

Illinois Public Pension Advisory Committee

Global Investing Opportunities

May 17 2018

Jumer's Hotel

Rock Island, Illinois

Moderator: John T. Mitchell

President

Mitchell, Vaught, & Taylor

Panelists: David Morrison

Vice President

Capital Group Institutional Investment Services

Daniel Jarema, CFA

Vice President and Senior Consultant

Oppenheimer Funds

Thomas Brennan CFA

Fixed Income Portfolio Specialist

William Blair

International Equity Investments:

An Essential Part of Your Portfolio

Presented by:



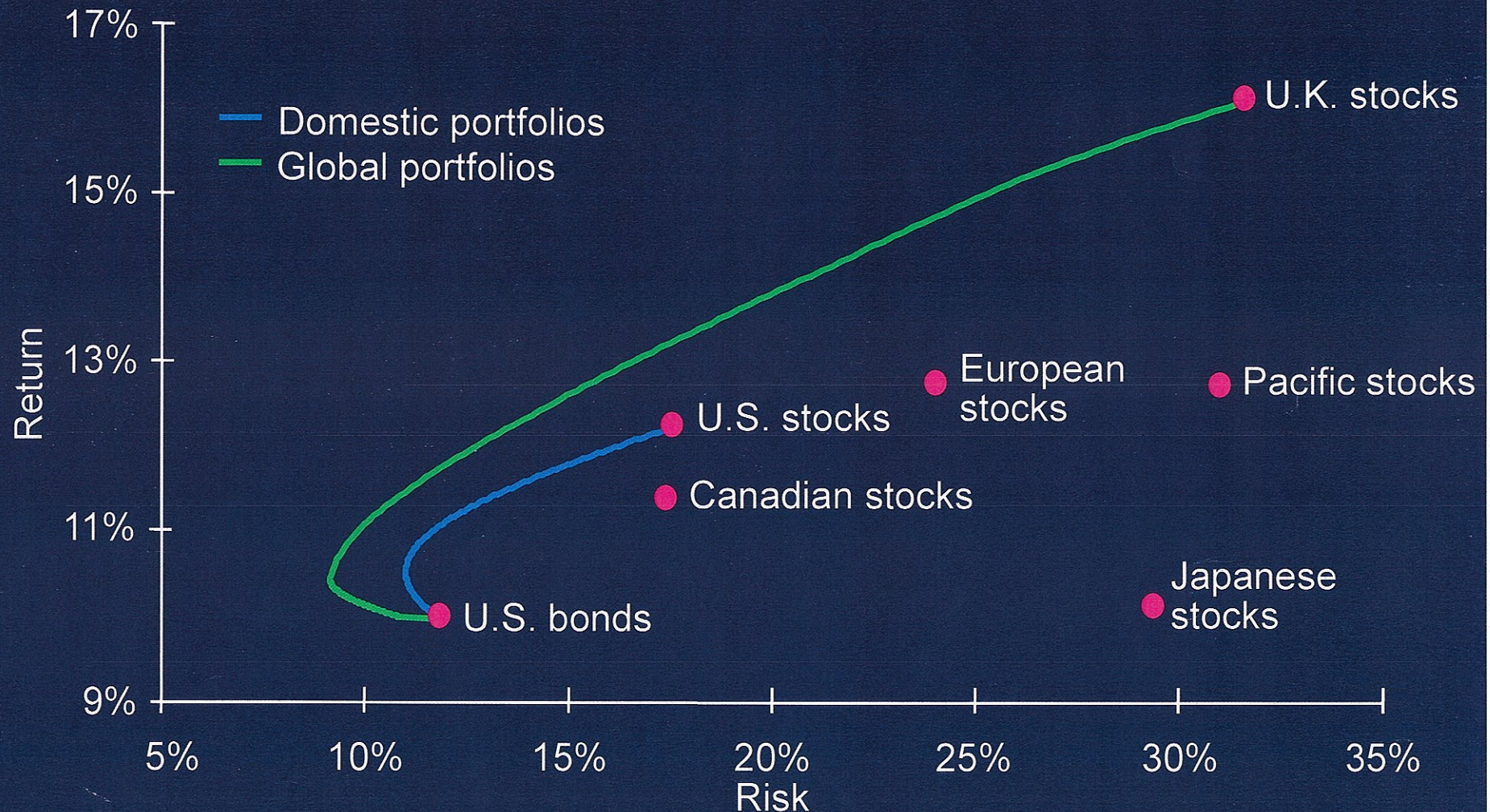
Investment Advisors

November 3, 2004

We would be happy to meet with your Board and discuss the importance of International Investing in your Equity Portfolio.

International enhances domestic portfolios

International regions 1970–2002



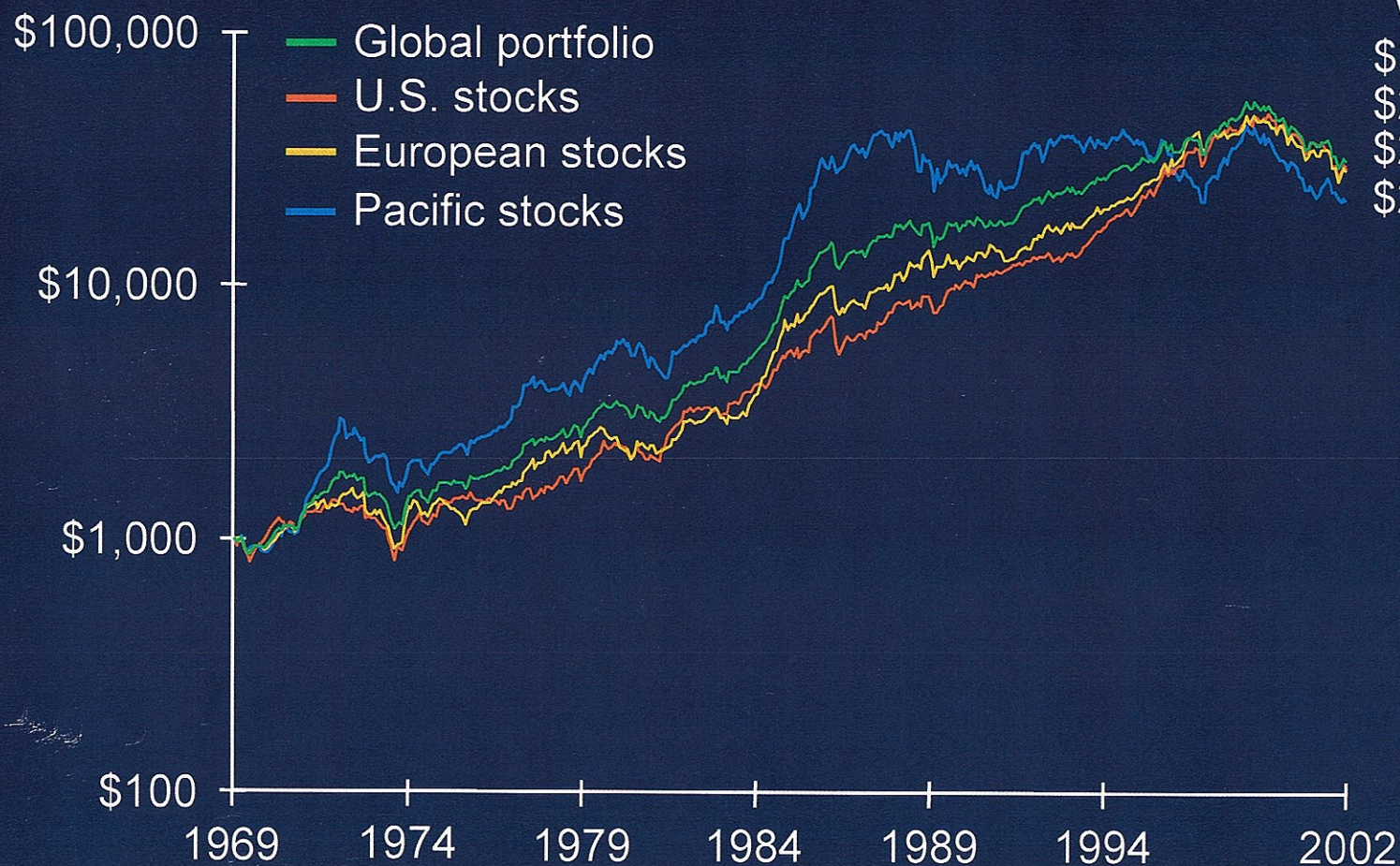
Risk is measured by standard deviation. Risk and return are based on 1970–2002 data. Data in U.S. dollars.

This is for illustrative purposes only and not indicative of any investment.
Past performance is no guarantee of future results. 3/1/2003.
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Benefits of global diversification

1926–2002

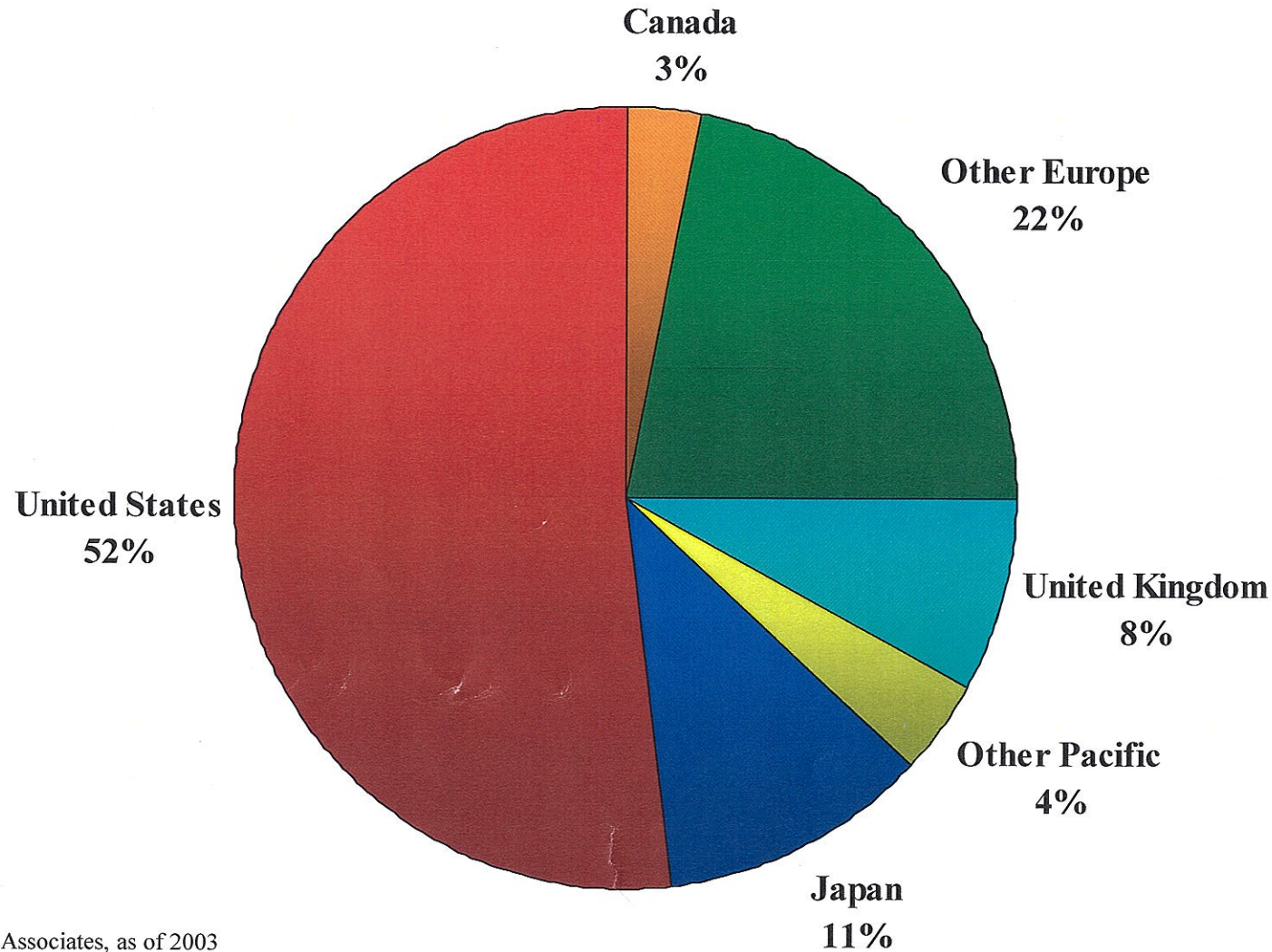


Hypothetical value of \$1,000 invested at year-end 1969. Global portfolio represents an equal investment (1/3) in each asset class.

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Past performance is no guarantee of future results. 3/1/2003.
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World Stock Market Capitalization



Source: Ibbotson Associates, as of 2003

Economic Actuarial Assumptions

Asset Class	Category 1 Funds	Category 2 Funds	Category 3 Funds	Category 4 Funds
Government Fixed Income Securities	90.0%	55.0%	55.0%	35.0%
Corporate Bonds	2.5%	12.5%	5.0%	10.0%
Large Cap Stocks	3.5%	10.0%	15.0%	17.5%
Small Cap Stocks	1.5%	7.5%	10.0%	12.5%
International Equities	-	5.0%	5.0%	10.0%
Emerging Market Equities	-	2.5%	5.0%	5.0%
Real Estate	2.5%	7.5%	5.0%	10.0%

- Category 1: Funds with net assets less than \$2,500,000
 Category 2: Funds with net assets of between \$2,500,000 and \$4,999,999
 Category 3: Funds with net assets of between \$5,000,000 and \$9,999,999
 Category 4: Funds with net assets of \$10,000,000 and higher

Because GRS is a benefits consulting firm and does not provide investment advice, in 2017 we reviewed capital market assumptions developed and published by 10 independent investment consulting firms, with varying time horizons. These investment consulting firms periodically issue reports that describe their capital market assumptions; that is, their estimates of expected returns, volatility and correlations among the different asset classes. While some of these assumptions may be based upon historical analysis, many of these firms also incorporate forward looking adjustments to better reflect near-term and long-term expectations. The estimates for core investments (i.e., fixed income, equities and real estate) are generally based on anticipated returns produced by passive index funds.

Only two of the 10 investment consulting firms provided capital market assumptions for 2017 for longer time horizons (15 to 30 years). Two of the investment consulting firms provided capital market assumptions for both longer time and shorter term horizons. The remaining six firms provided capital market assumptions for shorter time horizons (10 years or less).

Given the target asset allocations described above for each of the four categories of Article 3 and Article 4 pension funds and the capital market assumptions from the four investment consultants who provided longer term expectations, GRS calculated the range of long-term net returns that could be expected to be produced by the four different investment portfolios.



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Figures are past results and are not predictive of results in future periods.

Investments are not FDIC-insured, nor are they deposits of or guaranteed by a bank or any other entity, so they may lose value.

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Why Flexibility Matters

U.S. and Non-U.S. Equities Have Become Increasingly Correlated

Rolling Five-Year Correlations Between U.S. and Non-U.S. Equity Markets



Source: MSCI. We use the S&P 500 and MSCI EAFE indexes to represent U.S. and non-U.S. equities, respectively.

A Variety of Data Point to a Regime Shift in Correlations

Comparison of Correlation Measure

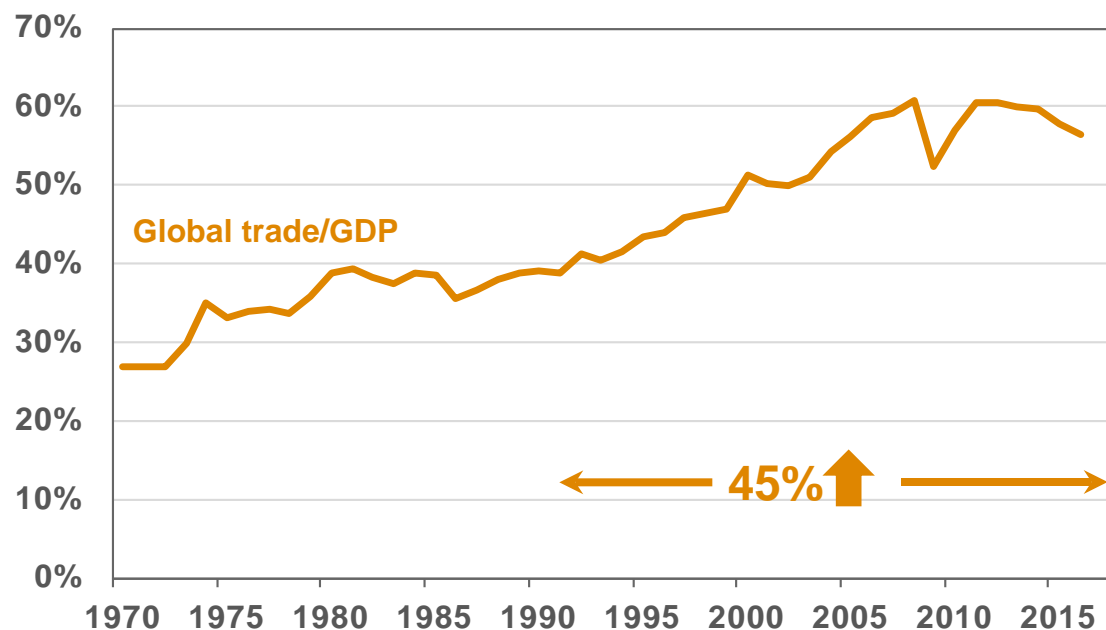
Correlation Measure	1970–1997	1998–2017
Correlation of S&P 500 vs. MSCI EAFE in USD	0.48	0.86
Correlation of S&P 500 vs. MSCI EAFE in local currency	0.58	0.85
Median cross-country global equity correlation in local currency	0.36	0.59
Median cross-country global bond correlation in local currency	0.34	0.56

Source: MSCI and FRED. Analysis based on all available data on 23 developed countries included in the MSCI World Index. For example, sample includes 18 equity and 10 bond markets in 1970, and 23 equity and 20 bond markets in 2017.

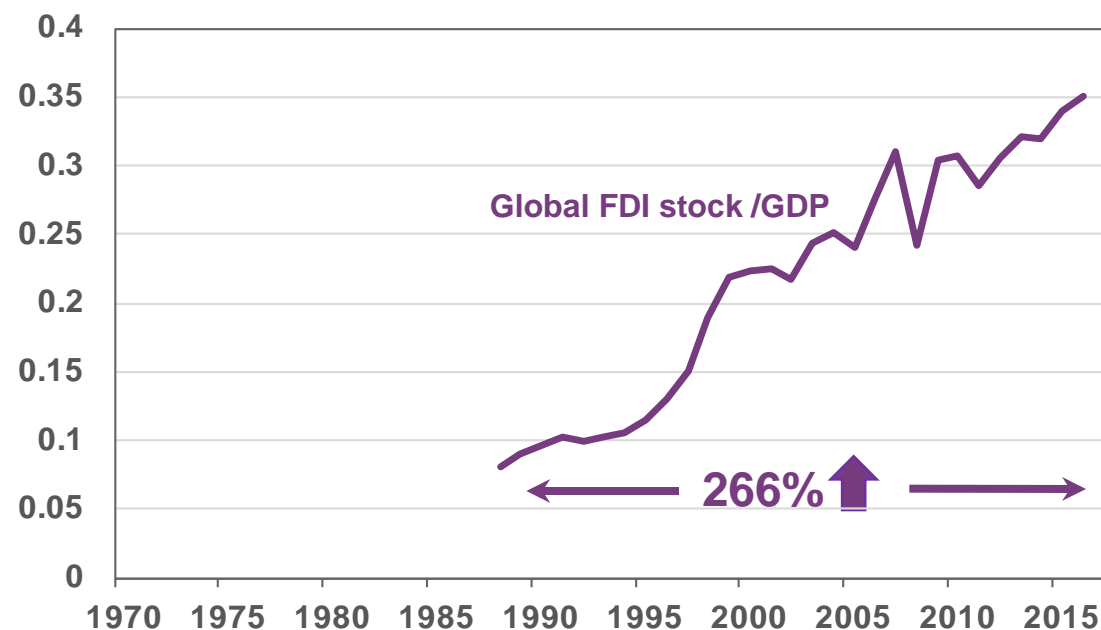
Higher Correlations Are Consistent With Greater Global Integration

Global Trade and Foreign Direct Investment as a Proportion of Global Gross Domestic Product (GDP)

Global Trade Flows



Global Capital Flows



Growth of Multinationals Has Blurred Distinctions Between Domicile

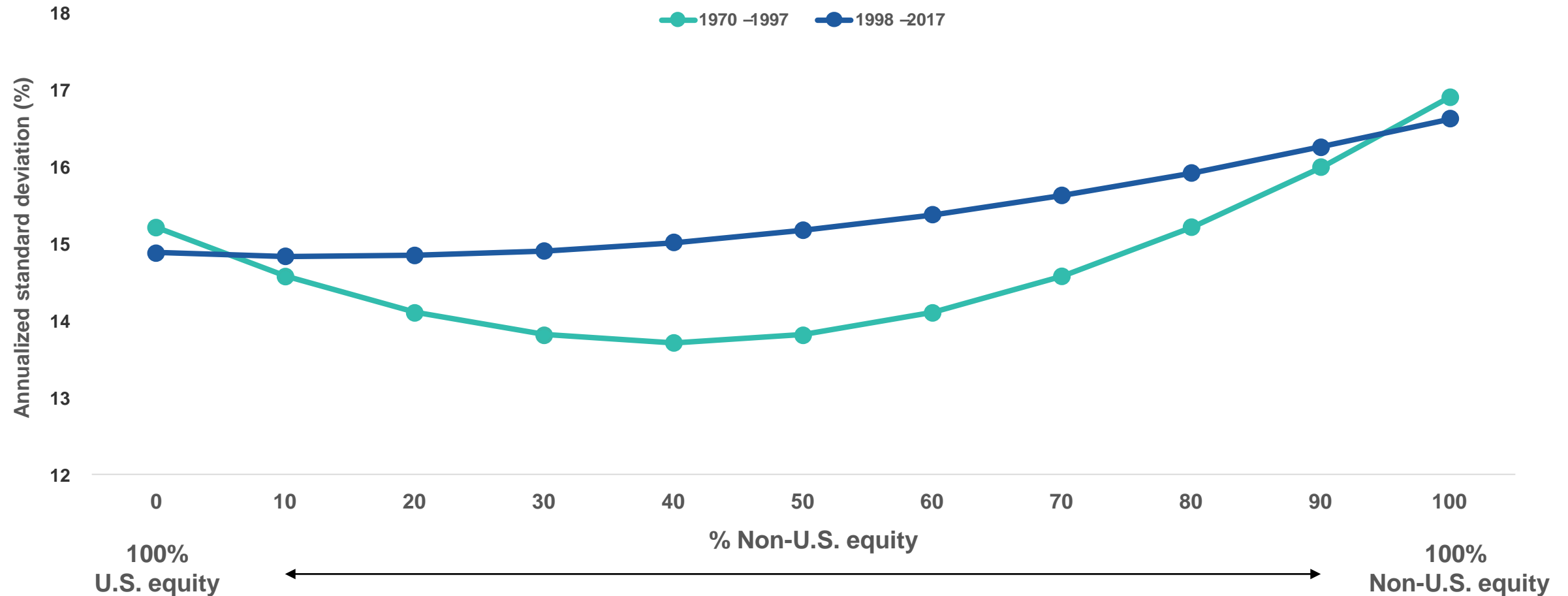
Indicators of Multinational Corporations

Growth of Multinational Corporations	1990	2016	1990–2016 Growth
Global GDP (\$ trillion)	23.5	75.3	221%
Employment of foreign affiliates (# million)	21	82	283%
Sales of foreign affiliates (\$ trillion)	5.1	37.6	637%
Gross product of foreign affiliates (\$ trillion)	1.1	8.4	679%
Total assets of foreign affiliates (\$ trillion)	4.6	112.8	2,356%

Source: UNCTAD World Investment Report 2017.

Higher correlations have resulted in lower diversification benefits

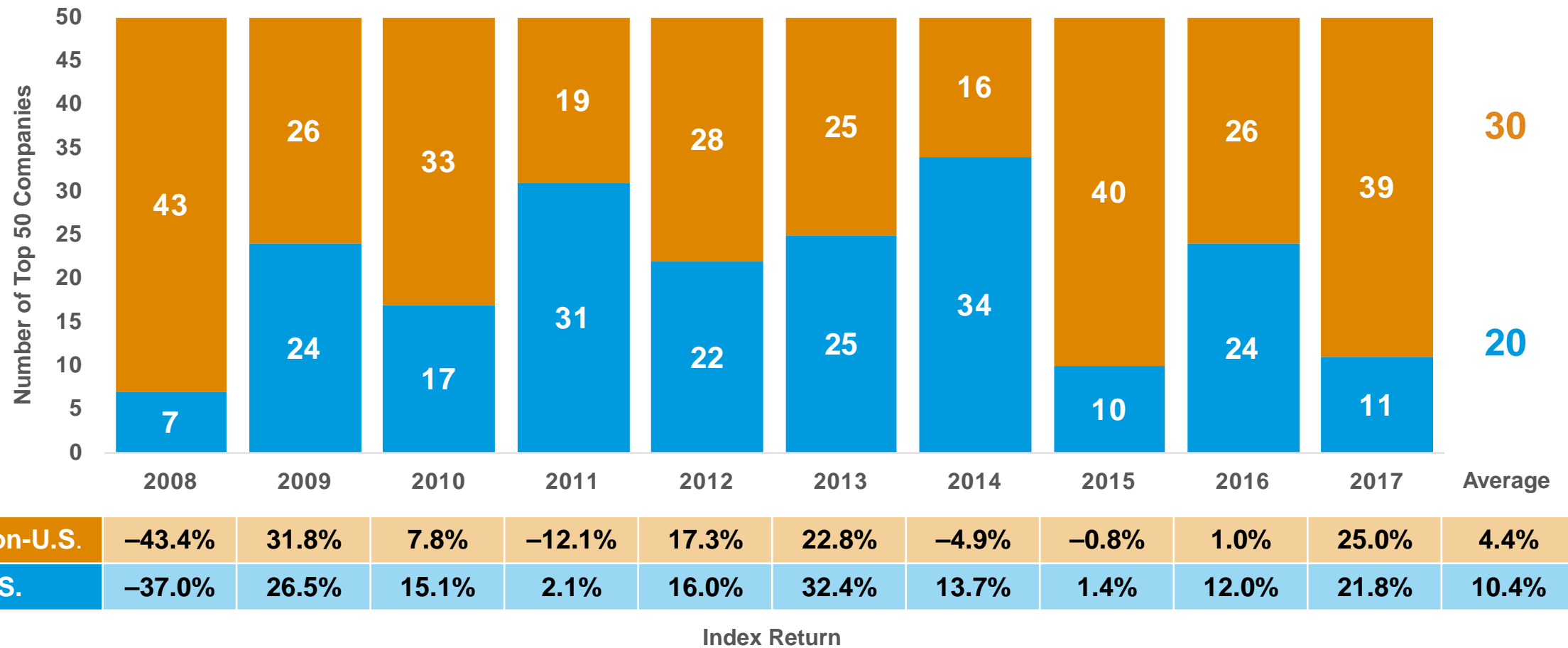
Historical Volatility for Portfolios of U.S. and Non-U.S. Equities



Sources: Capital Group, MSCI, Standard & Poor's. Standard & Poor's 500 Composite Index and MSCI EAFE Index are used to represent U.S. and non-U.S. and non-U.S. equities, respectively.

Global Flexibility Increases the Opportunity Set of Companies

Domicile of the Top 5 Companies per GIC Sector (5 Companies x 10 Sectors* = 50 Stocks)

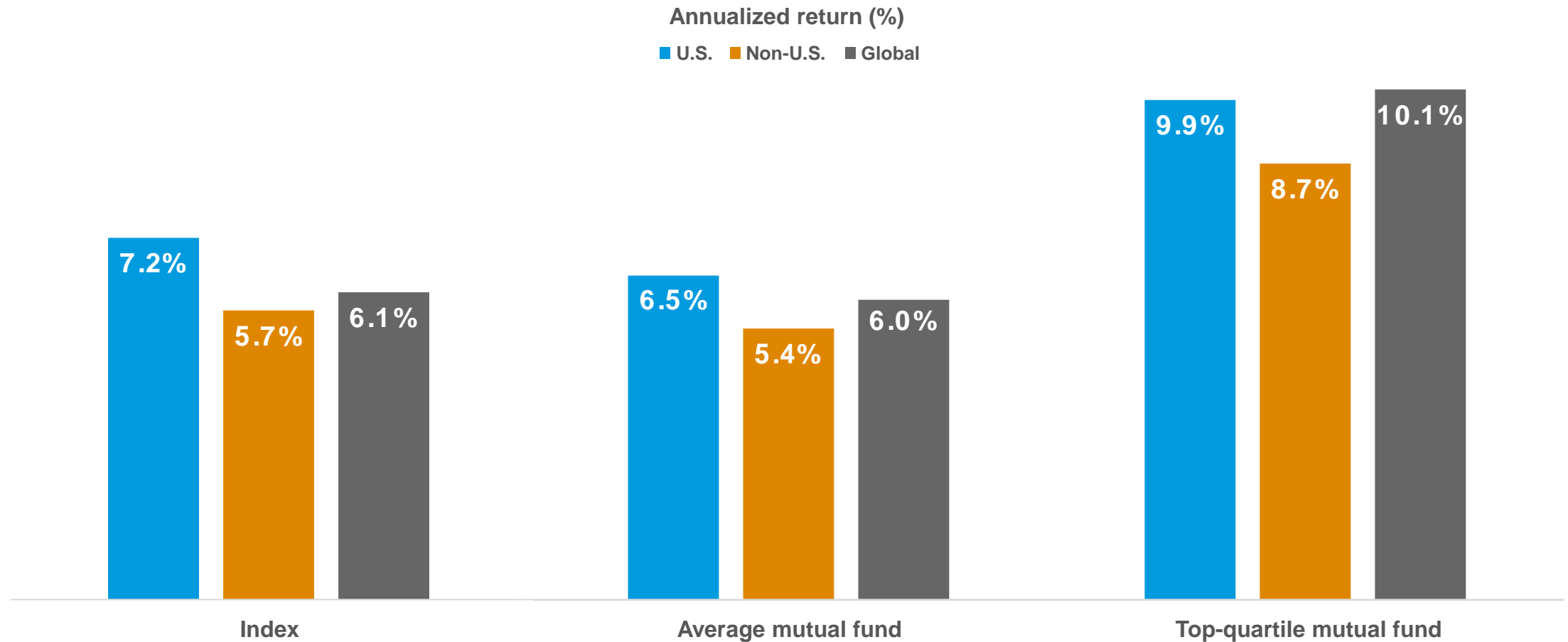


Sources: Capital Group, MSCI, Standard & Poor's. The 10 Global Industry Classification Standard (GICS) sectors are part of the MSCI World Index, which represents the top 50 companies. Index returns are the S&P 500 Index (U.S. equities) and MSCI EAFE (non-U.S. equities).

* In 2016, MSCI separated real estate as its own sector; we continued with a combined real estate/financials sector for all years to maintain consistency.

Skill Plus Opportunity = Alpha

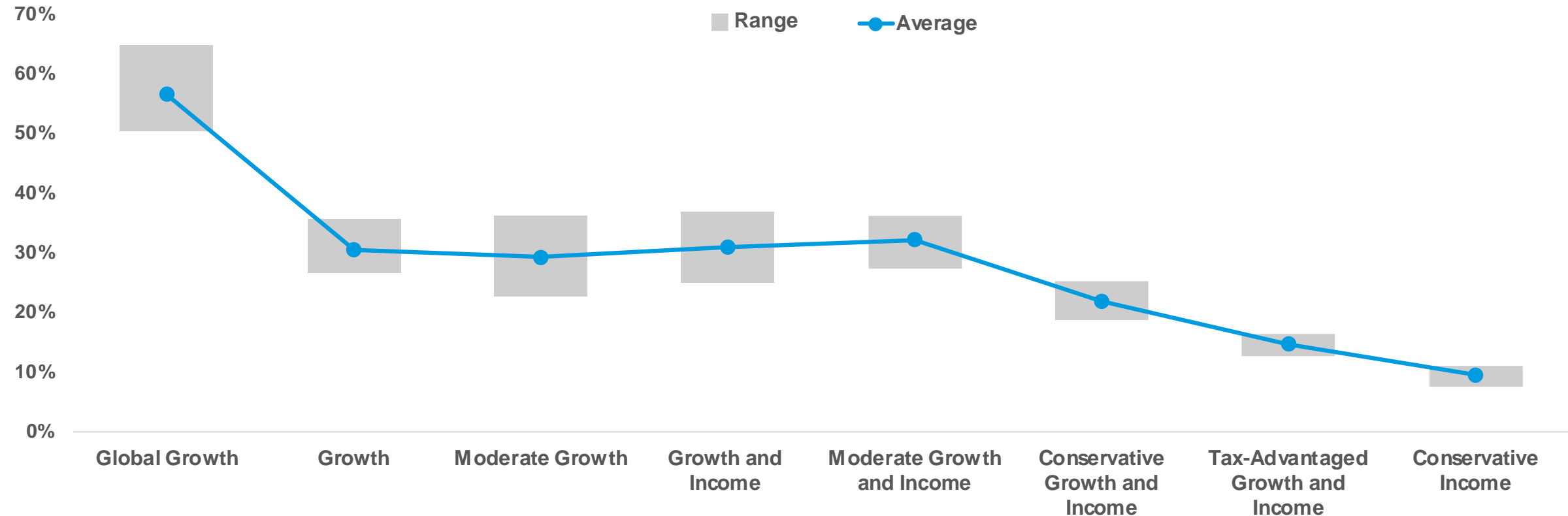
Comparison of U.S., Non-U.S. and Global Funds: 1/98–12/17*



* Sources: MSCI and Morningstar. We use S&P 500 and MSCI World Index to represent U.S. and Global equities, respectively. Averages include only actively managed funds for this illustration.

American Funds® Model Portfolios Include Disciplined Flexibility

Non-U.S. Equity Assets as a Proportion of Total Equities (December 2017)



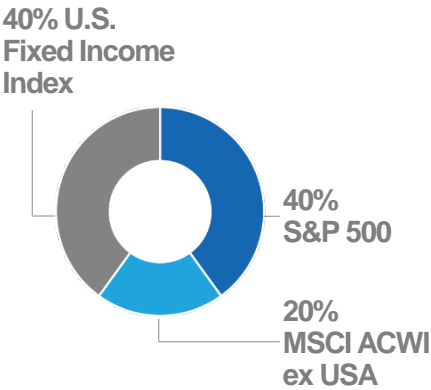
Source: Capital Group. As of December 31, 2017. Average and ranges of exposure were calculated using the historical quarterly asset mix of each underlying fund over the period of 10 years ending December 31, 2017, based on current allocation to the underlying funds. Although the data are based on the current allocations, the series' allocations may have changed multiple times prior to that date. Therefore, movements in asset exposure shown in the chart reflect only the changes in the asset mix within the underlying funds over the period of 10 years ending December 31, 2017; the movements do not reflect the historical top-down changes to the allocations made over the life of the series. The maximum and minimum values reflect the highest and lowest asset exposure based on the underlying funds' historical asset mixes; the average reflects the average asset class exposure under the same parameters. Current asset mixes reflect underlying fund data as of December 31, 2017, and current allocations to underlying funds.

Advisors May Benefit From an International Implementation ...

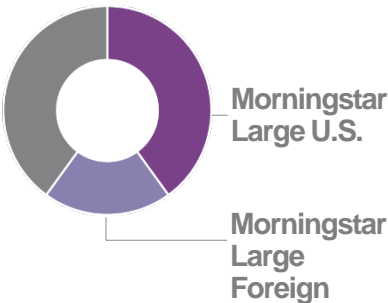
Hypothetical Portfolio Results for the 20 Years Ended December 31, 2017

Figures shown are past results for Class F-2 shares and are not predictive of results in future periods. Current and future results may be lower or higher than those shown. Share prices and returns will vary, so investors may lose money. Investing for short periods makes losses more likely. For current information and month-end results, visit americanfunds.com.

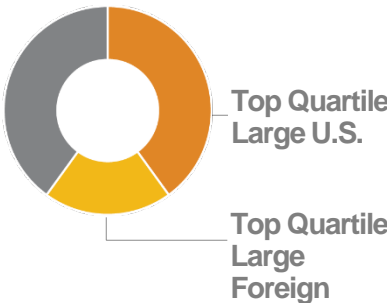
All Index



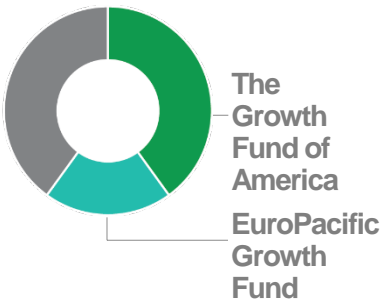
Category Average*



Top Quartile*



American Funds



			vs. Index (bps)		vs. Index (bps)		vs. Index (bps)
Annualized Return	6.4%	6.0%	-37	8.0%	+166	8.0%	+157
Standard Deviation	9.1%	9.0%	-5	9.1%	+5	9.5%	+40
Sharpe Ratio	0.47	0.43	-4	0.65	+18	0.62	+14

Source: Capital Group, based on data from Morningstar.

* "Category Average" = those mutual funds that are included in the Morningstar Large Cap Foreign and Large Domestic categories. "Top Quartile" = those funds ranking in the top fourth of the Morningstar Large Cap Foreign and Large Domestic categories.

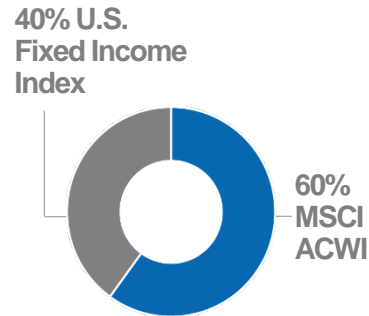
U.S. fixed income represented by the Bloomberg Barclays U.S. Aggregate Index. The Growth Fund of America is a U.S.-focused equity fund that may invest up to 25% of its assets in securities of issuers outside the U.S. EuroPacific Growth Fund normally invests at least 80% of assets in securities of issuers in Europe or the Pacific Basin, which includes emerging markets. The fund has the flexibility to invest in securities from companies domiciled outside of those regions and of any size, ranging from small firms to large corporations. Past results are not predictive of results in future periods. Portfolios were rebalanced monthly. The portfolios' returns are hypothetical and do not reflect actual results of an investor. An investor's experience in similar portfolios may differ significantly. Sharpe ratio uses standard deviation and excess return to determine reward per unit of risk. The higher the number, the better the portfolio's historical risk-adjusted performance.

... Or a Pure Global Implementation

Hypothetical Portfolio Results for the 20 Years Ended December 31, 2017

Figures shown are past results for Class F-2 shares and are not predictive of results in future periods. Current and future results may be lower or higher than those shown. Share prices and returns will vary, so investors may lose money. Investing for short periods makes losses more likely. For current information and month-end results, visit americanfunds.com.

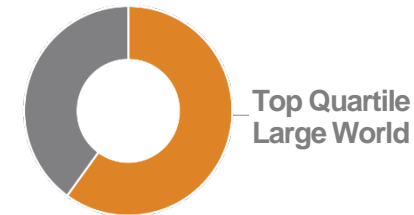
All Index



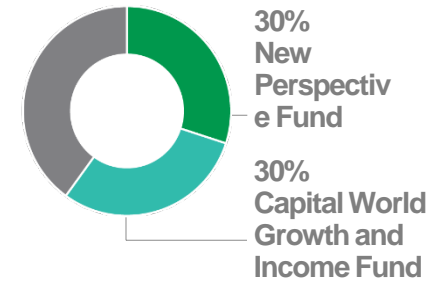
Category Average*



Top Quartile*



American Funds



			vs. Index (bps)		vs. Index (bps)		vs. Index (bps)
Annualized Return	6.0%	5.9%	-10	8.4%	+239	8.0%	+198
Standard Deviation	9.4%	9.3%	-12	9.3%	-8	9.0%	-43
Sharpe Ratio	0.42	0.41	-1	0.67	+26	0.65	+24

Source: Capital Group, based on data from Morningstar.

* "Category Average" = those mutual funds that are included in the Morningstar Large Cap Foreign and Large Domestic categories. "Top Quartile" = those funds ranking in the top fourth of the Morningstar Large Cap Foreign and Large Domestic categories.

U.S. fixed income represented by the Bloomberg Barclays U.S. Aggregate Index. New Perspective Fund is a global fund with the flexibility to invest 100% of its assets outside of the U.S. Capital World Growth and Income Fund primarily invests in stocks issued by companies in the world's largest stock markets. Past results are not predictive of results in future periods. Portfolios were rebalanced monthly. The portfolios' returns are hypothetical and do not reflect actual results of an investor. An investor's experience in similar portfolios may differ significantly. Sharpe ratio uses standard deviation and excess return to determine reward per unit of risk. The higher the number, the better the portfolio's historical risk-adjusted performance.

Key Takeaways

- 
- 1 The world has become increasingly globalized and is unlikely to go back.
 - 2 Correlations have increased and the traditional diversification benefits of international equity have declined.
 - 3 The benefits of international equity today come through a broader opportunity set.
 - 4 Flexibility must be guided by the discipline of investment objectives.
 - 5 Advisors may achieve better outcomes by incorporating either flexible regional funds or global mandates.

Investment Results for Periods Ended December 31, 2017

Figures shown are past results for Class F-2 shares and are not predictive of results in future periods. Current and future results may be lower or higher than those shown. Share prices and returns will vary, so investors may lose money. Investing for short periods makes losses more likely. Fund results shown are at net asset value with all distributions reinvested. Class F-2 shares are sold without any initial or contingent deferred sales charge. Results do not reflect annual asset-based fees charged by the sponsoring firm. For current information and month-end results, visit americanfunds.com.

Funds	Average Annual Total Returns (%)			Expense Ratio (%)
	1 Year	5 Years	10 Years	
EuroPacific Growth Fund®	31.02	9.09	3.85	0.60
The Growth Fund of America®	26.38	16.34	8.58	0.43
New Perspective Fund®	29.12	12.85	7.13	0.55
Capital World Growth and Income Fund®	24.92	11.28	5.27	0.55
Bloomberg Barclays U.S. Aggregate Index	3.54	2.10	4.01	—
MSCI All Country World Index	23.97	10.80	4.65	—
MSCI All Country World Index ex USA	27.19	6.80	1.84	—
S&P 500 Index	21.83	15.79	8.50	—

Investment results assume all distributions are reinvested and reflect applicable fees and expenses. Please see americanfunds.com for more information. Expense ratios are as of fund prospectuses available at the time of publication. Class F-2 shares were first offered on August 1, 2008. Class F-2 share results prior to the date of first sale are hypothetical based on Class A share results without a sales charge, adjusted for typical estimated expenses. Results for certain funds with an inception date after August 1, 2008, also include hypothetical returns because those funds' Class F-2 shares sold after the funds' date of first offering. Please see americanfunds.com for more information on specific expense adjustments and the actual dates of first sale.

Investors should carefully consider investment objectives, risks, charges and expenses. This and other important information is contained in the fund prospectuses and summary prospectuses, which can be obtained from a financial professional and should be read carefully before investing. Securities offered through American Funds Distributors, Inc.

Investing outside the United States involves risks, such as currency fluctuations, periods of illiquidity and price volatility, as more fully described in the prospectus. These risks may be heightened in connection with investments in developing countries.

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Bloomberg Barclays U.S. Aggregate Index represents the U.S. investment-grade fixed-rate bond market. MSCI All Country World Index (ACWI) is a free float-adjusted, market capitalization-weighted index that is designed to measure results of more than 40 developed and emerging equity markets. MSCI All Country World Index ex USA measures stock market results in more than 40 developed and developing country markets, excluding the U.S. Results for the MSCI ACWI and MSCI ACWI ex USA reflect dividends gross of withholding taxes through December 31, 2000, and dividends net of withholding taxes thereafter. Indexes are unmanaged, and their results include reinvested dividends and/or distributions but do not reflect the effect of sales charges, commissions, account fees, expenses or taxes. Investors cannot invest directly in an index.

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Thank You.
Questions?



OppenheimerFunds®

The Right Way
to Invest

Emerging Market Equities: Then and Now

March 2018

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Agenda

- I. The Evolution of Emerging Market Equities
- II. The Inescapable Importance of China
- III. Themes in Emerging Markets



The **Evolution** of Emerging Market Equities



The Evolution of Emerging Market Equities

Market Maturation 1997–2017

Percentage of World GDP¹

1997



17%

Listed Companies²



8,365

Market Cap²

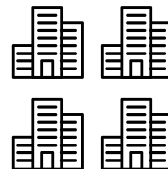


\$1T

2017



33%



22,438



\$22T

1. World Bank as of 12/31/16 2. Source: Bloomberg as of 12/31/17



The **Evolution** of Emerging Market Equities

Composition Changes: 1997–2017

Telecoms



16%



5%

Utilities



10%



2%

Info Tech



3%



28%

Brazil



17%



7%

Mexico



13%



3%

China



0.4%



30%

Source: FactSet as of 12/31/17. Subject to change.

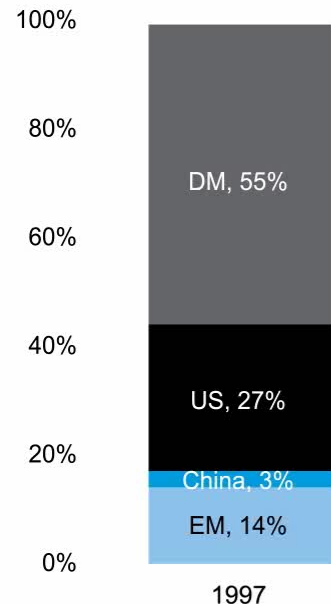
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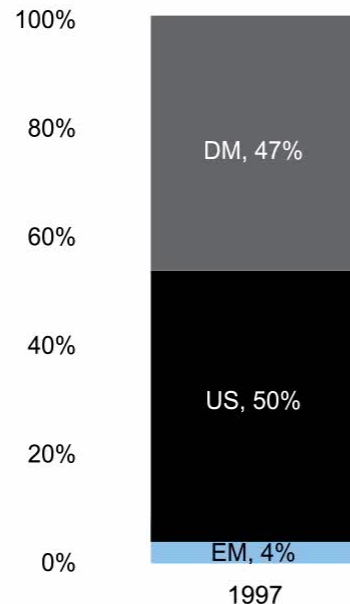
The Evolution of Emerging Market Equities

Percentage of Global

GDP in nominal
USD terms¹

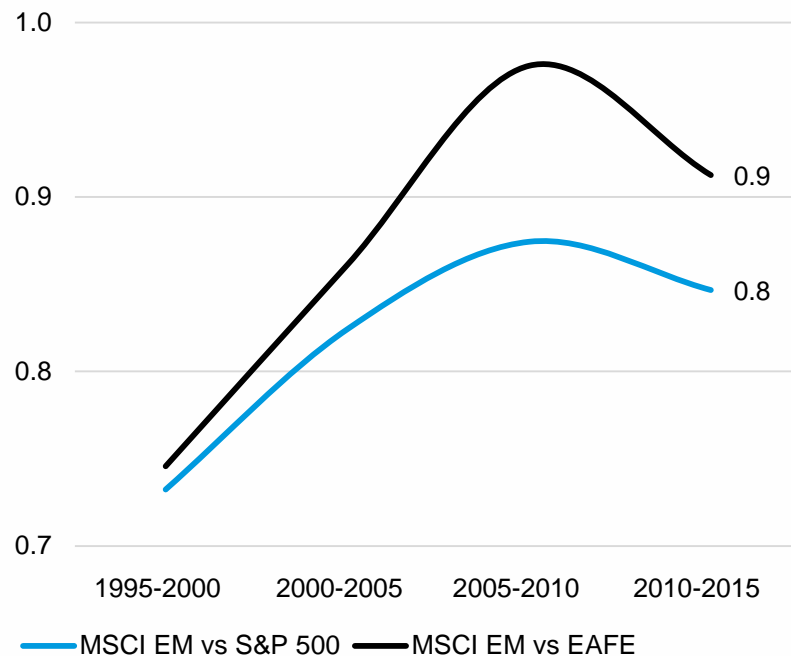


World Market
Capitalization



■ Emerging Markets ex China ■ China ■ US ■ Developed Markets ex US

EM Equity Correlation vs. Developed Markets¹











Source: 1. World Bank as of 12/31/16. Past performance is no guarantee of future results. Estimates may not be achieved.



The Evolution of Emerging Market Equities

EM Heterogeneity- Rich EM Countries

	Population ¹	GDP per capita (USD) ²	Listed Companies ³	Market Cap ²
Korea	 51MM	 \$28k	 2,821	 \$1.3 Trillion (Kospi)
Spain	 49MM	 \$27k	 305	 \$705 Billion (IBEX 35)

The reality is Korea is developed, but benefits from being the big fish in a small pond

1. Source: CIA Factbook July 2017 2. World Bank as of 12/31/16 3. Source: Bloomberg as of 12/31/17

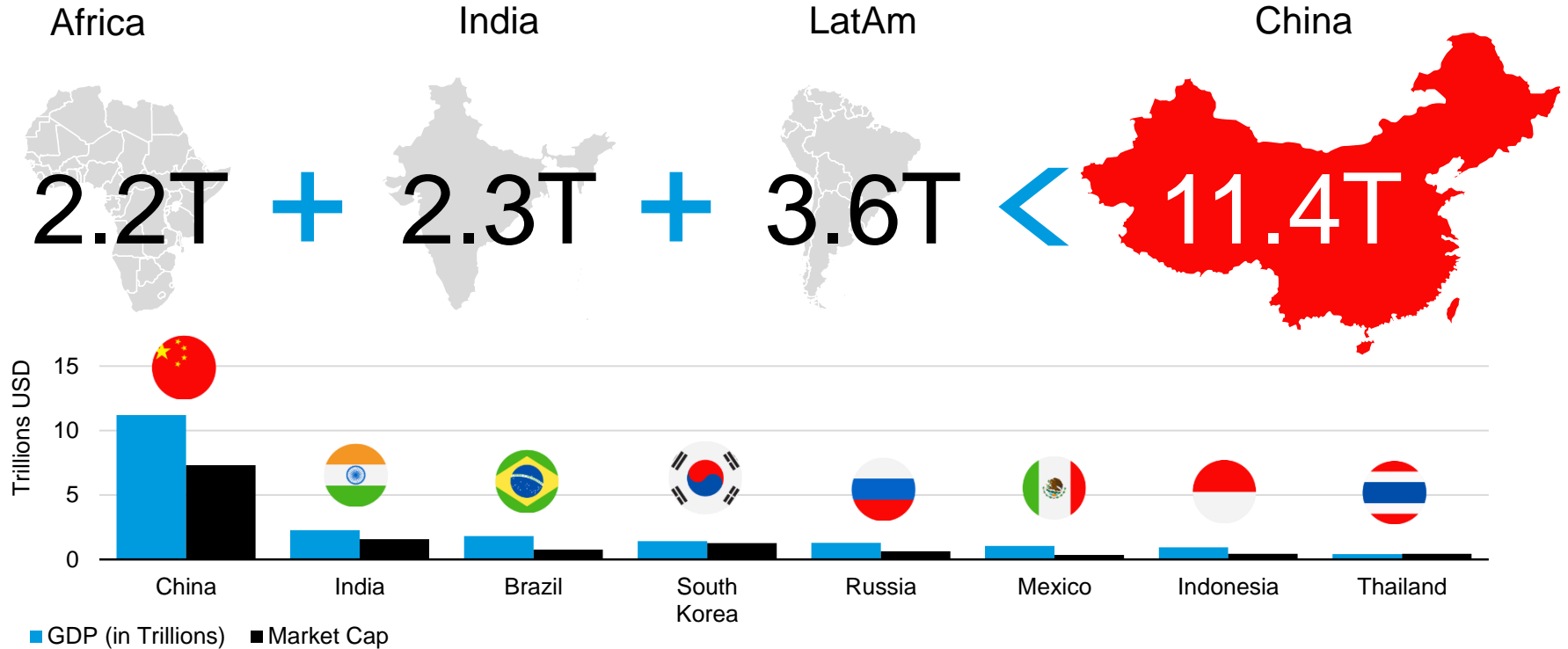


The Inescapable Importance of China



The Inescapable Importance of China

GDP and Market Capitalization



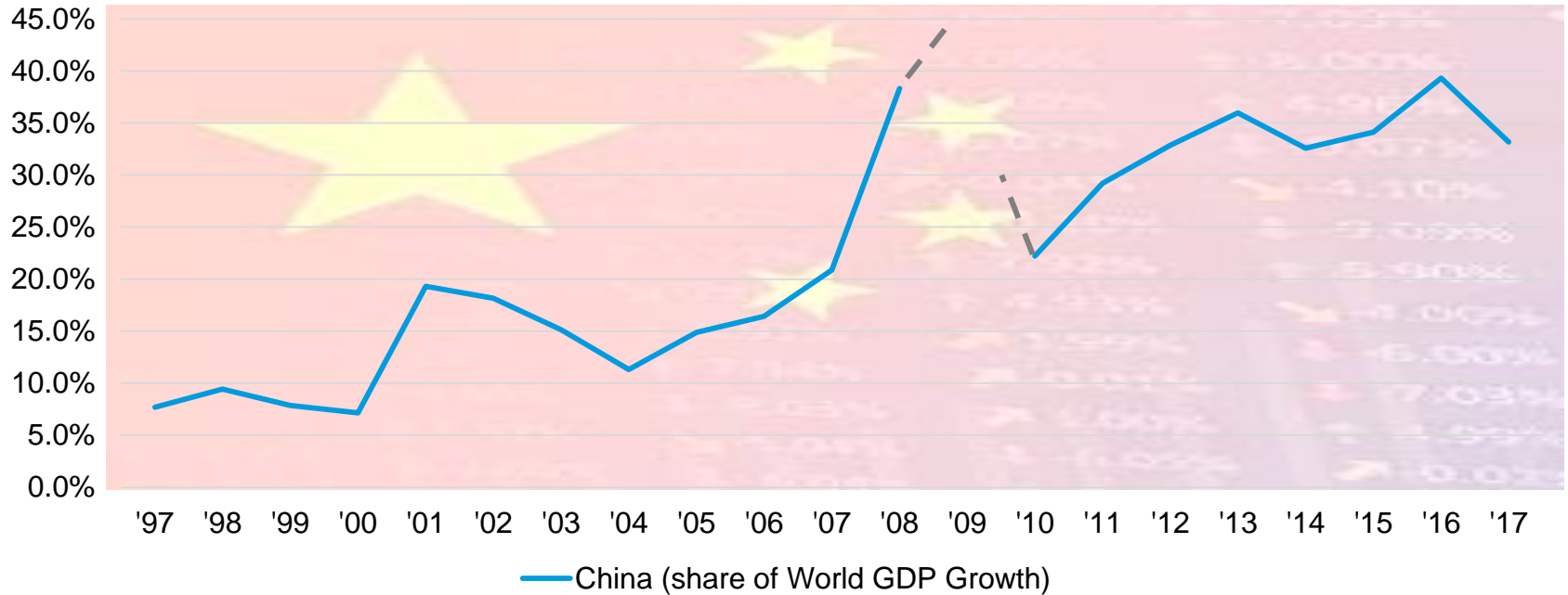
Source: World Bank as of 12/31/16. Subject to change. Not a recommendation to buy or sell securities in the countries mentioned above.

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The Inescapable Importance of China

China's Share of World GDP Growth



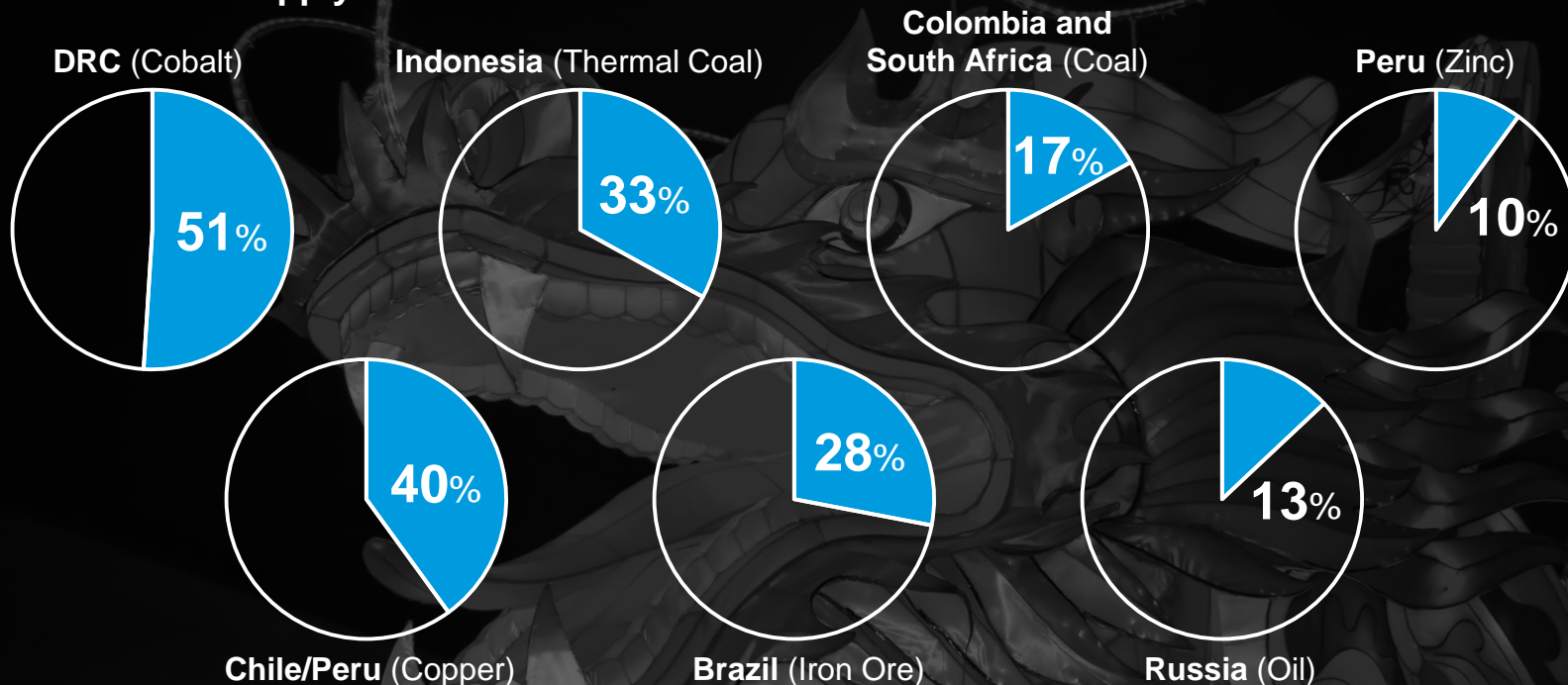
Source: EM Advisors as of 12/31/17. Subject to change. Not a recommendation to buy or sell securities in the countries mentioned above.



Commodities: Who Feeds the Dragon?

China Drives Global Consumption Growth

Share of Global Supply



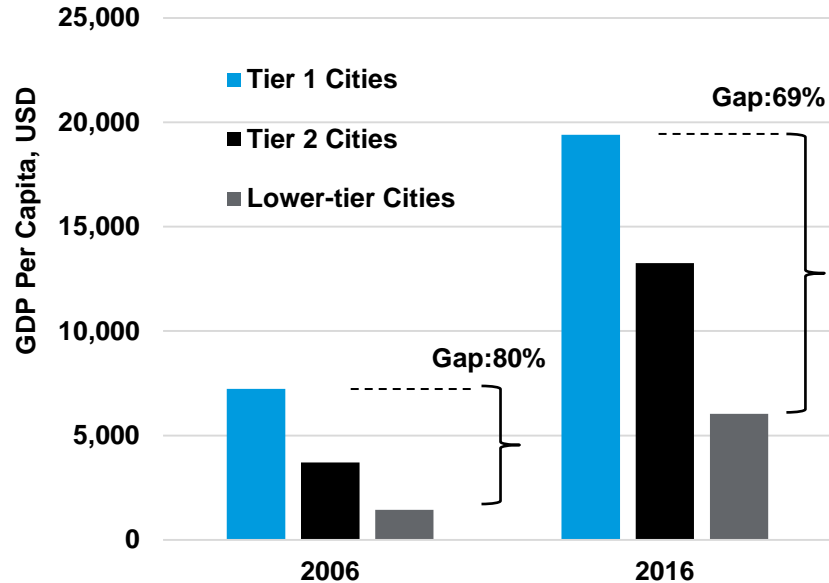
Source: Data as of 11/30/17. BP, McCloskey, WoodMac, Bloomberg, OppenheimerFunds estimates (Chart 1). Countries statistical agencies, Bloomberg, OppenheimerFunds (Chart 2). Thermal coal, iron ore and coal are based on seaborne trade in Chart 2. Subject to Change. **Past performance is no guarantee of future results.**

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The Inescapable Importance of China

GDP Per Capita by City Tiers



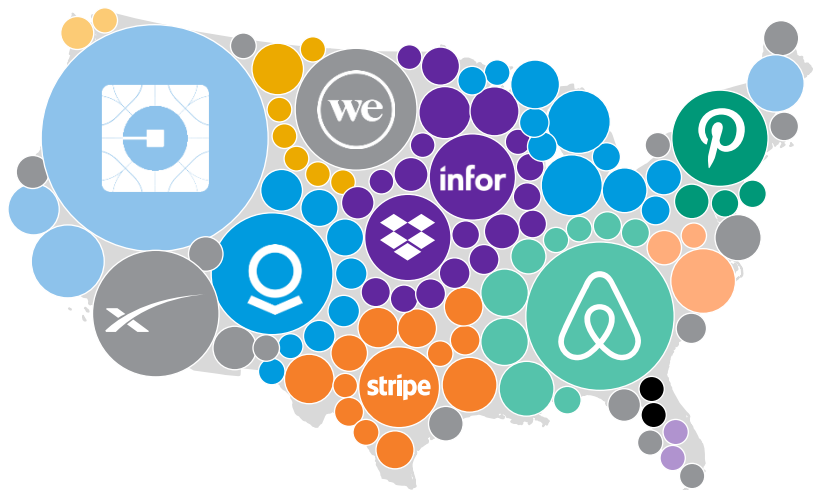
Source: CEIC, Morgan Stanley Research



U.S. and China Unicorn Companies 2017

All Private Companies Valued at \$1B+

United States



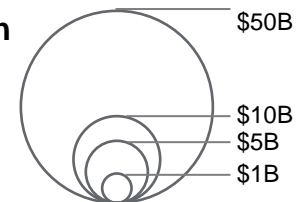
China



Industry



Valuation



Sources: <https://howmuch.net/articles/the-worlds-unicorn-companies-2017>; <https://www.cbinsights.com/research-unicorn-companies>



The Inescapable Importance of China



- Enormously important to EM economic output, growth and market capitalization



- EM equity benchmarks will gravitate toward a **CHINA +** orientation



- Deeply misunderstood, common fragilities theses is naïve and likely wrong



- Entrepreneurial and creative talents are about to go global



Themes in Emerging Markets



Current Themes in Emerging Markets

The Short Term - Real Economies



- China supply side reform and sustenance of recent commodity price gains



- Inflation and interest rates bottom with restoration of growth



- Recovery in global trade and capital formation



- The return of the affluent EM consumer



Future Themes in Emerging Markets

The Short Term - Equity Markets



- Signs of short term excess are manifesting



- Passive and momentum styles have been winners



- Monetary policy is normalizing: inflation, higher rates, and volatility return



- Active management with considered imagination is required



Future Themes in Emerging Markets

The Long Term - Equity Markets

- Ubiquitous mobile-first technology across EM, leapfrogs the developed world
- Technology, urbanization and policy help formalize EM economies
- Economic reform is challenging but imperative
- The unstoppable rise of China is incomplete



- **Brazil**- finally joining the rest of the world



- **Russia**- rule of law



- **Indonesia**- fiscal, competition and SOE efficiency



- **India**- many positive changes, but not China



Q&A



Disclosures

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Special Risks: Foreign investments may be volatile and involve additional expenses and special risks, including currency fluctuations, foreign taxes and geopolitical risks. Emerging and developing market investments may be especially volatile. Due to the recent global economic crisis that caused financial difficulties for many European Union countries, Eurozone investments may be subject to volatility and liquidity issues. Investments in securities of growth companies may be volatile. Small and mid-sized company stock is typically more volatile than that of larger, more established businesses, as these stocks tend to be more sensitive to changes in earnings expectations. It may take a substantial period of time to realize a gain on an investment in a small or mid-sized company, if any gain is realized at all. The Fund may invest a significant portion of assets in a particular region, which may increase volatility and exposure to risks associated with that particular region.

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May 17, 2018

Panel on Global Investing: A Fixed Income Perspective

Thomas Brennan, CFA

William Blair

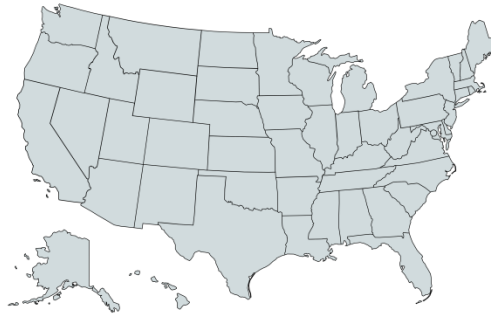
Global Investing in Bonds

U.S. Stock Indexes

U.S. Bond Indexes

1

Issuer Location



2

Security Attributes

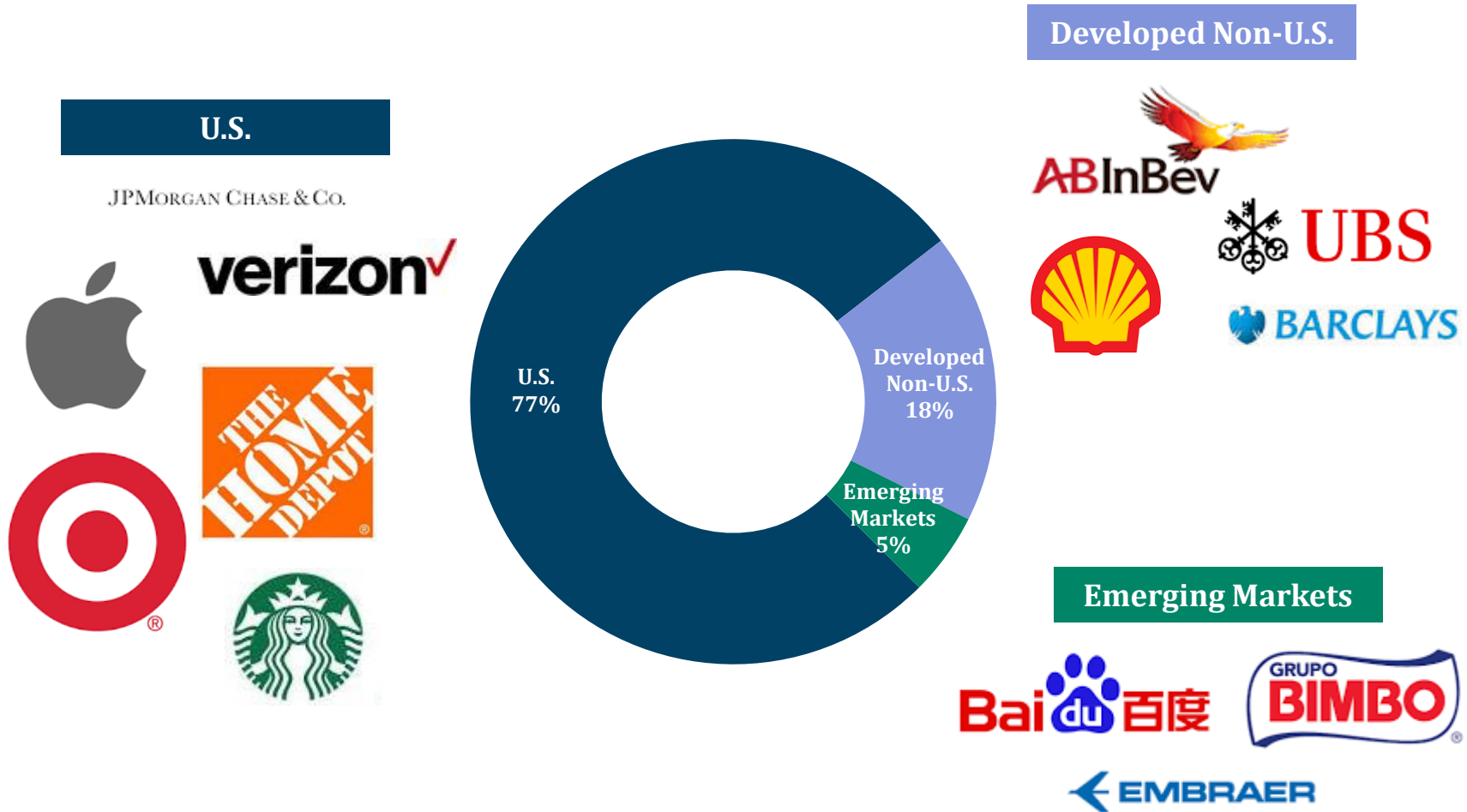
- Primary listing on a U.S. exchange (i.e., NYSE, NASDAQ, etc.)
- Criteria for organizational structure and share type

- Issued in U.S. dollars
- SEC registration requirement
- Criteria for amounts issued and outstanding, credit rating, maturity, and coupon type

Source: Standard & Poor's, Bloomberg, Barclays.

Global Investing in Bonds

Bloomberg/Barclays U.S. Credit Index Composition as of March 31, 2018



Source: Bloomberg, Barclays.

The Bloomberg Barclays US Credit Index measures the investment grade, U.S. dollar-denominated, fixed-rated, taxable corporate and government-related bond markets. A direct investment in an unmanaged index is not possible. References to specific issuers are provided for illustrative purposes only and should not be interpreted as a recommendation to buy or sell any security.

William Blair

Global Investing in Bonds – Emerging Markets

Bloomberg/Barclays EM USD Aggregate Index

	Weight	Sample Constituents
Regions		
Latin America	32%	• Brazil, Mexico, Argentina
EMEA (Europe, Middle East, Africa)	34%	• Russia, Turkey, UAE, South Africa
Asia	34%	• China, South Korea, Indonesia
Sectors		
Sovereign	40%	<ul style="list-style-type: none"> • Foreign government debt • Sample issuer: United Mexican States
Quasi-Sovereign	35%	<ul style="list-style-type: none"> • Generally companies that are government-owned • Sample issuer: Petrobras (Brazil)
Corporate	25%	<ul style="list-style-type: none"> • Sample issuer: Teva Pharmaceuticals (Israel) • Sample issuer: Embraer SA (Brazil)

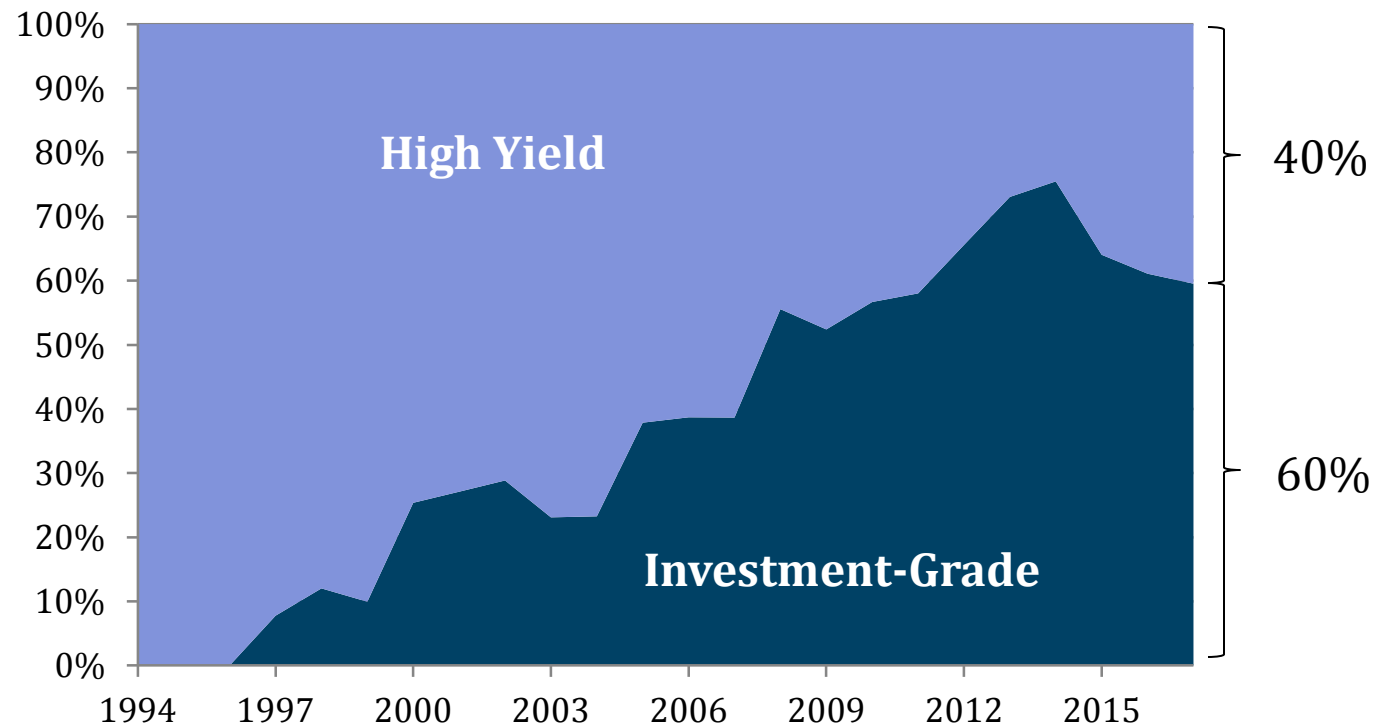
- **“Frontier markets”** are “pre-emerging” countries that are not included in emerging markets indices.
- MSCI’s Frontier Markets Index includes countries such as Vietnam, Kuwait, Morocco, and Nigeria.

Source: Bloomberg, Barclays, MSCI. Data are as of 3/31/18.

The Bloomberg Barclays Emerging Markets USD Aggregate Index includes fixed and floating-rate U.S. dollar-denominated debt issued from sovereign, quasi-sovereign, and corporate EM issuers. A direct investment in an unmanaged index is not possible. References to specific issuers are provided for illustrative purposes only and should not be interpreted as a recommendation to buy or sell any security.

Global Investing in Bonds – Emerging Markets

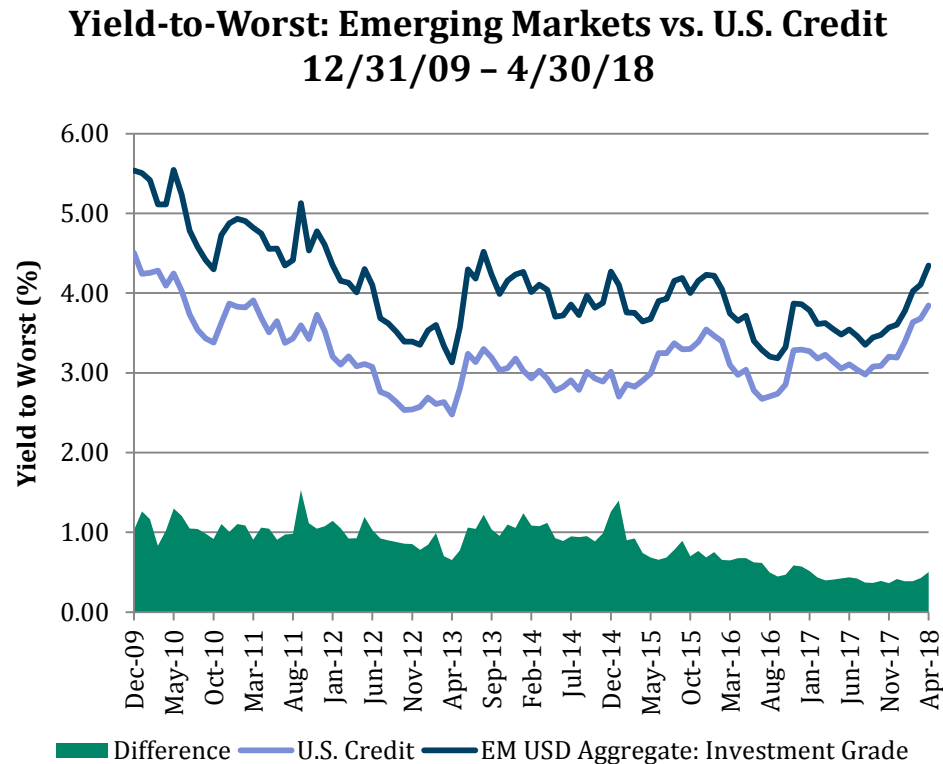
Emerging Market Debt by Credit Quality, 1994 - 2017



Source: Bloomberg, Barclays. A direct investment in an unmanaged index is not possible.

Global Investing in Bonds – Emerging Markets

Bonds issued by emerging market issuers offer opportunities to enhance yield opportunities relative to bonds issued by developed market issuers.



Source: Bloomberg, Barclays, William Blair Investment Management. Past performance is not indicative of future returns. A direct investment in an unmanaged index is not possible.

Global Investing in Bonds – Emerging Markets

Bonds issued by emerging markets domiciled entities have generated strong absolute and risk-adjusted returns relative to the broad credit market.

Performance Statistics

20 Years Ending 12/31/2017

	EM USD (Inv. Grade)	U.S. Credit (Inv. Grade)
Annualized Return	7.93%	5.73%
Annualized Risk	7.31%	4.97%
Sharpe Ratio	0.80	0.74

Source: Bloomberg, Barclays, Bank of America/Merrill Lynch, William Blair Investment Management. Past performance is not indicative of future returns. A direct investment in an unmanaged index is not possible. Index performance does not reflect the deduction of any fees or expenses.

Important Disclosures

This content is for informational and educational purposes only and not intended as investment advice or a recommendation to buy or sell any security. Investment advice and recommendations can be provided only after careful consideration of an investor's objectives, guidelines, and restrictions.

The data presented represents past performance. Past performance is not indicative of future results.

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