Forum 2b - Emerging markets
Have you got your exposure right?

César Cuervo, CFA
Director of Research, Sura Investment Management

SURA research on investing in EM equities

- In 2018 SURA undertook a very large piece of research
- Primary research question was:

  “Is there sufficient benefit to justify regional EM Investing?”
- Secondary question was, if so:

  “Can we quantify that value?”
- Tertiary question was:

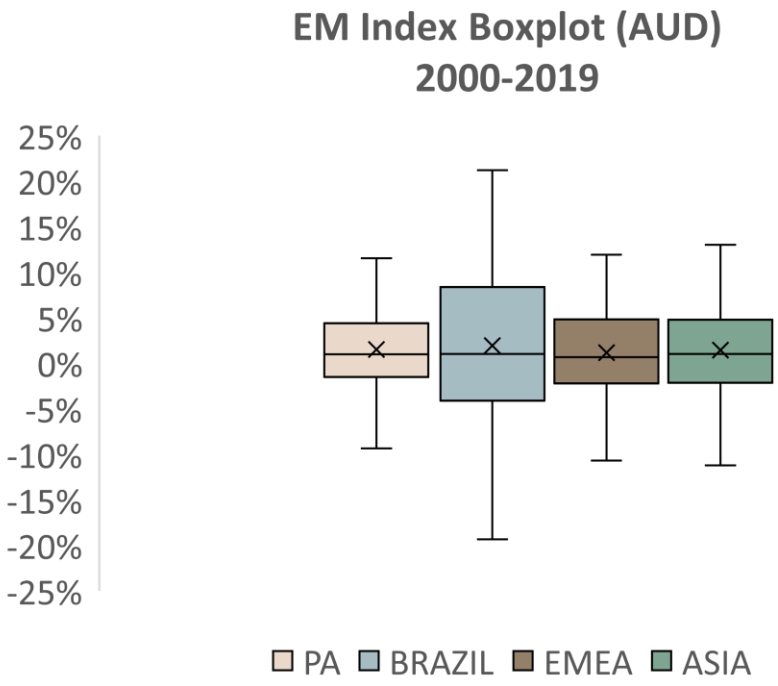
  “Can we tell what drives that difference?”

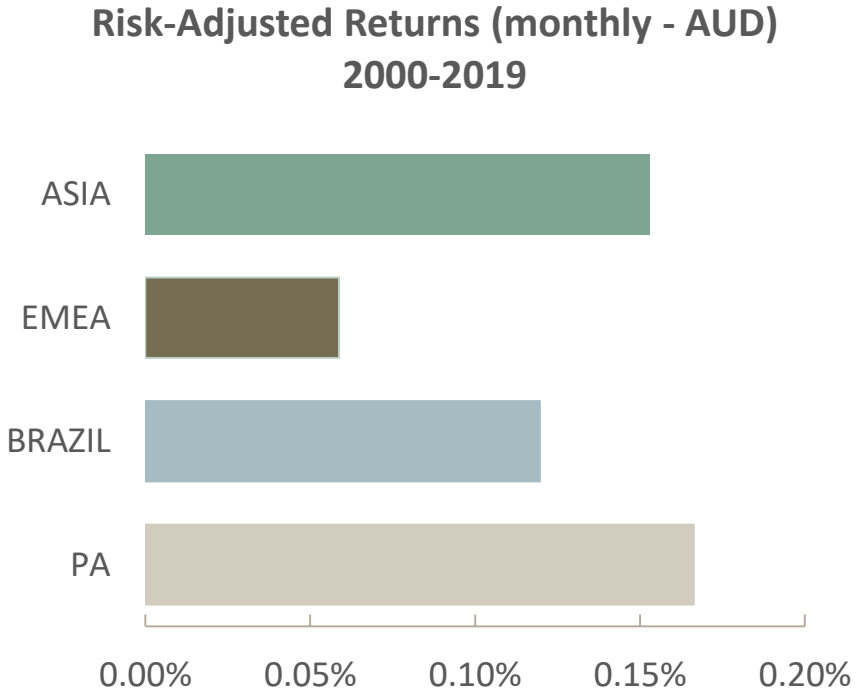
ASI 2019

SURA research on investing in EM equities

- Analyze risk – return characteristics of regions within Emerging Markets
- Look for diversification benefits (enhancement of sharpe-ratios)
- A machine learning (AI) process was created to test hypothesis with a different approach to asset allocation and portfolio optimization
- Possible explanations?

Risk-adjusted returns vary among regions





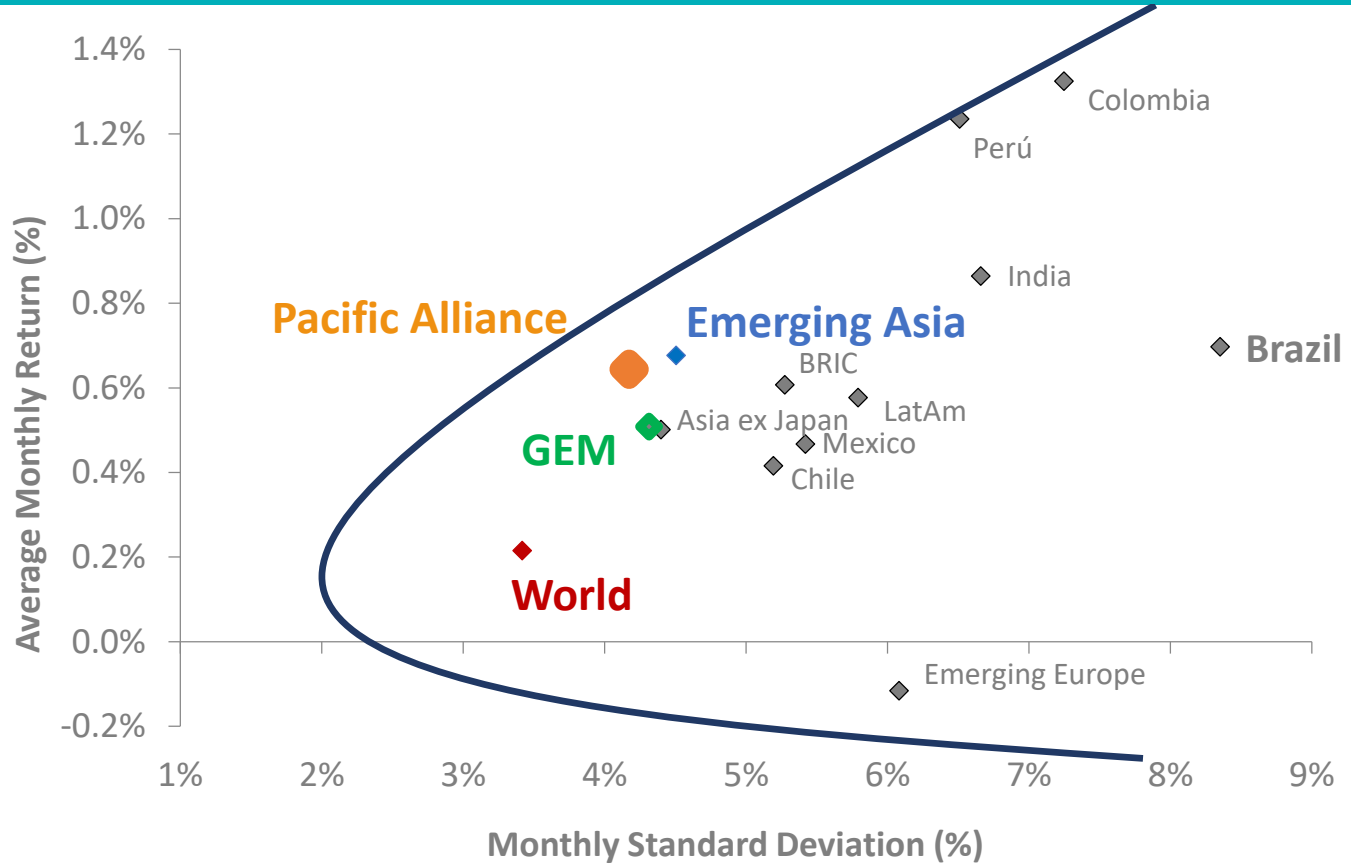
Correlations suggest diversification benefits

- Correlation of 2007-2019 monthly returns
- Relatively high correlation between Asian markets; not the case of Asia with Eastern Europe or Latin America (Pacific Alliance – PA)

	PA	China	India	EM Eur
PA	1,00			
China	0,31	1,00		
India	0,16	0,72	1,00	
EM Eur	0,33	0,13	-0,45	1,00

	Colombia	Chile	Mexico	Peru
Colombia	1,00			
Chile	0,82	1,00		
Mexico	0,68	0,52	1,00	
Peru	0,37	0,56	0,27	1,00

Increasing return while reducing risk

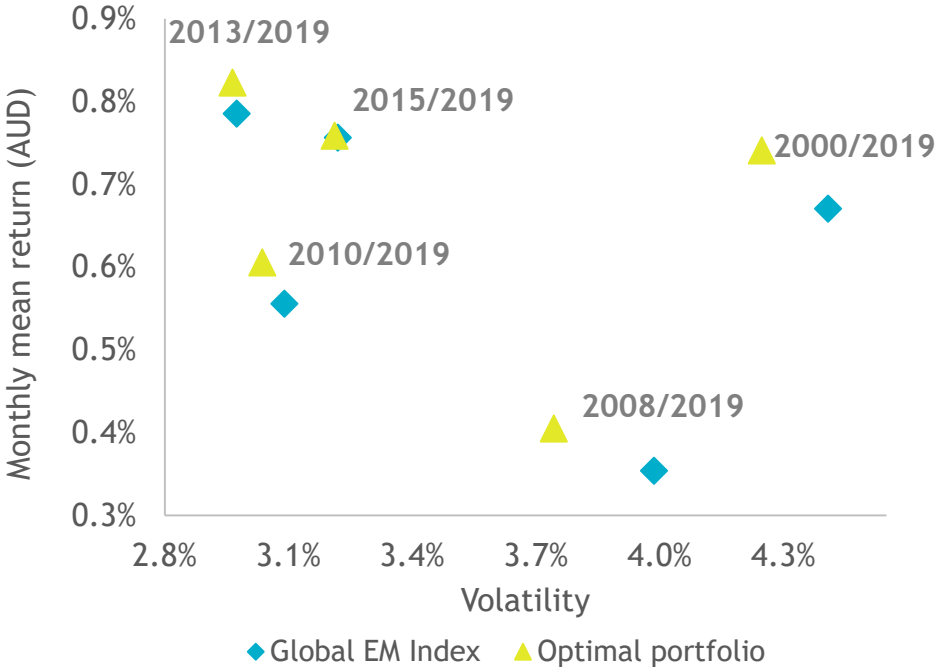


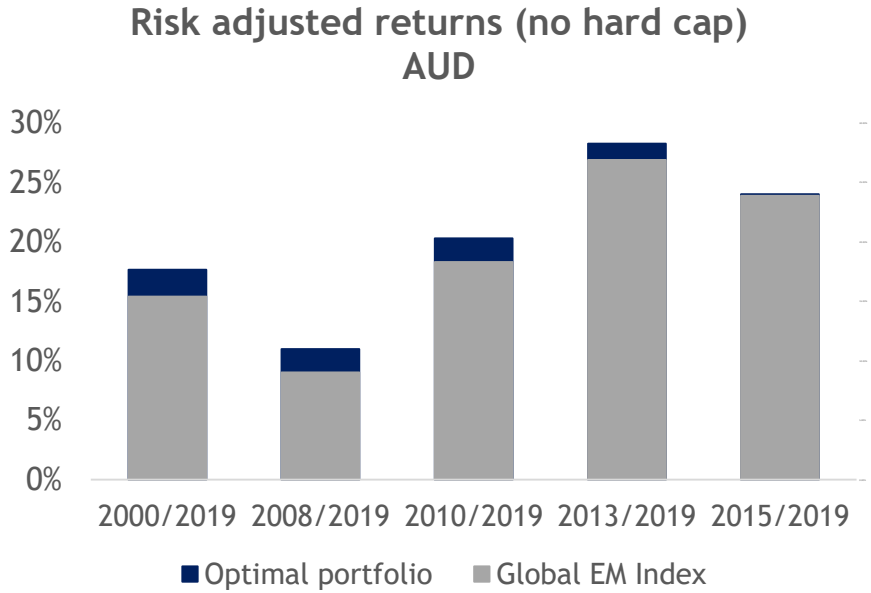
Source
Sura Asset Management
Bloomberg

Data
Returns in AUD
April 2001 to June 2019
Calculated monthly and aggregated

Index
MSCI PA index simulated pre 2014

Active regional allocation
enhances risk-adjusted returns





Risk-return profile of Global EM Index and Optimal Portfolios (no active hard cap)

AI Regional Allocation Process

The Process

1.

>500 variables

Macro, fundamental & market data

2.

AI Algorithms

Expected returns, volatilities & other variables

3.

Optimal Allocation

Create a “Committee” to select best model(s) given market conditions

Good out of sample performance

4.

Test results

AI Regional Allocation Process

LSTM Recurrent Neural Networks

Adaptive Boosting

Support Vector Machines

Random Forests

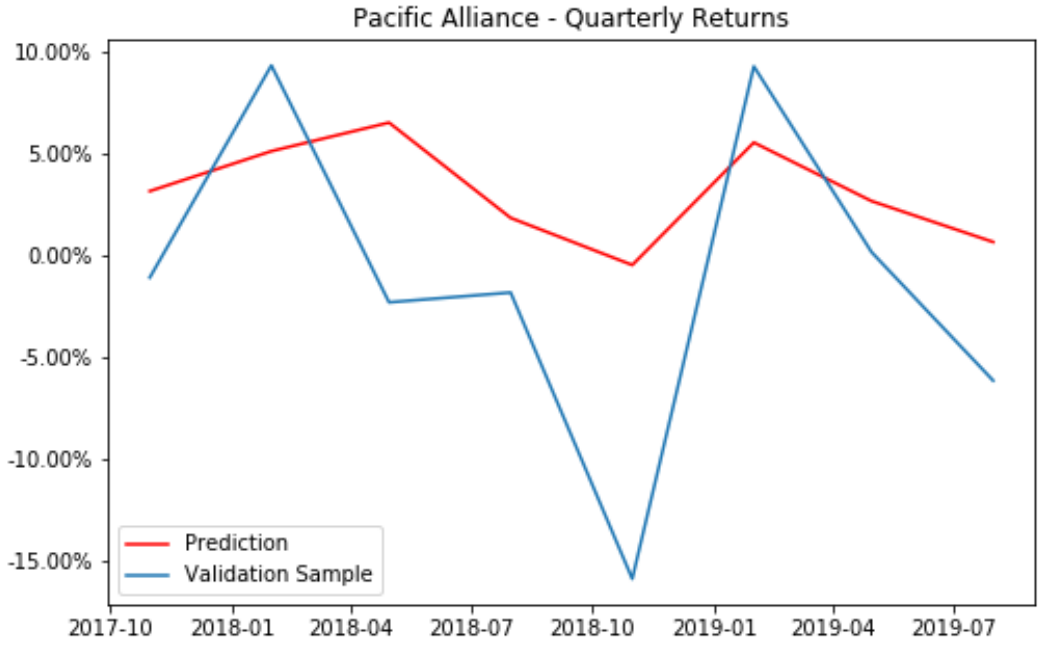
Arima-Garch

Asset Managers Reports

Research Analysts

Market Sentiment

Sequential online learning with expert advice – AI Committee to select best models



AI Allocation Process

Machine Learning approach

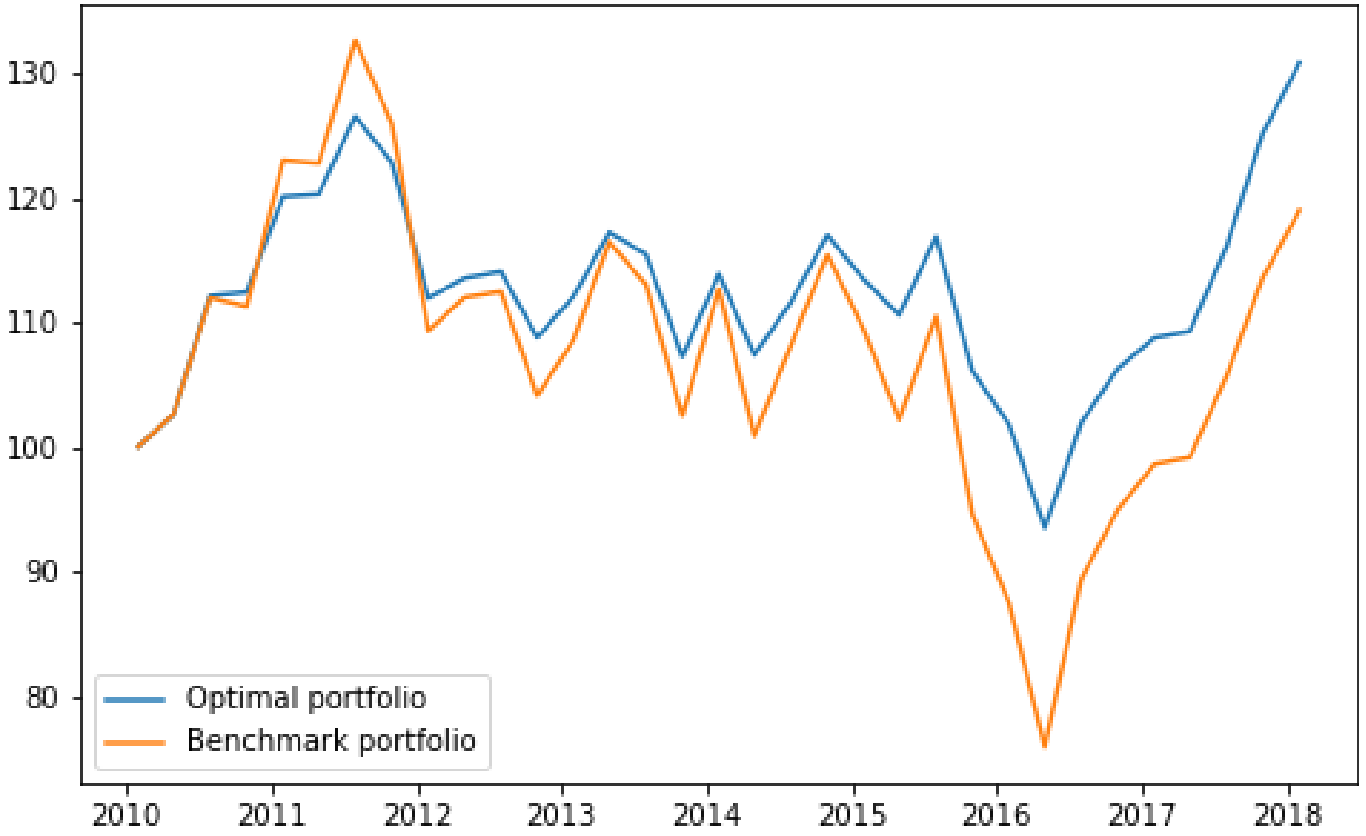
Region	Weight 2010
EM Brazil	16.8%
EM Pacific Alliance	6.2%
EM EMEA	21.5%
EM Asia	55.5%

- Benchmark weights kept constant during testing period.
- Return predictions incorporated in active management process to improve portfolio performance.

AI Allocation Process

Optimised Return

2010-2018



AI Process – Analyzing a different period

Machine Learning approach

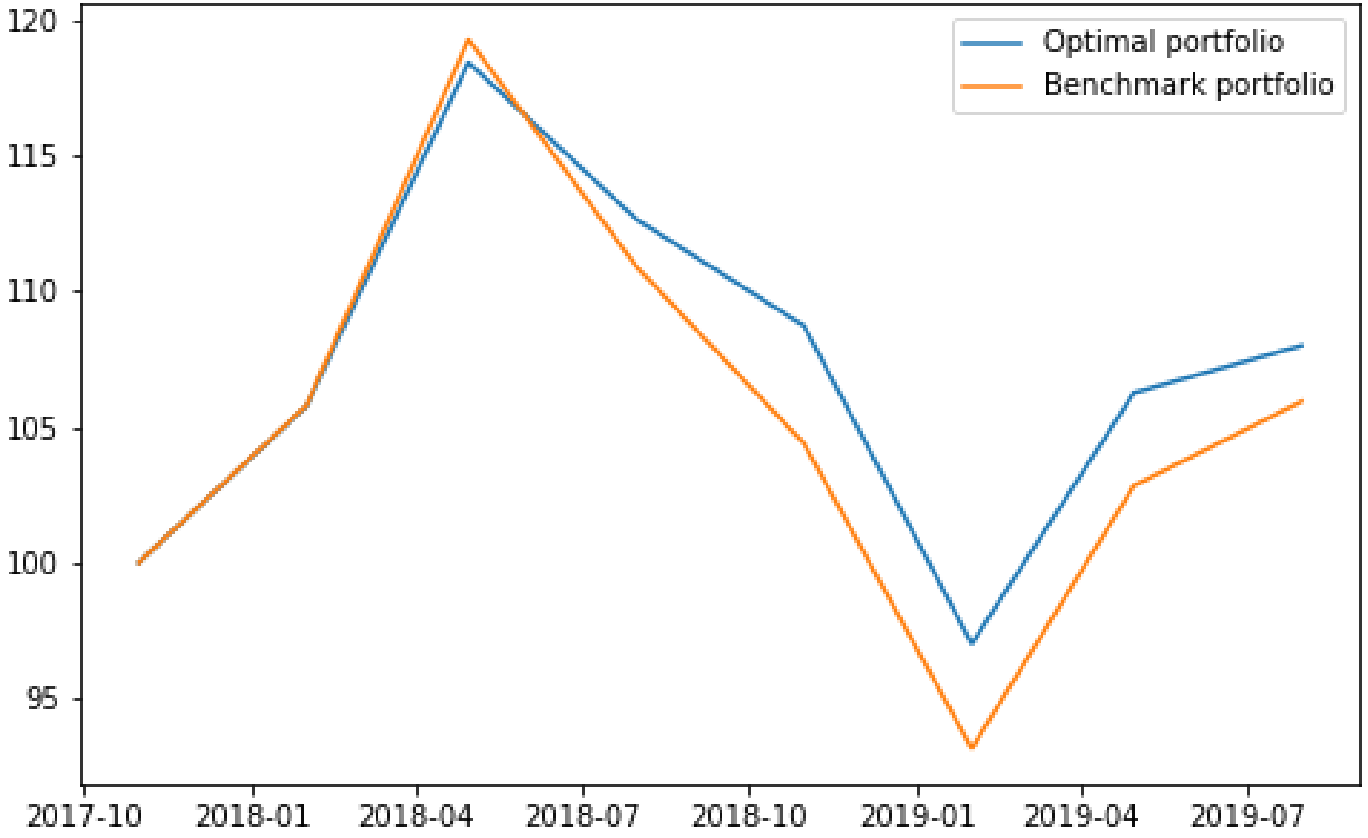
Region	Weight 2017
EM Brazil	9.8%
EM Pacific Alliance	2.4%
EM EMEA	14.1%
EM Asia	73.7%

- Asia weight increased significantly in the 2010-2017 period
- Results hold even when testing in a shorter, more recent timeframe

AI Process – Analyzing a different period

Optimised Return

2017-2019



What drives that difference?

- Some countries are very aligned to China due to trade (think BRICS)
- Even within regions, differences exist: e.g. Brazil vs. Pacific Alliance countries (LatAm without Brazil and Argentina – has a different risk-return profile)
- EM Indexes don’t benefit from the informational advantage of geographic proximity and superior knowledge of local active managers
- Differences in market efficiency between emerging market regions