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Capitalize on global economic growth with global real estate

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Real estate is a growing segment of the global economy and is becoming an integral part of investors' overall asset allocation strategy. It is often an effective barometer of the health of an economy: Rising real estate prices and increasing demand often mean a healthy economy, while falling prices often portend trouble ahead.

In this paper

We will explore a number of key issues, including:

- What is the role of real estate in investor portfolios?
- Does an allocation to global real estate make sense?
- Is now the right time to invest?
- How can investors gain exposure in their portfolios?

Investors who own homes may believe they already have sufficient real estate exposure. While their home certainly constitutes real estate, and they may realize profits from selling it, there are differences in owning a home and investing in commercial real estate. For the average investor, one of the most efficient ways of investing in real estate is through a publicly traded real estate investment trust (REIT) or a real estate operating company (both of which are "real estate securities").

A REIT is a stock that can be bought or sold on the major exchanges and invests in real estate directly, either through properties or mortgages. REITs receive special tax considerations and typically offer investors high yields and a liquid means of gaining exposure to real estate.

Real estate securities combine benefits of owning commercial real estate with advantages of owning publicly traded stocks. Profits and losses can be realized over time, and real estate securities usually produce income. They can serve as a complement to a well-diversified portfolio of stocks and bonds. Real estate securities have historically provided a number of key features:

- **Strong results.** They have historically delivered strong performance relative to traditional equity and fixed income indexes.
- **Attractive income.** They have historically provided attractive yields relative to equities and many fixed income options.
- **Diversification.** They offer diversification benefits to complement traditional equity and fixed income allocations.
- **Inflation hedging.** They may serve as an effective hedge against rising inflation rates.

We will support these points and others throughout the paper. We will also discuss the value of gaining global real estate exposure through fundamentally weighted (that is, non-cap-weighted) indexing. The Schwab Center for Financial Research has done extensive research on the merits of fundamentally weighted indexing.

The case for global real estate

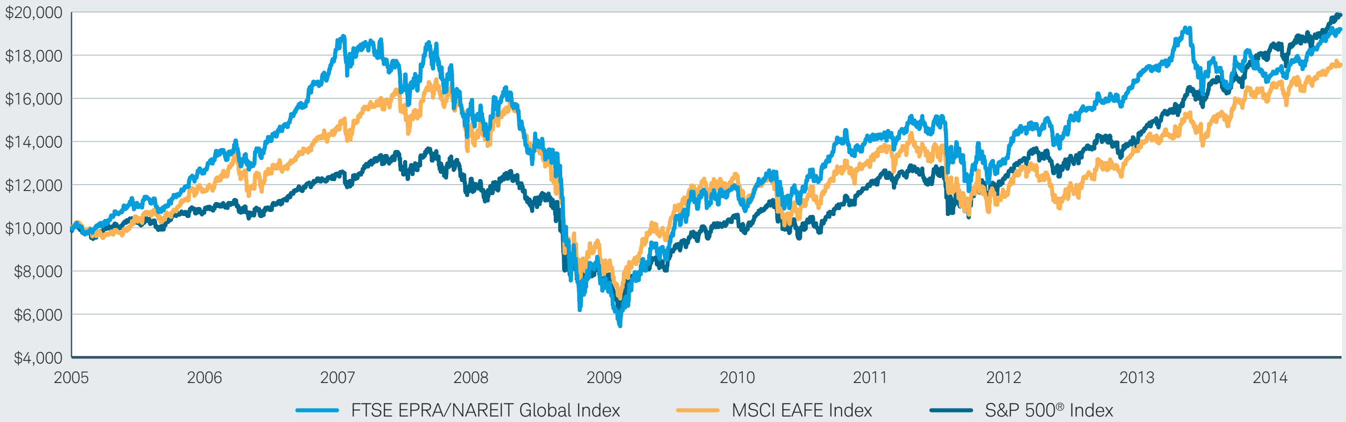
Within our equity and fixed income allocation, we generally accept the diversification and investment merits of gaining global exposure. For real estate, you can also make the case for global allocations across regions, since it is generally accepted that the real estate market should be correlated to economic growth. According to a Towers Watson paper, "The reason for this relationship is relatively straightforward—over time GDP growth should lead to improving occupier demand and in turn higher rents, which drive property returns. Indeed, in most economies[,] retail sales are monitored closely as a key indicator for expected GDP figures, partly due to these figures typically being available much quicker than official GDP estimates."[1]

If we accept the correlation of real estate to GDP growth, and we recognize that the various markets are at different stages of economic growth, then a global allocation across regions makes sense. "The global share of economic activity (as measured by GDP) is gradually shifting from developed markets in the US and Europe to the rest of the world. The US and Europe produced a combined 48.7% share of global GDP in 2012, down from 60.7% in 2000, while the combined share of Asia and Latin America rose to 40.1% in 2012 from 33.7% in 2000 (EIU)."[2] In other words, growth outside the U.S. is likely to be stronger than the growth within our borders, making the case for a global allocation.

[1] Towers Watson, "Real Estate: The Case for Global Diversification," *Perspectives*, 2012.

[2] Grace Bucchianeri, Paul Fiorilla, and Marc Halle, *Why Global Real Estate Securities?* Prudential Real Estate Investors, March 2013.

Exhibit 1
Growth of a hypothetical $10,000 investment



Source: Morningstar Direct. Data as of 2/22/2005 to 6/30/2014. FTSE EPRA/NAREIT Global Index was incepted on 2/22/2005. **Past performance is no guarantee of future results**. The example is hypothetical and provided for illustrative purposes only. It is not intended to represent a specific investment product. Dividends and interest are assumed to have been reinvested. Indexes are unmanaged, do not incur management fees, costs, and expenses, and cannot be invested in directly.

The role of global real estate

Real estate securities have historically delivered a number of attractive attributes: ***growth***, ***income***, and ***diversification***. In Exhibit 1, we compare the performance of the FTSE EPRA/NAREIT Global Index (global real estate) with a domestic benchmark (S&P 500®) and international benchmark (MSCI EAFE). As you can see in Exhibit 1, performance of global real estate compared favorably with the equity benchmarks. Ten thousand dollars invested in the global real estate index in February 2005 would have grown to more than $19,000 by June 2014 (and that includes the 2008 financial crisis). By comparison, $10,000 invested in the U.S. and international indexes would have grown to $19,860 and $17,570, respectively.

As illustrated in Exhibit 2, global real estate has also provided attractive yields relative to equity and fixed income options. As of June 30, 2014, global real estate had a 3.53% yield, which compares quite favorably with other equity and fixed income options available in the marketplace. With fixed income yields at generationally low levels, investors have been seeking other sources of income. Real estate securities have been an appealing option for investors who are seeking higher income, but real estate securities are more susceptible to rising interest rates.

Exhibit 2
Yields

Equity dividend yields		Fixed income yields	
Global REITs	3.53%	High yield	4.91%
U.S. stocks	1.91%	Corporates	2.91%
International stocks	3.37%	Global bonds	1.45%
MLPs	5.11%	Treasuries	2.53%

Source: Bloomberg. Data as of June 30, 2014. Asset classes are represented by the following indexes: **Equities:** Global Real Estate: FTSE EPRA/NAREIT Global Index; U.S. Stocks: S&P 500 Index; International Stocks: MSCI EAFE Index; Master Limited Partnerships (MLPs): Alerian MLP. **Fixed Income:** High Yield: Barclays U.S. Corporate High Yield Bond Index; Corporates: Barclays U.S. Corporate Bond Index; Global Bonds: Barclays Global Aggregate Bond Index ex U.S.; Treasuries: U.S. Generic Gov't 10 Year Yield, U.S.G 10YR Index.

Exhibit 3
Periodic table

2006	2007	2008	2009	2010	2011	2012	2013
Global Real Estate 43.72	Commodities 16.23	Investment-Grade Bonds 5.24	Global Real Estate 41.25	U.S. Small Cap Stocks 26.85	Investment-Grade Bonds 7.84	Global Real Estate 29.85	U.S. Small Cap Stocks 38.82
International Stocks 26.86	International Stocks 11.63	U.S. Small Cap Stocks -33.79	International Stocks 32.46	Global Real Estate 20.03	Broad U.S. Stock Market 2.11	International Stocks 17.90	Broad U.S. Stock Market 32.39
Global Stocks 20.65	Global Stocks 9.57	Commodities -35.65	Global Stocks 30.79	Commodities 16.83	U.S. Small Cap Stocks -4.18	Global Stocks 16.54	Global Stocks 27.37
U.S. Small Cap Stocks 18.37	Investment-Grade Bonds 6.97	Broad U.S. Stock Market -37.00	U.S. Small Cap Stocks 27.17	Broad U.S. Stock Market 15.06	Global Stocks -5.02	U.S. Small Cap Stocks 16.35	International Stocks 23.29
Broad U.S. Stock Market 15.79	Broad U.S. Stock Market 5.49	Global Stocks -40.33	Broad U.S. Stock Market 26.46	Global Stocks 12.34	Global Real Estate -8.14	Broad U.S. Stock Market 16.00	Global Real Estate 2.24
Investment-Grade Bonds 4.33	U.S. Small Cap Stocks -1.57	International Stocks -43.06	Commodities 18.91	International Stocks 8.21	International Stocks -11.73	Investment-Grade Bonds 4.21	Investment-Grade Bonds -2.02
Commodities 2.07	Global Real Estate -4.65	Global Real Estate -48.90	Investment-Grade Bonds 5.93	Investment-Grade Bonds 6.54	Commodities -13.32	Commodities -1.06	Commodities -9.52

Source: Morningstar Direct. Asset classes are represented by the following indexes: Broad U.S. Stock Market: S&P 500 Index; U.S. Small Cap Stocks: Russell 2000® Index; International Stocks: MSCI EAFE Index; Global Stocks: MSCI World Index; Investment-Grade Bonds: Barclays U.S. Aggregate Bond Index; Commodities: Dow Jones-UBS Commodity Index; Global Real Estate: FTSE EPRA/NAREIT Global Index. **Past performance is no guarantee of future results.** Dividends and interest are assumed to have been reinvested. Indexes are unmanaged, do not incur management fees, costs, and expenses, and cannot be invested in directly.

We view global real estate as a valuable component of a diversified portfolio. Exhibit 3 shows the best and worst yearly performances of various asset classes. As you can see, in 2006, 2009, and 2012 global real estate was the best-performing asset class. Conversely, it was the worst-performing asset class in 2007 and 2008. As the exhibit shows, there is a natural rotation among the best- and worst-performing asset classes, and that's why investors should diversify their allocations. By allocating across stocks, bonds, commodities, and real estate, investors gain diversified exposure that should help dampen volatility.

Global fundamental

The Schwab Center for Financial Research has written extensively about fundamentally weighted indexes and how they compare with their market-cap equivalents (see *Fundamentally Weighted Indexing: Weighing the Difference*). Fundamentally weighted indexing breaks the link with price, weighting securities based on economic factors such as sales, cash flows, and dividends plus buybacks. Market-cap indexes allocate the largest weights to the largest companies.

The differences in weighting methodologies across the market-cap and Fundamental Index® strategies lead to a divergence in holdings, sector allocations, and country allocations. Exhibit 4 shows the top 10 holdings for a market-cap and a Fundamental Index strategy. While there are some similar holdings, the rationales for the weightings vary. The Russell Fundamental Global Select Real Estate Index selects and weights securities based on economic factors. The FTSE EPRA/NAREIT Global Index selects and weights securities based on market capitalization.

Exhibit 4
Top 10 stocks with weights

RUSSELL FUNDAMENTAL GLOBAL SELECT REAL ESTATE INDEX

Company	Weight
Simon Property Group Inc	2.80%
Mitsui Fudosan Co Ltd	2.54%
Westfield Group	2.16%
Mitsubishi Estate Company Ltd	2.09%
Daito Trust Construction Co Ltd	1.94%
Vornado Realty Trust	1.90%
Equity Residential	1.79%
Cheung Kong Holdings Ltd	1.70%
Stockland	1.68%
Host Hotels & Resorts Inc	1.57%
Total	**20.17%**

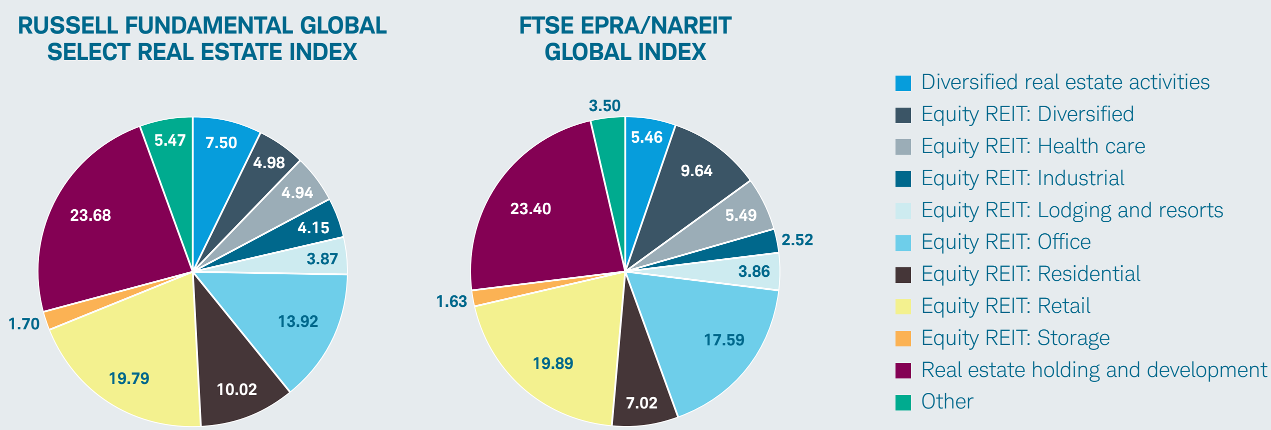
FTSE EPRA/NAREIT GLOBAL INDEX

Company	Weight
Simon Property Group Inc	3.88%
Mitsubishi Estate Company Ltd	2.35%
Mitsui Fudosan Co Ltd	2.14%
Unibail-Rodamco SE	2.12%
Public Storage	1.84%
Equity Residential	1.69%
Sun Hung Kai Properties Ltd	1.59%
Prologis Inc	1.54%
Healthcare REIT	1.45%
HCP	1.42%
Total	**20.02%**

Source: Russell Indexes and FTSE Indexes. Data as of June 30, 2014. For illustrative purposes only.

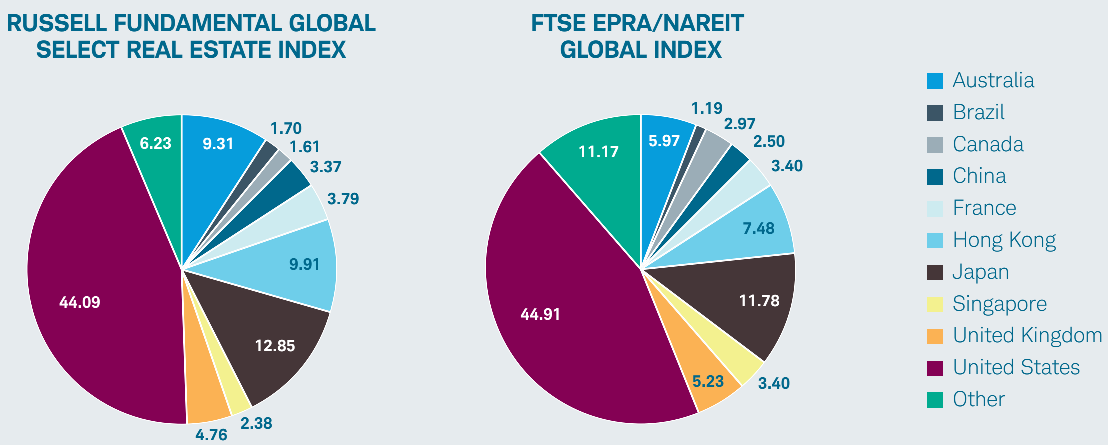
Exhibit 5 compares the sector allocations of the Russell Fundamental Global Select Real Estate Index and FTSE EPRA/NAREIT Global Index. While real estate holding and development is the largest sector in both indexes, there are some big differences across the other sectors. Office is the third-largest allocation in both indexes but is weighted more heavily in the FTSE Index. Diversified is the fourth-largest weight in the market-cap index and is nearly double the weight of the Fundamental Index portfolio (9.64% versus 4.98%). The differences are attributable to their weighting methodologies.

Exhibit 5
Sector allocations (%)



Source: Russell Indexes and FTSE Indexes. Russell Global Sectors industry classification system. Data as of June 30, 2014.

Exhibit 6
Country allocations (%)



Source: Morningstar Direct, Russell Indexes, and FTSE Indexes. Morningstar equity industry allocations. Data as of June 30, 2014.

Exhibit 6 shows the country allocations of the Russell Fundamental Global Select Real Estate Index and the FTSE EPRA/NAREIT Global Index. While the top five countries are the same—the United States, Japan, Australia, Hong Kong, and the United Kingdom—the weights are different. The difference in weighting methodology leads to divergence among the holdings, sectors, and country allocations across the two global real estate indexes. The two indexes will consequentially experience different returns over time.

Conclusion

Global real estate can represent a valuable addition to a diversified asset allocation portfolio. Relative to traditional investments, global real estate has historically delivered strong long-term performance, attractive yields, and diversification benefits. Investors now have multiple options to access global real estate. They can consider active management or passive index strategies and can allocate to market-cap or fundamental strategies.

Global real estate provides an effective means of capturing some of the global growth opportunities. Real estate securities combine the benefits of owning commercial real estate with the advantages of owning publicly traded securities. Fundamentally weighted indexing is a core philosophy at Schwab. We believe that, taken together, fundamentally weighted global real estate strategies may offer a unique aspect of diversification.

Glossary of terms

Alpha. A performance measure on a risk-adjusted basis. Alpha takes the volatility (risk) of a mutual fund, or other type of investment, and compares its risk-adjusted performance with a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund's alpha.

Alternative beta. Also known as *smart beta* and *strategy beta*. Alternative beta strategies attempt to deliver a better risk-and-return trade-off than conventional market-cap-weighted indexes by using alternative weighting schemes based on measures such as volatility. Alternative beta strategies include a range of alternative weighting methods: fundamentally weighted, equal weighting, minimum variance, and low volatility, among others.

Beta. The beta of an investment is a measure of the risk arising from general market movements, or systematic risks, as opposed to idiosyncratic factors. By definition, the market portfolio has a beta of +1. It is important because it is a measure of risk of an investment that cannot be diversified away and, as such, is also a measure of risk the investment adds to a diversified portfolio.

Correlation. Correlation measures the relationship and movement of two or more securities, which ranges between -1 and +1. Perfect positive correlation (a correlation of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction, the security that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the securities are said to have no correlation; they are completely random.

Fundamentally weighted index. A type of equity index in which components are weighted based on fundamental criteria as opposed to market capitalization. Fundamentally weighted indexes may be based on fundamental metrics such as revenue, sales, dividends, earnings, or book value. Proponents of these indexes believe that they are a more accurate aggregate measure of the market because market capitalization tends to overweight companies that are richly valued while underweighting companies with low valuations. Fundamentally weighted indexes are sometimes referred to as *alternative beta* or *smart beta*. Fundamental strategies track fundamentally weighted indexes.

Market-cap weighting. Most of the broadly used market indexes today are "cap-weighted" indexes, such as the S&P 500, Russell 2000, and MSCI EAFE Indexes. In a cap-weighted index, large price moves in the largest components can have a dramatic effect on the value of the index. Some investors feel that this overweighting toward the larger companies gives a distorted view of the market.

Real estate investment trust (REIT). A REIT is a company that owns, and in most cases operates, income-producing real estate such as apartments, shopping centers, offices, hotels, and warehouses. The shares of many REITs are freely traded, usually on a major stock exchange. To qualify as a REIT, a company must distribute at least 90% of its taxable income to its shareholders annually. REITs receive special tax considerations and typically offer investors high yields, as well as a liquid method of investing in real estate. Their revenues come principally from their properties' rents.

Real estate operating company. A publicly traded company that specializes in real estate investments but does not meet the requirements to be a REIT, particularly the requirement to pay at least 90% of net income out to investors. The ability to retain earnings allows REOCs to invest in expansion opportunities.

Sharpe ratio. The Sharpe ratio is a measure of risk-adjusted return. Specifically, it is a measure of the excess return of a risky security relative to a risk-free security per unit of risk. When comparing two assets versus a common benchmark, the one with a higher Sharpe ratio provides better return for the same risk (or, equivalently, the same return for lower risk).

Standard deviation. Standard deviation is a statistical measurement that sheds light on historical volatility. Standard deviation is a measure of the amount of variation from the average. A volatile portfolio will have a higher standard deviation than a less volatile portfolio.

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Anthony Davidow is responsible for providing Schwab's point of view on asset allocation and portfolio construction. He is also responsible for providing research and analysis on alternative beta strategies and how investors can incorporate them in their portfolios. Davidow is also a member of the firm's Asset Allocation Council.

Before joining Schwab, Davidow was a managing director, portfolio strategist, and head of the ETF Knowledge Center for Guggenheim Investments. Before joining Guggenheim, Davidow was executive vice president and head of distribution for IndexIQ. Previously, he spent 15 years at Morgan Stanley, where he served as managing director and head of sales and training for the Consulting Services Group. While at Morgan Stanley, he worked with many of the firm's largest clients in developing and implementing asset allocation strategies, incorporating active and passive strategies, and using alternative investments as risk management tools.

Davidow has authored several white papers and strategy pieces and spoken at industry conferences on a range of topics, including "The Merits of Core-Satellite Investing," "Asset Allocation and Manager Selection: Adaptive Allocation," "Alpha-Beta Separation," "Alternative Weighting Strategies," "The Role and Use of Alternative Investments," "Currency as an Asset Class," "An Evolutionary Approach to Portfolio Construction," and "Alternative Beta Strategies," among others.

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The risks of REITs are similar to those associated with direct ownership of real estate, such as changes in real estate values and property taxes, interest rates, cash flow of underlying real estate assets, supply and demand, and the management skill and creditworthiness of the issuer. Investing in REITs may pose additional risks, such as real estate industry risk, interest-rate risk, and liquidity risk.

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