

2018

ASSET ALLOCATION REPORT



INTRODUCTION

We invite you to review Omnia Family Wealth's 2018 report on expected asset class returns for the next 10 years. While we believe these forecasts reflect a reasonable framework with which we can make long-term asset allocation decisions, the path is never a straight line. So with that in mind, we also offer some thoughts on shorter-term relative values.

We'll discuss our views on equity markets (we see relative value in international stocks), why bond returns could be very challenged for years to come, and our thoughts on how to position hedge funds, private equity, and real estate. We'll also discuss our thoughts on master limited partnerships (MLPs), which we view as one of the most undervalued investments to own in today's markets. We encourage you to reach out to us with any thoughts, comments, or questions that you may have.

EXECUTIVE SUMMARY

This report presents Omnia's recommendations for asset class return and risk (standard deviation) assumptions, intended for asset allocation use in setting long-term portfolio asset class targets. While these forward-looking or "expected" asset return and risk assumptions are intended for investment horizons of 10 years or longer, they can change as market conditions change and therefore should be used for asset allocation work conducted near the date of the report.¹

Exhibit I on the following page provides return forecasts for the major asset classes as of January 1, 2018 (column 1), and compares them with our year earlier forecasts at January 1, 2017 (column 2). Also included are the calendar 2017 returns (column 4) of the asset class benchmarks (column 5), which were selected as representative of each asset class. Decreases (increases) in expected returns are often, but not always, driven by prior performance gains (losses). A full listing of asset class return, risk, and correlation forecasts is provided at the end of this report.

Key observations from our 2018 Report along with some thoughts on shorter-term relative value:

1. STOCKS

- a. Year-over-year stock expected returns declined modestly, from 6.7% to 6.5%. The S&P 500 climbed 19% over the year, lowering expected returns. The expected return would have been even lower, but for a strong 21% climb in earnings per share in 2017. Stocks returns could be higher if growth achieves a new above-trend trajectory.
- b. On valuation measures alone (i.e. P/E) non-U.S. and emerging markets represent good value relative to U.S. stocks.

¹ The terms "expected return" and "return forecast" are used interchangeably throughout the report.



- 2. RATES** — our 2.7% expected return remains low and less attractive.
- 3. STOCK/BOND SPREAD** — the 3.8% difference between stock and bond expected return is down from 4.1% one year ago and 4.45% in 2016 but remains above the 3.0% historical spread.
- 4. CREDIT** — for the second year in a row, narrowing credit spreads reduced expected returns for three of our four credit asset classes. Two years ago, we judged high yield having a positive outlook. Today, we judge high yield having a neutral to negative outlook.
- 5. INFLATION** — expected 10-year inflation, measured by the Treasury/TIPs breakeven rate, fell modestly, after climbing significantly in the prior year. Headline inflation has actually risen over the last year, but core inflation is down, holding back the market-implied forward-looking inflation rates, despite expected stimulus from the recent tax cut.
- 6. PRIVATE EQUITY** — expected returns have declined to 9.5% in line with the decline in expected returns for equities. Consistent with this, we have observed higher private market transaction prices. Our expectation continues to be that private equity will generate a net 3% return over public stocks over longer time periods, an achievement that has been documented in studies of pension returns.
- 7. HEDGE FUNDS** — we increased expected returns modestly, from 5.85% to 6.05%, due largely to cash rates. We favor strategies that have very little beta to equity and fixed income markets.
- 8. PRIVATE DEBT** — our expected return for unlevered private loan assets fell slightly from 7.05% to 6.95%. Lower credit spreads were partially offset by rising LIBOR benchmarks. We judge our 6.95% expected return for unlevered private loan asset as an attractive alternative to lower yielding traditional fixed income.
- 9. REAL ASSETS** — our expected return for MLPs increased along with higher yields as prices declined. Our forecast for commodity returns likewise increased, driven by higher LIBOR rates.
- 10. REAL ESTATE** — we have a positive outlook on both real estate debt and equity despite lower cap rates.

Based on these return assumptions we would expect liquid “60/40” portfolios to return 5.55% and “endowment-style” portfolio returns to average 7.25%

EXHIBIT 1: Long Term (10 Year) Expected Returns for Major Asset Classes²

	JAN 1, 2018	JAN 1, 2017	YOY CHANGE	2017 RETURN	BENCHMARK INDEX
Stocks					
U.S. Stock	6.50	6.70	-0.20	21.1%	Russell 3000
Non-U.S. Developed	6.50	6.70	-0.20	25.0%	MSCI EAFE
Emerging Markets	7.50	7.70	-0.20	37.3%	MSCI EM
Global Equity	6.80	7.00	-0.20	24.0%	MSCI ACWI
Rates					
Core U.S. Bonds	2.70	2.60	0.10	3.5%	Bloomberg Barclays U.S. Aggregate Bond
IG Corporate	3.25	3.40	-0.15	5.7%	Bloomberg Barclays U.S. Corporate Bond
10-yr Treasury	2.50	2.45	0.05	2.1%	Bloomberg Barclays 10y U.S. Treasury
10-yr TIPS	2.50	2.45	0.05	2.9%	Bloomberg Barclays 5-10y U.S. TIPS
Credit					
High Yield Bonds	5.25	5.70	-0.45	7.5%	Bloomberg Barclays U.S. High Yield Bond
Bank Loans	5.40	5.45	-0.05	4.1%	S&P/LSTA U.S. Leveraged Loan
Emerging Market Debt	5.05	5.60	-0.55	10.3%	J.P. Morgan EMBI Global Diversified
Public BDCs [®]	7.55	7.25	0.30	0.9%	Cliffwater BDC
Real Estate					
Public REITs	6.00	5.85	0.15	8.7%	FTSE/NAREIT Equity REITs
Private (Unlevered)	6.20	7.20	-1.00	6.9% [†]	NCREIF Property
Private Partnerships	8.20	9.20	-1.00	11.0% ^{††}	Cambridge Opportunistic RE
Private Equity					
Diversified	9.50	9.70	-0.20	16.2% ^{††}	Cambridge Global PE & VC
Buyout	8.75	8.95	-0.20	18.5% ^{††}	Cambridge U.S. Buy out
Venture Capital	10.25	10.45	-0.20	8.8% ^{††}	Cambridge Global Venture
Energy	9.50	9.70	-0.20	14.5% ^{††}	Cambridge Global Energy
Private Debt					
Unlevered	6.95	7.05	-0.10	9.3% [†]	Cliffwater Direct Lending
Levered	9.45	9.65	-0.20	11.3%	Cliffwater After Fee Estimate
Hedge Funds					
Diversified	6.05	5.85	0.20	7.7%	HFRI FOF Composite
Absolute Return	5.20	5.05	0.15	3.8%	HFRI FOF Conservative
Directional	6.85	6.55	0.30	12.0%	HFRI FOF Strategic
Other Real Assets					
Commodity Futures	2.25	1.65	0.60	1.7%	Bloomberg Commodity
MLPs	7.95	7.60	0.35	-6.5%	Alerian MLP
Farmland (core)	6.00	6.00	0.00	6.2% [†]	NCREIF Farmland Property
Infrastructure	6.25	6.70	-0.45	12.4% ^{††}	Cambridge Infrastructure
Cash					
3M T-bill	1.95	1.40	0.55	0.9%	3M T-Bill
3M LIBOR	2.25	1.65	0.60	1.2%	Bloomberg 3M Libor
Inflation	1.95	2.00	-0.05	2.2% ^{†††}	CPI-U

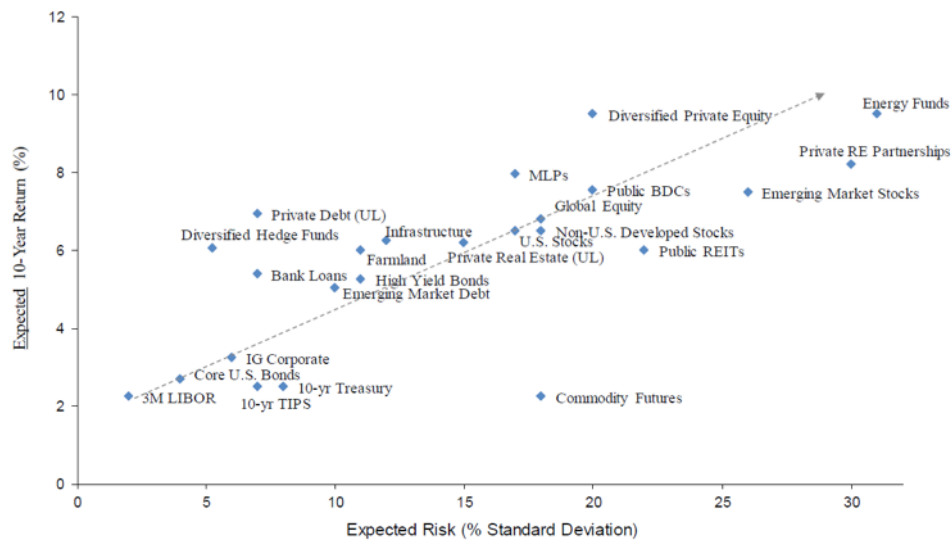
* Expected geometric annual return over the next 10 years. [®] Business Development Companies, a liquid investment in private middle market corporate debt

† One quarter lagged †† Two quarters lagged ††† One month lagged

² There can be no assurance that any expected rates of return will be achieved. Expected rates of return and risk may be based upon assumptions regarding future events and conditions that prove to be inaccurate. Expected rates of return and risk should not be relied upon as an indication of future performance and should not form the primary basis for an investment decision. The index returns are provided for information only. Reference to an index does not imply that a portfolio will achieve returns, volatility, or other results similar to the index. Please see additional disclosure at the end of this report.

Exhibit 2 plots 10-year *expected* asset class return and risk.

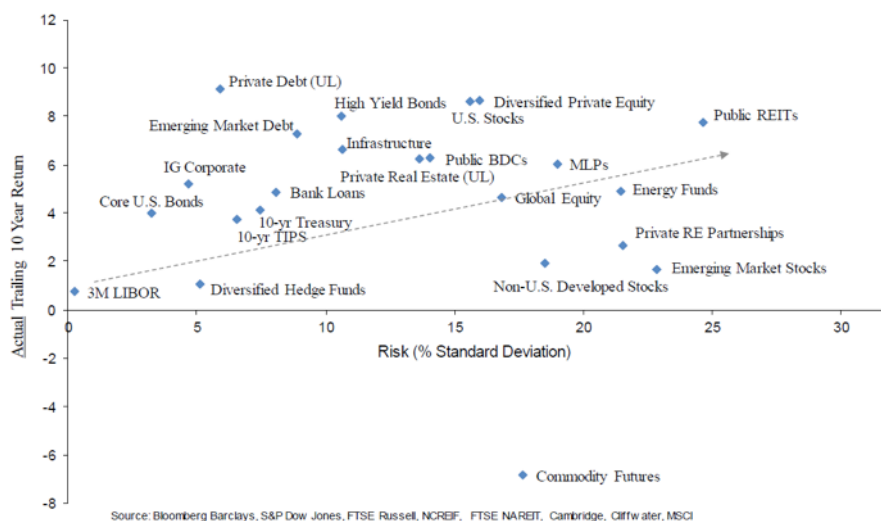
EXHIBIT 2: 2018 Asset Class *Expected* Return and Risk



The dashed line in Exhibit 2 represents what is known as the “capital market line” representing the market tradeoff between expected return and risk. Asset classes that plot above the line offer higher risk-adjusted returns (or Sharpe Ratios) compared to asset classes below the line. We find that asset classes are now plotting closer to the capital market line compared to prior years.

Exhibit 3 plots *actual* historical asset class return and risk for the 10 years ending December 31, 2017.³

EXHIBIT 3: 10-Year *Historical* Asset Class Benchmark Return and Risk



³Returns for private debt (UL), private real estate (UL), and farmland are lagged by one quarter and returns for diversified private equity, energy funds, private RE partnerships, and infrastructure are lagged two quarters. Historical risk calculations are “unsmoothed” for private instruments, excluding hedge funds. See Cliffwater Expected Return and Risk Methodology.

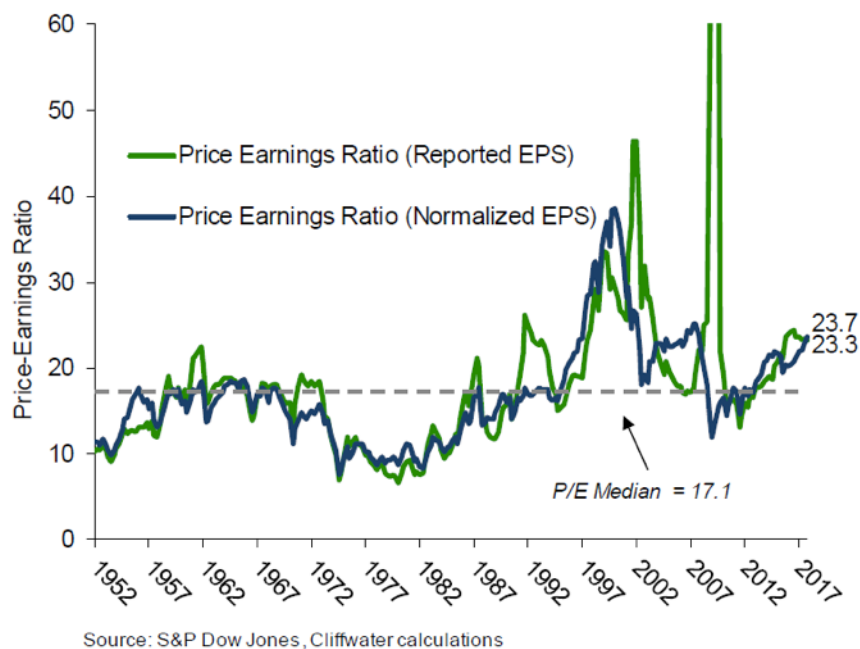
US STOCKS

Omnia uses a long-term stock return assumption of 6.5%, down from a 6.7% assumption last year. The S&P 500 climbed 19% year-over-year, lowering future return expectations. With the new corporate tax cuts driving up expected earnings projections for 2018 and the stock market hitting all-time highs on what seems like almost a daily basis, it is important to view this asset class from a long-term perspective. Proper risk controls can be distorted by the natural overweighting of an asset class that occurs when its prices rise dramatically.

Exhibit 4 shows S&P 500 price-earnings multiples over the last 66 years. Over that period they average 17.1 but have been subject to significant swings, falling to 7 during the 1970s, climbing to 28 at their peak in 1999 (except for a reported 120 price-earnings spike in 2009 as earnings fell from write-offs and the recession), then falling again to 13 at the end of 2008.

Today, as measured by reported earnings, the price-earnings ratio is 23.30, which represents a 36% premium to the 17.1 historical average mentioned above. This does not necessarily mean that stocks are overvalued. In the context of low interest rates and low inflation, a higher price-earnings ratio may be justified.

EXHIBIT 4: S&P 500 Price-Earnings Ratio, 1952 to 2017

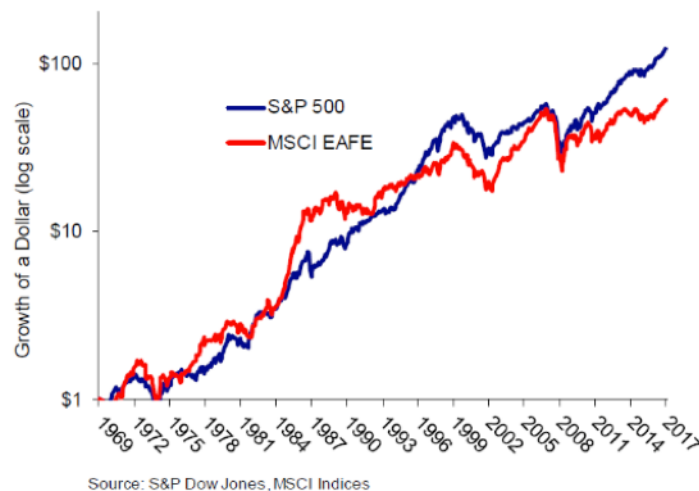


NON-U.S. EQUITY (DEVELOPED AND EMERGING MARKETS)

Omnia is assuming a 6.5% return for non-U.S. stocks, the same as for U.S. stocks. Studies of the major global stock markets, which date back over a century, show that the non-U.S. markets perform no better than the U.S. market when returns are measured over long periods of time. In fact, the U.S. market was the best performing market of all the developed stock markets during the prior century.

Exhibit 5 illustrated the similar long-term performance of U.S. stocks (S&P 500) and non-U.S. stocks (MSCI EAFE) starting December 31, 1969, the longest period for which MSCI EAFE returns are available. With the exception of the Japanese stock market bubble in the 1980s and the current strong U.S. market, U.S. and foreign markets have shown very similar performance over the last 48 years.

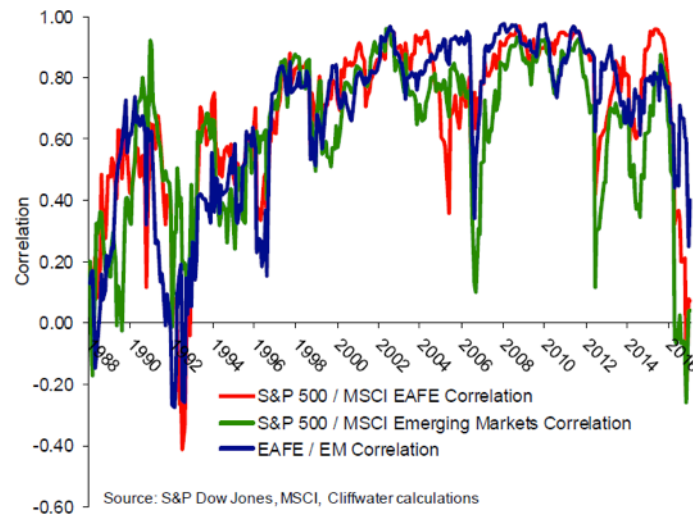
EXHIBIT 5: S&P 500 and MSCI EAFE Returns, 1969 to 2017



Omnia is assuming a 7.5% return for the emerging stock markets or 1% above our return assumptions for the U.S. and other developed equity markets. The higher return for emerging markets is based upon an expectation of greater growth in those markets.

Geographic diversification by balancing U.S. and non-U.S. stocks in an equity portfolio has been a major trend among institutional investors over many years. The belief is that by doing so, risk can be significantly reduced. Unfortunately, the benefits of global diversification diminished in 2000 and generally remained low (high correlation) until very recently. Exhibit 6 captures these diversification shifts visually by showing cross-correlations between the S&P 500, the MSCI EAFE, and the MSCI Emerging Markets indices over the last 29 years.

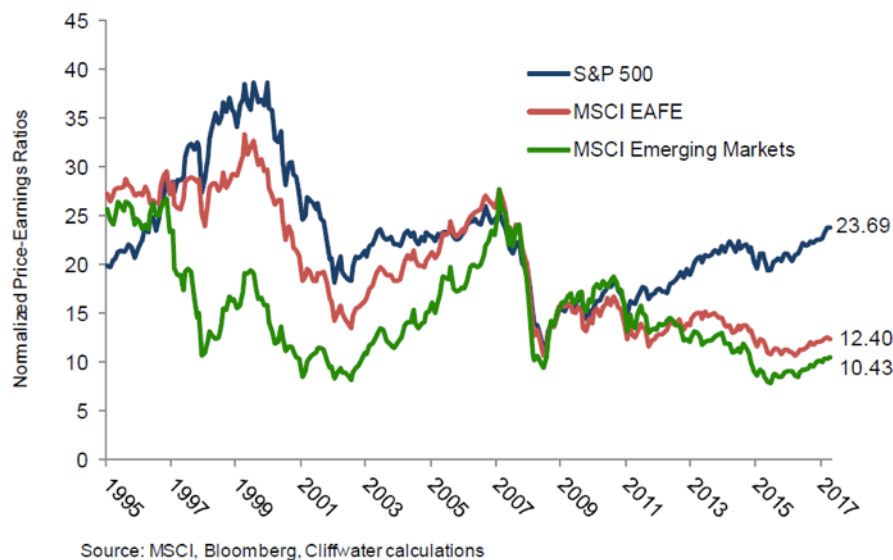
EXHIBIT 6: Rolling 12 Month Correlations between U.S., EAFE, and Emerging Market Equity Indices, 1989 to 2017



With the recent decline in correlation close to 0.50, global equity diversification is again meaningful. Furthermore, non-U.S. stocks have begun achieving returns comparable to or above U.S. stocks, making diversification potentially accretive from both a return and risk perspective.

In addition, price-earnings ratios for non-U.S. stocks versus U.S. stocks have become attractive. Exhibit 7 provides price-earnings ratios over time for U.S. and non-U.S. stocks. After 2008, U.S. price-earnings ratios climbed considerably relative to price-earnings ratios for non-U.S. stocks. Current differences in price-earnings multiples point to more attractive valuations for non-U.S. stocks compared to U.S. stocks.

EXHIBIT 7: Price-Earnings Ratios for U.S. and non-U.S. stocks



U.S. BONDS

Omnia's long-term assumption for core U.S. bond returns is 2.7%, equal to the Bloomberg Barclays U.S. aggregate index's yield to maturity at the end of the year.

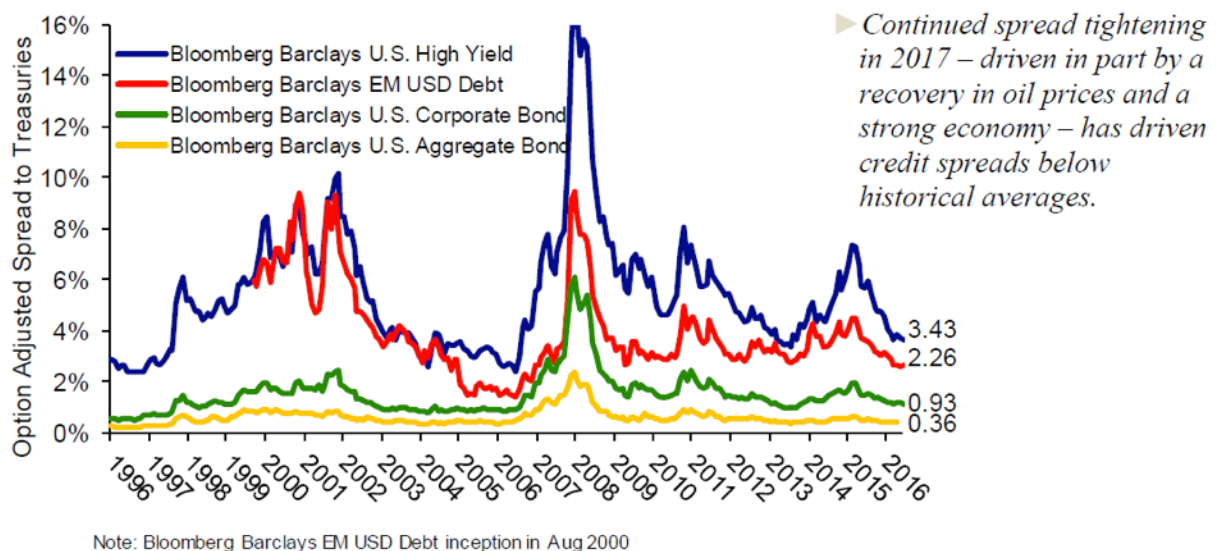
The Fed has been the largest global investor in recent years, growing its balance sheet from under \$1 billion before QE started in 2008, to \$4.5 billion today. But the Fed is not a traditional economically rational investor that would balance return and risk across multiple asset classes to contribute to "efficient markets." Instead, its actions are driven by public policy goals which can create market distortions that investors need to understand and factor into their asset allocation decisions.

Specifically, we believe that Treasury rates have been distorted to the low side – at least by any historical measure – and that this presents investment risks that do not fall under the investor-driven speculative bubble category. The risk is that rising rates could bring down all asset prices and that the length and severity of such a change could cause market disruptions. The good news is that there has been no disruption, and stock markets have continued to be strong despite the end to Fed bond-buying and several rate increases. Furthermore, we believe that while the Fed may prefer to take the additional step of reducing, rather than maintaining, the size of its balance sheet, any such measures are likely to be gradual given the known risks.

HIGH YIELD BONDS, BANK LOANS, AND EMERGING MARKET DEBT

High yield bond spreads narrowed another 0.66% in 2017, following a precipitous 2.51% spread decline in 2016. Exhibit 8 plots the reduction in U.S. High Yield Bond spreads (relative to comparable maturity Treasuries) over the last two years.

EXHIBIT 8: Yield Spreads on Bloomberg Barclays U.S. High Yield, Emerging Market USD Debt, U.S. Corporate Bond, and U.S. Aggregate Bond Indices, 1996 to 2017



PRIVATE EQUITY

Private equity is commonly divided into four subcategories: U.S. Buyout, Venture Capital, Distressed, and Non-U.S. Private Equity. Our forecast of a 9.5% annual return for Diversified Private Equity is intended to reflect a diversified portfolio that included all the subcategories.

Surveys of private equity portfolios managed by large institutional pension systems show that they have been able to earn returns 3% to 5% above public stock returns, after fees, by investing in a diversified portfolio of institutional quality private equity. Our forecast of 9.5% represents a 3% excess return over our assumption of public stock returns.

In the U.S. Buyout category, we would underweight large-cap buyout as prices and leverage levels remain elevated.

We believe that opportunities remain for managers with a focused approach in the mid/small cap buyout arena and have an overweight there.

Other areas of private assets that we currently favor include both equity and debt real estate partnerships.

HEDGE FUNDS

Traditional assets like stocks and bonds derive most, if not all, of their return from the types of securities they represent. The buy-and-hold returns generated by these traditional asset classes are referred to as "beta." Our thoughts on hedge funds, in general, are that far too many managers generate a good portion of their returns from beta. In other words, this market beta can be attained with much less expense than hedge funds typically charge. Therefore, we believe that the value proposition of many hedge funds is challenged in today's world. We also believe this has been evidenced by the disappointing returns from many strategies employed in the hedge fund universe.

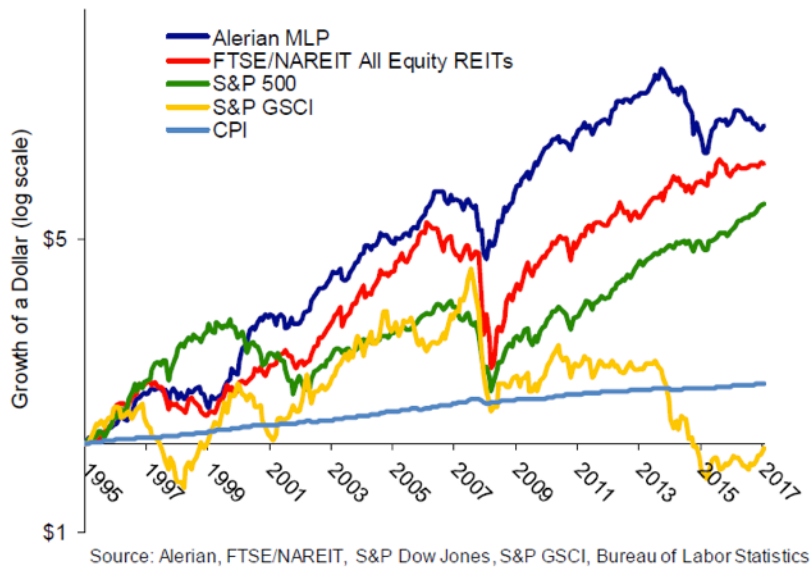
We do, however, believe that the hedge funds that do not derive their return streams from this market beta factor can be invaluable in reducing overall portfolio risk while also producing an independent source of return. We like to think of these strategies as the "third leg of the stool," where stocks and bonds are the other two legs. We believe that a well-curated portfolio of top quality hedge funds can provide a long-term return on par with our long-term expectations for stocks while having the volatility of bonds and an extremely low correlation to either traditional asset class.

MASTER LIMITED PARTNERSHIPS (MLPS)

Created by Congress in the 1980s, these publicly traded partnership interests are tax-free at the entity level, provided that 90% of their income comes from natural resources such as oil, natural gas, coal, and timber. Income-generating MLP activities include exploration and production, mining, as well as midstream services such as gathering & processing, transportation, storage, and distribution, but exclude most downstream services such as gas stations and utilities.

MLPs continue to be one of the best performing asset classes over their history, but as illustrated in Exhibits 9 and 10, experienced sharp drawdowns in 2014, 2015, and again in 2017

EXHIBIT 9: MLP Performance versus Other Asset Classes, 1996 to 2017



MLPS have demonstrated strong performance over the 22 years since the inception of the Alerian MLP Index, returning an annualized 12.04%. As reported in exhibit 10, this return is well above the 8.94% S&P 500 return for the same period and higher than selected other inflation-sensitive asset classes such as REITs (FTSE/NAREIT All Equity REIT Index) and commodity futures (S&P GSCI).

While MLPs do belong in the “risk-on” category, their volatility and correlation characteristics are relatively attractive, as shown in section (b) of Exhibit 10.

EXHIBIT 10: MLP Return and Risk versus Other Asset Classes, Periods ending Dec 2017

	MLP	REITs	S&P500	CPI	S&P GSCI
(a) Returns ending December 2017					
2017	-6.52%	5.23%	21.83%	1.96%	5.77%
3 Years	-9.33%	5.62%	11.41%	1.57%	-7.52%
5 Years	-0.06%	9.46%	15.79%	1.37%	-12.16%
10 Years	6.05%	7.44%	8.50%	1.58%	-10.16%
Since Jan 1996 (22 Yrs)	12.04%	10.52%	8.94%	2.18%	-0.18%
Year 2008	-36.93%	-37.74%	-37.01%	-0.04%	-46.49%
(b) Risk and Correlation since Jan 1996					
Risk	16.17%	19.78%	14.80%	0.99%	22.14%
Correlations:					
MLPs	1	0.33	0.39	0.17	0.35
REITs	0.33	1	0.56	.05	0.15
S7P 500	0.39	0.56	1	0.03	0.26
CPI	0.17	0.05	0.03	1	0.34
S&P GSCI	0.35	0.15	0.26	0.34	1
(c) Sensitivity to Oil Prices since Jan 1996					
Oil Beta	0.16	0.06	0.10	0.01	0.62

MLP correlations are also attractive from a portfolio construction perspective, particularly their lower 0.39 correlation to the S&P 500. By comparison, REITs have a much higher 0.56 correlation to the S&P 500. Also noteworthy is the positive 0.17 correlation between MLPs and the CPI. While low, it is positive and higher than the 0.05 correlation between REITs and the CPI.

An important question is the sensitivity of MLP earnings and returns to commodity prices, particularly oil and natural gas. This touches on the commodity risk embedded in MLPs and whether they can be a reliable inflation hedge. The conventional wisdom is that most MLPs follow a “toll-road” business model where revenues are more sensitive to the volume of oil and gas put through the pipes and other transport assets and less sensitive to the price of oil and gas themselves.

Another reason for the interest in MLPs is their high current yield. A high yield appeals to investors who want liquidity and/or current income and also provides some inflation protection as cash flow can be reinvested at higher rates during periods of rising inflation.

MLP yields are consistently high and exceed most other yield-oriented asset classes, even high yield bonds over the last three years. MLP yields rose in 2017 from 7.07% to 7.64% as a result of declining prices, and are not at high spread levels relative to high yield bonds and other yield-oriented asset classes.

Omnia Q1 2018 Long Term (10 Year) Capital Market Assumptions
(See Omnia's 2018 Asset Allocation Report (Jan 2018) for detailed explanation of assumptions)

The following table of Capital Market Assumptions shows forward-looking return and risk expectations as estimated by Omnia for asset classes that compose Omnia's investment universe. The table also shows estimated forward-looking correlations among the various asset classes. Omnia uses these Capital Market Assumptions to inform its process for determining asset allocation recommendations.

	Annual Risk (%)		Average Return (%)		Compound Return (%)	
Stocks	U.S. Stocks	6.50	7.56	17.00	1.00	
	Non-US Developed	6.50	8.12	18.00	0.85	1.00
	Emerging Markets	7.50	10.88	26.00	0.85	0.80
	Global Equity	6.80	8.42	18.00	0.90	0.85
Fixed Income	Core U.S. Bonds	2.70	2.78	4.00	0.00	0.00
	IG Corporate	3.25	3.43	6.00	0.25	0.30
	3M LIBOR (Cash)	2.50	2.82	8.00	-0.20	0.00
	10-yr Treasury	2.25	2.27	2.00	0.00	0.00
	10-yr TIPS	2.50	2.75	7.00	0.00	0.15
	High Yield Bonds	5.25	5.86	11.00	0.65	0.60
	Bank Loans	5.40	5.65	7.00	0.55	0.10
	Emerging Market Debt	5.05	5.55	10.00	0.55	0.60
	Private Real Estate (UL)	6.20	7.33	15.00	0.60	0.55
	Public REITs	6.00	8.42	22.00	0.70	0.65
Alternatives	Private RE Partnerships	8.20	12.70	30.00	0.60	0.55
	Diversified Private Equity	9.50	11.50	20.00	0.60	0.70
	Diversified Hedge Funds	6.05	6.19	5.27	0.70	0.65
	Energy Funds	9.50	14.31	31.00	0.60	0.20
	Farmland	6.00	6.61	11.00	0.10	0.10
	Commodity Futures	2.25	3.87	18.00	0.35	0.50
	Infrastructure	6.25	6.97	12.00	0.70	0.65
	MLPs	7.55	9.40	17.00	0.50	0.50
	Private Debt (UL)	6.55	7.20	7.00	0.65	0.60
	Private Debt (L+0.85)	9.45	10.50	12.95	0.65	0.60
Sub-strategies	Public BDCs	7.55	9.55	20.00	0.80	0.75
	Buyouts	8.75	10.75	20.00	0.80	0.70
	Venture Capital	10.25	14.75	30.00	0.60	0.70
	Directional HFs	6.83	7.09	7.24	0.81	0.81
	Absolute Return HFs	5.21	5.30	4.25	0.43	0.43
	Market Neutral HFs	4.33	4.44	4.78	0.40	0.40
	Credit/ Distressed HFs	6.07	6.28	6.47	0.60	0.60
	Event Driven HFs	7.23	7.58	8.38	0.75	0.75
	Equity U.S. HFs	7.15	7.51	8.54	0.85	0.85
	Macro (Discretionary) HFs	5.24	5.44	6.26	0.10	0.10
Macro	Macro (Trend) HFs	5.49	6.10	11.04	0.00	0.00
	Mult Strategy HFs	5.45	5.60	5.43	0.50	0.50
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
	Equity U.S. HFs	0.76	0.76	0.76	0.76	0.76
CPI	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19
	Macro (Trend) HFs	0.19	0.19	0.19	0.19	0.19



DISCLOSURE

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