is being furnished for general informational purposes only. The material does not constitute or undertake to give advice of any nature, including fiduciary investment advice, and prospective investors are recommended to seek independent legal, financial and tax advice before making any investment decision. T. Rowe Price group of companies including T. Rowe Price Associates, Inc. and/or its affiliates receive revenue from T. Rowe Price investment products and services. **Past performance is not a reliable indicator of future performance.** The value of an investment and any income from it can go down as well as up. Investors may get back less than the amount invested.

The material does not constitute a distribution, an offer, an invitation, a personal or general recommendation or solicitation to sell or buy any securities in any jurisdiction or to conduct any particular investment activity. The material has not been reviewed by any regulatory authority in any jurisdiction.

Information and opinions presented have been obtained or derived from sources believed to be reliable and current; however, we cannot guarantee the sources' accuracy or completeness. There is no guarantee that any forecasts made will come to pass. The views contained herein are as of the date noted on the material and are subject to change without notice; these views may differ from those of other T. Rowe Price group companies and/or associates. Under no circumstances should the material, in whole or in part, be copied or redistributed without consent from T. Rowe Price.

The material is not intended for use by persons in jurisdictions which prohibit or restrict the distribution of the material and in certain countries the material is provided upon specific request. It is not intended for distribution to retail investors in any jurisdiction.

EEA - Issued in the European Economic Area by T. Rowe Price International Ltd, 60 Queen Victoria Street, London EC4N 4TZ which is authorized and regulated by the UK Financial Conduct Authority. For Professional Clients only.

© 2018 All rights reserved. T. ROWE PRICE, INVEST WITH CONFIDENCE and the Bighorn Sheep design are, collectively and/or apart, trademarks or registered trademarks of T. Rowe Price Group, Inc. All rights reserved.

201808-591914

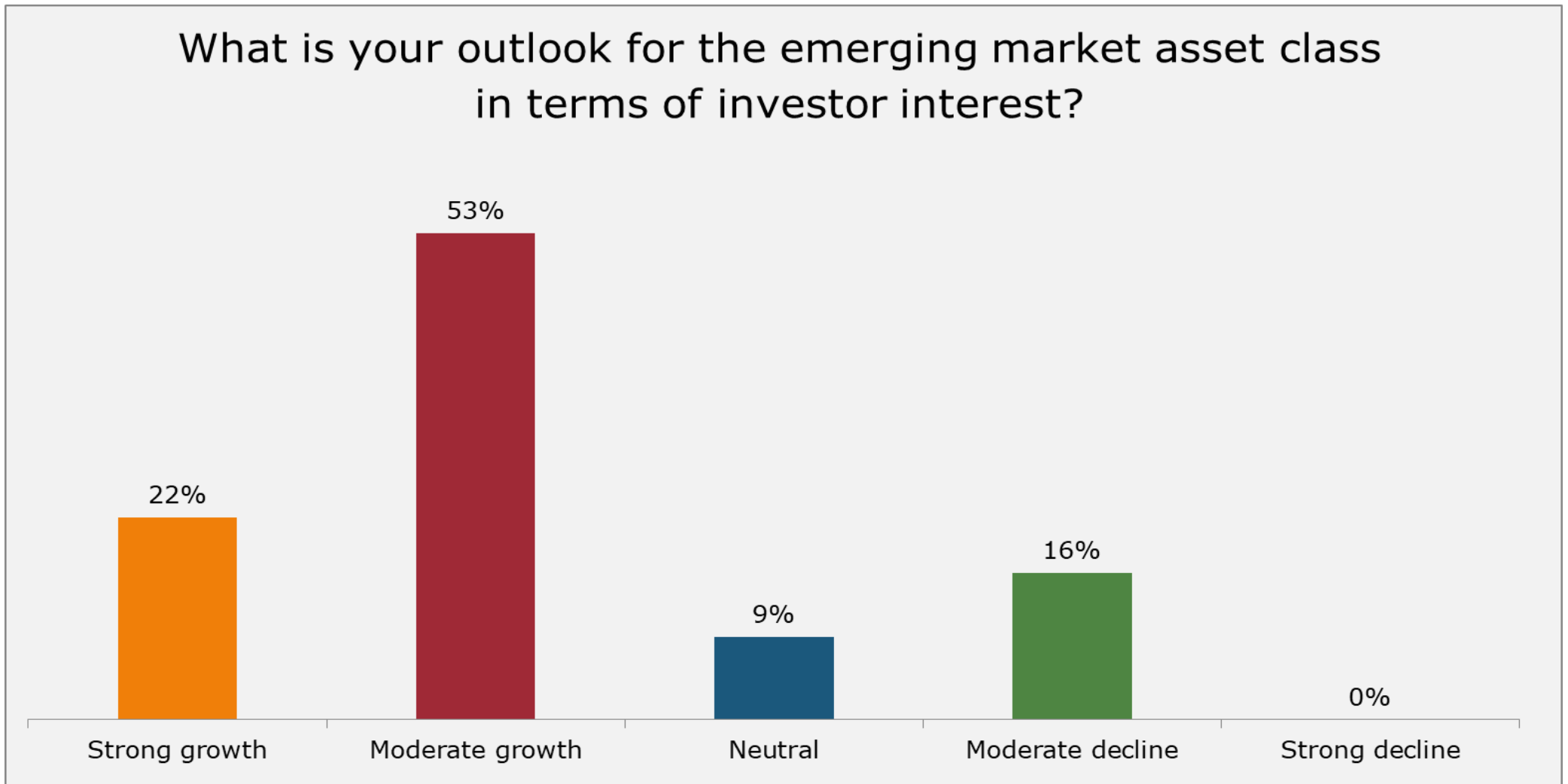
Trends in Emerging Markets

Romil Patel

Senior Staff Writer, Funds Global MENA

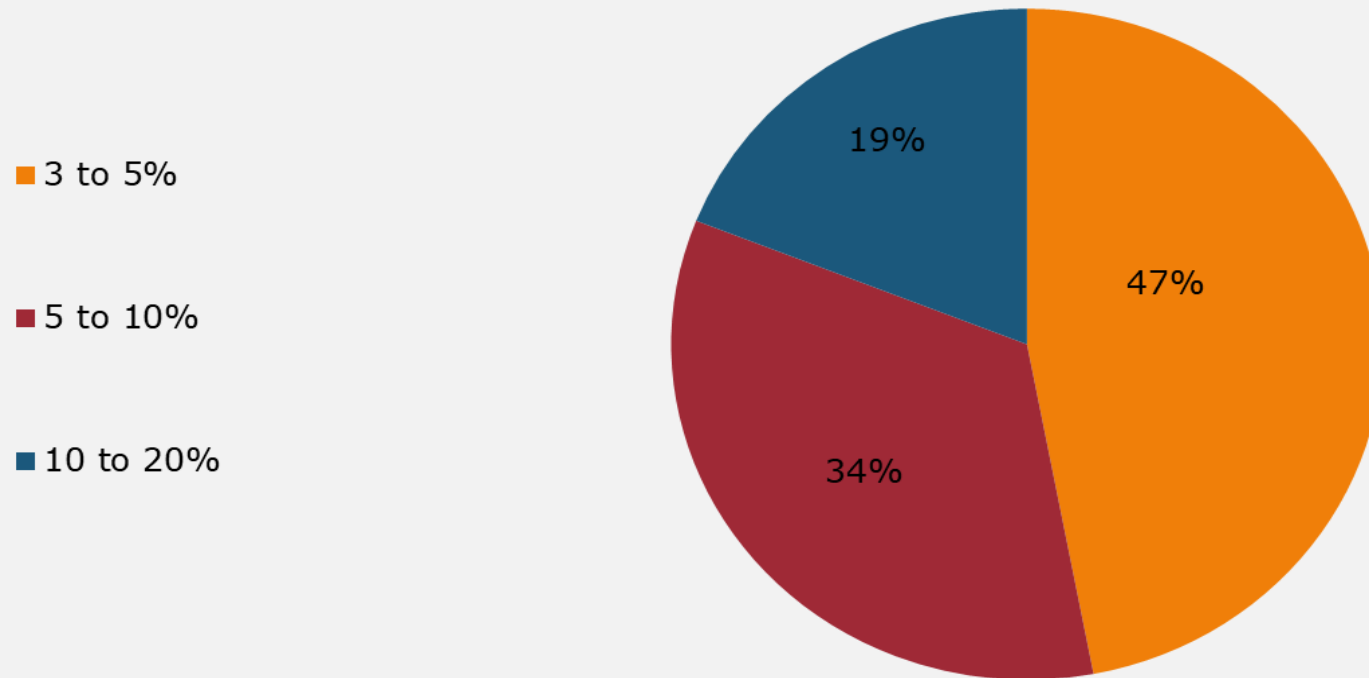
Emerging Markets: Coming of Age Investor Survey

What is your outlook for the emerging market asset class in terms of investor interest?



Emerging Markets: Coming of Age Investor Survey

How much do you think a typical investor allocates to emerging market assets today?



Emerging Markets: Coming of Age Investor Survey

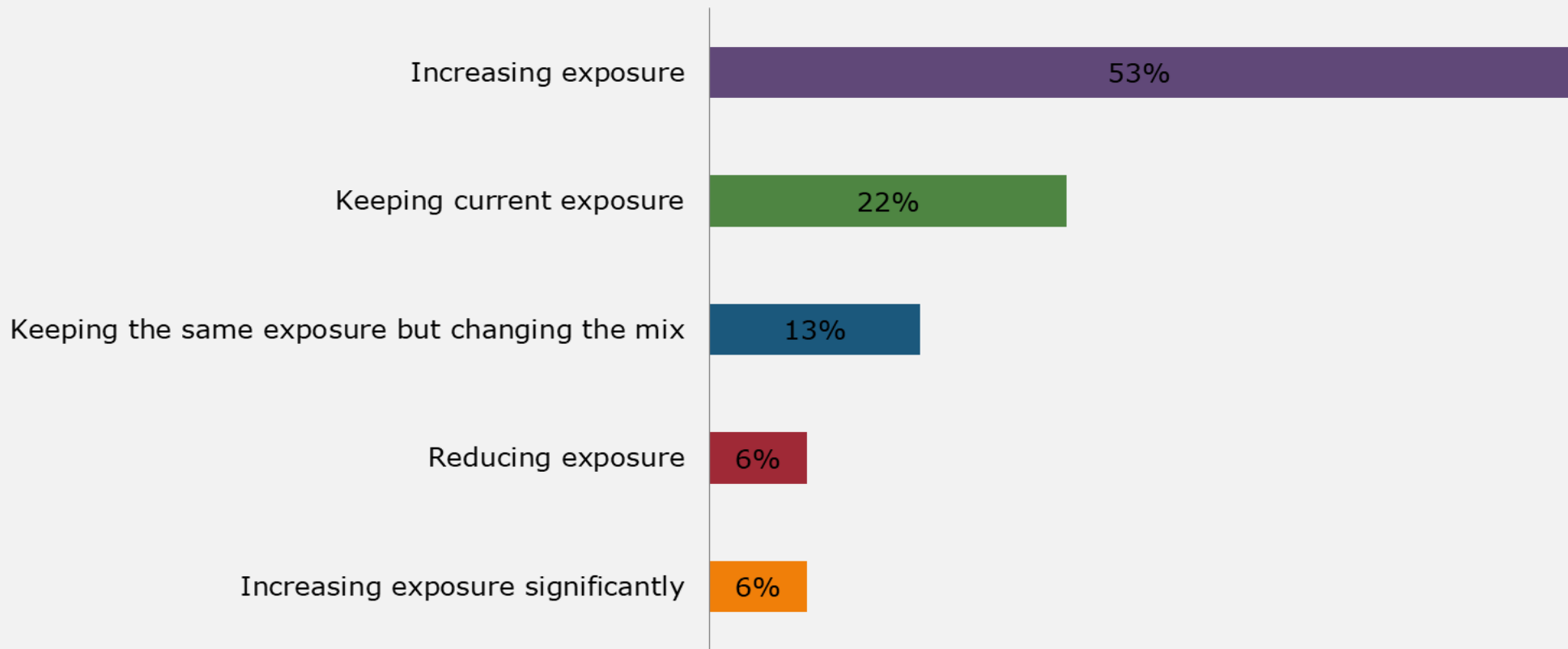
Of the 47% of respondents who said a typical investor allocates between 3% and 5% to emerging market assets, more than half said that should the figure should rise to between 5% and 10%.

Of the 34% of respondents who said 5% to 10%, more than half said a typical investor should allocate 10% to 20% to emerging market assets.

Of the 19% of respondents who said a typical investor allocates 10% to 20% to emerging market assets today, half said that should increase to more than 20%.

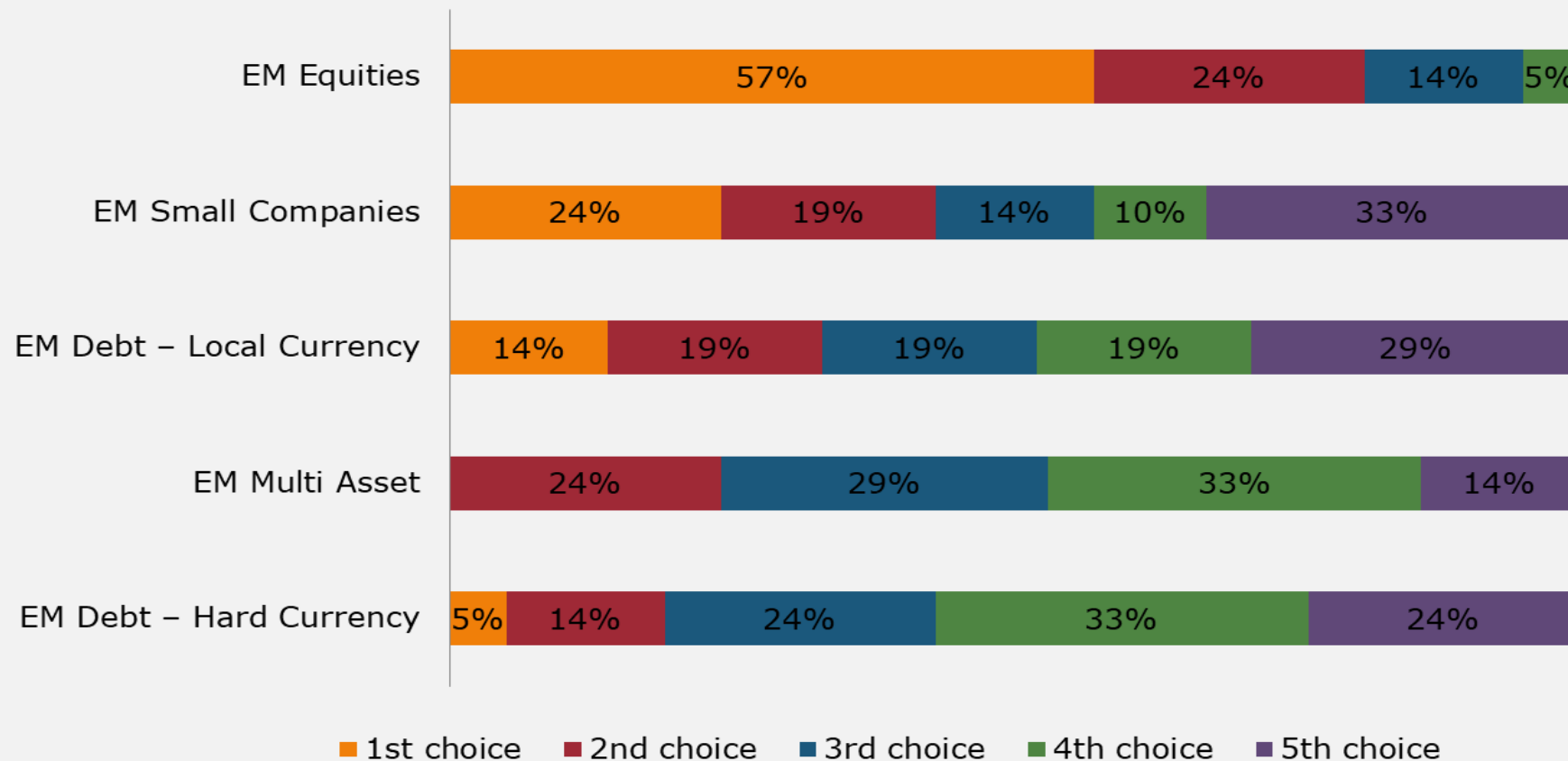
Emerging Markets: Coming of Age Investor Survey

Looking at your own investment outlook how much will you be investing in emerging markets?



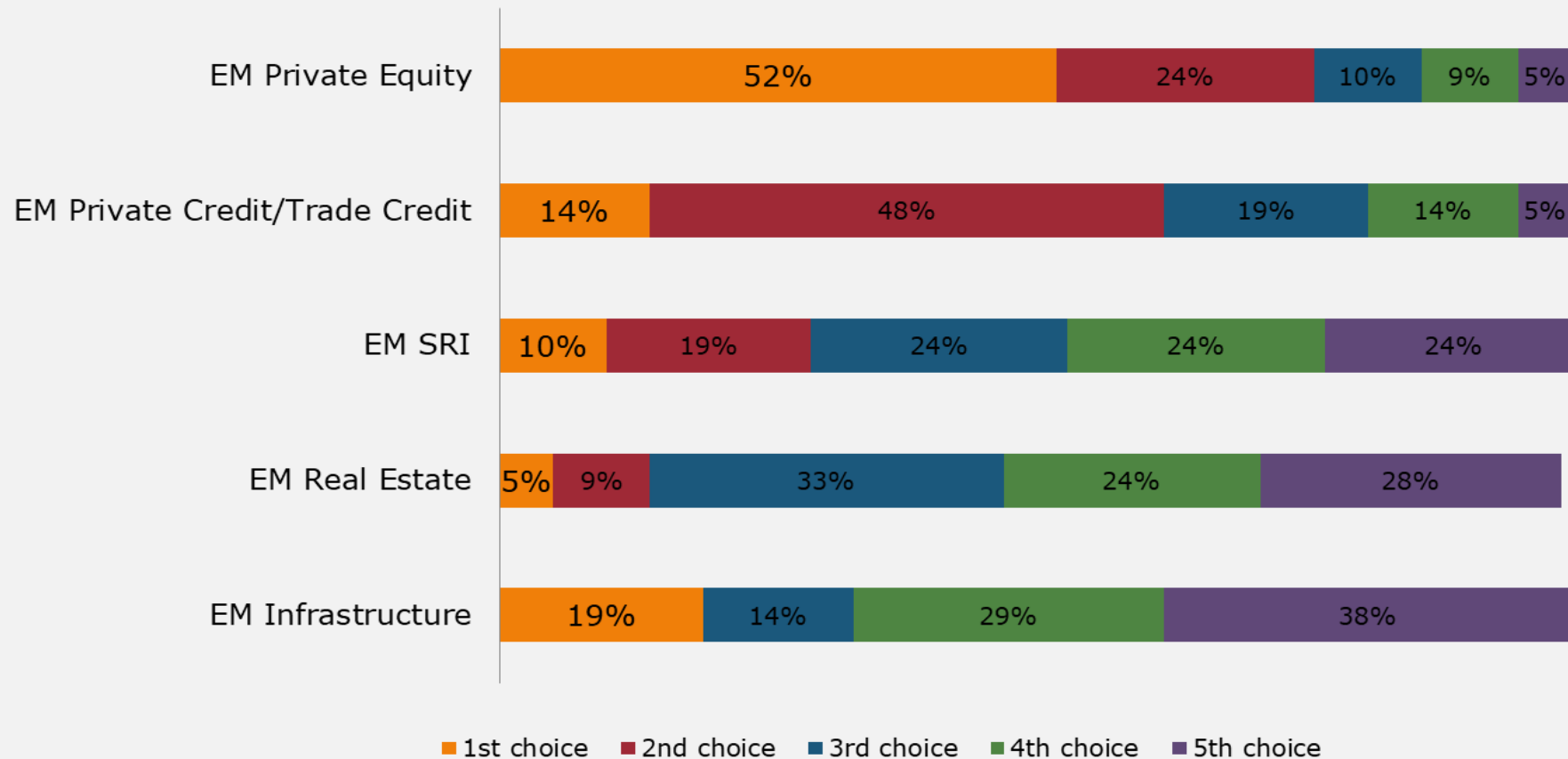
Emerging Markets: Coming of Age Investor Survey

For the major asset classes where do you see the most opportunity?



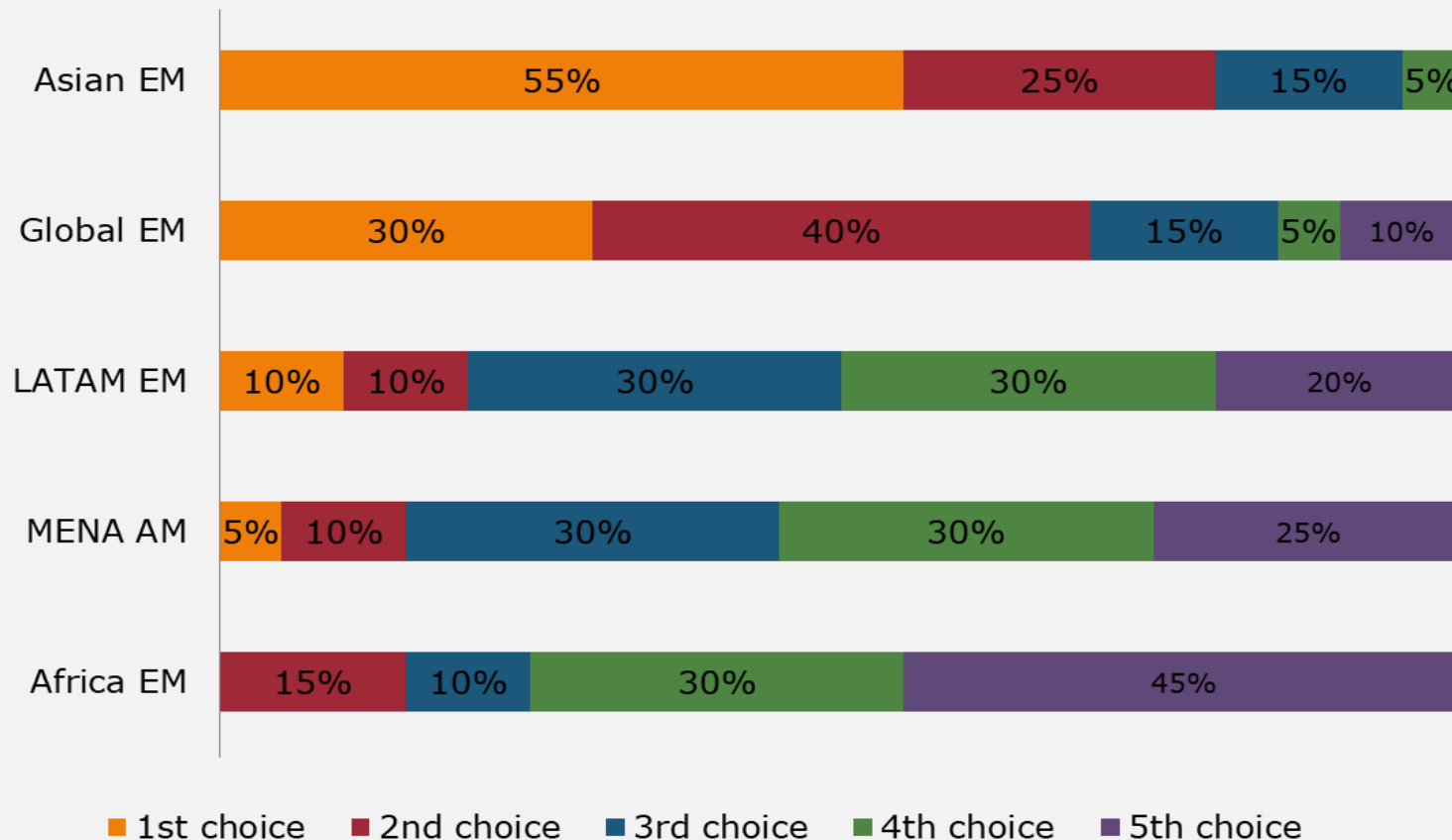
Emerging Markets: Coming of Age Investor Survey

Looking at the growth asset classes for emerging markets where do you see major opportunities?



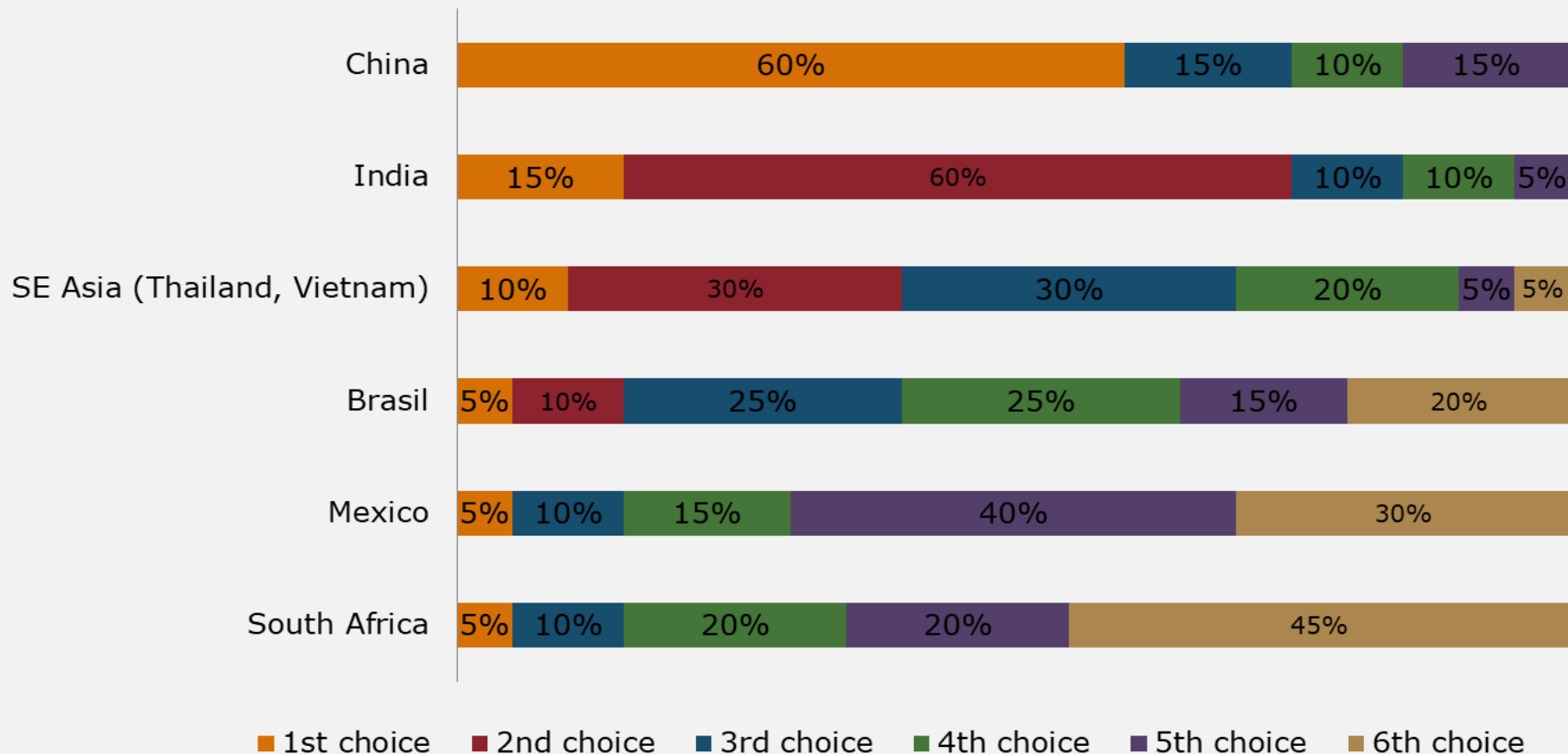
Emerging Markets: Coming of Age Investor Survey

Looking at the geographical split of emerging markets what are the most attractive areas?



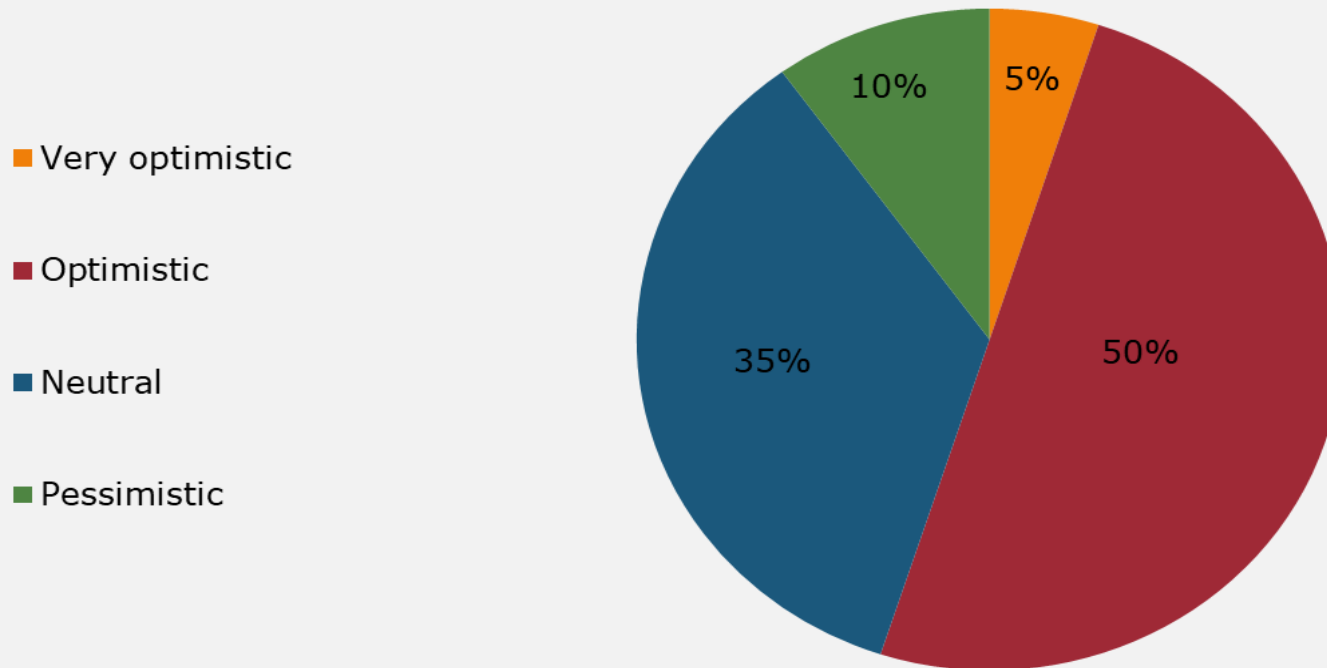
Emerging Markets: Coming of Age Investor Survey

Looking at individual investment countries please rank the most attractive?



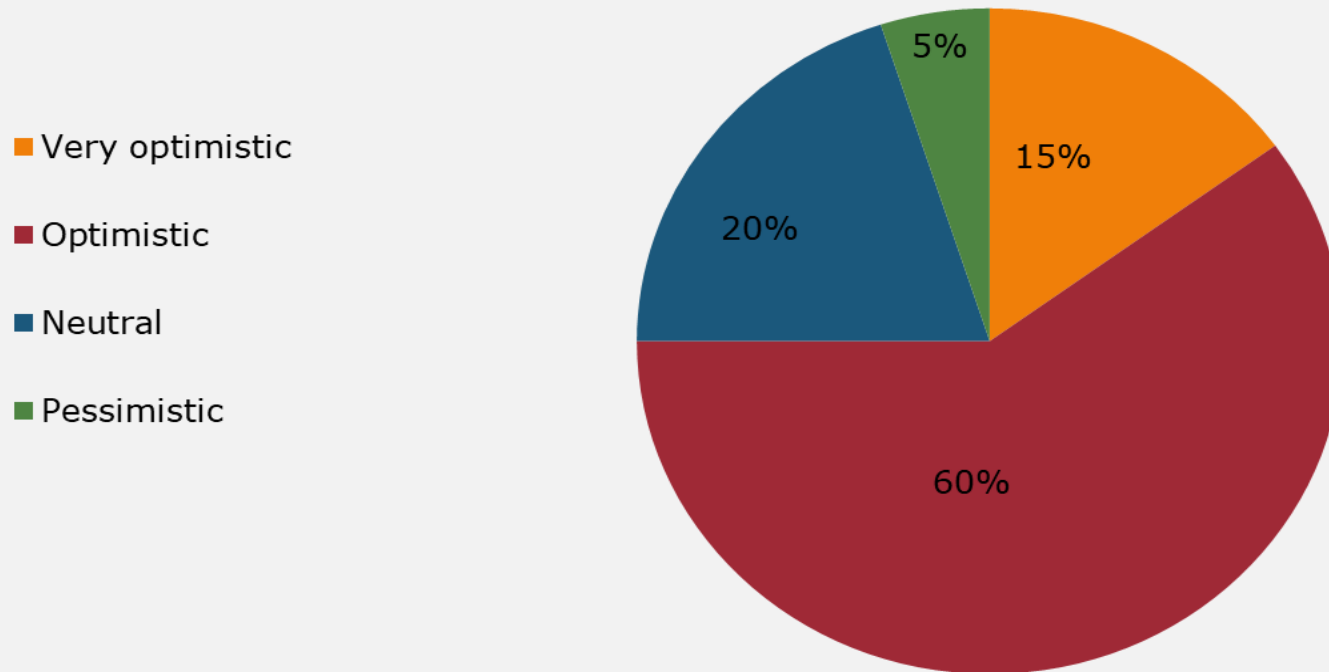
Emerging Markets: Coming of Age Investor Survey

What is your outlook for investments in China ?



Emerging Markets: Coming of Age Investor Survey

What is your outlook for investments in India ?



Delivering alpha quantitatively and nimbly in EM: All Cap and Small Cap examples

Arup Datta, MBA, CFA

Senior Vice President and Head of Global Quantitative Equity

13 September 2018



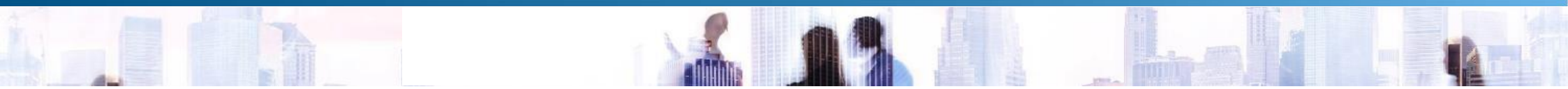
MACKENZIE
Investments



TABLE OF CONTENTS

- BACKGROUND
- COMPARING QUANT & FUNDAMENTAL
- QUANT APPROACH
 - EM SWEET SPOT
 - INVESTMENT PROCESS
 - SMALL CAP OPPORTUNITY

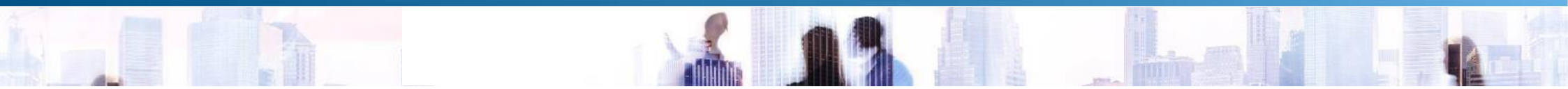
BACKGROUND



BACKGROUND

- Experience
 - 25+ years of experience working with institutional clients
 - Track record of innovation and success in L/S, extension and low volatility strategies
 - Quantitative team based in Boston
- Investment Focus
 - Stock selection
 - Core focus that aims to add value across a variety of market conditions
 - Nimble – incorporating daily changes in alpha rankings
 - Daily rebalancing & trading, predictive transaction cost modelling, focus on capacity
 - Mid and small cap focus

COMPARING QUANT & FUNDAMENTAL



QUANTITATIVE vs. FUNDAMENTAL – SIMILARITIES

- Both styles share the same perspective:

Fundamental Investing Methods

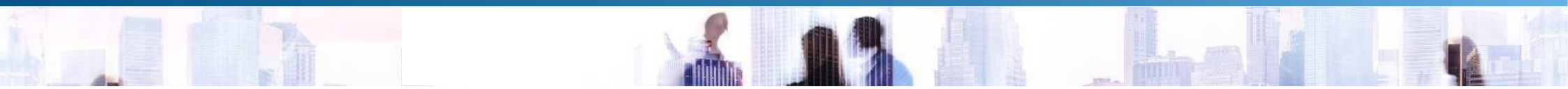
Management Efficiency & Use of Capital

Value

Growth / Catalyst

Peer Relative Rankings

- Fundamental elements applied systematically and broadly over a large spectrum of factors and stocks



QUANTITATIVE vs. FUNDAMENTAL – DIFFERENCES

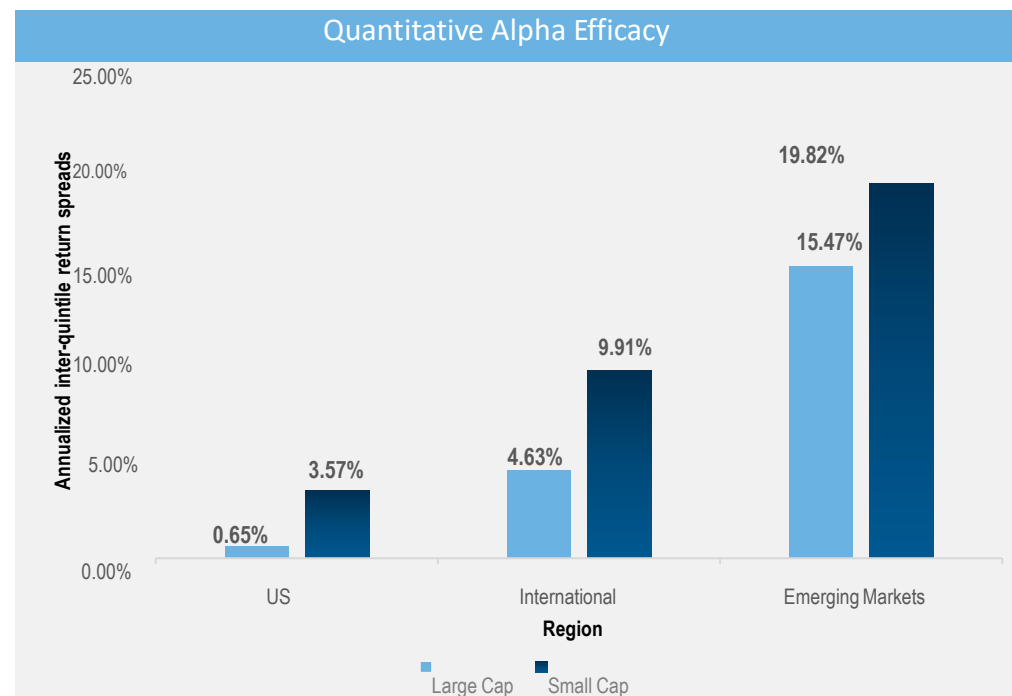
QUANTITATIVE INVESTING	FUNDAMENTAL INVESTING
Computing power to process vast information	Limited by human brain capacity
Broader knowledge of stock universe	Deeper knowledge of a select few stocks
Good quant shops build proprietary risk & transaction cost models	Often rely on external vendors for risk models (e.g. Axioma). Can be transaction cost unaware
Ability to trade daily allows quick reaction to latest information	Takes time to act
Judgement applied to process design of a very systematic process	Judgement applied throughout process
Timing of buy/sell built into process design	Timing of buy/sell based on judgement
Doesn't believe in meeting with management	Believes in meeting with management
Same portfolio positioning	Not necessarily the case

QUANT APPROACH



EM - SWEET SPOT FOR QUANTS

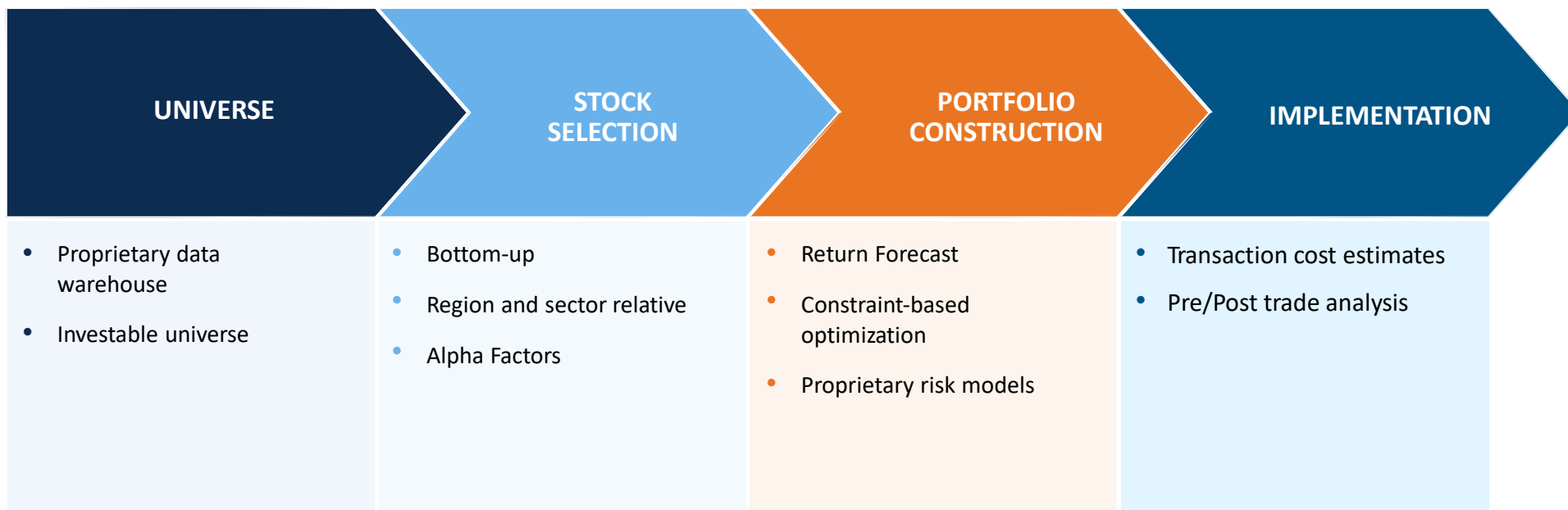
- Alpha potential
- Less efficient
- Fewer investment managers relative to developed
- Quant advantage given breadth of names
- Ability to capture daily mispricings



Represents inter-quintile return spreads using 50/50 blend of Value and Momentum from September 2002 – September 2017
Source: Mackenzie Global Quantitative Equity boutique proprietary research. Data source: Bloomberg



INVESTMENT PROCESS





INVESTMENT UNIVERSE



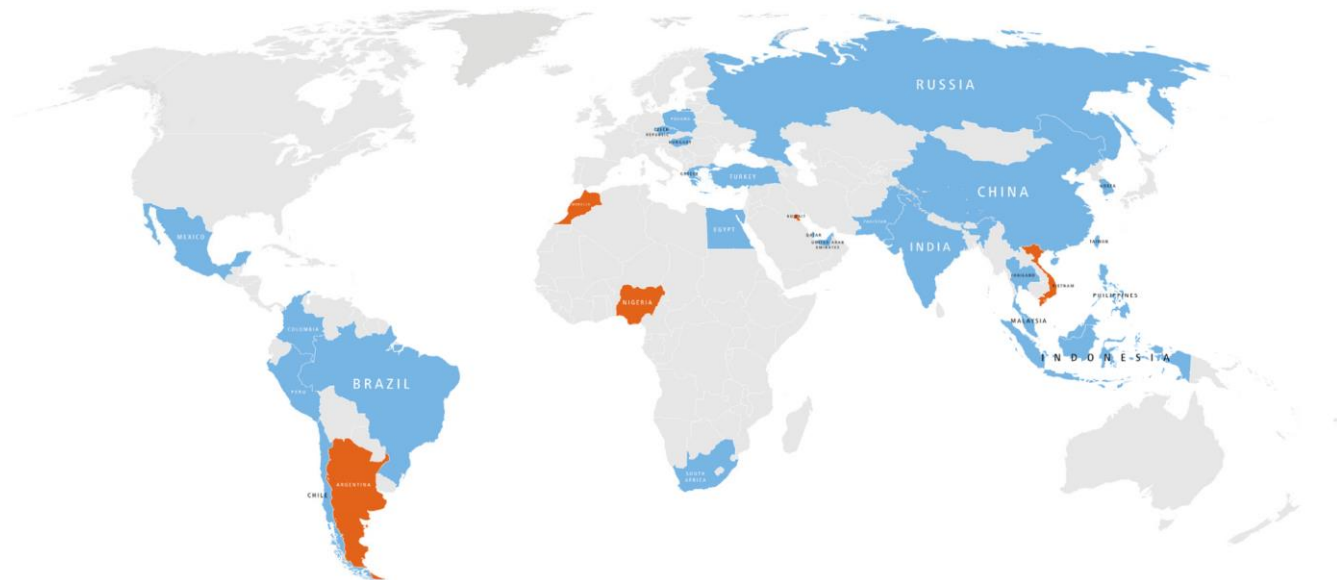
- USD \$500,000 median daily trading volume or index membership
- Broad universe of 5,000 EM and Frontier securities

Emerging

- Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, United Arab Emirates

Frontier

- Argentina, Kuwait, Morocco, Nigeria, Vietnam



Information current as at the date of this presentation. Subject to change.

STOCK SELECTION



Peer Universe

- Comparisons made within a sector within a region
- 3 regions* and 11 sectors
- Industry models where differentiated – e.g. banks, real estate, REITs

Investable Universe

SECTOR/INDUSTRY	REGION		
	Asia	EMEA	LatAm
Consumer Discretionary	12.44%	0.87%	1.20%
Consumer Staples	5.21%	0.72%	0.82%
Energy	2.20%	0.35%	0.68%
Financials	6.26%	1.13%	1.93%
Health Care	7.08%	0.13%	0.28%
Industrials	15.04%	0.82%	1.30%
Information Technology	17.69%	0.12%	0.23%
Materials	10.21%	0.73%	1.67%
Real Estate	4.35%	0.33%	1.02%
Telecommunication Services	0.78%	0.22%	0.45%
Utilities	2.45%	0.87%	0.42%

Represents investable universe as of 4/30/18. For illustrative purposes only.

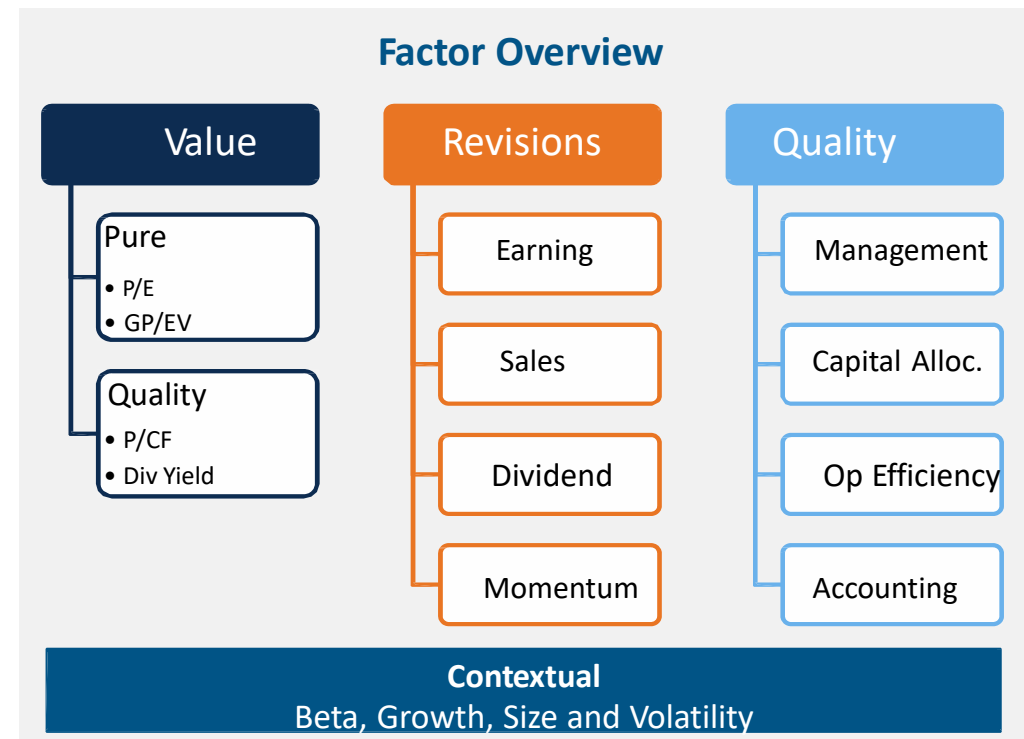
* Developed is 4th region L/S only

STOCK SELECTION



Alpha Factors

- Bottom-up stock selection
- Core Focus – aim to outperform in different market cycles
- Balance between three “super factors”
- Pure & Quality balance within value
- Emphasis on analyst forecasts within revisions
- Every stock has its own factor weights based on contextual variables
- Human Override – extreme events



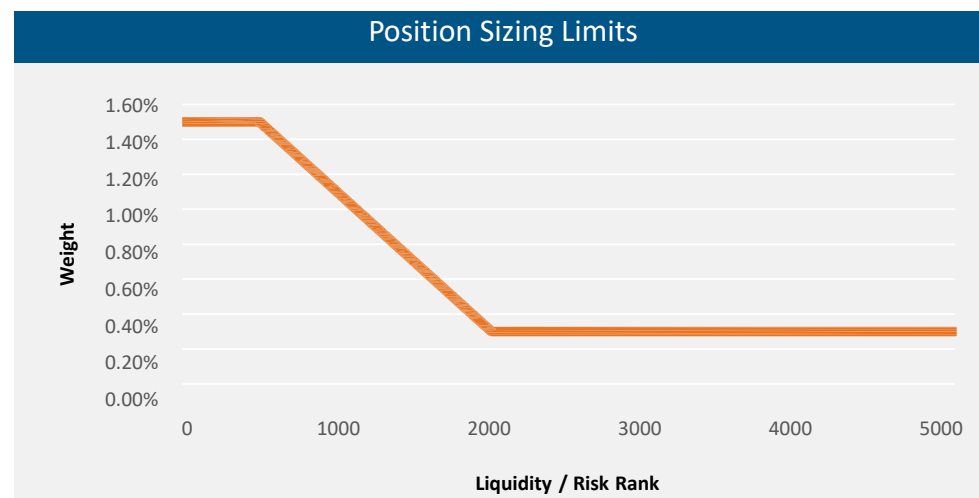
Represents a subset of factors utilized. Factors are subject to change over time.



PORTFOLIO CONSTRUCTION

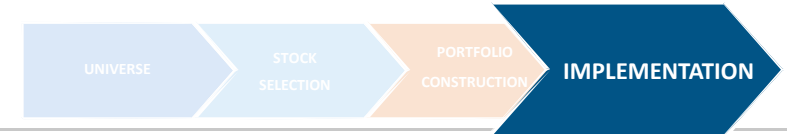


- Optimizer maximizes return forecasts from alpha model while backing out transaction cost forecasts
- Constraint based approach – focuses on alpha while neutralizing extraneous factors
 - Capitalization, beta, country, sector
 - Position limits per stock: 30 - 150bps
- Proprietary risk models
 - Fundamental and statistical
- Country neutrality
 - Provides same currency exposure as benchmark

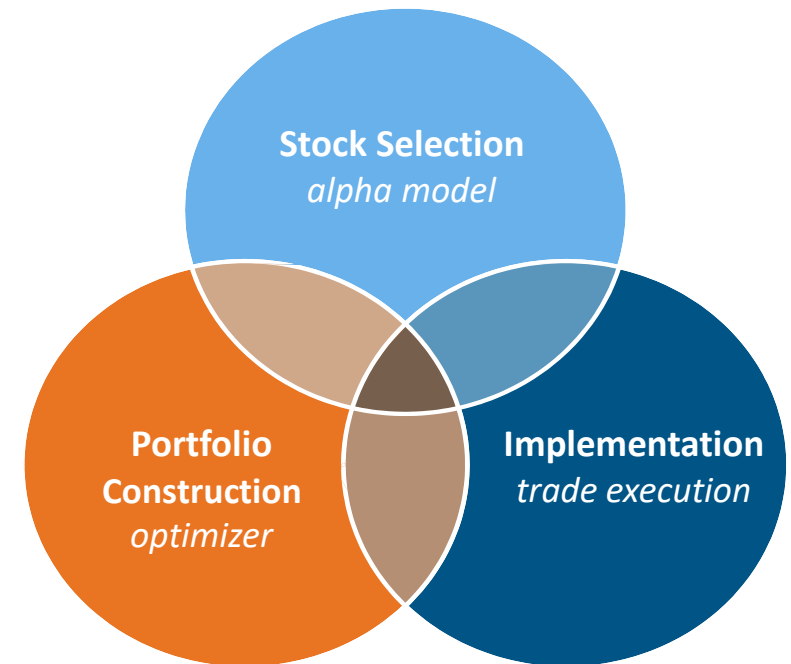


IMPLEMENTATION

- Transaction cost forecast
 - Factored into each investment decision
 - Market impact cost model
 - Commissions and stamp duties
- Daily trading & rebalancing
 - Nimble
 - Capacity management
- Monitor transaction costs



INTEGRATED PROCESS





SPECTRUM OF TRADITIONAL & ALTERNATIVE EM STRATEGIES

	Emerging Markets All Cap	Emerging Markets Large Cap	Emerging Markets Small Cap	Emerging Markets Long/Short	Emerging Markets Low Volatility
Benchmark	MSCI Emerging Markets IMI	MSCI Emerging Markets	MSCI Emerging Markets Small Cap	Citigroup 3-month T-bill	MSCI EM Minimum Volatility

SMALL CAP OPPORTUNITY

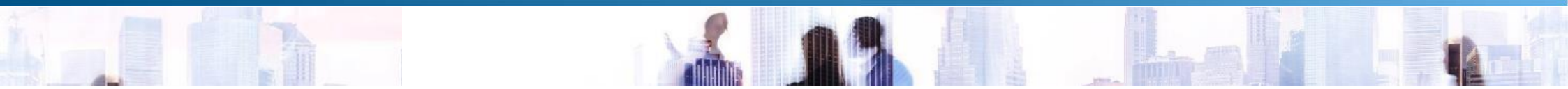


PARTICIPATING IN EM SMALL CAP PERFORMANCE OPPORTUNITY

- Large & Small Cap indices move more closely together in EM relative to the US & World
- Annualized volatility in EM more similar in Small Cap & Large Cap relative to the US & World
- Potential added alpha for EM Small Cap relative to EM All Cap with similar volatility and tracking error profile

Index Correlations	20 year	10 year	5 year
MSCI EM vs. MSCI EM Small Cap	95%	97%	93%
S&P 500 vs. Russell 2000	83%	90%	77%
MSCI World vs. MSCI World Small Cap	90%	96%	90%
Annualized Volatility	20 year	10 year	5 year
MSCI EM	23%	22%	15%
MSCI EM Small Cap	23%	24%	13%
S&P 500	15%	15%	10%
Russell 2000	20%	20%	14%
MSCI World	15%	16%	10%
MSCI World Small Cap	17%	18%	11%

Source: Mackenzie, Bloomberg
As of June 2018



DISCLAIMERS

For Institutional Use Only. Issued by Mackenzie Financial Corporation (“Mackenzie”).

- **This presentation is being provided solely for informational purposes and does not constitute an offer to sell, or a solicitation of an offer to buy, any type of securities or services.**
- These materials may contain “forward-looking” information that is not purely historical in nature, and such information may include, among other things, projections, forecasts or estimates of cash flows, yields or returns, volatility, scenario analyses and proposed or expected portfolio composition. The words “anticipates”, “assumes”, “believes”, “budgets”, “could”, “estimates”, “expects”, “forecasts”, “intends”, “may”, “might”, “plans”, “projects”, “schedule”, “should”, “will”, “would” and similar expressions are often intended to identify forward-looking information, although not all forward-looking information contains these identifying words. The forward-looking information contained herein is based upon certain assumptions about future events or conditions and is intended only to illustrate hypothetical results under those assumptions (not all of which will be specified herein). Not all relevant events or conditions may have been considered in developing such assumptions. The success or achievement of various results, targets and objectives is dependent upon a multitude of factors, many of which are beyond the control of the investment advisor. No representations are made as to the accuracy of such estimates or projections or that such projections will be realized. Actual events or conditions are unlikely to be consistent with, and may differ materially from, those assumed.
- This presentation is confidential and may not be reproduced or distributed, in whole or in part, except by authorized representatives of Mackenzie. By accepting receipt of this presentation, the recipient agrees not to duplicate or furnish copies of these materials or any information contained herein to any person other than their professional advisors.
- This presentation does not constitute legal, tax, investment or any other advice. Prospective investors should consult with their own professional advisors regarding the financial, legal and tax consequences of any investment.
- Certain information contained herein has been supplied by third parties. While Mackenzie believes such sources are reliable, it cannot guarantee the accuracy of any such information and does not represent that such information is accurate or complete.
- The information presented herein is current only as of the particular dates specified for such information, and is subject to change without notice.



CAMRADATA

funds europe

Emerging Markets Seminar

Coming of Age

13th September 2018

THANK YOU