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Building a Global Equity Portfolio

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Introduction

Equities play a critical role in almost any long-term investment plan. The primary characteristic that equities have which makes them nearly essential to a balanced portfolio is their potential for relatively high returns. Over time, equities have demonstrated their ability to produce higher returns than cash, bonds and many other alternative investments. However, these returns don’t come without risk. We believe that investors need to understand and accept the risks that come with investments like equities, so that they have the confidence to stick with a plan that will allow them to overcome inflation and increase the real value of their assets over time.

After deciding to include equities in a portfolio, an investor must then decide which equity investments best meet their individual needs. In order to make an informed decision about which equities to include in their portfolios, investors should objectively evaluate the risk and return characteristics of individual equity

markets and determine how they are likely to perform relative to each other and relative to other assets such as bonds.

In this research note, we review the composition of global equity markets and analyze their historical risks and returns. We also construct several portfolio alternatives to demonstrate how various equity blends have performed over time.

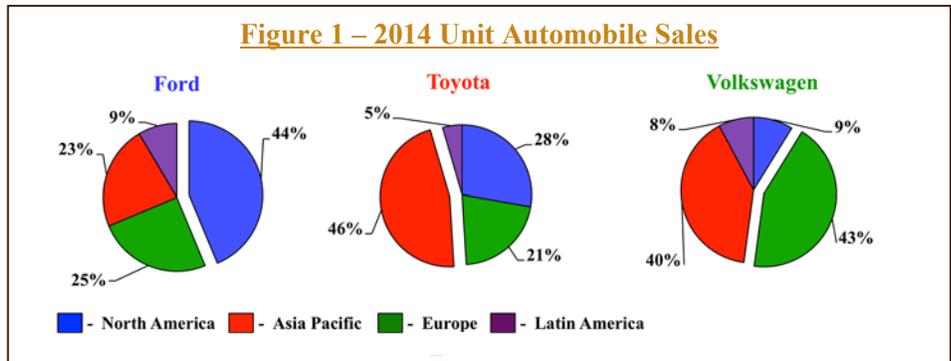
Global Equity Market Composition

Investors dissect equity markets in many different ways, based on the characteristics of the companies whose

common stocks trade in public markets. Some of the more conventional delineations that are used by investors include a company’s home country, industry, size in terms of market capitalization, or whether a company’s business is oriented towards growth or value.

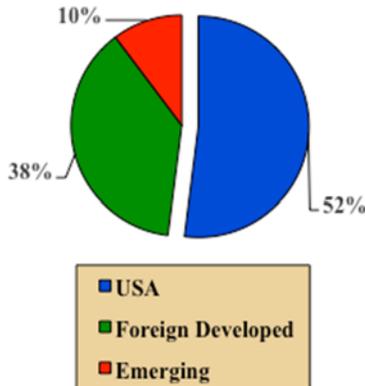
At the highest level, we believe that global equity markets are best defined by the countries in which companies are domiciled. The *home country* is important not only because it often drives underlying business exposure, but also because it has the greatest impact on an investor’s exposure to foreign currency movements,

Figure 1 – 2014 Unit Automobile Sales



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**Figure 2 –
Global Equity Market
Composition**



accounting regulations and the taxation of dividends.

Although the home country may be the best way to describe investor risk, frequently it does not fully describe the geographic exposure of large companies. As the global economy and the business world have become more integrated, it has become nearly impossible to define the exposure of many companies within any one country. A good example of this is illustrated in Figure 1, which shows the unit sales of three major automobile manufacturers by region. In all three cases, the manufacturers sell more cars in their home region, but more than half of their sales are made away from home.

A breakdown of these companies' manufacturing centers shows a similar pattern of geographic diversity. This globalization of manufacturing and sales complicates the notion of buying domestically to support local workers and economies. From the perspective of a US consumer, many foreign companies such as Volkswagen and

Toyota have a significant manufacturing presence in the United States. Likewise, domestic companies such as Ford have significant manufacturing facilities abroad.

There are currently about 195 recognized countries in the world. Many of these are tiny, unstable and their markets offer no real opportunity to foreign investors. Like most investors, we look to index data providers such as MSCI to define the landscape of investable markets and to track their performance over time. MSCI's All Country World Index (ACWI) includes roughly 2,500 companies in a total of 46 countries, which make up the grand majority of the world's investable equity markets. At the highest level, MSCI divides these countries into 23 developed and 23 emerging markets based on a rigorous set of criteria including economic, regulatory and market factors. Figure 2 shows that as of the end of 2014, 52% of ACWI's global equity market exposure came from US companies. The other 48% is split between developed and emerging foreign countries. It is important to note that these percentages change over time. This can happen because

countries move between the broad categories of developed and emerging as they develop or deteriorate, or because of relative market performance.

Evaluating Equity Market Risk and Returns

At the highest level, we divide the global equity market into three categories; US domestic, foreign developed and emerging. We believe that these categories have sufficiently different risk and return characteristics to warrant separate designations for the purpose of asset allocation. These categories are also large enough to represent a meaningful percentage of assets within the makeup of a globally balanced portfolio.

Our long-term assumptions about returns and local market risk for developed markets including the US are relatively similar. From a risk standpoint, the key factor that differentiates foreign developed equities from their US equivalents is their exposure to foreign currency movements. Over the long-term, we do not believe that currency exposure increases or decreases expected returns of foreign assets. However,

Figure 3 – Equity Market Volatility (trailing 5 year periods)



Building a Global Equity Portfolio - cont'd

currency exposure does increase the volatility of foreign assets from the perspective of a US investor.

Historically, the volatility of returns in developed foreign equities is 15% to 20% higher in dollar terms than it is in local currency terms. US investors do derive a diversification benefit from currency exposure, as unhedged foreign equities have a modestly lower correlation to domestic equities.

Unlike foreign developed equities, we believe that emerging markets have the ability to produce higher returns than domestic equities over time. Figure 3 illustrates that these higher returns have historically come with more risk, as volatility in emerging markets has been consistently higher than in US and foreign developed markets.

Constructing a Global Equity Portfolio

Before a disciplined investor constructs a portfolio, they must choose a methodology to determine which securities to include and the appropriate weight of each security within the portfolio. The most commonly used methodology for weighting individual securities is based on the total value of each outstanding security or its market capitalization (market cap). We believe that using market cap is a good starting point in building a diversified portfolio for several reasons. The first reason is that the outstanding value is an objective measure, determined by the collective wisdom of all market participants. The second reason is that market cap weighted portfolios need little rebalancing over time. As relative market movements change the

value of securities, their weight within the portfolio changes by a like amount. This rebalancing feature reduces trading costs and minimizes the tax implications of realized gains.

There are certain investor specific characteristics that can have a significant impact on the mix of assets that will produce the most desirable results within a portfolio. When evaluating alternatives within the global market, one of the most important investor characteristics is the currency of future obligations. These obligations may be as simple as the future spending of an individual or as complicated as the collective obligations of a pension plan, endowment or philanthropic foundation. Generally speaking, equities expose investors who share their home currency to less risk than foreign investors. As a result, it is appropriate for an investor to include a higher weight to domestic equities than the market cap would imply.

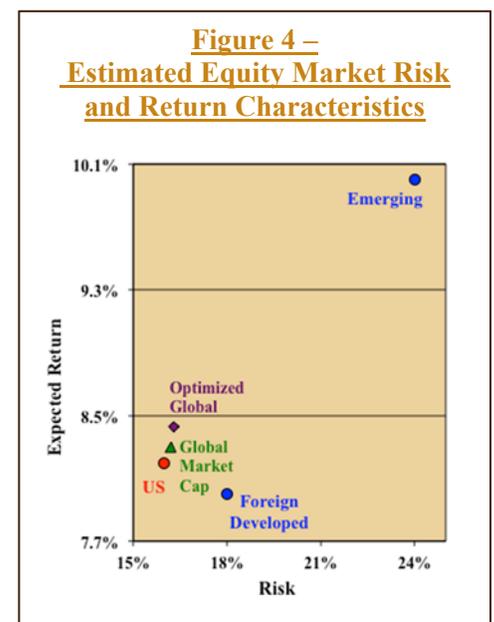
The risk tolerance and return objectives of an investor can also change the mix of equities that best meet their long-term needs. Just like an investor's risk appetite influences the appropriate amount of equities in a balanced portfolio, it also influences the optimal mix of securities within the equity allocation.

Figure 4 shows the risk and return characteristics of the three aforementioned broad equity categories, along with two globally diversified portfolios. The figure is based on the proprietary forward-looking assumptions that we use to construct portfolios. The portfolio constructed using the current market

cap has modestly higher expected return and risk than the domestic portfolio. By modifying the blend to include higher weights in US and emerging markets, we were able to construct an optimized global portfolio with higher expected returns and little added risk. The characteristics of the optimized portfolio will also be more stable than a market cap weighted portfolio, since the category weights will remain constant over time.

Conclusion

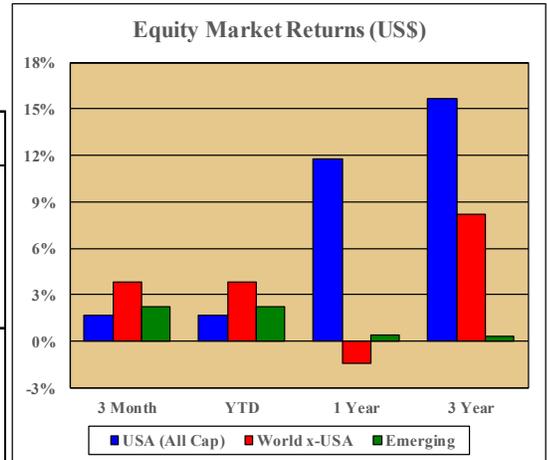
Although returns can vary significantly between markets during different time periods, the risks associated with global equity markets are considerably more stable. We believe that a globally diversified portfolio provides better risk-adjusted returns over time, and that deviating from market cap weightings can further improve results.



Historical Market Data (March 31st, 2015)

Global Equity Market Returns (MSCI)

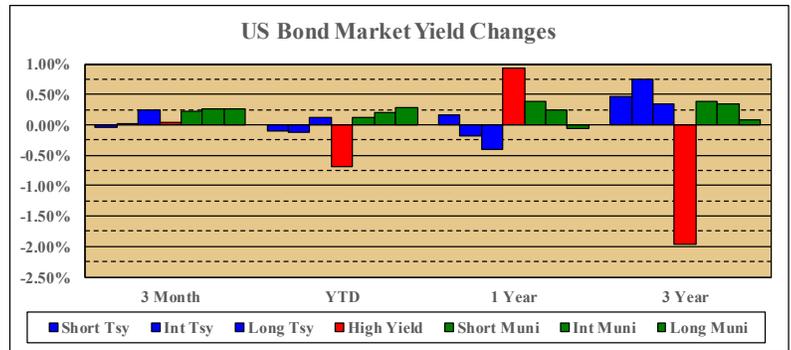
	Returns (US\$)				Returns (Local)			
	3 Month	YTD	1 Year	3 Year	3 Month	YTD	1 Year	3 Year
United States								
USA (All Cap)	1.7%	1.7%	11.8%	15.7%				
USA Growth	4.0%	4.0%	17.8%	16.7%				
USA Value	-1.6%	-1.6%	6.6%	14.1%				
USA SC Growth	6.4%	6.4%	10.5%	17.6%				
USA SC Value	3.0%	3.0%	8.5%	16.2%				
Foreign Developed								
World x-USA	3.8%	3.8%	-1.4%	8.2%	10.1%	10.1%	16.8%	15.9%
Europe	3.5%	3.5%	-4.9%	9.4%	11.6%	11.6%	14.7%	15.1%
Far East	9.0%	9.0%	11.8%	9.3%	9.2%	9.2%	27.3%	21.2%
Australia	3.1%	3.1%	-6.0%	5.1%	10.4%	10.4%	14.1%	16.4%
Canada	-6.0%	-6.0%	-6.1%	1.1%	2.7%	2.7%	7.8%	9.4%
Emerging Markets								
Emerging	2.2%	2.2%	0.4%	0.3%	4.9%	4.9%	10.9%	6.4%
Asia	5.2%	5.2%	10.7%	6.3%	5.7%	5.7%	14.3%	8.2%
Latin America	-9.6%	-9.6%	-20.9%	-13.3%	1.2%	1.2%	2.0%	-0.9%
EMEA	2.0%	2.0%	-12.0%	-4.8%	5.7%	5.7%	8.3%	8.9%



Annualized if greater than one year

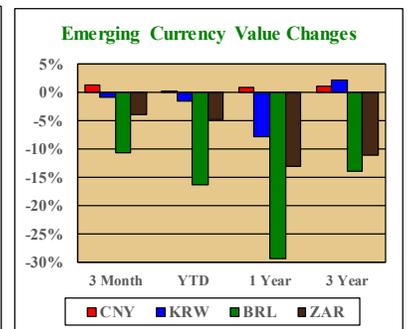
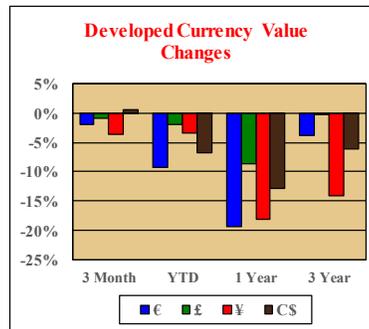
US Bond Yield and Spread History (Barclays)

	Current Level	Change			
		3 Month	YTD	1 Year	3 Year
US Treasury					
Short	0.85%	-0.04%	-0.11%	0.17%	0.46%
Intermediate	1.82%	0.03%	-0.12%	-0.18%	0.74%
Long	2.75%	0.24%	0.12%	-0.40%	0.34%
US High Yield					
Yield	5.92%	0.04%	-0.69%	0.93%	-1.96%
Spread	4.33%	0.02%	-0.50%	0.82%	-2.38%
Tax-Exempt Muni.					
Short	1.07%	0.23%	0.12%	0.39%	0.38%
Intermediate	2.02%	0.25%	0.20%	0.25%	0.34%
Long	2.99%	0.27%	0.28%	-0.05%	0.09%



Foreign Exchange Rate History (Bloomberg)

	Current Level	Change (Foreign Currency versus \$)			
		3 Month	YTD	1 Year	3 Year
Developed					
Euro (€)	1.10	-1.9%	-9.2%	-19.4%	-3.9%
British Pound (£)	1.53	-1.0%	-1.9%	-8.7%	-0.3%
Japanese Yen (¥)	124	-3.6%	-3.5%	-18.0%	-14.2%
Canadian Dollar (C\$)	1.25	0.5%	-6.7%	-12.9%	-6.0%
Emerging					
Chinese Renminbi (CNY)	6.20	1.2%	0.1%	0.8%	0.9%
Korean Won (KRW)	1108	-0.9%	-1.6%	-7.9%	2.1%
Brazilian Real (BRL)	3.18	-10.6%	-16.4%	-29.5%	-14.0%
South African Rand (ZAR)	12.15	-4.1%	-4.9%	-13.0%	-11.2%



Annualized if greater than one year