Schwab’s Global Asset Allocation Philosophy

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Schwab believes in the merits of a globally diversified portfolio. We think asset allocation needs to evolve beyond U.S. stocks, bonds and cash investments – to include broader diversification across the globe – and the inclusion of certain non-traditional asset classes. We believe that broad diversification across an array of global asset classes can help in managing risk in client portfolios and provide a broader set of investment opportunities.

Investors often exhibit a *home-country bias*. We tend to invest in things that are comfortable and familiar. While this is human nature, it limits the opportunity set; and may not be prudent given the nature of today’s global markets. According to MSCI data, roughly one-half of all global companies are based outside of the United States, which corresponds to global gross domestic product (GDP) ratios. Do you really want to limit your investment opportunities by one-half? How can we overcome this home-country bias?

In this paper, we will discuss why global asset allocation still makes sense and make the case for allocating to non-U.S. markets. Specifically, we will cover the following:

- Is Modern Portfolio Theory still relevant?
- What are the new market realities?
- How should investors respond to the new market realities?
- What's the case for allocating globally?
Revisiting Modern Portfolio Theory

The difference that a globally diversified portfolio can deliver over the sum of its parts is what Nobel Prize winning economist Harry Markowitz once called “the only free lunch in finance.” In other words, diversification can deliver benefits over time at no additional cost.

The “free lunch” is made possible by the fact that individual asset classes typically aren’t perfectly correlated. If asset values do not move in perfect harmony, then a diversified portfolio will have less risk than the weighted average risk of its constituent parts. Markowitz first introduced the concept of diversification in 1952. Markowitz's work, which served as the foundation for MPT, concluded that an investor could reduce the overall risk of a portfolio by including investments that have low correlations to one another.

The markets have changed a great deal since Markowitz's original work. We live in a more complex world, with an expanded number of asset classes. The markets are also more interconnected than at any time in our history. Therefore, we believe that diversification needs to expand beyond merely allocating to U.S. stocks, bonds and cash investments.

Unfortunately, as we've experienced increasing bouts of volatility around the globe, correlations have been rising over the last several years. We believe in diversification across equities and fixed income – as well as the inclusion of non-traditional asset classes to help buffer volatility. Equity allocations should include domestic large and small cap, and international and emerging markets among others. Fixed income investments should be diversified across Treasuries, corporates, high yield, international and emerging markets debt among others.

1 Markowitz, Harry, "Portfolio Selection," *Journal of Finance*, March 1952
As we examine the role of asset allocation in investors' portfolios today, it's important to understand that even during periods of market stress, when correlations tend to increase, diversification still provides benefits as long as assets don't move in perfect lockstep. It's important to recognize that asset allocation strategies can be dynamic — both in choosing which asset classes to include and in making tactical adjustments to reflect short or long-term changes in the market or macroeconomic environment.

**New Market Realities**

While we often look to history as a guide for the markets, we need to also recognize that markets evolve and certain things change over time. We believe the next 20 years will likely be very different from the last 20 years. We believe that there are a new set of market realities that will persist for the foreseeable future:

- Globalization
- Increased bouts of volatility
- Lower bond yields
- Lower expected equity returns

The financial markets are more interconnected today than ever before. Nearly half the revenues of U.S. companies in the Standard & Poor's 500® Index come from international operations. And more than half the world's market capitalization now lies outside the United States. If you don't invest globally, you're significantly narrowing your opportunity set and ignoring an important tool to help manage volatility.

While some investors assume that owning large multi-nationals is sufficient diversification, the data shows that the country of domicile really does matter. Apple acts like a U.S. company — and Alibaba acts like a Chinese company. Country indexes are often dominated by individual sectors — Canada / Energy,
Japan / Financials, and U.S. / Technology. To capture the dynamics within a country, you need diversification across sectors.

One major repercussion of global interconnectivity is that markets are hit by more external shocks. Major market-moving shocks have increased in number and intensity in recent years. Events like global central bank intervention, the Brexit vote, China’s slowing economic growth and the U.S. elections can impact global markets. Globalization impacts the opportunities and the risks across the globe.

Another factor contributing to this dynamic is how quickly information spreads within and across markets. Investors now have access to information once available only to large institutional investors; but they have less time to digest and respond appropriately. Hedge funds and high-frequency traders can often respond to news immediately, creating big swings in individual stocks and market segments. This tendency to act quickly on breaking news contributes to market volatility during times of crisis or general unease.

Bond yields have remained at generational low levels since the 2008 financial crisis – here and abroad. While the Federal Reserve (Fed) raised rates in late 2015, they remain significantly below historical norms. The Fed has made it clear that they would like to keep rates “lower for longer.” This has caused investors to seek alternative sources of income, including investments like high yield bonds, preferred securities, master limited partnerships (MLPs) and real estate investment trusts (REITs). These investments introduce additional risks.

Because of these historically low rates, it’s tough to imagine equity returns moving toward their long-term historical averages. Expected equity returns can be derived by taking the risk-free rate (T-bills) plus dividends and price/earnings (P/E) multiple expansion \[ER = RF + D + P/E\]. Based on this simple formula, equity returns are likely to average mid-to-high single digits over the next several years.
Responding to the new market realities

Merely extrapolating from stocks' and bonds' long-term historical results will not be sufficient for asset allocation models going forward. Stock market returns and bond yields are likely to remain below their historical averages for the next several years. Investors will need to look at other return opportunities and income streams.

We believe that broader diversification helps in responding to these new market realities. Diversification beyond core equity and fixed income holdings offers both risk-reduction and the opportunity to participate in growing market segments. We also believe in the merits of including non-traditional investments like real assets – for example, oil, precious metals, and real estate. Lastly, we believe in the value of incorporating a dynamic tactical asset allocation approach as a means of responding to the rapidly changing market environment – making subtle adjustments at the margin.

It is no longer prudent to allocate to a traditional 60/40 portfolio (60% S&P 500® Index/40% Barclays U.S. Aggregate Bond Index) and “set it and forget it.” We must be more intelligent in allocating capital, and need to be able to respond when appropriate. The chart on the next page shows the historical returns of a diversified portfolio compared to a 60/40 portfolio and the S&P 500 alone.

The diversified portfolio achieved substantially better results over this time period – not because of the higher expected returns, but due to the broader diversification which helped buffer two tumultuous events. Diversification strategies do not guarantee capturing of profits or protection against losses in any market environment, but they have shown over time to provide a “smoother ride.” Rather than bearing the brunt of the Internet Bubble (Tech Wreck) and the 2008 Financial Crisis (Great Recession) – the diversified portfolio provided cushion under the large market drop and was able recoup its losses and grow over time.
As mentioned above, since the markets are dynamic, we believe in the value of tactical asset allocation – making subtle shifts in your long-term strategic allocation in order to respond to changing market conditions. Investors shouldn't drive using the rearview mirror; but rather establish a long-term strategic allocation based on current Capital Market Expectations (CMEs) and a disciplined approach for incorporating forward-looking views of the financial markets. These tactical shifts can exploit investment opportunities in undervalued segments of the market – or may stabilize portfolios from dramatic losses when appropriate.
Why allocate globally?

To paraphrase the famous bank robber Willie Sutton, “Why allocate globally? It’s where the money (growth) is.”

Since the developed international and emerging markets are at different stages of economic development and growth, they provide opportunities for growth and diversification benefits. According to the International Monetary Fund (IMF), U.S. economic growth projections for 2017 will lag the developed and emerging markets by a healthy margin (2.5% vs. 4.6%). The economies of China and India are projected to grow 6.2% and 7.4%, respectively. The Eurozone is projected to trail U.S. economic growth largely based on the potential impact of the Brexit vote, with a 1.4% growth rate; but individual companies and markets may provide better opportunities. According to Factset (as of August 30, 2016), the expected earnings growth rate for the U.S. is 20%, Eurozone is 22%, and Japan is 18%.

We recognize that in certain market environments global asset allocation approach can be challenging. However, it’s important to revisit the merits of global diversification over longer intervals. The chart below helps illustrate the value of global diversification.

The chart on the next page shows the natural rotation of the best and worst performing asset classes on a year-over-year basis. U.S. large caps (S&P 500®) performed near the top from 2013-2015, and emerging markets were near the bottom. In 2016, we’ve begun to see a rotation with the emerging markets outperforming and the U.S. large caps lagging. With U.S. large caps recent performance and valuations getting stretched, international and emerging markets underperformance may reverse course yet again.
Asset classes like emerging markets are often near the best or worst performing asset class. Investors would benefit from exposure to emerging markets - but likely would be uncomfortable with a large allocation to this volatile asset class.

The diversified portfolio owns a portion of all of the ranked asset classes, and consequentially takes out the peaks and the valleys associated with owning individual asset classes. The returns of the diversified portfolio are typically in the middle of the pack – with lower risk – thus smoothing the ride. The reality is no one has a crystal ball and can accurately predict the best performing market on a year-over-year basis. It is better to be prudent and own multiple market segments.

For those with the foresight, you can tactically overweight or underweight segments of the market depending upon the prevailing market conditions. This isn’t to suggest that you can be successful “timing the market” – but rather providing value by making subtle shifts to take advantage of undervalued segments of the market – or avoiding expensive and/or risky segments of the market.
The reality is no one has a crystal ball and can accurately predict the best performing market on a year-over-year basis. It is better to be prudent and own multiple market segments.
On the next page you will find a different way to evaluate world markets. Here we show the 10 largest developed markets plus the emerging markets - and compare the results to the MSCI World Index. Similar to our diversified portfolio above, the MSCI World Index's returns typically ranked in the middle of the pack. There was a rotation of leadership from the emerging markets to the United States, from Japan to Germany and others. While U.S. markets have performed well recently, they lagged many other markets in the early part of the decade. The MSCI World Index provided a smoother ride since it captured the broad-based exposure of the world's markets.

Although some of these countries may seem “foreign” to investors – clients are likely familiar with some of the underlying companies and products. Here's just a few of the well-known companies and their home bases: Toyota (Japan), Nestle (Switzerland), Glaxo Smith Kline (UK), Daimler (Germany), Royal Dutch Shell (Netherlands), Sanofi (France), TD (Canada), Siemens (Germany), and BP (UK). Clients consume many of the goods and services from these companies without realizing that they are foreign-domiciled.
# Market Leadership Changes Over Time

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*2016 Year-to-date, as of September 30, 2016

Source: Charles Schwab & Co., Inc. with data from FactSet, MSCI as of September 30, 2016.

Geographical performance is represented by annual total returns of the following: MSCI AC World, MSCI USA, MSCI Japan, MSCI United Kingdom, MSCI Switzerland, MSCI Germany, MSCI France, MSCI Canada, MSCI Australia, MSCI Nordic Countries, MSCI Spain, MSCI EM (Emerging Markets) Indices are unmanaged, do not incur fees or expenses, and cannot be invested in directly. Past performance is no indication of future results. Diversification strategies do not assure a profit and do not protect against losses in declining markets.
Conclusion

Modern Portfolio Theory is still relevant – but we believe it needs to evolve to incorporate an expanded set of investment options. We believe that there is a set of new market realities to which investors need to respond in order to meet their goals and objectives. We shouldn’t ignore the lessons learned, but rather evolve our thinking beyond traditional approaches. While global asset allocation has been questioned recently, we should evaluate results over longer intervals. Owning large multi-nationals doesn’t necessarily provide the diversification advantages of owning securities based in foreign markets.

The world offers a very large and diverse set of opportunities. Should we limit our portfolio’s exposure merely because of familiarity, or should we try and learn more about the opportunities abroad? With so much of the world’s GDP outside the United States – and many of the best companies – the answer is clear – global diversification presents significant opportunities now and in the future.

References

1IMF, World Economic Outlook Update, July 2016

Markowitz, Harry, “Portfolio Selection”, *Journal of Finance, March* 1952


Davidow, Anthony, Peterson, James, “A Modern Approach to Asset Allocation and Portfolio Construction,” August 2013
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International investments involve additional risks, which include differences in financial accounting standards, currency fluctuations, geopolitical risk, foreign taxes and regulations, and the potential for illiquid markets. Investing in emerging markets may accentuate this risk.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed-income investments are subject to various other risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors. Lower rated securities are subject to greater credit risk, default risk, and liquidity risk.

**Index Definitions**

**S&P 500** Index: An index of 500 stocks chosen for market size, liquidity, and industry grouping, among other factors. The S&P 500 Index is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large-cap universe.

**Russell 2000 Index**: The Russell 2000 Index is a small-cap stock market index of the bottom 2,000 stocks in the Russell 3000 Index. The Russell 2000 is by far the most common benchmark for mutual funds that identify themselves as “small-cap”, while the S&P 500 index is used primarily for large capitalization stocks.

**Barclays Short Treasury 1-3 Month**: The index includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of more than one month and less than 3 months. Included securities are investment-grade, have $250 million or more of outstanding face value, denominated in US dollars, fixed rate, and non-convertible.

**Barclays US Agency**: The U.S. Agency Index includes native currency agency debentures from issuers such as Fannie Mae, Freddie Mac, and Federal Home Loan Bank. It is a subcomponent of the Government-Related Index (which also includes non-native currency agency bonds, sovereigns, supranationals, and local authority debt) and the U.S. Government Index (which also includes U.S. Treasury debt). The index includes callable and non-callable agency securities that are publicly issued by U.S. government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. government (such as USAID securities). The U.S. Agency Index is a component of the U.S. Aggregate Index and the U.S. Universal Index.

**Barclays US Securitized Bonds**: Barclays US Securitized Bond Index. The index is a composite of asset-backed securities, collateralized mortgage-backed securities (ERISA-eligible) and fixed rate mortgage-backed securities.

**Barclays US Credit**: The Barclays Corporate Bond Index tracks all investment grade
The index includes:

**Barclays Global Aggregate Ex-USD TR Index for International Developed Country Bonds.** The index is designed to be a broad based measure of global investment-grade fixed income markets outside of the US.

**Barclays Emerging Markets USD Bond TR Index for International Emerging Markets Bonds.** The index tracks the total return for debt instruments of the emerging markets.

**Barclays US VLI High Yield TR Index for US Corporate High Yield.** The index includes publicly issued US dollar denomiated, non-investment grade, fixed-rate, taxable corporate bonds that have a remaining maturity of at least one year and have $600 million or more outstanding face value.

**Barclays U.S. Aggregate Bond Index:** is a market-value-weighted index of taxable investment-grade fixed-rate debt issues, including government, corporate, asset backed, and mortgage backed securities, with maturities of one year or more.

**S&P GSCI TR Index for Commodities.** The index is a world production-weighted index comprised of the principal physical commodities that are the subject of active, liquid futures markets.

**MSCI AC World – Total Return Index:** A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey* and United Arab Emirates.

**MSCI EM (Emerging Markets) – Total Return Index:** is a division of Charles Schwab & Co., Inc. is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey* and United Arab Emirates.

**MSCI USA – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the US market. With 633 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

**MSCI Japan – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the Japanese market. With 318 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

**MSCI United Kingdom – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the UK market. With 113 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.

**MSCI Switzerland – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the Swiss market. With 40 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Switzerland.

**MSCI Germany – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the German market. With 55 constituents, the index covers about 85% of the equity universe in Germany.

**MSCI France – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the French market. With 74 constituents, the index covers about 85% of the equity universe in France.

**MSCI Canada – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the Canada market. With 94 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Canada.

**MSCI Australia – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the Australia market. With 72 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Australia.

**MSCI Nordic Countries – Total Return Index:** captures large and mid cap representation across 4 Developed Markets (DM) countries*. With 66 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Spain – Total Return Index:** is designed to measure the performance of the large and mid cap segments of the Spanish market. With 25 constituents, the index covers about 85% of the equity universe in Spain.

**MSCI EM (Emerging Markets) – Total Return Index:** is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey* and United Arab Emirates.

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