Asset Class Views

February | 2016

CAMBRIDGE C|A ASSOCIATES

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- Each asset class is covered by a specialist from C|A's Global Investment Research team who follows developments in the market, assesses the market's valuation, and provides advice for making commitments to that asset class today on both an absolute basis and relative to other asset classes where appropriate. The valuation call and advice on each Asset Class View are determined by the asset class specialist.

- C|A's Chief Investment Strategist uses the views expressed by specialists in developing C|A's house view advice, as expressed in our quarterly VantagePoint publication as well as in the portfolio tilts on the following page. Views and advice from C|A's Chief Investment Strategist may differ from those expressed by the asset class specialist given the total portfolio perspective of the Chief Investment Strategist that incorporates views on relative value across asset classes.

Portfolio Tilts from C|A's Chief Investment Strategist (February 2016)

	Overweights	Underweights	Pros/Cons of the Tilt
Diversified Growth	US High-Quality Equities	US Small-Cap Growth	**Pros:** Firms with historically stable profits and low leverage should be less vulnerable; small-cap growth is richly valued, and is vulnerable in a risk-off environment **Cons:** High quality no longer cheap; small caps have more robust manager universe than high-quality strategies
	Asia ex Japan Equities		**Pro:** Asia ex Japan valuations are low relative to their history and may be defensive relative to broad EM given sharp declines in commodity prices **Cons:** Slower China growth may put pressure on regional economic and earnings growth; relatively defensive sectors are richly valued; macro headwinds hold potential for negative surprise over the near term
		US Equities	**Pros:** US valuations are relatively elevated and earnings under pressure from strong US dollar and energy sector **Cons:** US economic growth is stable; US stocks may benefit from EM volatility
	Eurozone Equities (currency hedged)		**Pros:** Attractive relative valuations; earnings and profit margins relatively depressed and may rebound; prefer currency hedging to US$, but not as critical given euro is now undervalued relative to US$ **Cons:** Macro risks remain elevated. Germany is particularly exposed to a China slowdown
	Japanese Equities (currency hedged)		**Pros:** Attractive across the capitalization spectrum based on relative valuations; improving focus on shareholder value; earnings strength beyond exporters. Like the euro, the yen is now cheap relative to the US$; currency hedging is less critical **Cons:** Macro risks given swelling central bank balance sheet, high fiscal debt levels, and exposure China to slowdown
	Low Equity Beta Diversifiers (e.g., less equity- and credit-oriented hedge funds)	Macro Protection (particularly inflation resistant) Credit	**Pros:** Real and nominal sovereign bonds and credits remain overvalued; diversified commodity indexes somewhat unattractive (see below) **Cons:** Likely decreases inflation and deflation protection, but can still provide diversification in varied macro environments; may increase portfolio active risk
Deflation Hedge	Cash	Sovereign Bonds	**Pros:** Return potential of bonds today not commensurate with interest rate risk; cash can be spending source for deflation or some *in*flationary periods **Con:** Holding cash for extended period would be challenging
Inflation Resistant	Energy MLPs	Commodities and Inflation-Linked Bonds	**Pros:** Elevated yields plus low single-digit distribution growth provide attractive valuations. Use of active management allows for value added opportunity through selection of well-managed MLPs with higher-quality assets **Cons:** Lack of a performance pop in nasty inflation bout; subject to stress in prolonged low energy price environment
	Natural Resources Equities	Commodities	**Pros:** More attractive valuation levels and with fewer implementation hurdles (e.g., negative roll yield and no cash yield) than commodities **Con:** Lack of a performance pop in nasty inflation bout
	Gold	Commodities	**Pro:** Gold should hedge against risk of currency debasement **Cons:** Can't value gold, which has no cash flow; very vulnerable in central bank tightening
	Cash	Commodities	**Pros:** Cash held as substitute for sovereign bonds can be double-counted as cash available as a liquidity reserve during inflation; "double-counting" use of cash allows for higher allocation to diversified growth **Con:** Holding zero-yield cash for extended period would be challenging. Less inflation resistant than commodities, which offer more expected upside in a nasty inflation bout
	US TIPS	Global Inflation-Linked Bonds	**Pro:** Higher real yield and core inflation with potential for relative currency appreciation amid US$ strength **Cons:** Potential increase in US real yields; US$ is somewhat overvalued

Cambridge Associates' February 2016 Asset Class Views: Summary

Asset Class /Strategy	Valuation (Since)		Advice	Key Takeaway
Developed Markets Equities	FV	Sep 2015	Neutral	Valuations have improved but earnings growth is lackluster in some markets
Developed ex US Equities	FV	Sept 2012	Overweight	Relative valuations favor non-US markets, but our overweight focuses on EMU and Japan
Developed ex US Small-Cap Equities	FV	Feb 2016	Neutral	Fairly valued but expensive relative to large caps
Developed Small-Cap Equities	FV	Feb 2016	Neutral	Fairly valued but expensive relative to large caps
US Equities	FV	Feb 2016	Underweight	Valuations are not as rich today but remain at significant premium relative to other markets
US Growth Equities	OV	April 2013	Neutral	Absolute valuations are expensive, but relative valuations do not yet support a value tilt
US Value Equities	FV	Sep 2015	Neutral	Valuations have improved, but we do not yet see a tactical case for value over growth
US Small-Cap Equities	OV	Oct 2015	Underweight	US small caps remain overvalued both in absolute terms and relative to large caps
US High-Quality Equities	OV	June 2013	Overweight within US equities	High-quality equities are overvalued but relatively attractive for their defensive qualities
Canadian Equities	FV	Oct 2015	Neutral	Fairly valued in both absolute and relative terms
UK Equities	FV	June 2009	Neutral	Fairly valued in absolute terms, but inexpensive compared to US equities
EMU Equities	FV	May 2015	Overweight vs US equities	Absolute valuations are below historical averages
Europe ex UK Equities	FV	Sept 2012	Overweight	Absolute valuations remain near historical averages, but relative valuations are extreme
Swiss Equities	OV	-	Neutral	Valuations are improving, but still less attractive than Eurozone equities
Japanese Equities	FV	Oct 2013	Overweight vs US equities	Valuations are favorable compared to US equities, and earnings growth has been robust
Asia ex Japan Equities	VUV	Sep 2015	Overweight	Overweight as value play
Australian Equities	FV	Sept 2013	Neutral	Reasonable valuations; but earnings and macro face headwinds
New Zealand Equities	FV	April 2014	Neutral	Fairly valued in absolute and relative terms
Emerging Markets Equities	VUV	Sep 2015	Overweight vs US equities	A value play; overweight should be modest
EM Equities Asia	VUV	Sep 2015	Overweight	Overweight as a relative-value play
EM Equities EMEA	VUV	Oct 2015	Neutral	Despite undervaluation, we have little conviction about when markets will re-rate
EM Equities Latin America	FV	June 2010	Neutral	The most expensive region within emerging markets
EM Small-Cap Equities	FV	Jan 2013	Neutral	While fairly valued in absolute terms, EM small caps are expensive versus large caps
Chinese A-Share Equities	FV	Oct 2015	Neutral	No rush for global investors
Frontier Markets Equities	UV	Sep 2015	Neutral	Reasonable valuations; oil-dependent economies challenged; low liquidity remains a concern
Asian Private Equity	FV	-	Selectively commit to top-quality managers	Focus on small-/mid-cap buyouts in developed Asia
European Private Equity	VOV	June 2014	Very selectively commit to top-quality managers	Favor growth equity and small-/mid-cap buyouts over large-cap buyouts

Cambridge Associates' February 2016 Asset Class Views: Summary (continued)

Asset Class /Strategy	Valuation (Since)		Advice	Key Takeaway
European Venture Capital	FV	-	Selectively commit to top-quality managers	Can offer a complement to US exposure; investment capacity limited
Latin American Private Equity	FV	-	Selectively commit to top-quality managers	Favor growth equity and small-/mid-cap buyouts over large-cap buyouts
US Private Equity	VOV	June 2014	Very selectively commit to top-quality managers	Favor growth equity and small-cap buyouts over mid-/large-cap buyouts
US Venture Capital	OV	Sept 2014	Selectively commit to top-quality managers	Any new commitments to expansion and late stage should be made selectively (Note: Early stage VC is fairly valued, late stage is very overvalued, and expansion stage VC is overvalued)
Euro-Denominated Credits	VOV	Sept 2012	Underweight	Low yields will cap future returns; allocate to diversifiers with better return potential
UK Sterling-Denom Credits	OV	April 2012	Underweight	Low yields cap upside potential, but yields and spreads are in line with other developed markets
Structured Finance	-	-	Neutral	Challenges in finding attractively priced bonds require managers to consider more risk and leverage
Leveraged Loans	OV	Sep 2015	Underweight	Underweight within diversifying assets relative to hedge funds
US Bonds	OV	July 2013	Underweight	Historically low yields limit deflation-hedging potential and expose investors to downside risks
US High-Yield Bonds	OV	Aug 2015	Underweight	The oil price drop and continued macro troubles could further roil the sector
US Corporate Bonds	OV	July 2013	Underweight	Little upside potential; could sell off if rates rise or macro conditions deteriorate
Local Currency Emerging Markets Debt	FV	Aug 2012	Neutral	Concerns over EM currencies offset modestly attractive bond yields
USD Denominated EM Debt (Corporate)	FV	Nov 2015	Neutral	Favor EM debt managers with broad mandates across local and hard currency bonds
USD Denominated EM Debt (Sovereign)	FV	Nov 2015	Neutral	Favor EM debt managers with broad mandates across local and hard currency bonds
Long/Short Hedge Funds	-	-	Neutral	Manager selection remains critical
Convertible Arbitrage	FV	May 2009	Neutral	Strategy is cyclical and may best be accessed via a flexible, multi-strategy mandate
Event-Driven Investing	FV	June 2013	Neutral	The opportunity set may be improving
Distressed Investing (Non-Control)	OV	June 2013	Underweight	For US distressed, a low-conviction view to underweight
Commodities	FV	Nov 2014	Underweight	Opportunistic investment that does not currently look attractive versus other diversifying assets
Natural Resources Equities	UV	Nov 2015	Overweight relative to commodities	Attractive valuations, but earnings remain vulnerable as commodity prices continue their fall
Energy Master Limited Partnerships	UV	Aug 2015	Overweight	Robust tax-advantaged yield are appealing; persistently low energy prices would be a concern
Private Metals and Mining	UV	Nov 2014	Selectively commit to top-quality managers	Favor managers with operational expertise
Private Oil, Gas, & Other Energy	FV	-	Selectively commit to top-quality managers	Opportunities exist across the value chain

Cambridge Associates' February 2016 Asset Class Views: Summary (continued)

Asset Class /Strategy	Valuation (Since)		Advice	Key Takeaway
Developed Asian Private Property	OV	-	Selectively commit to top-quality managers	Favor strategies not dependent on rental growth or cap rate compression
Emerging Asian Private Property	FV		Selectively commit to top-quality managers	Favor strategies not dependent on rental growth or cap rate compression
Europe ex UK Private Property	FV	-	Selectively commit to top-quality managers	Target managers with seeded product and/or specialist focus
Core UK Private Property	OV	-	Very selectively commit to top-quality managers	Target mispriced/undermanaged assets in best locations in London/large regional city locations
Opportunistic UK Private Property	OV	Aug 2015	Selectively commit to top-quality managers	Target mispriced/undermanaged assets in best locations in London/large regional city locations
Core US Private Property	OV	-	Very selectively commit to top-quality managers	Favor opportunistic over core mandates
Opportunistic US Private Property	OV	Sep 2015	Selectively commit to top-quality managers	Favor opportunistic over core mandates
Asian Property Securities	FV	Mar 2012	Neutral	Opportunistic investment with some markets attractively priced
Europe ex UK Property Securities	OV	Jan 2015	Underweight	Opportunistic investment currently expensively priced by some metrics
UK Property Securities	OV	Mar 2015	Underweight	Opportunistic investment currently expensively priced by some metrics
US REITs	OV	Dec 2009	Underweight	Opportunistic investment currently expensively priced by some metrics
Global Inflation-Linked Bonds	OV	July 2013	Underweight	Low real yields imply low long-term returns and impaired inflation protection
US Inflation-Linked Bonds	OV	July 2013	Underweight	Real yields are positive but low; underweight for now
Core EMU Sovereign Bonds	VOV	July 2014	Underweight; favor cash	Core country bond yields are well below ECB's 2% inflation target and carry duration risk
Swiss Government Bonds	VOV	Jan 2015	Seek to maintain low duration risk	Yields at record lows are poor value and do not justify duration risk; hold some cash
UK Gilts	OV	Mar 2015	Underweight; favor cash	Limited upside, low real yields, duration risk
Australian Govt Bonds	OV	April 2014	Underweight vs cash	Macro risks remain but yield curve is flat
New Zealand Govt Bonds	OV	Nov 2015	Underweight vs cash	Macro risks remain but yield curve is flat; attractive versus DM peers
US Treasuries	OV	July 2013	Underweight; favor cash	Downside risk if economic recovery gains steam and job market continues to tighten
US Tax-Exempt Bonds	FV	Sep 2015	Neutral	Munis are currently superior to taxable bonds for US taxable investors
US$ vs DM Currencies	OV	Mar 2015	Neutral	Consider strategic hedging given currency volatility
Swiss Franc	VOV	Jan 2015	CHF-based investors should remain partially hedged	Reduce USD hedges while maintaining EUR hedges
Emerging Markets Currencies	UV	Oct 2015	Neutral	EM currencies remain vulnerable in the near term
Cash	-	-	Overweight vs deflation-hedging assets	Given sovereign bonds' asymmetric return profile, prefer cash for part of deflation hedge despite near zero/negative yields
Gold	-	-	Overweight (relative to our standard position of none)	Investors concerned about currency debasement may well benefit from a modest allocation to gold

Notes: VUV stands for very undervalued, UV stands for undervalued, FV stands for fairly valued, OV stands for overvalued, and VOV stands for very overvalued. Long/short hedge funds, cash, and gold are not assigned valuations.

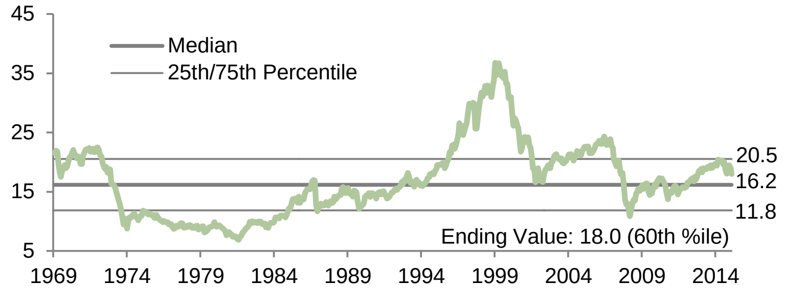
Growth Engine and Diversified Growth

Developed Markets Equities (Fairly Valued)

Fairly valued from September 2015

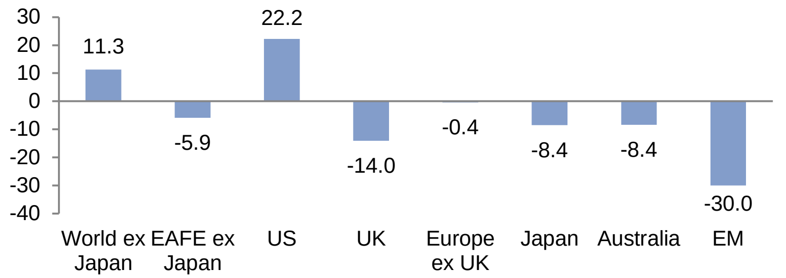
ABSOLUTE VALUATION: MSCI World ex Japan Composite Normalized P/E

December 31, 1969 – January 31, 2016



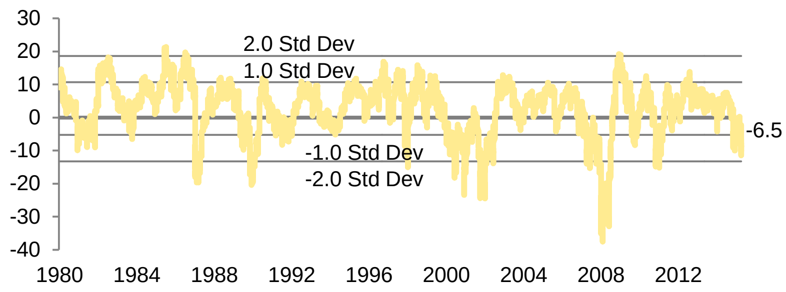
ABSOLUTE VALUATION: MSCI Comp Norm P/E % Dev from Hist Median

As of January 31, 2016



MOMENTUM: MSCI World Deviation from 200-Day Moving Average

October 3, 1980 – January 31, 2016 • Percent (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Valuations have improved but earnings growth is lackluster in some markets

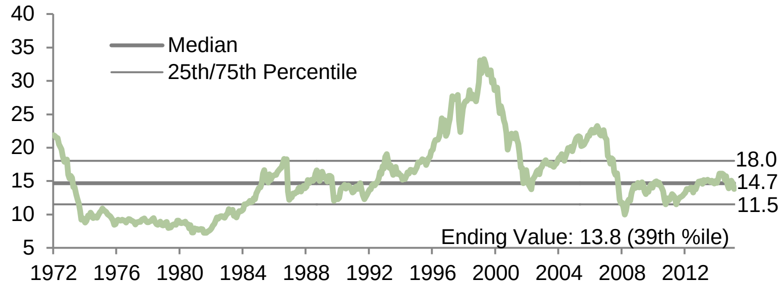
Most developed markets are fairly valued though earnings are under pressure in some markets. Global equity investors should maintain neutral allocations relative to policy.

- Our composite normalized P/E ratio for the MSCI World ex Japan Index stands at 18.0, 11% above fair value and in the 60th percentile of all observed valuations. The index average masks dispersion among regions. Most developed markets look fairly valued but some like the United Kingdom are approaching undervalued.
- Given positive 2015 returns, equities in certain developed markets like the EMU have become more expensive. However, full year earnings growth is expected to be healthy for these markets and normalized valuations remain near historical medians. Earnings growth has been weaker for countries with strong currencies (e.g., Switzerland) or high commodity exposure (United Kingdom).
- We believe a neutral allocation to equities is appropriate. Valuations have improved and suggest for most markets that long-term, forward-looking returns will be close to historical averages. Low yields on fixed income make many non-equity assets unattractive as measured by prospective returns.
- Within developed markets, we currently recommend an overweight to both Eurozone and Japanese equities versus US equivalents based on relative valuations and earnings growth that seems to be synching across regions.
- Macro risks are elevated given an apparent slowdown in emerging markets and elevated debt levels in many countries. The flipside of this is that monetary policy remains accommodating in some markets and this should support earnings and debt servicing.

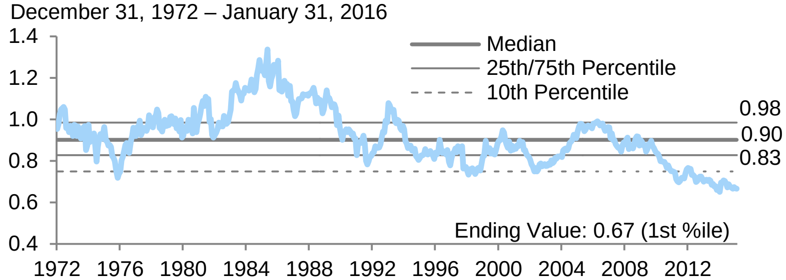
Developed ex US Equities (Fairly Valued)

Fairly valued since September 2012

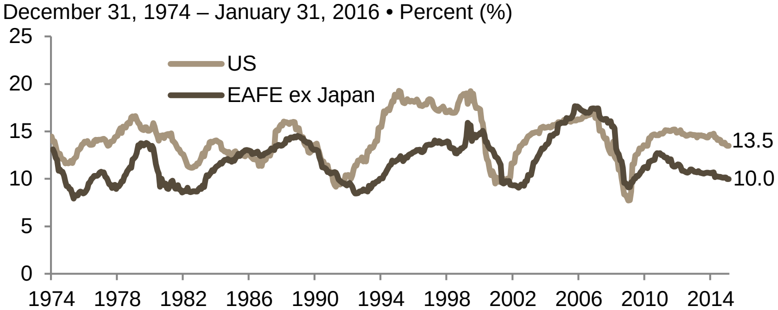
ABSOLUTE VALUATION: MSCI EAFE ex Japan Composite Normalized P/E
December 31, 1972 – January 31, 2016



RELATIVE VALUATION: MSCI EAFE ex Japan Composite Normalized P/E Relative to MSCI US Composite Normalized P/E
December 31, 1972 – January 31, 2016



ABSOLUTE VALUATION: MSCI EAFE ex Japan and MSCI US ROE
December 31, 1974 – January 31, 2016 • Percent (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight

Relative valuations favor non-US markets, but our overweight focuses on EMU and Japan

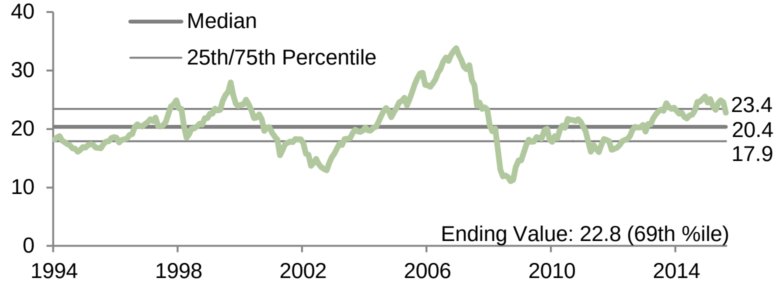
We recommend an overweight to developed ex US equities versus US stocks, implemented through both the Eurozone and Japan. While absolute valuations are near their long-term averages, relative valuations are more attractive than those found in the United States.

- The MSCI EAFE ex Japan Index trades at 13.8 times normalized earnings, 6% below its historical median. Across regions, Europe, Japan, and Australia all feature valuations near or just below historical medians. We consider global ex US equities fairly valued in aggregate.
- Developed ex US equities offer close to a record 33% discount to US equities. We prefer both Eurozone and Japanese stocks relative to US stocks though we are more neutral on countries where profits are being challenged by factors like commodity exposure (United Kingdom) or currency strength (Switzerland).
- Relative profitability explains some of the valuations gap—EAFE ex Japan companies have lower levels of ROE than US equivalents but we note the gap closed somewhat during the course of 2015.
- Earnings in Europe have not recovered post–global financial crisis to the same extent they have in the United States. However, Japanese profits are now around 9% above 2007 levels and Eurozone growth is expected to have increased around 11% in 2015.
- Macro risks are significant in the Eurozone and Japan given high debt levels and weak inflation. Offsetting these liabilities are significant private sector assets. These risks are also mitigated by extremely dovish monetary policy, which lowers interest rates and cheapens currencies, as well as efforts toward structural reform.
- US$-based investors should hedge currency exposure to Eurozone and Japanese stocks given that diverging monetary policy regimes may continue to exert downward pressure on the euro and yen.

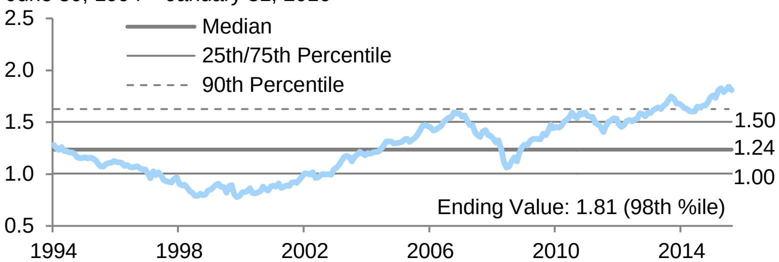
Developed ex US Small-Cap Equities (Now Fairly Valued)

Moved to fairly valued this month from overvalued

ABSOLUTE VALUATION: MSCI EAFE ex Japan SC Composite Normalized P/E
June 30, 1994 – January 31, 2016



RELATIVE VALUATION: MSCI EAFE ex Japan SC Composite Normalized P/E Ratio Relative to MSCI EAFE ex Japan LC Composite Normalized P/E
June 30, 1994 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Fairly valued but expensive relative to large caps

Developed ex US small caps have moved into the high end of our fair value range though remain expensive relative to large caps. Although there is evidence that small-cap equities outperform large-cap equities over long time horizons, today's high absolute and relative valuations reduce the scope for outperformance.

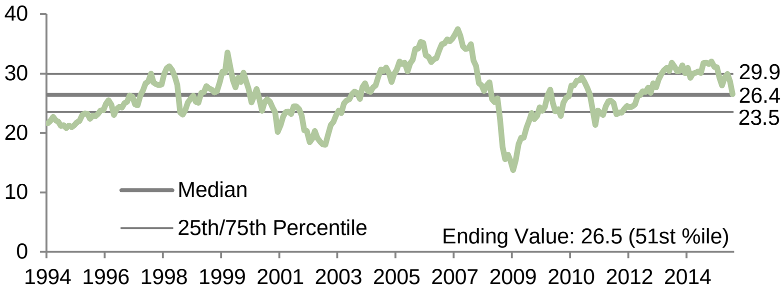
- The MSCI EAFE ex Japan Small-Cap Index trades at a composite normalized P/E of 22.8, in the 69th percentile of observed valuations since 1994 and around 12% above its historical median.
- Developed ex Japan small caps trade at a price-to-book ratio of 1.7, just 3% above their historical median. Short-term valuations are slightly less attractive—the index trades at 21.9 times trailing earnings, in the 73rd percentile of observed values and around 9% above its post-1994 median of 20.0.
- Small caps are expensive relative to EAFE ex Japan large caps given they trade at an 81% premium (using normalized multiples). Short-term valuations look less stretched; small caps trade at a 39% premium over large caps when looking at multiples of trailing earnings.
- Small-cap stocks have outperformed their large-cap counterparts in recent years, in part due to stronger earnings growth. In Europe this has reflected limited exposure to commodity sectors and lower weightings for large banks, where earnings have been decimated. Still, the large relative valuation premium we see today is likely to offset what in some cases may be the cyclical earnings outperformance of small caps.
- Although absolute valuations for developed ex US small caps are not extreme, we favor large caps on a relative basis, especially in risk-adjusted terms.

Developed Small-Cap Equities (Now Fairly Valued)

Moved to fairly valued this month from overvalued

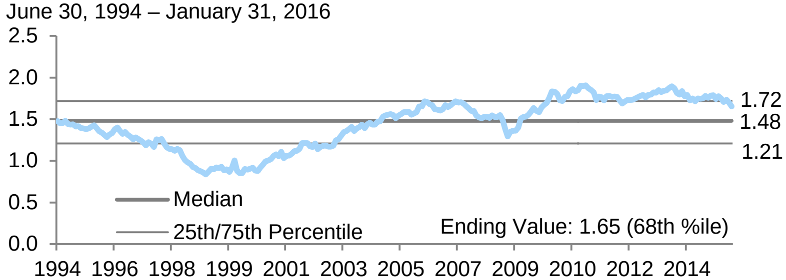
ABSOLUTE VALUATION: MSCI World ex Japan SC Composite Normalized P/E

June 30, 1994 – January 31, 2016



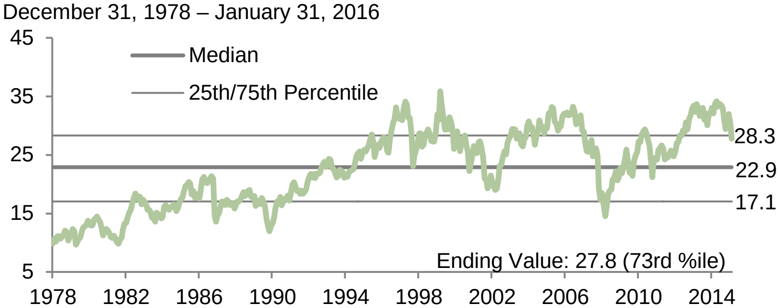
RELATIVE VALUATION: MSCI World ex Japan SC Composite Normalized P/E Relative to MSCI World ex Japan LC Composite Normalized P/E

June 30, 1994 – January 31, 2016



ABSOLUTE VALUATION FOR US SMALL CAPS: Russell 2000® Composite Normalized P/E

December 31, 1978 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Fairly valued but expensive relative to large caps

While developed small caps trade at a lofty 26.5 times normalized earnings, this multiple is not unusual relative to its recent history. We consider them fairly valued in aggregate, but are less constructive about more expensive sub-regions like the United States.

- Developed ex Japan small caps trade at 26.5 times normalized earnings, close to their historical median. While this is based on a limited data set that only dates back to 1994, the price-to-book ratio of 1.8x also lies comfortably in our fair value range (32nd percentile).
- Valuations vary across developed small-cap markets. US small-cap stocks, for which we have considerable historical data, trade at 28 times normalized earnings or 21% above their historical median. In contrast, EAFE ex Japan (where historical data are more limited) small caps trade at 23 times normalized earnings, around 12% above their (post-1994) historical median.
- Developed small caps trade at a 65% premium over large caps, well above the average premium since 1994.
- The MSCI World Small-Cap Index has underperformed the large-cap index over the past 12 months, though relative performance has varied significantly across regions. In the United States, where small caps look the most expensive, the Russell 2000® underperformed by 810 bps, though in Japan and Europe they have outperformed by 680 bps and 1,295 bps, respectively.
- We are neutral on developed small-cap stocks overall but recognize they can offer more attractive exposure in some instances to recovering domestic economies and be less vulnerable to currency volatility and commodity weakness, which can whipsaw the profits of large-cap exporters.

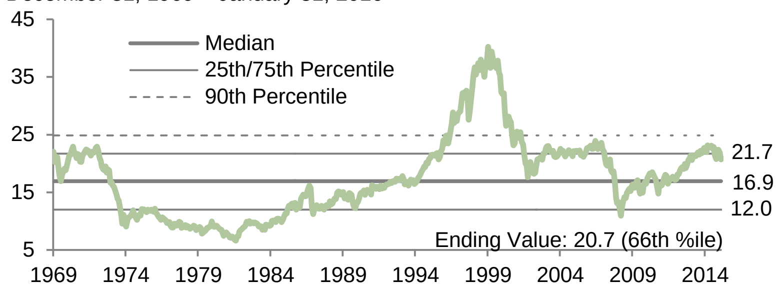
Cambridge Associates' February 2016 Asset Class Views

US Equities (Now Fairly Valued)

Moved to fairly valued this month from overvalued

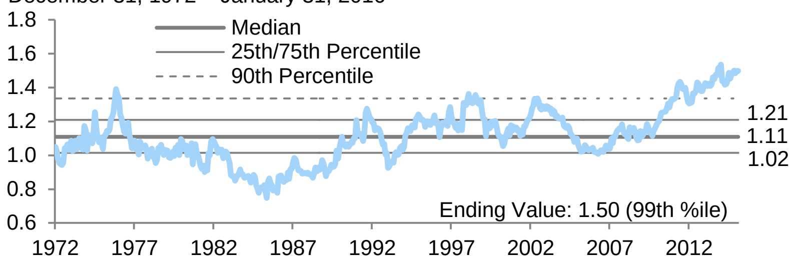
ABSOLUTE VALUATION: MSCI US Composite Normalized P/E

December 31, 1969 – January 31, 2016



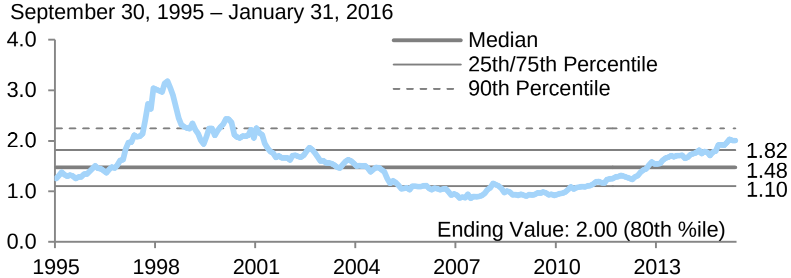
RELATIVE VALUATION: MSCI US Composite Normalized P/E Relative to MSCI EAFE ex Japan Composite Normalized P/E

December 31, 1972 – January 31, 2016



RELATIVE VALUATION: MSCI US Composite Normalized P/E Relative to MSCI Emerging Markets Composite Normalized P/E

September 30, 1995 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Underweight

Valuations are not as rich today but remain at significant premiums relative to other markets

January's sell off sent valuations back into fair value territory, though they sit in the high end of this historical range and remain expensive relative to global peers. We continue to recommend underweighting US equities in favor of Eurozone, Japanese, and Asian EM equities.

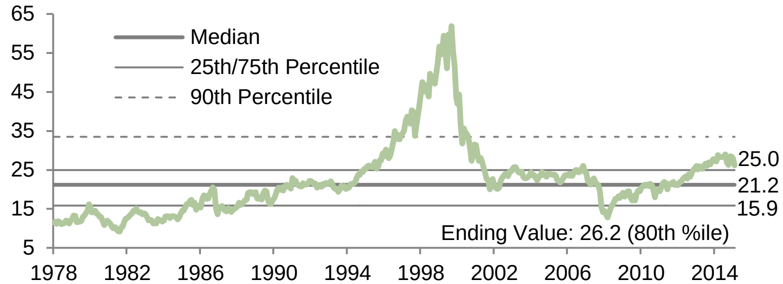
- Valuations fell back into the upper end of their fair value range following January's market correction. Still, US equities traded at a composite normalized P/E ratio of 20.7, which remains 22% above their historical median and in the 66th percentile of observed multiples since 1969.
- US stocks remain quite expensive relative to global peers. The MSCI US Index trades at a 50% premium to the MSCI EAFE ex Japan Index, an extreme level compared to the median post-1972 premium of 11%. Similarly, the MSCI US Index trades at a 100% premium (80th percentile of observations since 1995) to the MSCI Emerging Markets Index.
- Stretched valuations and weak earnings growth weighed on US equity returns in 2015, having trailed those for EMU and Japan stocks by over 900 bps each in local currency terms.
- US companies are now paying out over 100% of their operating free cash flow via buybacks and dividends. This reduces financial flexibility and suggests opportunities for growth are limited.
- US equities have often outperformed during downturns given their perceived safe-haven status (and, for offshore investors in particular, due to the countercyclical nature of the US dollar), as was the case in January. However, lofty valuations may limit this protection going forward, and the strong dollar also continues to present a headwind to US large-cap earnings.
- Today we continue to recommend an underweight to US equities in favor of Eurozone, Japanese, and Asian EM equities, which currently have more attractive valuations. Within US equities, we recommend underweighting small caps and maintaining tilts to high-quality equities.

Cambridge Associates' February 2016 Asset Class Views

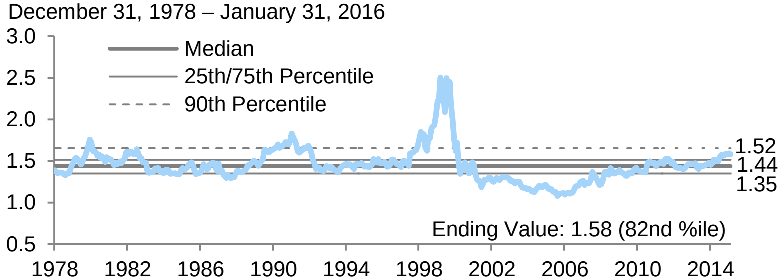
US Growth Equities (Overvalued)

Overvalued since April 2013

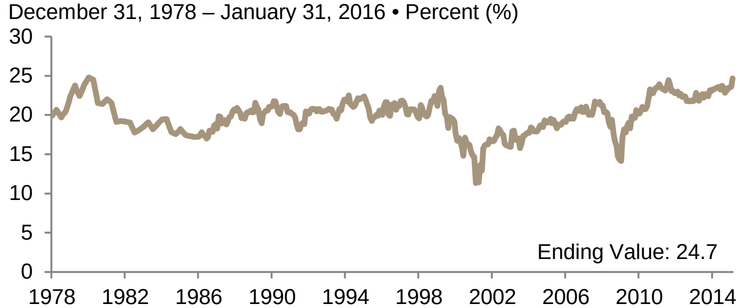
ABSOLUTE VALUATION: Russell 1000® Growth Composite Normalized P/E
December 31, 1978 – January 31, 2016



RELATIVE VALUATION: Russell 1000® Growth Composite Normalized P/E Relative to Russell 1000® Value Composite Normalized P/E
December 31, 1978 – January 31, 2016



ABSOLUTE VALUATION: Russell 1000® Growth ROE
December 31, 1978 – January 31, 2016 • Percent (%)



Sources: Frank Russell Company and Thomson Reuters Datastream.

Advice: Neutral

Absolute valuations are expensive, but relative valuations do not yet support a value tilt

Large-cap US growth equities remain expensive, while value stocks are now more fairly valued. Though evidence suggests that value stocks outperform over long time horizons, today we still do not see a tactical case for either category beyond investors' existing allocations.

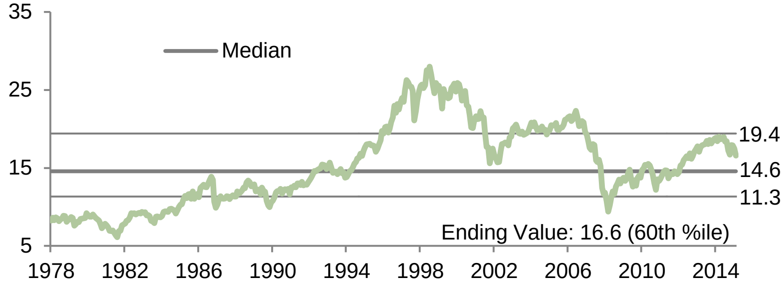
- US growth stocks remain overvalued, whereas the broader market is now closer to fair value. The Russell 1000® Growth Index trades at a composite normalized P/E of 26.2, or 24% above its fair value P/E ratio of 21.2, while the trailing P/E of 21.5 is now just 7% above its historical median.
- On a relative basis, US growth equities trade at a 58% premium to value equities, above the fair value premium of 44%.
- Historically, growth stocks have generated greater profitability (ROE) and faster earnings growth than value, but not always enough to justify their valuations. While growth stock profitability remains superior to that of value equities, the earnings growth disparity between growth and value is far less notable today.
- Information technology stocks are over 25% of the growth index (based on GICS sectors) and part of the reason why EPS growth has been strong over the long run. A strong US$ has been an earnings headwind to IT stocks and other sectors that derive a large share of their revenues from abroad, however dollar strength may be fading. The flipside is a much smaller energy weight, insulating revenues from the oil sell-off.
- While growth outperformed value handily in 2015, investors should note the narrow scope of the rally. Just a handful of stocks in the Russell 1000® Growth generated the majority of the index's return.
- Today we do not yet see a tactical valuation case for either value or growth stocks relative to strategic allocations.

US Value Equities (Fairly Valued)

Fairly valued since September 2015

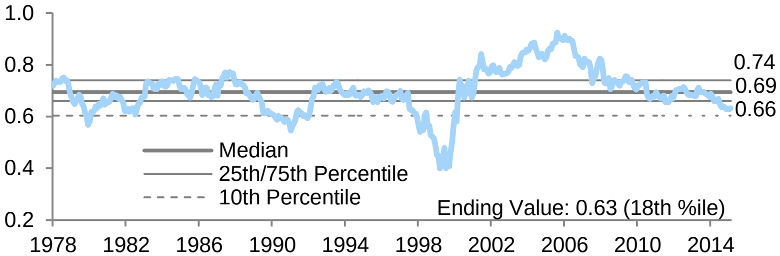
ABSOLUTE VALUATION: Russell 1000® Value Composite Normalized P/E

December 31, 1978 – January 31, 2016



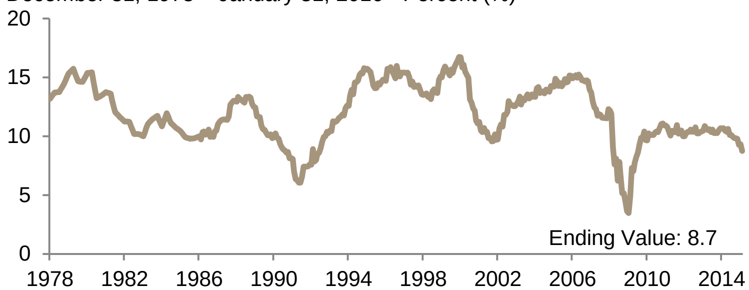
RELATIVE VALUATION: Russell 1000® Value Composite Normalized P/E Relative to Russell 1000® Growth Composite Normalized P/E

December 31, 1978 – January 31, 2016



ABSOLUTE VALUATION: Russell 1000® Value ROE

December 31, 1978 – January 31, 2016 • Percent (%)



Sources: Frank Russell Company and Thomson Reuters Datastream.

Advice: Neutral

Valuations have improved, but we do not yet see a tactical case for value over growth

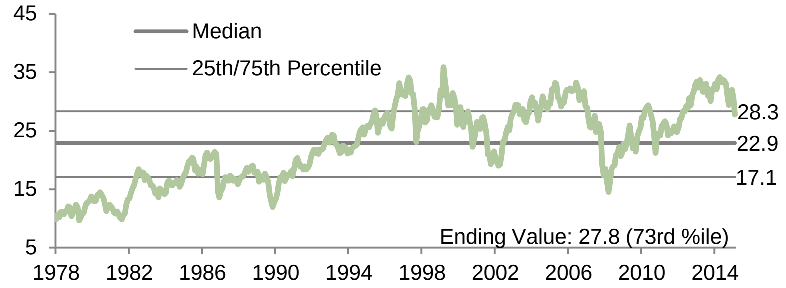
US value equities fall in their historical fair value range, while growth stocks remain overvalued. However, value stocks are still somewhat pricey, and we do not see a tactical valuation case for value stocks beyond investors' existing allocations.

- We view US value stocks as fairly valued, in contrast to the continued overvaluation of US growth stocks today. The Russell 1000® Value Index trades at a composite normalized P/E of 16.6, in the 60th percentile of observed valuations and 14% above its median P/E ratio of 14.6. The trailing P/E of 19.1 is also now 26% above its historical median.
- On a relative basis, US value equities trade at a 37% discount to growth equities, larger than their historical fair value discount. Though evidence suggests value stocks outperform over longer time horizons, in 2015 they underperformed growth by a significant margin (approximately 950 bps) in part because earnings growth among value stocks has been weaker.
- Today we do not see a tactical valuation case for either value or growth stocks relative to strategic allocations. Value stocks trade at a sizeable discount to their growth counterparts but the Russell 1000® Value Index has a much larger allocation to energy stocks (13% compared to less than 1% in the Russell 1000® Growth Index), which continue to face headwinds with US energy sector earnings forecasted to plunge in both 2015 and 2016 due to the ongoing collapse in global crude oil prices. Such a sea change calls into question the earnings potential of energy stocks going forward.
- We remain neutral on tactical tilts. We would be more inclined to increase bets toward value and "cyclical" stocks amid a more sustained market sell-off that sees the relative valuation discount widen further.

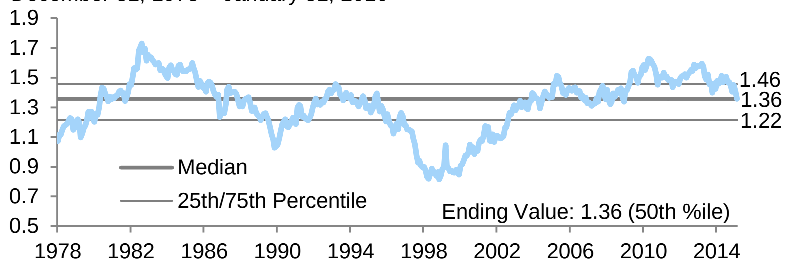
US Small-Cap Equities (Overvalued)

Overvalued since October 2015

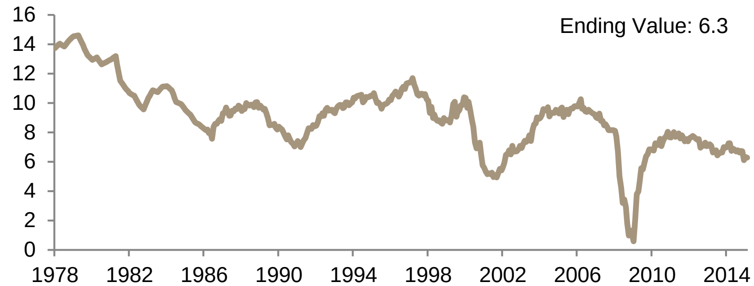
ABSOLUTE VALUATION: Russell 2000® Composite Normalized P/E
December 31, 1978 – January 31, 2016



RELATIVE VALUATION: Russell 2000® Composite Normalized P/E Relative to Russell 1000® Composite Normalized P/E
December 31, 1978 – January 31, 2016



ABSOLUTE VALUATION: Russell 2000® ROE
December 31, 1978 – January 31, 2016 • Percent (%)



Sources: Frank Russell Company and Thomson Reuters Datastream.

Advice: Underweight

US small caps remain overvalued both in absolute terms and relative to large caps

US small-cap equity valuations remain overvalued, and small-cap growth shares are particularly expensive. We recommend underweighting small caps in favor of large caps or US high-quality equities. Small caps today are a bet that earnings will eventually soar to meet sky-high investor expectations.

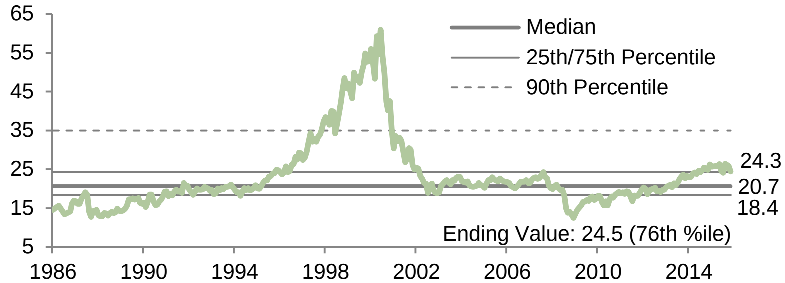
- We view US small-cap equities as overvalued. The Russell 2000® Index trades at a composite normalized P/E ratio of 27.8, in the 73rd percentile of historical observations and roughly 21% above its fair value; the trailing P/E at 30.9 tells a similar story.
- Extreme valuations caught up with small-cap stocks in 2014 as the Russell 2000® Index underperformed the Russell 1000® Index by over 800 bps. In 2015, small caps narrowed their underperformance to 530 bps as sectors like information technology and health care continued to rise, however a sell-off in biotech stocks in January led small caps to underperform by another 340 bps.
- The market consensus now estimates less than 5% growth in Russell 2000® earnings for 2015, significantly lower than expectations at the start of last year but still exceeding flat earnings for large caps. Still, earnings growth for small caps has trailed that for large caps over intermediate-term periods and, when combined with significantly lower profitability, does not justify premium valuations.
- Small caps trade at a 36% premium to large caps, matching the historical fair value premium.
- A further bout of macro-driven volatility would likely have a disproportionate impact on small caps given their stretched valuations and more leveraged balance sheets. This appears to be transpiring so far in 2016.

US High-Quality Equities (Overvalued)

Overvalued since June 2013

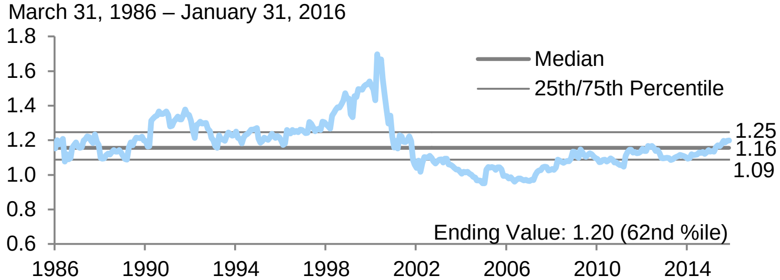
ABSOLUTE VALUATION: Russell Top 200® Growth Composite Normalized P/E

March 31, 1986 – January 31, 2016



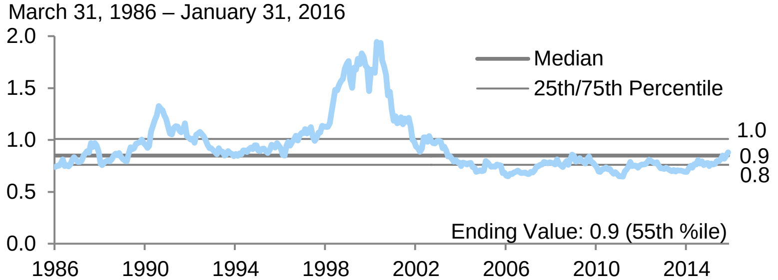
RELATIVE VALUATION: Russell Top 200® Growth Composite Normalized P/E Relative to Russell 1000® Composite Normalized P/E

March 31, 1986 – January 31, 2016



RELATIVE VALUATION: Russell Top 200® Growth Composite Normalized P/E Relative to Russell 2000® Composite Normalized P/E

March 31, 1986 – January 31, 2016



Sources: Frank Russell Company and Thomson Reuters Datastream.

Advice: Overweight within US equities

High-quality equities are overvalued but relatively attractive for their defensive qualities

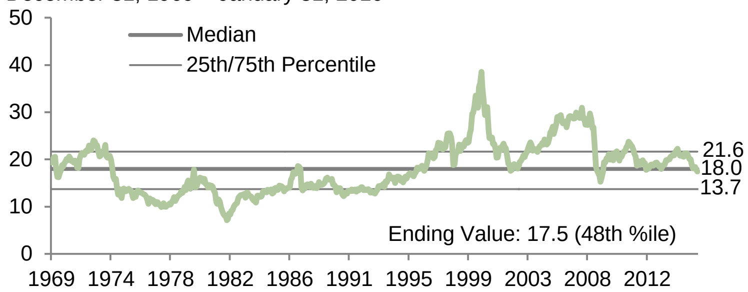
We view US high-quality stocks as overvalued. However, relative valuations are neutral compared to the broader US large-cap equity market and attractive relative to US small caps. Our high-quality equity overweight recommendation is based primarily on these stocks' "defensive" qualities, especially if the US enters another downturn.

- Our research shows that "high-quality" stocks (companies with consistently high profitability and steady earnings growth) are concentrated in mega-cap growth stocks. As a proxy for high-quality valuations, we use the Russell Top 200® Growth Index.
- High-quality stocks trade at a normalized P/E ratio of 24.5, in the 76th percentile of observed values and 19% above their historical fair value P/E of 20.7.
- Short-term multiples look less expensive; high quality trades at 20.7 times trailing earnings, closer to its historical median P/E of 20.5.
- Relative to the Russell 1000® Index, mega-cap growth's premium to the broader large-cap market is 20%, slightly above the fair value premium.
- Earnings growth for US high-quality stocks is poised to remain positive in 2015, demonstrating quality stocks' resilient profitability.
- A recent headwind for quality stocks has been the ongoing strength of the US dollar, which has weighed on their above average exposure to overseas revenues, although dollar strength may be fading.
- There is no compelling valuation case today for overweighting quality stocks relative to the broader US large-cap market. Still, we prefer to tilt US equity allocations toward quality stocks for their defensive, lower-beta properties and recommend overweighting US high-quality stocks while underweighting US small caps.

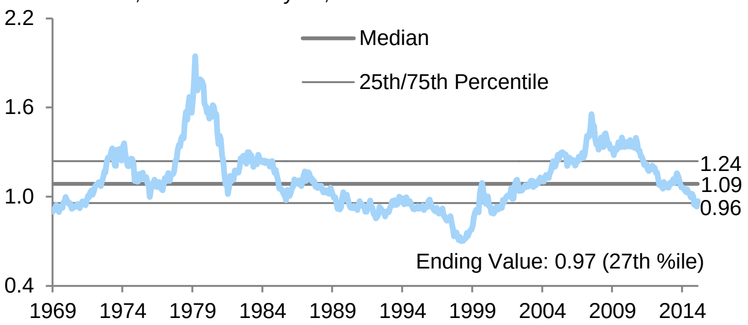
Canadian Equities (Fairly Valued)

Fairly valued since October 2015 when our coverage began

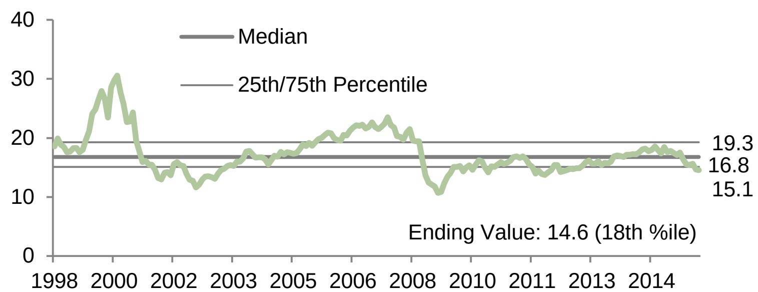
ABSOLUTE VALUATION: MSCI Canada Composite Normalized P/E
December 31, 1969 – January 31, 2016



RELATIVE VALUATION: MSCI Canada Composite Normalized P/E Relative to MSCI World ex Japan Normalized Composite P/E
December 31, 1969 – January 31, 2016



ABSOLUTE VALUATION: MSCI Canada ex Nat Res Equities ROE-Adjusted P/E
December 31, 1998 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Fairly valued in both absolute and relative terms

Canadian equity valuations are fairly valued in absolute terms and at the low end of their fair value range in relative terms versus global peers. However, the market's outsized exposure to cyclical stocks (which are most susceptible to rising macroeconomic risks) leads us to recommend no more than a neutral allocation.

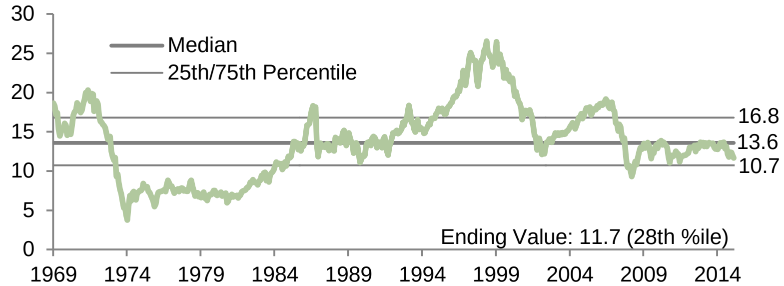
- Canadian equities returned -9.0% in 2015, significantly under-performing developed markets peers in local currency terms. Energy and materials stocks, in particular, suffered outsized declines, as did health care given the selloff in Valeant Pharmaceuticals.
- The MSCI Canada Index trades at a composite normalized P/E ratio of 17.5, which is in the 48th percentile of historical observations. On a relative basis, the market now trades at a slight discount to World ex Japan equities and in contrast to its small historical premium. Excluding natural resources equities, the remaining index constituents look somewhat undervalued based on a relatively limited historical data set.
- The Canadian economy faces ongoing challenges as lower commodity prices have led to a significant drop in capital expenditures in the energy and mining sectors. Canada experienced a record trade deficit in 2015, driven by sharply lower energy prices. While non-energy export volumes returned to growth in November, due to rising auto exports, the manufacturing sector, is still not yet benefitting from a weak CAD and improving US economy to the extent expected. A strong manufacturing export-led recovery has been slow to materialize.
- We are neutral on Canadian equities. Valuations appear reasonable, but profitability is deteriorating and the market is estimated to have experienced a 23% earnings decline in 2015. We are concerned that the index is concentrated within cyclical sectors with more than 75% of the index exposed to energy, financials, industrials, and materials, which are most vulnerable to the macroeconomic headwinds facing the economy.

UK Equities (Fairly Valued)

Fairly valued since June 2009

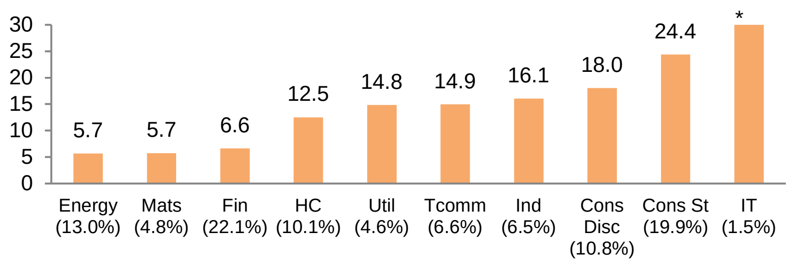
ABSOLUTE VALUATION: MSCI UK Composite Normalized P/E

December 31, 1969 – January 31, 2016



VALUATION: MSCI UK Sector ROE-Adjusted P/Es

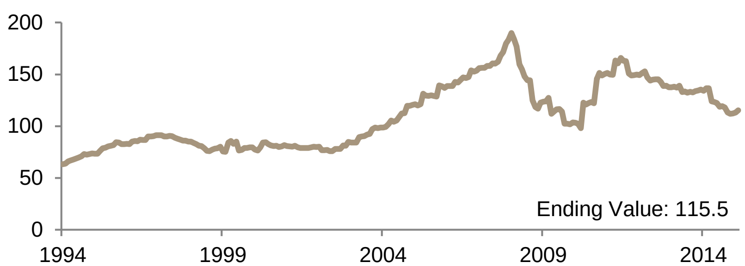
As of January 31, 2016 • Index Weight in Parentheses



* The IT sector has an ROE-adjusted P/E of 66.0.

ABSOLUTE VALUATION: MSCI UK TTM EPS

December 31, 1994 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Fairly valued in absolute terms, but inexpensive compared to US equities

UK equity valuations are inexpensive and approaching our undervalued range. However, valuations are distorted by high weightings for inexpensive cyclical sectors with weak earnings prospects. We are neutral on UK equities and would prefer to tilt a European overweight toward Eurozone stocks.

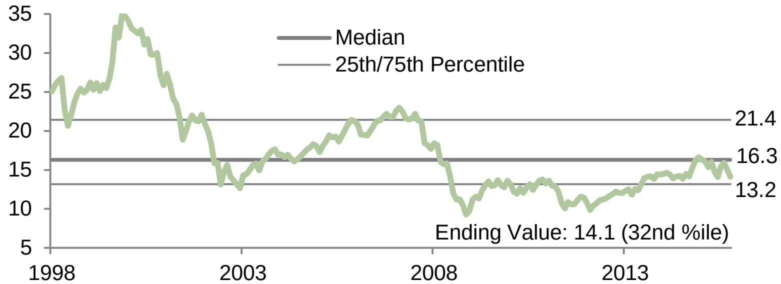
- UK equities have underperformed global peers over most recent trailing timeframes; the MSCI UK returned -7.1% (in sterling terms) over the past 12 months while the MSCI World was up 0.5% (in sterling terms).
- Inexpensive valuations have not been enough to generate outperformance; UK stocks trade at a normalized P/E ratio of just 11.7, 14% below their historical median. This is distorted by low valuations for three sectors: financials, materials, and energy.
- Given weak earnings, short-term valuations are higher; the trailing P/E of 15.4 is around 13% above its historical median of 13.6.
- The issue with UK stocks is not valuations but earnings. UK corporate profits are well below 2007 levels and have shrunk 16% on a trailing 12-month basis. The consensus expects a 17% decline for full year 2015 yet hopes for a recovery in 2016 have faded.
- Unlike Eurozone competitors, UK companies have less upside from the healthy domestic economy given the composition of the index which includes many EM-focused and global businesses.
- UK equities seem vulnerable to an EM slowdown given commodity and financial exposures. This said, the weak pound will flatter the value of global revenue generated by UK consumer companies.
- We recommend that investors maintain a slight overweight to Eurozone equities at the expense of US stocks. Large-cap UK stocks are less compelling but mid-cap earnings have looked much healthier than large-cap equivalents and valuations are not stretched.

EMU Equities (Fairly Valued)

Fairly valued since May 2015 when our coverage began

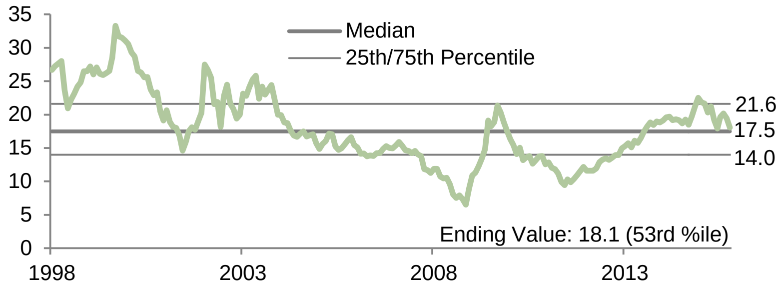
ABSOLUTE VALUATION: MSCI EMU Composite Normalized P/E

April 30, 1998 – January 31, 2016



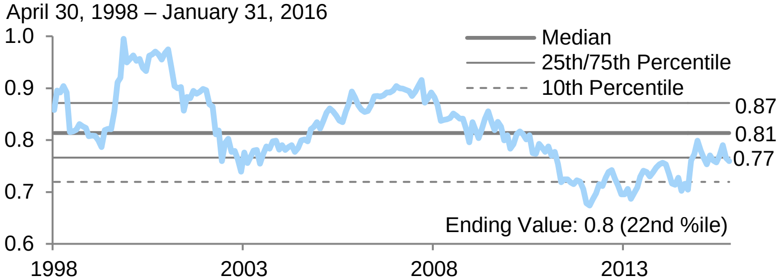
ABSOLUTE VALUATION: MSCI EMU TTM P/E

April 30, 1998 – January 31, 2016



RELATIVE VALUATION: MSCI EMU Composite Normalized P/E
Relative to MSCI World Composite Normalized P/E

April 30, 1998 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight versus US equities

Absolute valuations are below historical averages

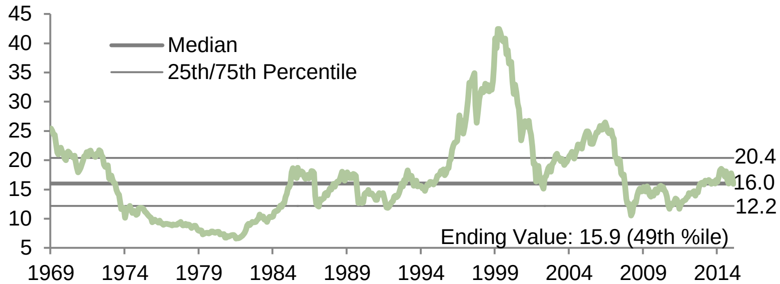
EMU equity valuations are below historical averages, and earnings are rising from a low base given tailwinds such as lower interest rates, the cheaper euro, and reduced austerity. Investors should overweight EMU equities and underweight US equivalents, using currency hedges if they are not locally based.

- After a strong 2015, EMU equities returned -6.3 in January, slightly underperforming developed world peers. Markets have been volatile in recent months given fears over global growth, commodity prices, and weaker earnings forecasts.
- EMU equities trade at a normalized P/E of 14.1, 13% below their median. Short-term valuations look slightly less reasonable; the MSCI EMU Index trades around 18 times trailing earnings, or around 3% above its historical median.
- EMU companies should benefit from several macro tailwinds, as the European Central Bank's expansion of QE has devalued the euro and lowered real interest rates. Cheaper oil should both lower input costs for companies and leave more cash in consumers' wallets.
- Earnings have collapsed since the end of 2007 given first the global financial crisis and more recently the sovereign debt crisis. The better news is that this lowers the bar for an earnings recovery; earnings have risen 3% on a trailing 12-month basis and the consensus expects EMU profits to show a 11% rise when full-year 2015 results are in.
- We recommend investors overweight EMU equities and fund this from underweighting US equivalents. Macro volatility may persist, but backstops like the ECB's recently expanded QE are in place. Non-local investors should currency hedge their equity exposures, given the potential for future euro weakness.

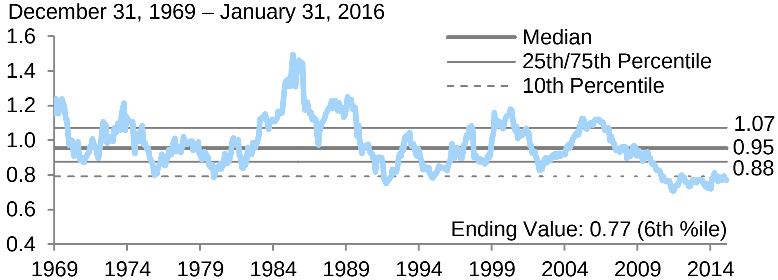
Europe ex UK Equities (Fairly Valued)

Fairly valued since September 2012

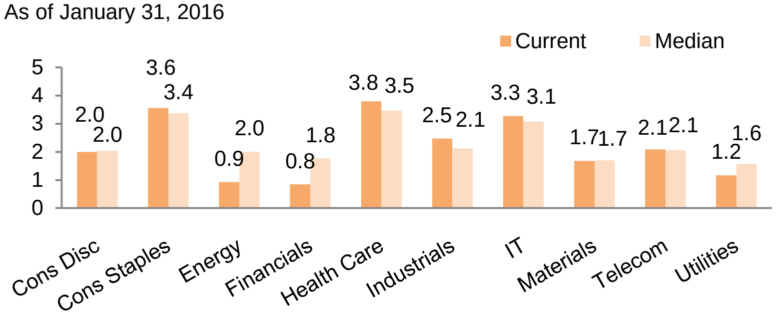
ABSOLUTE VALUATION: MSCI Europe ex UK Composite Normalized P/E
December 31, 1969 – January 31, 2016



RELATIVE VALUATION: MSCI Europe ex UK Composite Normalized P/E Relative to MSCI US Composite Normalized P/E
December 31, 1969 – January 31, 2016



ABSOLUTE VALUATION: MSCI Europe ex UK GICS Sector P/B Ratios
As of January 31, 2016



Sources: FactSet Research Systems, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight

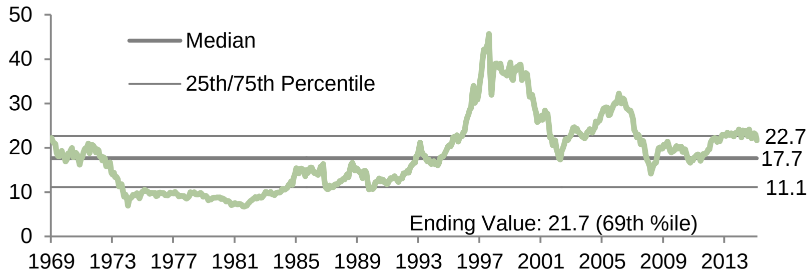
Absolute valuations remain near historical averages, but relative valuations are extreme

Given the steep valuation discount Eurozone stocks offer versus US equities, we recommend an overweight funded from US allocations. US$-based investors should consider currency hedging exposures, as looser monetary policy in the Eurozone could put further downward pressure on the common currency.

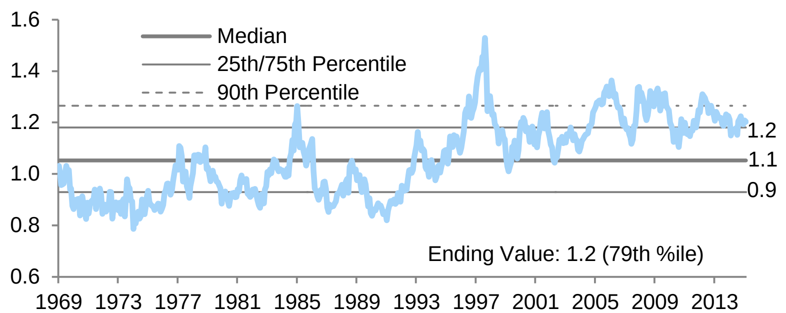
- After a healthy 8.3% gain in 2015, Europe ex UK equities returned -6.0 (in local currency terms) in January, slightly trailing developed world peers.
- The normalized P/E for the MSCI Europe ex UK Index is almost exactly at its historical median of 16.0. Short-term metrics look more stretched; the trailing P/E of 17.9 is over 23% above its median and drawing a fair amount of consternation from bearish investors.
- European ex UK equities trade at a compelling 23% discount to US equivalents, well below the 5% historical average discount. Investors should overweight Eurozone equities at the expense of US equities given relative valuations and position in the earnings cycle.
- Earnings forecasts suggest Eurozone stocks will generate earnings growth similar to global peers of around 5% in 2016. Earnings are still down around 35% since the end of 2007 and there is room for upside from a variety of drivers including currency depreciation boosting foreign sales, operational leverage, and reduced write-offs for the financial sector.
- Should China suffer a larger-than-expected slowdown this will hurt profits, but only around 10% of European corporate revenue comes from Asia.
- A number of sectors in Europe look inexpensive relative to their history including financials, energy, and utilities. Some of these sectors face headwinds and may see a subdued earnings recovery.

Swiss Equities (Overvalued)

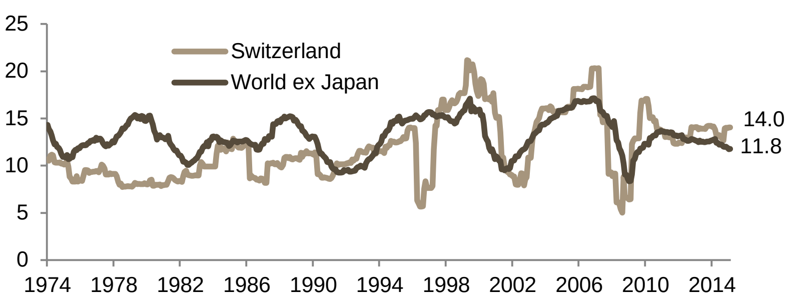
ABSOLUTE VALUATION: MSCI Switzerland Composite Normalized P/E
December 31, 1969 – January 31, 2016



RELATIVE VALUATION: MSCI Switzerland Composite Normalized P/E Relative to MSCI World ex Japan Composite P/E
December 31, 1969 – January 31, 2016



ABSOLUTE VALUATION: MSCI Switzerland and MSCI World ex Japan ROE
December 31, 1974 – January 31, 2016 • Percent (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Valuations are improving, but still less attractive than Eurozone equities

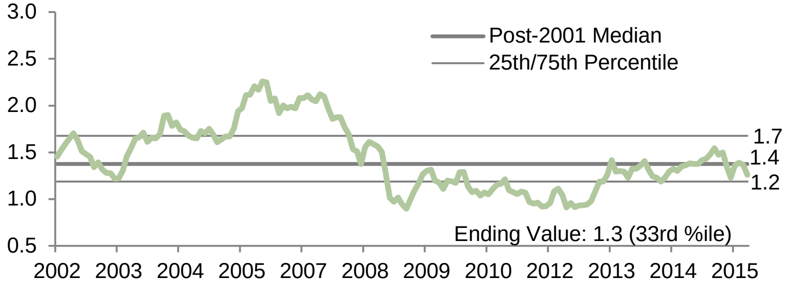
Swiss equity valuations have cheapened in recent months and are technically within our fair value range. However, valuations remain high on an absolute basis while earnings are being hit by the expensive currency; we continue to prefer Eurozone equivalents.

- Swiss equity valuations have cheapened since their cyclical peak in July 2015, but remain expensive relative to their own history. At the end of January, the market traded at a composite normalized P/E of 21.7, around 23% above its historical median.
- The strong Swiss franc has weighed on domestic economic growth and generated deflation in 2015. It has also hit the earnings of large Swiss multinationals that dominate the index. Swiss earnings are expected to drop around 13% for full-year 2015 and only stage a modest 6% rebound in 2016.
- Stretched valuations have also weighed on the relative performance of Swiss equities; the MSCI Switzerland returned 2.8% trailing 12-months while the MSCI EMU was down 4.2%.
- These headwinds and index concentration (Nestle, Roche, and Novartis account for over 50% of the MSCI Switzerland Index) offset some other positive attributes of Swiss equities, including their relatively higher profitability and defensive potential during periods of market stress.
- Swiss equities appear less attractive than Eurozone or global equities more broadly given high absolute valuations; for example the Swiss composite P/E ratio of 21.7x is well above that of EMU equities (14.1x).
- Swiss investors should consider underweighting the market, especially given elevated valuations for the Swiss franc.

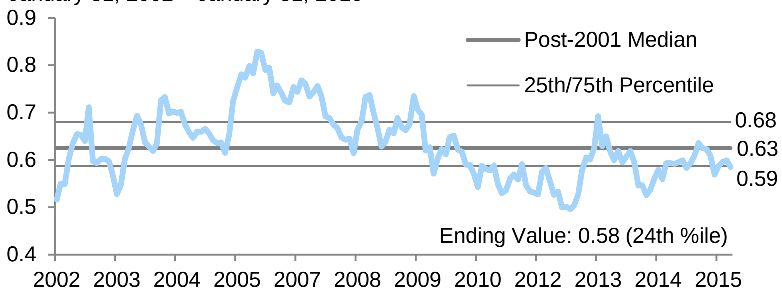
Japanese Equities (Fairly Valued)

Fairly valued since October 2013

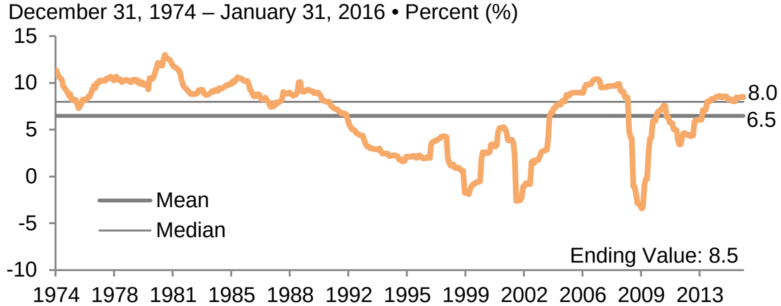
ABSOLUTE VALUATION: MSCI Japan P/B Ratio
January 31, 2002 – January 31, 2016



RELATIVE VALUATION: MSCI Japan P/B Relative to MSCI World ex Japan P/B
January 31, 2002 – January 31, 2016



ABSOLUTE VALUATION: MSCI Japan ROE
December 31, 1974 – January 31, 2016 • Percent (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight vs US equities

Valuations are favorable compared to US equities, and earnings growth has been robust

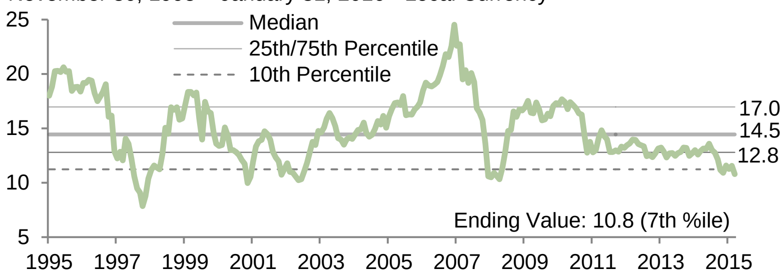
Japanese equities are fairly valued on an absolute basis and appear attractive relative to more expensive US equivalents; we recommend a modest overweight to Japanese equities relative to US equities. Offshore investors should hedge yen exposures given the Bank of Japan's desire to weaken the currency.

- Japanese equities have returned -7.6% year-to-date (in yen terms), surrendering much of their 2015 outperformance given fears over a weaker China, a strengthening yen, and stalling progress on Abenomics.
- The sell-off further improves valuations for Japanese stocks, and we believe markets are demanding an unjustified margin of safety. The current P/B of 1.3 is below its post-2001 median, and the trailing P/E of 14.8 is in the 20th percentile of historical valuations.
- Recent returns are not reflective of healthy earnings growth; Japanese corporate profits have increased around 8% on a trailing 12-month basis and are expected to rise around 15% during the current fiscal year.
- Profits have been boosted by yen weakness, but there is more to the story. A newfound focus on shareholder returns is bearing fruit, reinforced by a new governance code and the creation of the new JPX Nikkei 400 Stock Index.
- Japanese companies have significant cash holdings—around ¥250 trillion including short-term investments—and are starting to increase payouts via buybacks and dividend payments. Still, they could do more—the 2015 expected dividend yield is only around 2.0%.
- Macro uncertainty is high given Japan's large debt burden and soft GDP growth. The Bank of Japan has recently cut its benchmark rate but the yen has rallied on flight-to-safety flows.
- Offshore investors should hedge yen exposures given the government's stated desire to weaken the currency via QE and other channels.

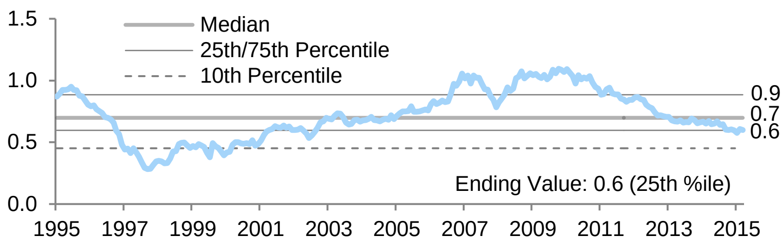
Asia ex Japan Equities (Very Undervalued)

Very Undervalued since September 2015

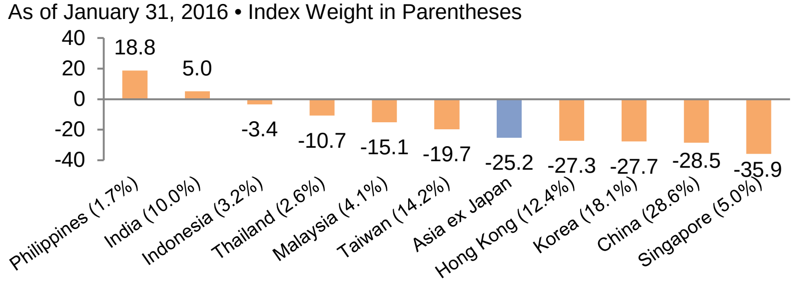
ABSOLUTE VALUATION: MSCI All Country Asia ex Japan ROE-Adjusted P/E
November 30, 1995 – January 31, 2016 • Local Currency



RELATIVE VALUATION: MSCI All Country Asia ex Japan P/B Relative to World ex Japan P/B
November 30, 1995 – January 31, 2016 • Local Currency



ABSOLUTE VALUATION: MSCI Asia ex Japan Country P/B % Deviation from Historical Median
As of January 31, 2016 • Index Weight in Parentheses



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight

Overweight as a value play

Asia ex Japan equities are very undervalued, and we remain comfortable with an overweight position. Macro risks remain substantial, and investors overweighting the asset class based on relative valuations should be aware that valuations across countries within the region are not uniformly cheap.

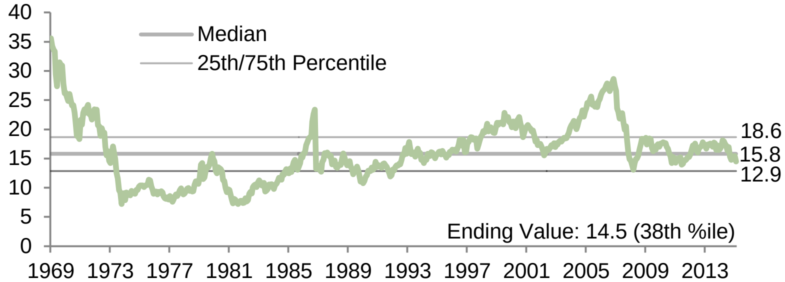
- We view Asia ex Japan equities as very undervalued, with the asset class trading at an ROE-adjusted P/E ratio of 10.8. Multiples have been cheaper just 7% of the time historically.
- Our valuation history for Asia ex Japan is considerably shorter than our data history for developed markets, some of which traded at single-digit multiples for several years. However, our Asia ex Japan history does include several periods of low valuations, including 1998, the months surrounding the September 11, 2001, attacks, the SARS outbreak, and the global financial crisis.
- Valuations across countries remain somewhat dispersed, with Singapore, China and South Korea cheap relative to their own history, while the Philippines is rich.
- On a relative basis, Asia ex Japan equities offer a deeper discount than normal to developed markets equities.
- In the near term, slowing regional growth may continue to weigh on equities. Valuations—especially in cyclical sectors—have priced in headwinds. Further, depressed energy prices are a boon to some Asian nations. However, any credit scare in China would likely depress absolute and relative valuations for Asia ex Japan equities further.

Australian Equities (Fairly Valued)

Fairly valued since September 2013

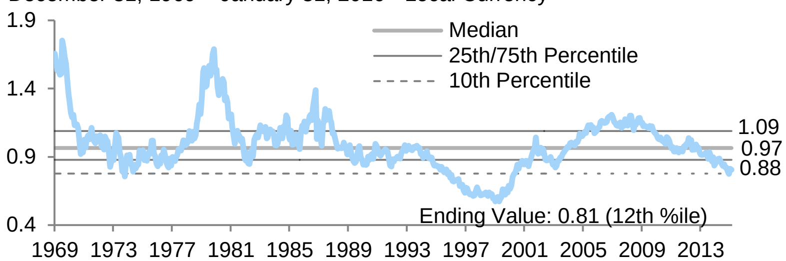
ABSOLUTE VALUATION: MSCI Australia Composite Normalized P/E

December 31, 1969 – January 31, 2016 • Local Currency



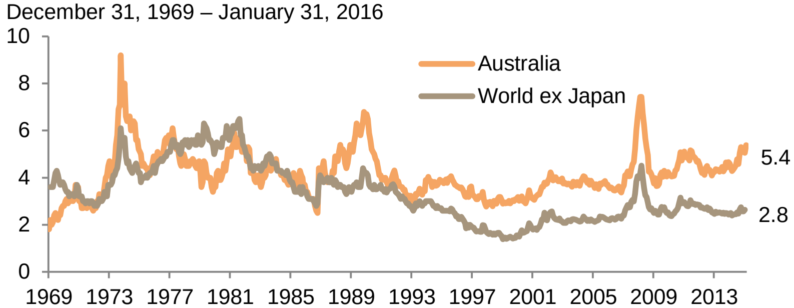
RELATIVE VALUATION: MSCI Australia Composite Normalized P/E Relative to World ex Japan Composite Normalized P/E

December 31, 1969 – January 31, 2016 • Local Currency



ABSOLUTE VALUATION: MSCI Australia and MSCI World ex Japan DYs

December 31, 1969 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Reasonable valuations; but earnings and macro face headwinds

We are neutral given average valuations and high dividend yields but are concerned about weakening earnings and large index exposure to financials and materials firms that face rising macro risks.

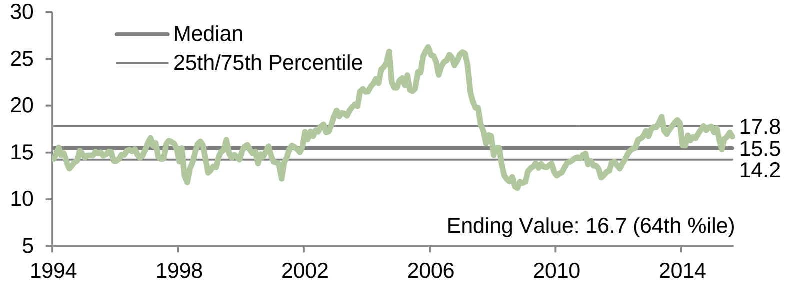
- Australian equities returned -5.9% in January, slightly underperforming broad developed markets (-5.4%). All sectors performed poorly with seven out of ten sectors (including heavyweights Financials and Materials) registering negative returns for the month.
- The MSCI Australia Index trades at a composite normalized P/E ratio of 14.5, which is in the 38th percentile of historical observations. We consider the asset class fairly valued. Australian equities look much cheaper relative to World ex Japan equities, trading at a 19% discount, well below its historical median of parity.
- Despite better-than-expected Q3 GDP growth data, the Australian economy faces challenges from low commodity prices and a housing market that seems to be peaking. Rising household debt also presents a risk to the economy.
- The outlook for earnings continues to be skewed downwards with the consensus expecting ASX 200 earnings to be slightly negative in 2016, driven by further weaknesses in resources earnings and muted growth in other sectors. At the same time, while a high dividend yield has supported Australian equities in the past, this may come under pressure from weaker earnings growth and an unsustainable payout ratio that now exceeds 70%.
- Overall, we are neutral on Australian equities. Valuations are reasonable, especially relative to developed markets equities. However, with the economy facing headwinds and earnings showing signs of weakness, it is unclear how much uncertainties have been priced in. Furthermore, we are concerned that the index is undiversified with large weights to financials (55%) and materials (12%), which face rising macro risks.

New Zealand Equities (Fairly Valued)

Fairly valued since April 2014

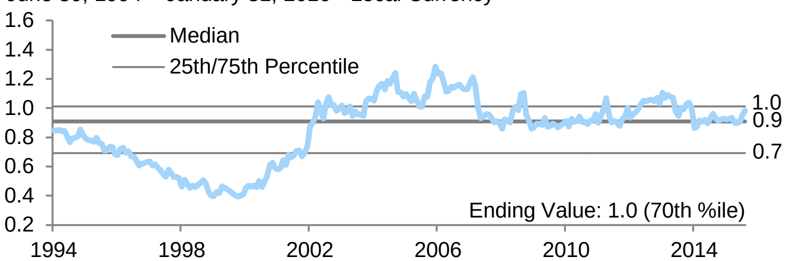
ABSOLUTE VALUATION: MSCI New Zealand IMI ROE-Adjusted P/E

June 30, 1994 – January 31, 2016 • Local Currency



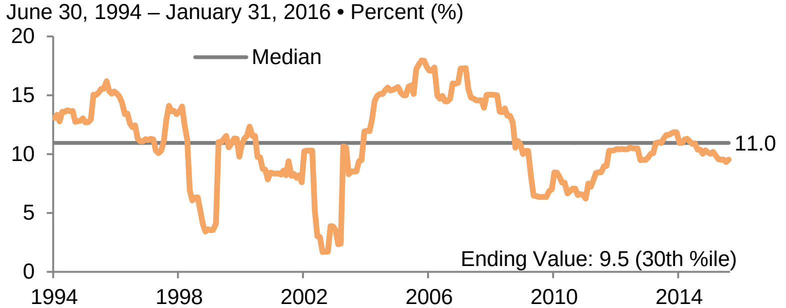
RELATIVE VALUATION: MSCI New Zealand IMI ROE-Adjusted P/E Relative to World ex Japan ROE-Adjusted P/E

June 30, 1994 – January 31, 2016 • Local Currency



ABSOLUTE VALUATION: MSCI New Zealand IMI ROE

June 30, 1994 – January 31, 2016 • Percent (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Fairly valued in absolute and relative terms

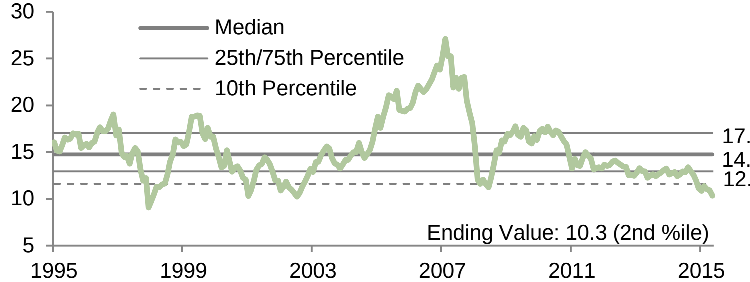
We are neutral as valuations are still within the fair value range.

- New Zealand equities, as represented by the MSCI New Zealand IMI, returned -2.4% in January in local currency terms, outperforming broader developed markets (-5.4%).
- At the end of January, New Zealand equities trade at an ROE-adjusted P/E ratio of 16.7, which is in the 64th percentile of historical observations. On a relative basis, the market trades at a 2% discount to World ex Japan equities, which is in the 70th percentile of historical observations. We consider the asset class fairly valued.
- In recent years, New Zealand GDP and earnings growth have been well above that seen in other regions, helped by a burgeoning housing market, especially in Auckland, and rising agricultural exports to China.
- The weakening Chinese economy, which accounts for around 20% of New Zealand exports, presents a risk. To help offset this risk and stimulate growth, the Reserve Bank of New Zealand cut rates four times in 2015, most recently in early December.
- Overall, despite macro risks, we remain neutral on New Zealand equities as valuations are within the fair value range. We would note that idiosyncratic risks are high given the top-four holdings represent nearly 40% of index market cap and the index consists of only 29 stocks.

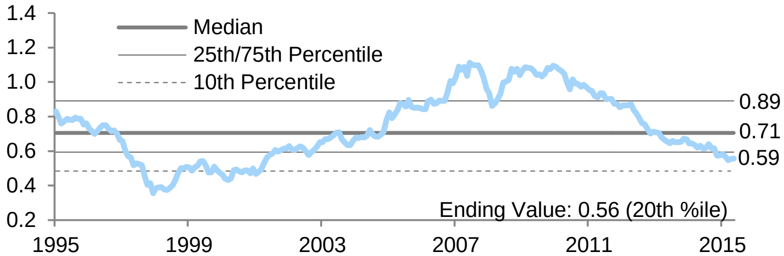
Emerging Markets Equities (Very Undervalued)

Very undervalued since September 2015

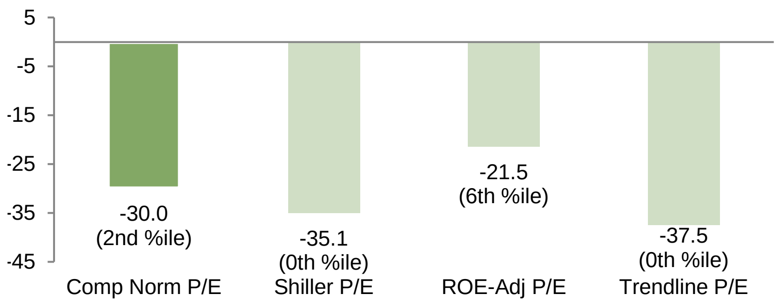
ABSOLUTE VALUATION: MSCI Emerging Markets Composite Normalized P/E
September 30, 1995 – January 31, 2016



RELATIVE VALUATION: MSCI Emerging Markets Composite Normalized P/E Relative to MSCI World Composite Normalized P/E
September 30, 1995 – January 31, 2016



VALUATION: MSCI Emerging Markets Valuations: % Above/Below Median
As of January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight vs US equities

A value play; overweight should be modest

We consider emerging markets equities very undervalued, with shares priced at low multiples to normalized earnings. Relative valuations are also appealing. However, given macro uncertainty, we advise overweights to be modest.

- Emerging markets equities are priced at 10.3 times normalized earnings today, well below the historical median of 14.8. Multiples have been lower only 2% of the time over the past two decades.

- The data history is substantially shorter for emerging markets than for developed markets, and does not include the 1970s and early 1980s, during which some developed markets traded at single-digit multiples for many years. However, the two-decade EM history includes several periods of low valuations, including the 1998 crisis, the September 11, 2001, attacks, the SARS epidemic, and the global financial crisis.

- Emerging markets equities still appear cheap relative to developed markets equities. On a normalized P/E basis, emerging markets equities trade at a hefty 44% discount to developed markets equities, compared to a historical median discount of 29%. Although this is not as extreme as the 1998–2002 period.

- Our composite of three valuation metrics indicates that emerging markets equities offer excellent value, and this is true for all three of the underlying metrics that we employ in our composite: Shiller P/E (ten-year average real earnings), ROE-adjusted P/E, and trend-line P/E ratios.

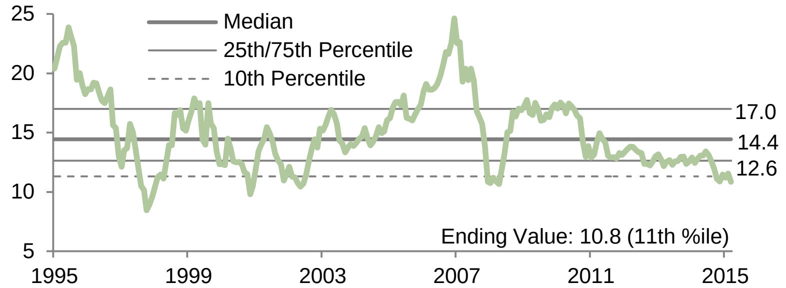
- We expect relative valuations to normalize at some point; however, macro issues including commodity exposure and debt growth could cause further disruptions. Overweighting emerging markets today (especially against richly valued US equities) is sensible for long-term investors with a tolerance for volatility.

Emerging Markets Equities Asia (Very Undervalued)

Very undervalued since September 2015

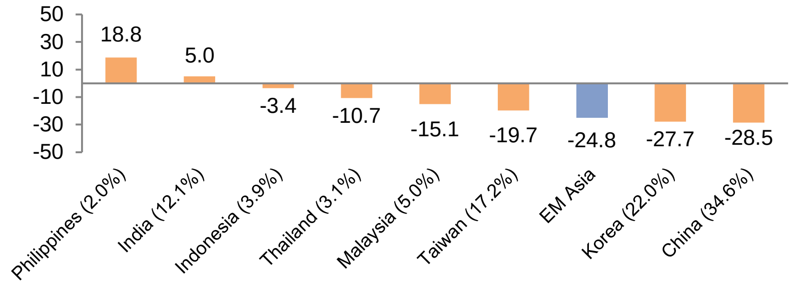
ABSOLUTE VALUATION: MSCI EM Asia ROE-Adjusted P/E

November 30, 1995 – January 31, 2016



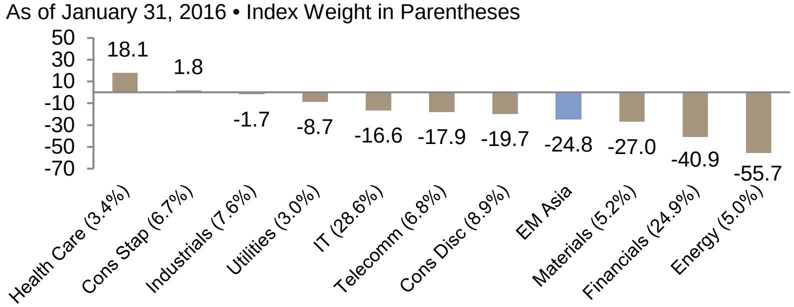
ABSOLUTE VALUATION: MSCI EM Asia Country P/B % Dev from Hist Median

As of January 31, 2016 • Index Weight in Parentheses



ABSOLUTE VALUATION: MSCI EM Asia Sector P/B % Dev from Hist Median

As of January 31, 2016 • Index Weight in Parentheses



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Overweight

Overweight as a relative-value play

Emerging markets Asian equities are very undervalued, and we are comfortable with an overweight position. Macro risks remain substantial, and investors overweighting the asset class based on relative valuations should be aware that valuations across countries and sectors within the region are not uniformly cheap.

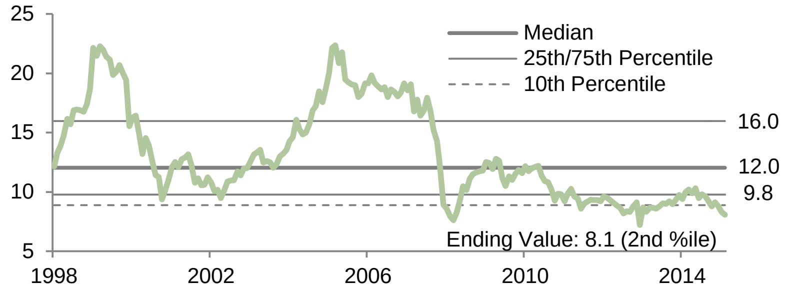
- On our ROE-adjusted P/E metric, emerging markets Asia equities are trading at 10.8 times normalized earnings, and have only been cheaper than this 11% of the time over the past two decades.
- Our valuation history for emerging markets Asia is about 25 years shorter than our data history for developed markets, some of which traded at single-digit multiples for several years. However, our EM Asia history does include several periods of low valuations, including 1998, the months surrounding the September 11, 2001, attacks, the SARS outbreak, and the global financial crisis.
- There is some valuation dispersion across sectors and countries. Two relatively defensive sectors are still valued *above* their historical median levels. As for countries, index heavyweights China, South Korea, and Taiwan have below-average valuations, while the Philippines remains rich.
- In the near term, slowing regional growth may continue to weigh on equities. Valuations have priced in headwinds, and lower energy prices are beneficial for some Asian nations. However, a credit scare in China could further depress absolute and relative valuations for emerging markets Asian equities.

EM Equities EMEA (Very Undervalued)

Very undervalued since October 2015

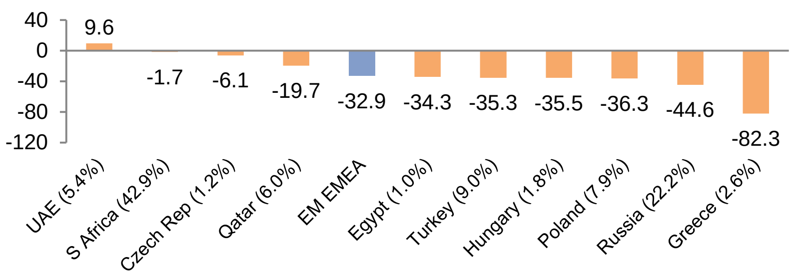
ABSOLUTE VALUATION: MSCI EM EMEA ROE-Adjusted P/E

December 31, 1998 – January 31, 2016



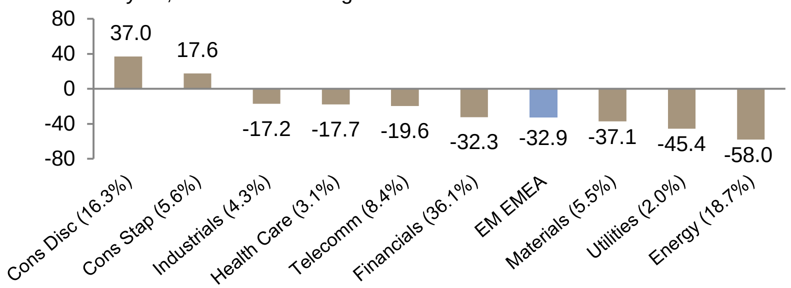
ABSOLUTE VALUATION: MSCI EM EMEA Country P/B % Dev from Hist Median

As of January 31, 2016 • Index Weight in Parentheses



ABSOLUTE VALUATION: MSCI EM EMEA Sector P/B % Dev from Hist Median

As of January 31, 2016 • Index Weight in Parentheses



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Despite undervaluation, we have little conviction about when markets will re-rate

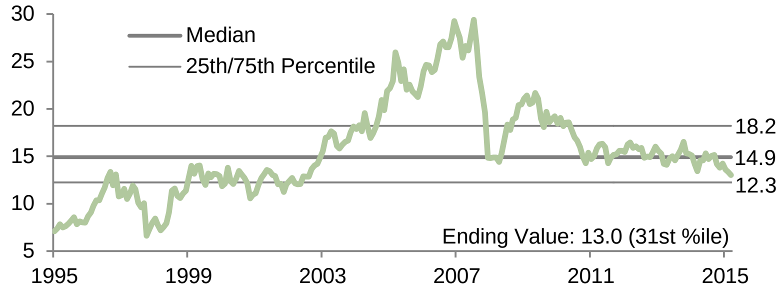
We believe emerging Europe, Middle East & Africa (EMEA) equities are very undervalued, but the disparate makeup of the region provides an implementation challenge for investors attracted to the low valuations.

- EMEA equities are very undervalued, with an ROE-adjusted P/E of 8.1, well below their 12.0 historical median. Valuations have been below the current multiple just 2% of the time since 1998.
- While the EMEA index is quite cheap, its component countries and sectors are not universally cheap. South Africa (43% of the index), is trading slightly below its historical median P/B multiple, while large components Poland, Russia, and Turkey are cheap relative to their histories. The EMEA index's energy, materials, and utilities holdings are the cheapest, whereas consumer-related sectors are expensive.
- Overall, we do not have strong opinions on EMEA equities, in part because of the disparate makeup of the region (which is dominated by South Africa and Russia).
- While the low valuations across EMEA offer upside potential if/when valuations revert to historical averages, we have little conviction about when that may occur.

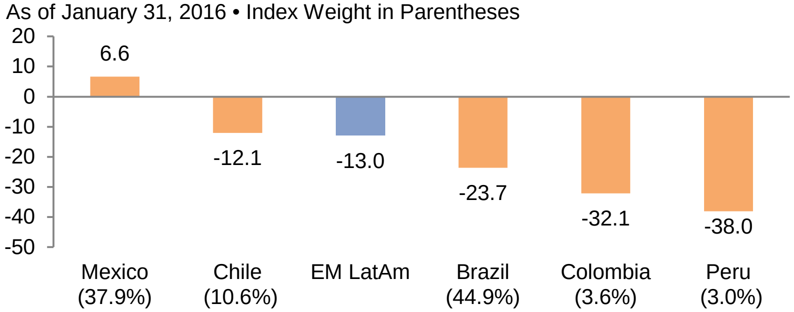
EM Equities Latin America (Fairly Valued)

Fairly valued since June 2010

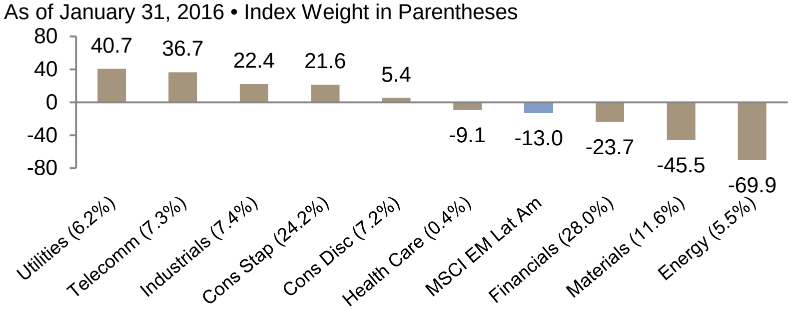
ABSOLUTE VALUATION: MSCI EM Latin America ROE-Adjusted P/E
November 30, 1995 – January 31, 2016



ABSOLUTE VALUATION: MSCI EM Lat Am Country P/B % Dev from Hist Median
As of January 31, 2016 • Index Weight in Parentheses



ABSOLUTE VALUATION: MSCI EM Lat Am Sector P/B % Dev from Hist Median
As of January 31, 2016 • Index Weight in Parentheses



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

The most expensive region within emerging markets

We believe EM Latin American equities are fairly valued yet not particularly attractive today.

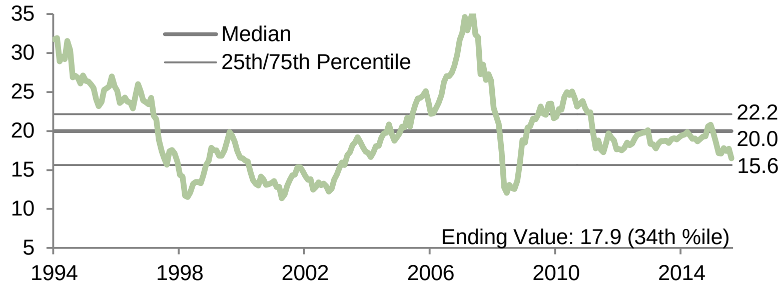
- We view EM Latin American equities as fairly valued, trading at 13.0 times normalized earnings, somewhat below the historical median. Valuations for Latin America are higher than those for EMEA and Asian emerging markets.
- As with emerging markets as a whole, valuation levels differ widely across Latin American countries and sectors. Brazil is much cheaper than Mexico.
- Brazil (the largest country in the index by market cap) faces slowing growth and instability stemming from a major corruption scandal. Volatile commodity prices and exchange rates, combined with high policy interest rates, bring continued uncertainty for investors. Our cyclically adjusted valuation ratios show Brazilian equities as moderately cheap.
- Overall, we do not have strong views on Latin American equities. Many of these countries are reliant on commodity exports, which face headwinds from the downshift in Chinese commodity demand. In addition, valuations are reasonable but above other emerging regions. Thus, we advocate a neutral stance.

Emerging Markets Small-Cap Equities (Fairly Valued)

Fairly valued since January 2013

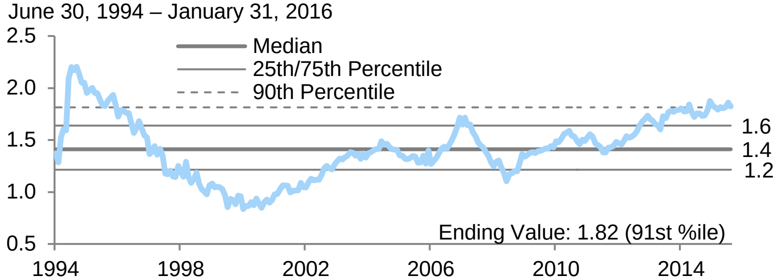
ABSOLUTE VALUATION: MSCI EM Small-Cap ROE-Adjusted P/E

June 30, 1994 – January 31, 2016



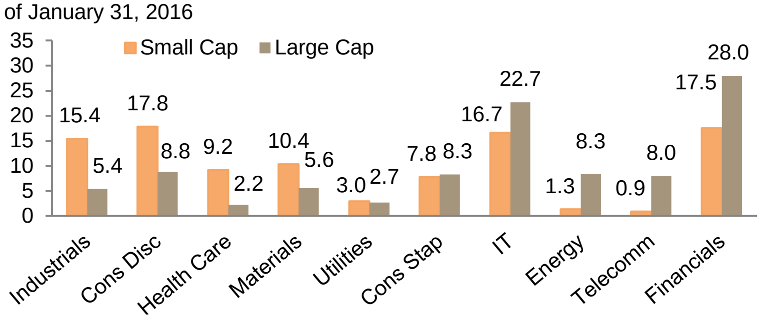
RELATIVE VALUATION: MSCI EM Small-Cap ROE-Adjusted P/E Relative to MSCI EM Large-Cap ROE-Adjusted P/E

June 30, 1994 – January 31, 2016



ABSOLUTE VALUATION: MSCI EM Small-Cap vs EM Large-Cap Sector Weights

As of January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

While fairly valued in absolute terms, EM small caps are very expensive versus large caps

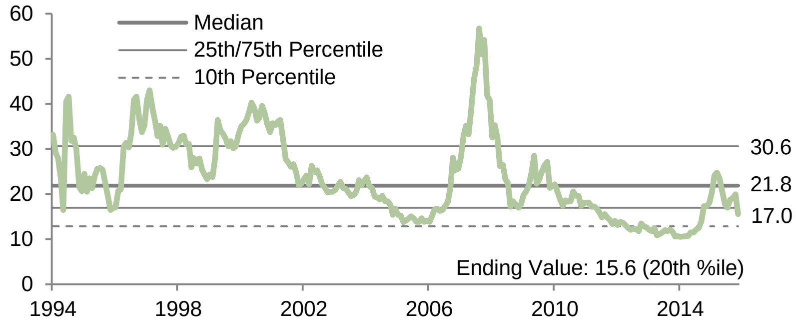
Emerging markets small caps are fairly valued on an absolute basis and offer greater domestic consumer exposure than large caps; however, valuations relative to emerging markets large caps are far above historical norms.

- Emerging markets small caps trade at 17.9 times normalized earnings, slightly below their historical median of 20x.
- On a *relative* basis, emerging markets small caps have become very expensive versus emerging markets large caps, trading at an 82% premium. This premium has been higher only 9% of the time over the past two decades.
- Emerging markets small caps are geared more to domestic consumer plays in Asia and are less exposed to energy and financial companies, which partly explains their recent outperformance and higher valuations. Thus, emerging markets small caps may perform relatively well amid a domestic demand–driven recovery in emerging markets, in contrast to an export/commodity-driven one.
- Given current relative valuations, the appeal of emerging markets small caps is diminished, even though their sector exposures may be more appealing. Relative valuations are very expensive, and underperformance versus large caps is likely should cyclical sectors and markets come back into favor.

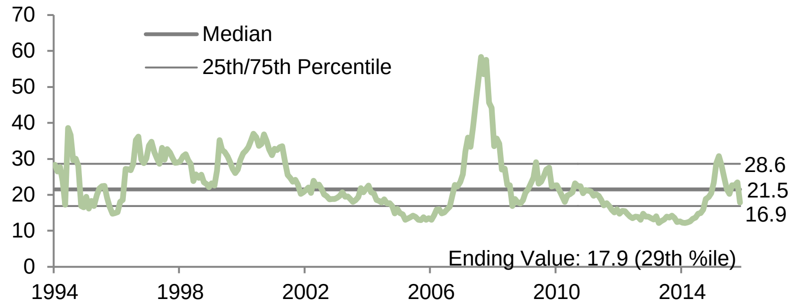
Chinese A-Share Equities (Fairly Valued)

Fairly valued since October 2015 when our coverage began

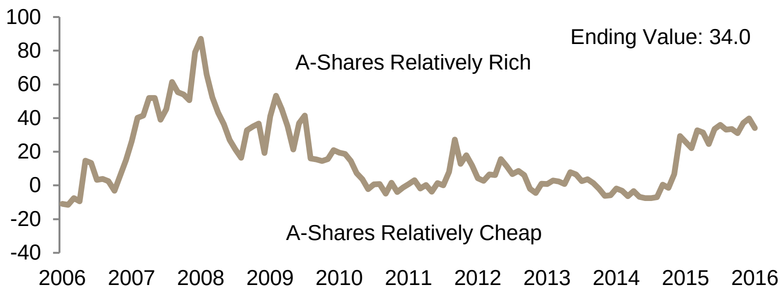
ABSOLUTE VALUATION: DS China A-Shares ROE-Adjusted P/E
March 31, 1994 – January 31, 2016



ABSOLUTE VALUATION: DS China A-Shares Non-Financials ROE-Adjusted P/E
March 31, 1994 – January 31, 2016



RELATIVE VALUATION: Mainland A-Shares Price Level Premium Discount Relative to Hong Kong–Listed H-Shares Price Level
January 31, 2006 – January 31, 2016 • Hang Seng AH Premium Index (%)



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

No rush for global investors

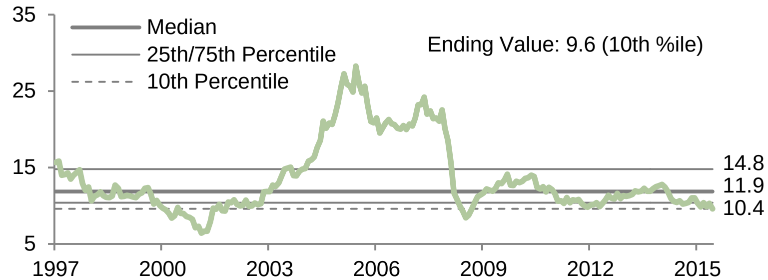
As global index providers move to include Chinese mainland-listed A-shares in coming years, global investors should begin watching them. The crash in the A-share market this year has improved valuations, but the market is not cheap on an absolute basis, and is quite rich relative to Hong Kong–listed shares.

- A-shares faced renewed heavy selling pressure in January, as the market deals with an overhang of leveraged investors, oversupply and overvaluation following last year's heavy-handed intervention to prop-up share prices.
- The market is valued at 15.6 times normalized earnings, which is well below the median historical multiple of 21.8. However, non-financials trade at 17.9, which while below historical median, is not yet in our undervalued range. Given the risks facing Chinese financials we are reluctant to view the market as undervalued.
- A-shares command a 34.0% premium to matching H-shares, on a capitalization-weighted basis. While A-shares have always commanded a premium, today's wide gap has us favor HK-listed Chinese equities (currently included in the MSCI EM Index), which we view as undervalued.
- Index providers are preparing to include A-share equities in global emerging markets indexes within the next couple of years, and while this is a potential tailwind for A-shares, initial index allocations are likely to be well below the levels indicated by market capitalization.
- Global investors interested in allocating to China A-shares will find that index products are heavily tilted to financial firms and have high fees relative to emerging markets index funds, while the universe of proven, high-quality active managers is somewhat limited. Investors should consider active managers with a flexible mandate that can own Chinese shares listed in Hong Kong, mainland China, and ADRs listed in the United States, which are now included in the MSCI China Index.

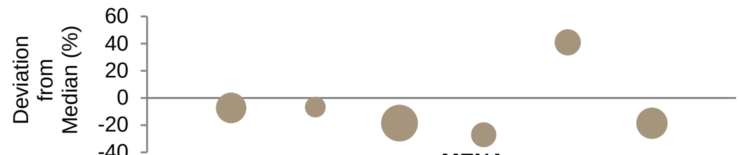
Frontier Markets Equities (Undervalued)

Undervalued since September 2015

ABSOLUTE VALUATION: Wgtd Avg ROE-Adj P/E for Frontier Regions
August 31, 1997 – January 31, 2016

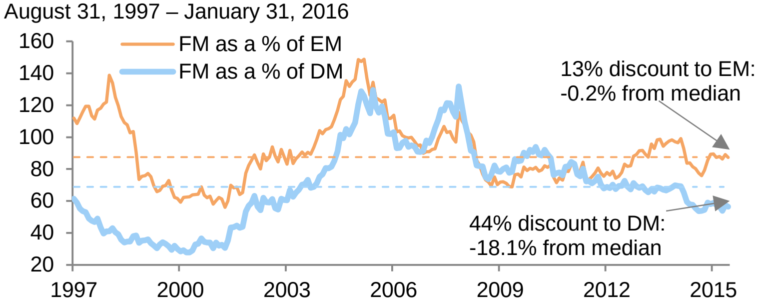


ABSOLUTE VALUATION: ROE-Adjusted P/E Ratio for Frontier Regions
Compared to Post-2007 History • As of January 31, 2016



Frontier Market:	Asia	C&EE	GCC	MENA x GCC	LatAm	SSA
Largest Constituent:	Pakistan	Romania	Kuwait	Morocco	Argentina	Nigeria
Current P/E:	10.9	9.7	8.0	11.5	16.0	9.0
Median P/E:	11.7	10.4	9.8	15.8	11.3	11.0
Index Allocation %:	18.6	8.5	26.9	12.6	13.7	19.7

RELATIVE VALUATION: Frontier ROE-Adjusted P/E Relative to Developed and Emerging Markets
August 31, 1997 – January 31, 2016



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

Reasonable valuations; oil-dependent economies challenged; low liquidity remains a concern

Frontier markets appear undervalued. Given their less-liquid nature, investors need to have long time horizons and the ability to tolerate volatility. We suggest active management in frontier markets equities, as frontier markets indexes are an imperfect reflection of the opportunity set and face disruptive reconstitutions.

- Given the recent poor performance of oil-related markets, frontier markets have drifted into undervalued territory. Our valuation data for frontier markets extend back to 1997 (before the index data begins) by incorporating the median ROE-adjusted P/E for countries within each frontier region, and then weighting the regional valuations in accord with today's MSCI index weight. By this metric, the 9.6 normalized P/E multiple for frontier markets is well below the 11.9 historical median valuation. The valuation multiple has been lower only 10% of the time in the asset class's limited history.

- Within frontier markets, several regions now trade at hefty discounts to their median post-2007 valuation. Markets in Asia face fewer headwinds from low oil prices (and in some cases benefit) and are fairly valued.

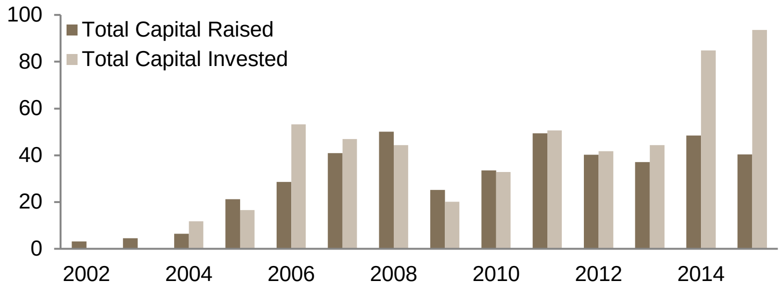
- Many investors fund frontier markets allocations out of emerging markets or even global developed markets allocations. Frontier trades at a 13% discount to emerging markets and a 44% discount to developed markets.

- We find frontier equity indexes a poor reflection of the opportunity set. Given that benchmarks will periodically undergo expensive reconstitutions as countries "graduate" to emerging markets status, we prefer active management. Investors should be mindful of transaction costs in this less-liquid asset class.

Asian Private Equity (Fairly Valued)

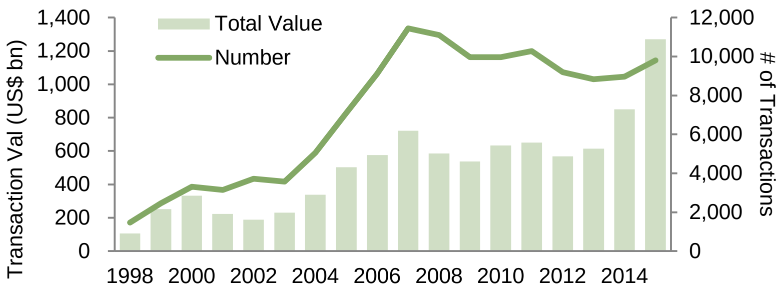
FUNDAMENTALS: Capital Raised and Invested in Asian Private Equity

2002–15 (Dec 31) • US Dollar (billions)



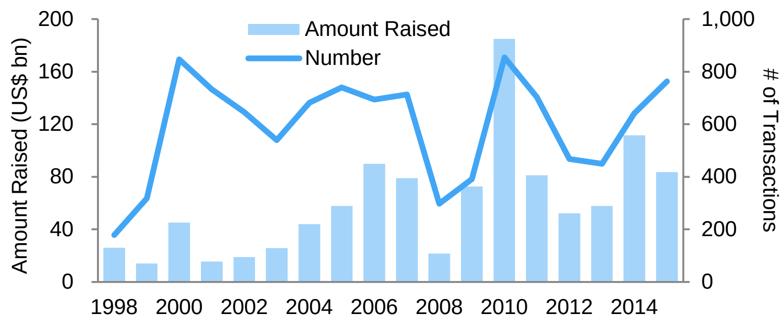
FUNDAMENTALS: Exit Environment—Asia Pacific M&A

1998–2015 (Dec 31)



FUNDAMENTALS: Exit Environment—Asia Pacific IPOs

1998–2015 (Dec 31)



Sources: Asia Private Equity Review and Dealogic.

Advice: Selectively commit to top-quality managers

Focus on small-/mid-cap buyouts in developed Asia

Across Asia, entry valuations appear to be increasing, and exits slowing. Valuations for small-/mid-cap buyouts in developed Asia are most reasonable. Asian venture capital, particularly China, is overvalued. We believe manager selection is largely a bottom-up exercise barring extreme market conditions, which are not present today.

- Late-stage venture in China, which makes up the bulk of Asian venture capital, is overvalued, and early-stage venture valuations are creeping upward too. We favor early stage over late stage, given the smaller rise in valuations, greater insulation from nontraditional players that have moved into late stage, and greater upside potential.

- Local and Pan-Asian buyout managers investing in Australia/New Zealand, Japan, Korea, and Singapore continue to use modest debt and exploit the low-interest, low-covenant regime for acquisitions and re-financings, and they have provided good liquidity—especially through the robust equity capital markets in these regions.

- Fund raising ended 2015 at $40.4 billion, down from $48.5 billion in 2014. Early-stage venture capital was the only segment that saw an increase in fund raising year-over-year, with just over $10 billion raised in 2015.

- Investment activity reached a record level in 2015 at $93.6 billion, and the average deal size was up from 2014. China remains the top destination for investments, but substantial year-over-year increases were registered in Australia/New Zealand, India, and South Korea, each of which attracted more than $12 billion in capital.

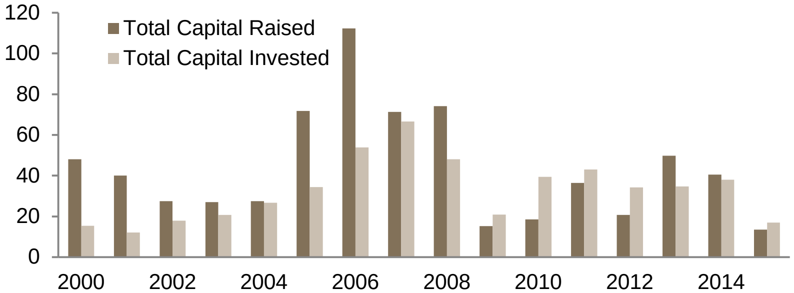
- Although overall M&A market activity picked up in 2015, the value of distributions from PE/VC exits fell to $34.5 billion, nearly one-third less than 2014's $49.7 billion, and according to *Asia Private Equity Review* the largest year-over-year drop on record. The number of PE/VC exits in 2015 was the lowest since 2011.

European Private Equity (Very Overvalued)

Very overvalued since June 2014

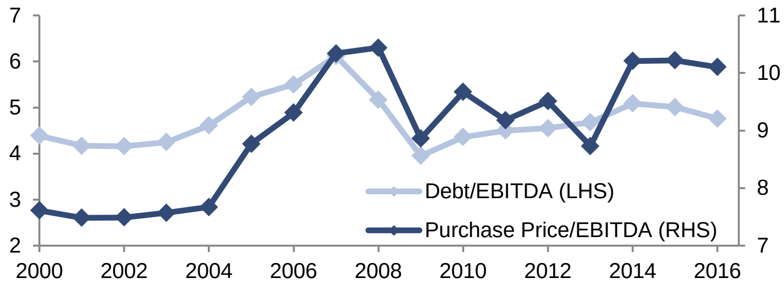
FUNDAMENTALS: Capital Raised and Invested in European PE Funds

2000–15 (June 30) • Euros (billions)



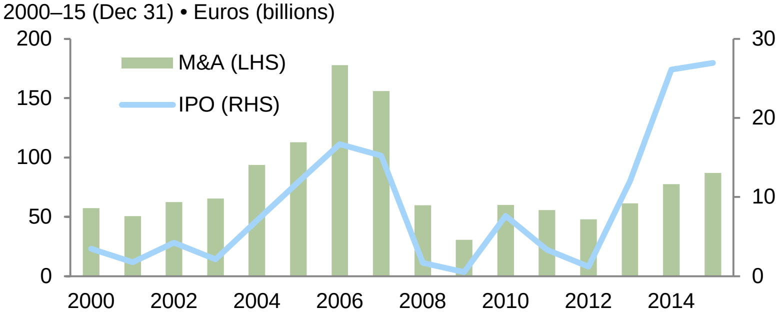
VALUATION: European PE Average Purchase Price and Debt Multiples

2000–15 (Jan 31)



FUNDAMENTALS: Exit Environment—European PE-Backed IPOs and M&A

2000–15 (Dec 31) • Euros (billions)



Sources: Dealogic, European Venture Capital Association, and Standard & Poor's LCD.

Advice: Very selectively commit to top-quality managers

Favor growth equity and small-/mid-cap buyouts over large-cap buyouts

Despite decreased new commitments to private equity funds, elevated leverage levels and increasing asset valuations have led us to keep Western European non-venture private equity at very overvalued. We believe manager selection is largely a bottom-up exercise, particularly in today's market environment, where some managers are deploying capital at less attractive entry levels.

- Although the fund-raising pace picked up in Q2 2015 with €8.2 billion raised, the €13.5 billion raised in the first half of the year was the lowest amount raised in the last three years. It was 17% lower than the amount raised in the first half of 2014.

- Investment activity slowed down in Q2 2015 with €6.2 billion invested in the quarter, down from €10.7 billion in the previous quarter. The total amount invested in the first half of 2015 was 7% lower than the first half of 2014 but 19% higher than the corresponding period in 2013. Many of the transactions remain sponsor-to-sponsor buyouts, with significant leverage putting upward pressure on deal valuations.

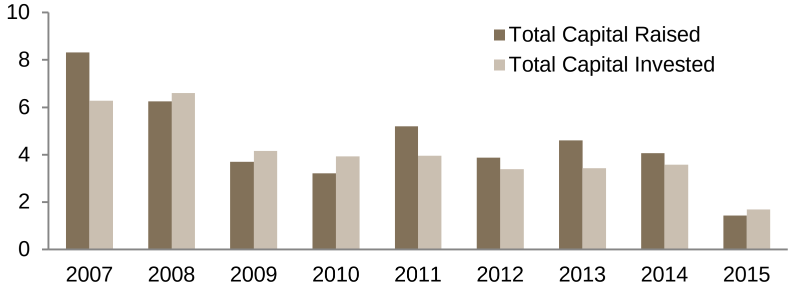
- The pricing developments observed in 2014 were maintained in 2015. Leverage was cheap, accessible, and typically packaged with loose covenants. The 5.0 times average debt/EBITDA level as of December 2015 was just below the 5.1 times average for 2014, the highest since 2008. Equity contributions to LBOs remained unchanged from the 2014 average of 41%, significantly higher than the 33% average between 2000 and 2007. As of December 2015, the average trailing 12-month purchase price multiple for transactions of €500 million or more was 10.2 times EBITDA, just above the 2006–08 average of 10.0 times (including fees and expenses).

- Following a strong Q4, €27.0 billion was raised through private equity-backed IPOs during 2015, the highest for any calendar year since records began in 1995. This continued on from the €26.1 billion raised in 2014, and was over 60% higher than what was recorded in the prior peak year, 2006.

European Venture Capital (Fairly Valued)

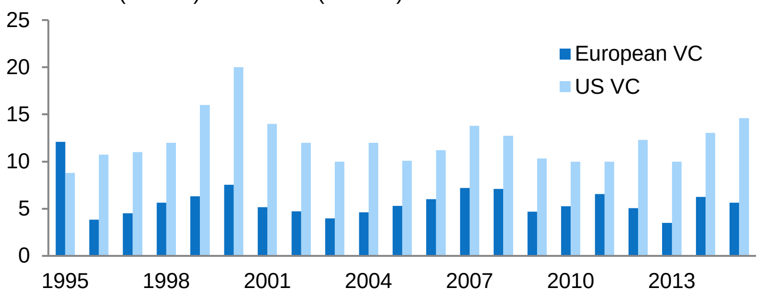
FUNDAMENTALS: Capital Raised and Invested in European Venture Funds

2007–15 (June 30) • Euros (billions)



VALUATION: Median First Round Valuations

1995–2015 (Dec 31) • US Dollar (millions)



Advice: Selectively commit to top-quality managers

Can offer a complement to US exposure; investment capacity limited

Pan-European venture capital valuations were stable during the first half of 2015. We are maintaining our outlook at fairly valued while we monitor this trend. We believe manager selection is largely a bottom-up exercise barring extreme market conditions, which are not present today.

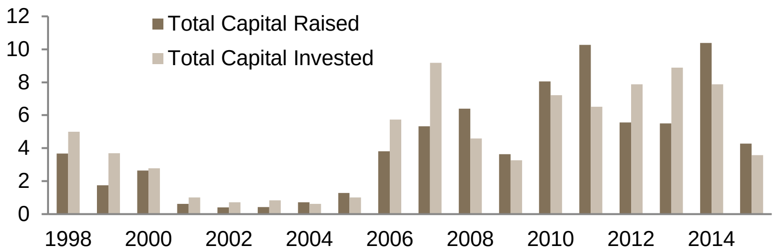
- While early- and late-stage valuations had been at reasonable levels for all but the most sought-out deals up to 2013, valuations increased during 2014. Dow Jones VentureSource showed a sharp increase in the median first round valuation to $6.3 million in 2014, the highest since 2011. Valuations dropped back slightly in 2015, but remained high at $5.8 million. We are continuing to monitor developments closely.
- Fund raising slowed down during the first half of 2015 with €1.4 billion raised, following an active 2014 in which €4.0 billion was raised. According to the European Private Equity and Venture Capital Association, the €0.7 billion raised in the second quarter was approximately 50% lower than second quarter 2014, and the smallest amount of capital raised during a first half of year since 2007.
- The €1.7 billion invested during the first half of 2015 was also the smallest amount of capital raised during a first half of year since 2007.

Sources: Dow Jones VentureSource and European Venture Capital Association.

Latin American Private Equity (Fairly Valued)

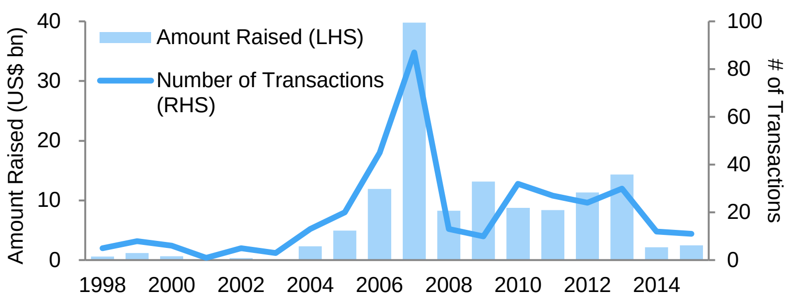
FUNDAMENTALS: Capital Raised and Invested in Latin America/Caribbean Private Equity Funds

1998–2015 (Jun 30) • US Dollar (billions)



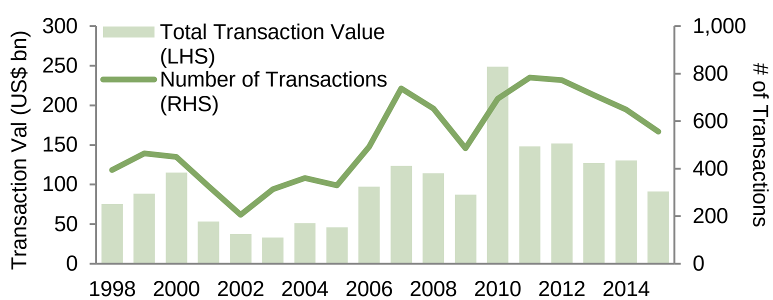
FUNDAMENTALS: Exit Environment—Latin America/Caribbean IPOs

1998–2015 (Dec 31)



FUNDAMENTALS: Exit Environment—Latin America/Caribbean M&A

1998–2015 (Dec 31)



Sources: Dealogic and Latin American Private Equity & Venture Capital Association.

Advice: Selectively commit to top-quality managers

Favor growth equity and small-/mid-cap buyouts over large-cap buyouts

Select opportunities exist in Latin America, with growth strategies and small-/mid-cap buyouts more attractive than large-cap buyout strategies for new commitments. We believe manager selection is largely a bottom-up exercise barring extreme market conditions, which are not present today.

- After reaching a record high of $10.4 billon in 2014, fund raising for Latin America–dedicated private equity and venture capital funds maintained momentum in the first half of 2015, raising $4.3 billion, as reported by the Latin American Venture Capital and Private Equity Association (LAVCA). The capital was committed through 23 fund closings, which while in line with 2014, continued to be markedly less concentrated than in earlier years, indicating that the universe of PE and VC funds dedicated to the region continues to expand.

- The fund-raising environment continues to be dominated by Brazil, and in the first half of 2015, Brazil-dedicated funds accounted for 56% of capital raised for Latin America. The remaining capital was raised primarily by pan-regional funds.

- Private equity investment activity in Latin America in the first half of 2015 increased 39% compared to the same period last year in terms of capital invested. Brazil was Latin America's most active market, as private equity firms took advantage of improving valuations amid the adverse economic environment. Outside Brazil, Mexico was the second most dynamic market, accounting for roughly 27% of total capital invested in the region.

- The M&A exit environment in Latin America has slowed down relative to 2014. IPO activity, historically driven by Brazil, has been picking up compared to 2014, but it continued to be very slow. The exit environment in Colombia, Mexico, and Peru is growing, although IPOs still remain limited.

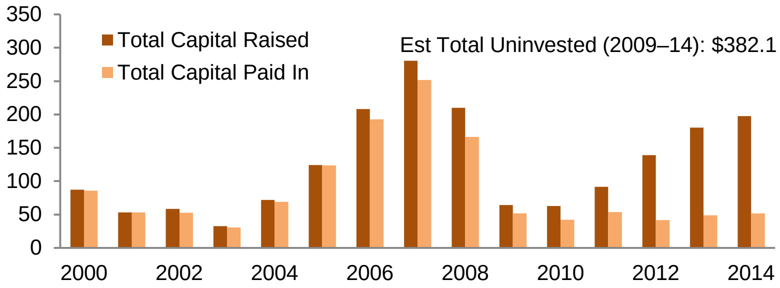
- Venture capital activity continued to grow, and investors deployed $264 million in the first half of 2015 through 71 transactions, a 53% increase in terms of capital invested versus the same period in 2014.

US Private Equity (Very Overvalued)

Very overvalued since June 2014

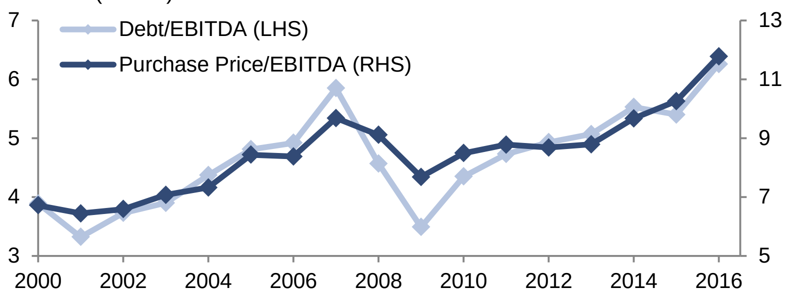
FUNDAMENTALS: US Private Equity Estimated Overhang

2000–14 • As of June 30, 2015 • US Dollar (billions)



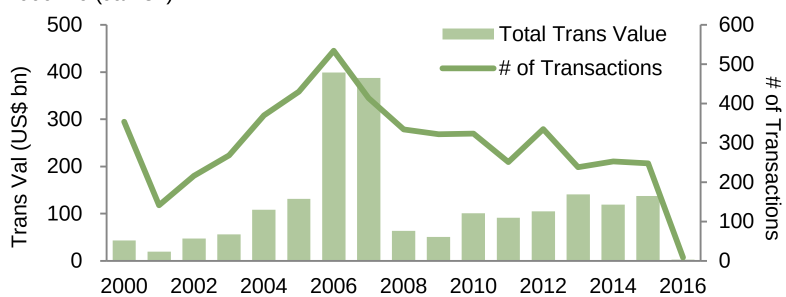
VALUATION: US PE Average Purchase Price and Debt Multiple

2000–15 (Jan 31)



FUNDAMENTALS: Exit Environment—PE-Backed M&A

2000–16 (Jan 31)



Sources: Cambridge Associates LLC Private Investments Database, Dealogic, *The Private Equity Analyst*, and Standard & Poor's LCD.

Advice: Very selectively commit to top-quality managers

Favor growth equity and small-cap buyouts over mid-/large-cap buyouts

Cheap debt availability has pushed leverage multiples higher; PPMs remain above average. As interest rates rise, tighter credit markets could inhibit exits/new investment activity and increase financing costs for existing portfolio companies. Current exposures should be monitored regarding capital deployed by managers.

- According to Dealogic, data through 2015 saw a decreased level of LBO activity, with 248 US LBOs totaling $137.2 billion, compared to 253 deals totaling $118.9 billion for the same time period in 2014.
- Deal valuations have increased for the lower middle market in 2016, though the sample size remains small as the year has just begun. S&P reports that through January, no deals with enterprise values between $250 million and $499 had been completed. For the three-month period ending January 31, 2016, there were 3 deals in the same size range with an average PPM of 9.8, slightly higher than the 9.5x EBITDA value for the 22 deals seen in 2015.
- There have been 5 deals above $500 million through January, with an average PPM of 11.8, slightly higher than the 10.5x EBITDA value for the 86 deals seen throughout 2015. For the three-month period ending January 31, 2016, there were 9 deals in the same size range with an average PPM of 11.5.
- The average leverage multiple for middle market LBO transactions through December was 5.3 times EBITDA, equal to 2014's 5.3, which was the highest level seen since 2007. For the three-month period ending December 31, 2015, the average leverage multiple was 5.1. The average equity contribution year-to-date through December is 44.7%, above 2014's 40.4% but slightly below 2013's 45.6%.
- End-to-end pooled returns in private equity funds were -1.4% in third quarter 2015, according to the Cambridge Associates LLC US Private Equity Index®. PE funds returned 6.2% in the four quarters ending September 2015, while the three- and five-year annualized end-to-end returns were 14.3% and 14.8%, respectively.

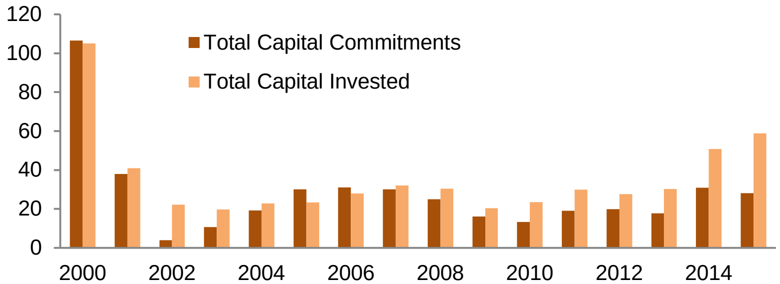
Cambridge Associates' February 2016 Asset Class Views

US Venture Capital (Overvalued)

Overvalued since September 2014; Very Overvalued (Late Stage); Overvalued (Expansion Stage); and Fairly Valued (Early Stage)

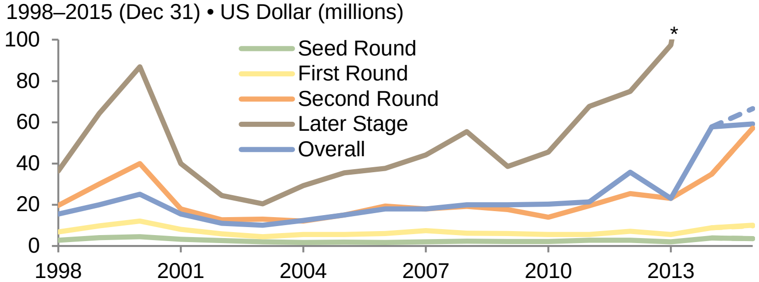
FUNDAMENTALS: US Venture Capital Commitments and Investments

2000–15 (Dec 31) • US Dollar (billions)



VALUATION: Median Pre-Money Valuations by Stage, All Sectors

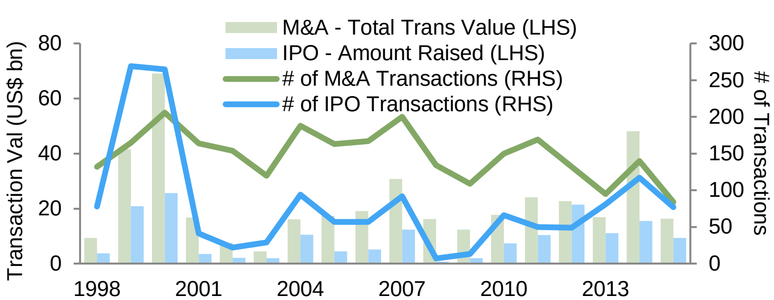
1998–2015 (Dec 31) • US Dollar (millions)



* Scale capped at 100 (later stage reached $400.0 in 2015).

FUNDAMENTALS: Exit Environment—US Venture-Backed IPOs and M&A

1998–2015 (Dec 31)



Sources: Cambridge Associates LLC, Dow Jones VentureSource, National Venture Capital Association, PricewaterhouseCoopers, and Thomson Reuters.

Advice: Selectively commit to top-quality managers

Any new commitments to expansion and late stage should be made selectively

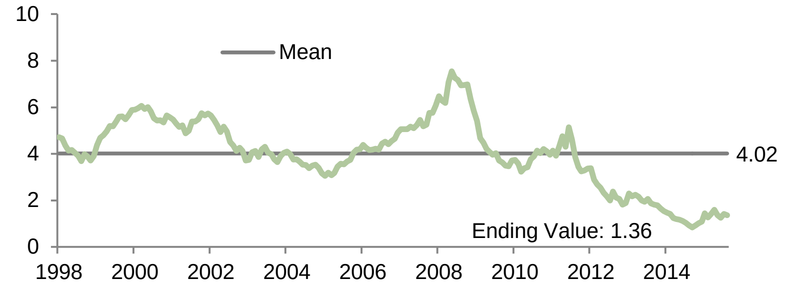
Venture capital deal valuations have reached record levels, driven up by investment levels that have reached their highest point since 2000. We believe manager selection is largely a bottom-up exercise barring extreme market conditions, which are not present today.

- In Q4, 46 venture funds raised $5.0 bn, an increase from the $4.6 bn raised in the third quarter. For the 12 months ending Q4 2015, 235 funds raised $28.2 bn, representing a decrease in the number of funds raised by 13% and a 9% decrease in dollars raised from the prior 12-month period.
- For the eighth straight quarter, firms invested over $10 bn in companies, with $11.3 bn invested in 962 deals. Software deals led, with $4.5 bn invested in 369 deals, followed by biotech, with $1.5 bn invested in 95 deals. For the 12 months ending Q4 2015, firms invested $58.8 bn in 4,380 deals, a 16% increase in invested capital from the prior 12-month period.
- Valuations for the year 2015 closed at $59.1 million, a historic high, up from $43.3 million in 2014. This increase was driven primarily by the surge in late stage valuations in 2015 to $400.0 million, up from $205 million in 2014.
- IPO activity was muted in Q4, with 16 IPOs raising $2.2 bn; M&A fared slightly better, with 26 deals with disclosed values totaling $3.6 bn. The quarter's IPO activity was led by enterprise software company Atlassian ($531 million raised) and storage company Pure Storage ($488 million). In the trailing 12-month period, 77 IPOs raised $9.4 bn, a 40% drop in dollars raised and a 34% decrease in number of IPOs from the 12 months ending Q4 2014. The last 12 months saw 84 M&A deals with aggregate value of $16.3 bn, a 40% drop in deal number and a 66% decrease in value from the 12 months ending Q4 2014; however, Facebook's $19 billion acquisition of WhatsApp in October 2014 skewed this data.

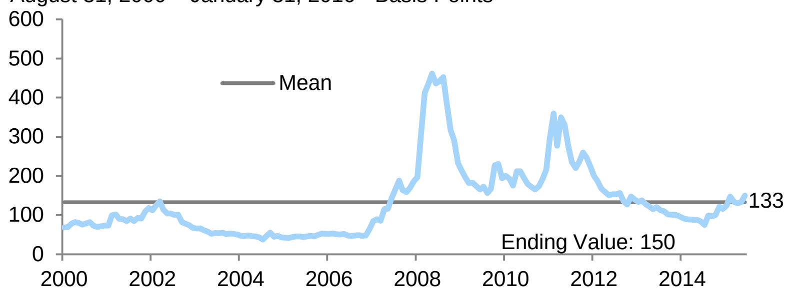
Euro-Denominated Credits (Very Overvalued)

Very overvalued since September 2012

ABSOLUTE VALUATION: Yield on European Corporates
June 30, 1998 – January 31, 2016 • Percent (%)



RELATIVE VALUATION: Option-Adjusted Spread on European Corporates
August 31, 2000 – January 31, 2016 • Basis Points



Advice: Underweight

Low yields will cap future returns; allocate to diversifiers with better return potential

Euro-denominated credit yields just 1.36% and is vulnerable under a number of scenarios.

- European credit yields fell 6 bps in January, with the index returning 0.6%. Investors should continue to keep a close eye on this space (or better—stay away) given the dangers inherent in buying bonds with vanishingly low yields.
- In contrast to sovereign yields, corporates of course do not enjoy an explicit central bank backstop; while the European Central Bank might prefer corporate yields stay low, it has fewer options to intervene directly in this market. Indeed, while spreads are in line with their post-2000 average, this should be taken with a large grain of salt due to the extremely low level of sovereign yields.
- Issuance, meanwhile, is off to a very slow start in 2016; early indications are that it was the worst beginning to a year in more than a decade.

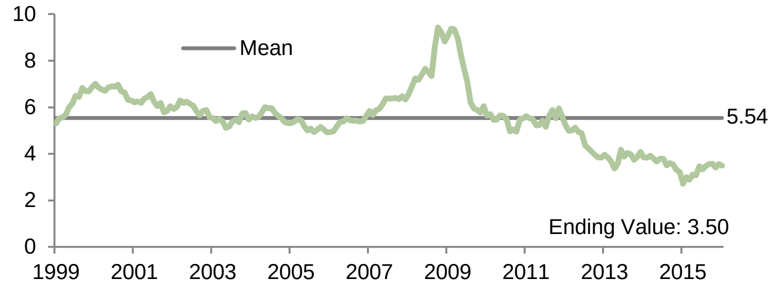
Source: Barclays.

UK Sterling-Denominated Credits (Overvalued)

Overvalued since April 2012

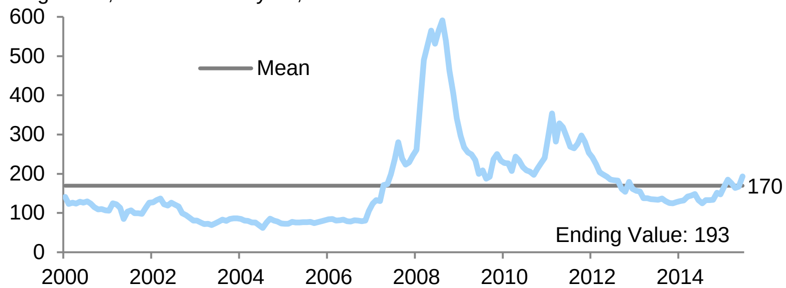
ABSOLUTE VALUATION: Yield on Sterling Corporates

January 31, 1999 – January 31, 2016 • Percent (%)



RELATIVE VALUATION: Option-Adjusted Spread on Sterling Corporates

August 31, 2000 – January 31, 2016 • Basis Points



Advice: Underweight

Low yields cap upside potential, but yields and spreads are in line with other developed markets

Sterling corporate bond yields remain close to all-time lows, putting them right in line with much of the rest of the world.

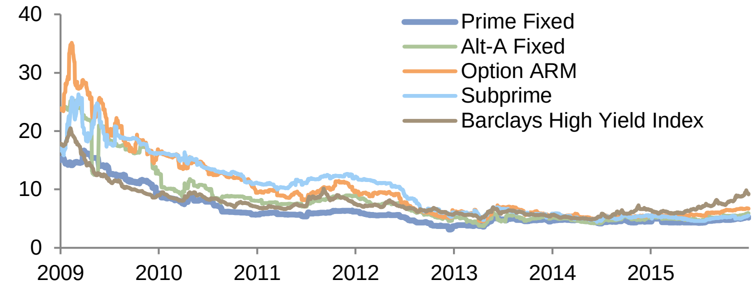
- Sterling-denominated credit rallied in January, with the index returning 0.9% as yields fell 7 bps.
- The index yield of 3.50% remains far below its long-term average, and while spreads over government bonds are in line with their post-2000 average, this should be viewed skeptically given very low gilt yields. Such yields and spreads are also in line with those in most of the developed world.
- At nearly eight years, the duration of the sterling corporate bond index is much higher than the roughly five-year duration of euro-denominated credits, and as such its returns are more sensitive to rate movements.

Source: Barclays.

Structured Finance

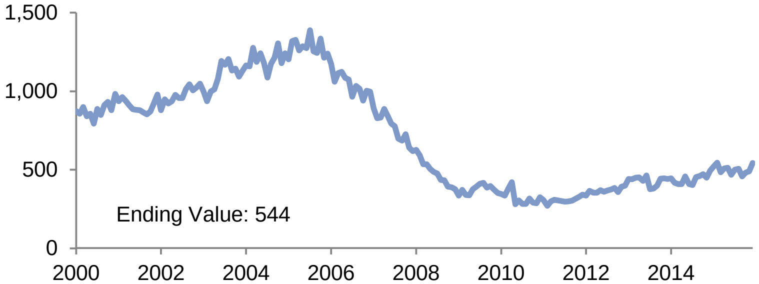
VALUATION: Model Yields for Non-Agency RMBS

January 31, 1990 – January 31, 2016 • Percent (%)



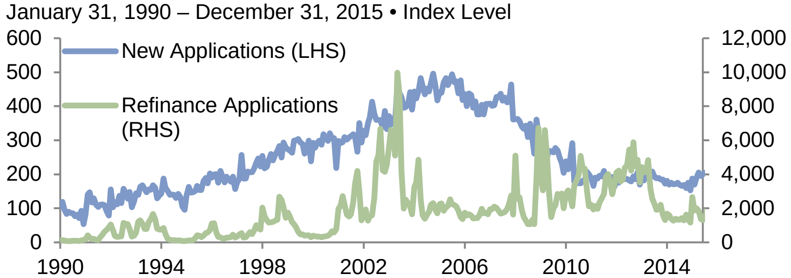
FUNDAMENTALS: US New Home Sales

January 31, 1990 – December 31, 2015



FUNDAMENTALS: Mortgage Applications

January 31, 1990 – December 31, 2015 • Index Level



Sources: Barclays, Bloomberg L.P., J.P. Morgan Securities, Inc., National Association of Realtors, Thomson Reuters Datastream, and US Census Bureau.

Advice: Neutral

Challenges in finding attractively priced bonds require managers to consider more risk and leverage

Investors in structured credit continue to hold seasoned cash-flowing bonds, as they cannot easily replace the issues due to weak new issuance and muted institutional sales.

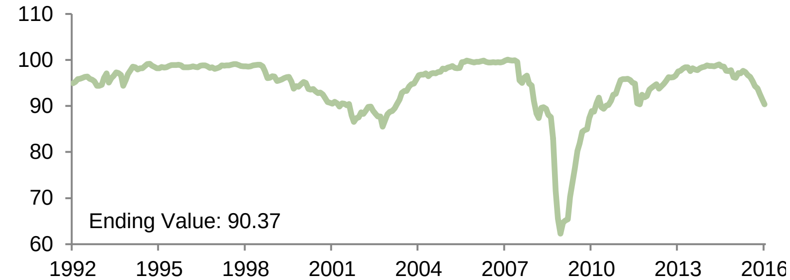
- Non-Agency bonds continue to benefit from improved housing fundamentals, a slowing of defaults, and limited new supply. Tighter inventory in many major markets is supporting prices, which have risen across most segments. Mortgage applications remain far below peak and even average levels over the past 25 years; while some of this owes to falling demand for refinancings, purchase applications also remain low relative to history despite low mortgage rates.
- Expanded government programs have provided relief for consumers while driving servicers to restructure more loans, but have done little to boost demand.
- Managers holding bonds with settlement and "put back" optionality have benefited from higher prices in recent months.
- New supply of non-Agency mortgages has been limited for the past several years, and the market is shrinking. Future securitizations are likely to have risk-sharing features that orient originators, investors, and servicers around higher-quality and more consistent underwriting standards.
- CMBS prices rallied in January, but could face tough sledding in the next several quarters as investors encounter a growing maturity wall.

Leveraged Loans (Overvalued)

Overvalued since September 2015

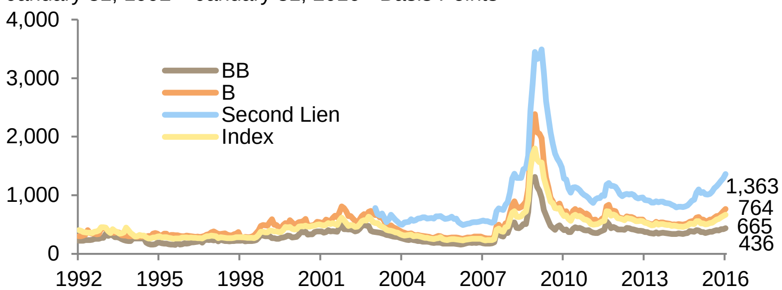
VALUATION: Bank Loan Price

January 31, 1992 – January 31, 2016 • US Dollar



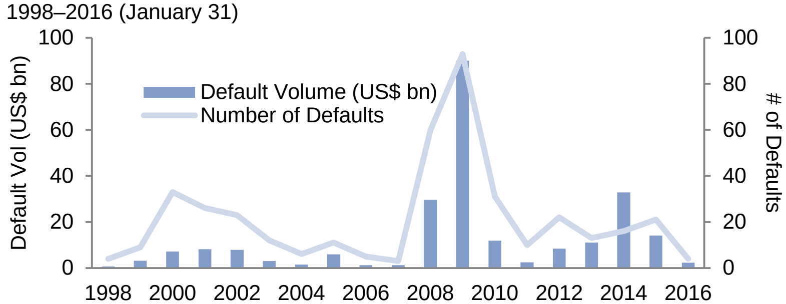
VALUATION: Discount Margin of CS Leveraged Loan Index

January 31, 1992 – January 31, 2016 • Basis Points



FUNDAMENTALS: Defaults by Volume and Number

1998–2016 (January 31)



Sources: Credit Suisse and J.P. Morgan Securities, Inc.

Advice: Underweight

Underweight within diversifying assets relative to hedge funds

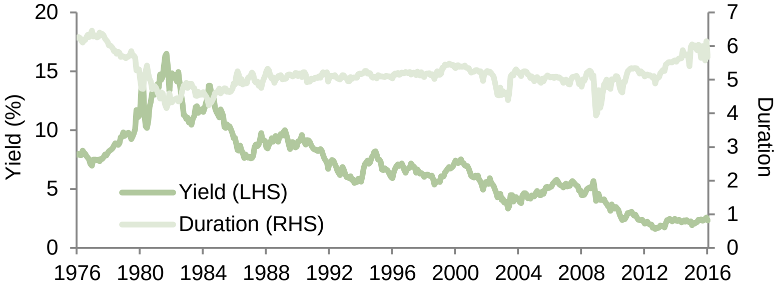
Leveraged loan prices have weakened off recent highs, due mainly to losses in energy issues, but remain elevated. Buyers at current levels have little margin of safety.

- US leveraged loan prices and discount margins remain unattractive, but have notably weakened in recent months. The discount margin for second-lien loans has risen by more than 350 bps since May, and by more than 550 bps since June 2014, while the margins for B and BB loans have risen by 206 bps and 72 bps, respectively, since May. We still consider the asset class overvalued, as risk outweighs potential reward, but recent price weakness has certainly improved this equation for current buyers.
- While some view leveraged loans as low risk/low reward, this is only true … until it is not. In 2008, for example, prices fell by more than one-third, with the discount margin soaring from 465 bps to 1,799 bps. Rising rates are also a double-edged sword for leveraged loan investors—they can increase coupons but also debt servicing costs, thus weakening credit quality.
- Compared to high-yield debt, leveraged loans offer the benefits of floating rate coupons, seniority in the capital structure, and only slightly lower yields. *However*, such positives are tempered by high prices, low absolute yields, and rising leverage.
- Further, several Wall Street firms have reportedly had trouble placing recent deals, with investors demanding steep discounts on newly issued debt.

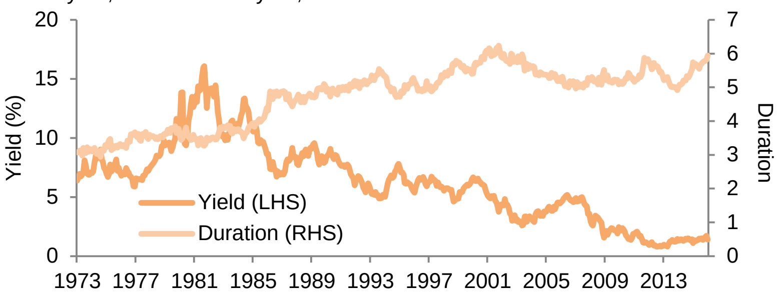
US Bonds (Overvalued)

Overvalued since July 2013

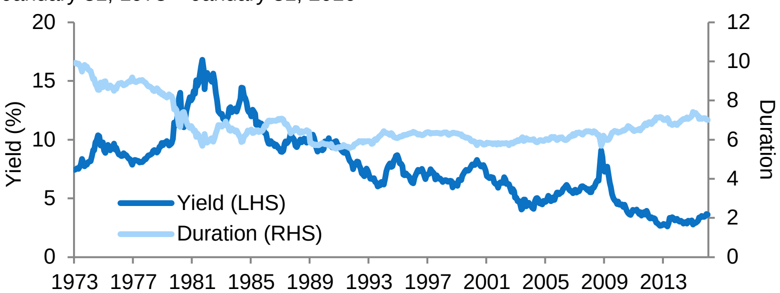
ABSOLUTE VALUATION: Barclays US Aggregate Bond Index
January 31, 1976 – January 31, 2016



ABSOLUTE VALUATION: Barclays US Treasury Bond Index
January 31, 1973 – January 31, 2016



ABSOLUTE VALUATION: Barclays Inv-Grade Corporate Bond Index
January 31, 1973 – January 31, 2016



Sources: Barclays and Thomson Reuters Datastream.

Advice: Underweight

Historically low yields limit deflation-hedging potential and expose investors to downside risks

Low coupons reduce the deflation-hedging potential of US bonds, but yields could fall further if economic growth falls short of estimates.

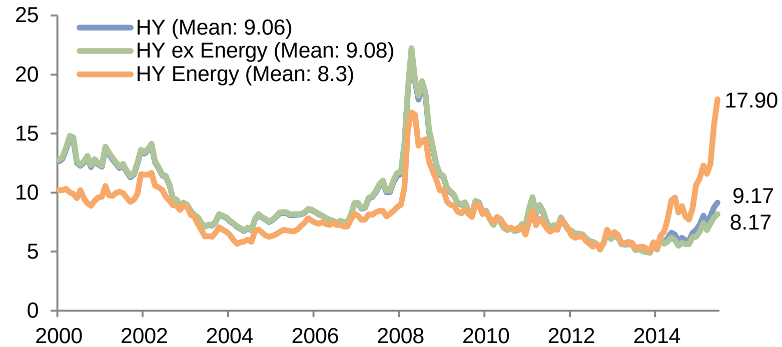
- Roughly 70% of the bonds in the Barclays US Aggregate Bond Index are either directly issued by the federal government or by federal housing agencies effectively guaranteed by the federal government; most of the remainder is investment-grade corporate bonds.
- As investors have sought the "safety and security" of stable income in recent years—and the economy has continued to limp along despite, or perhaps due to, enormous monetary stimulus—yields on US Treasuries, Agency residential mortgage–backed securities, and investment-grade bonds have compressed to near-historical lows.
- Yields have continued to trade in a tight range of late, ticking a bit higher around the Fed's long-anticipated December rate hike, then falling as markets shifted to "risk off" in January.

US High-Yield Bonds (Overvalued)

Overvalued since August 2015

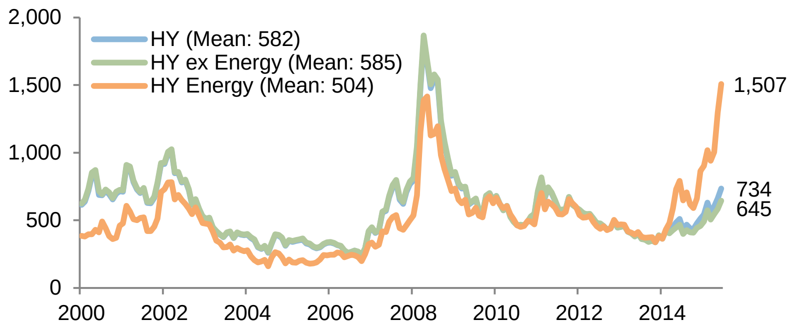
ABSOLUTE VALUATION: Yield on the Barclays US High Yield Index

August 1, 2000 – January 31, 2016 • Percent (%)



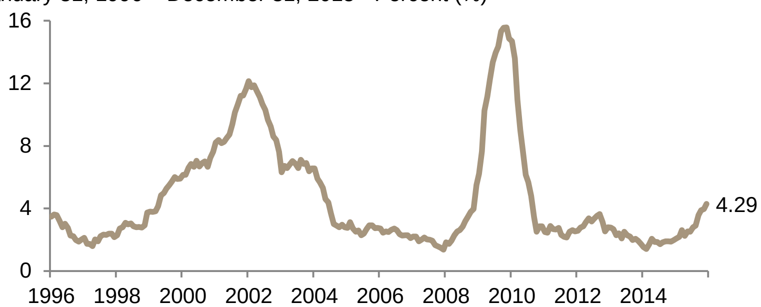
RELATIVE VALUATION: High-Yield Option-Adjusted Spread

August 1, 2000 – January 31, 2016 • Basis Points



FUNDAMENTALS: US High-Yield Trailing 12-Month Default Rate

January 31, 1996 – December 31, 2015 • Percent (%)



Sources: Barclays, Moody's Investors Service, and Thomson Reuters Datastream.

Advice: Underweight

The oil price drop and continued macro troubles could further roil the sector

Yields on high-yield bonds remain low relative to the risks shouldered by investors, and rising interest rates are a risk. While credit fundamentals are not overly stretched (yet), the plunge in oil prices has put enormous pressure on energy companies, and troubles in China as well as other regions are a growing concern.

- High-yield bond prices fell again in January, with yields rising 43 bps to 9.17%. Much of this remains concentrated in the energy sector, which makes up just over 10% of the universe—yields and spreads for energy company bonds are 17.90% and 1,507 bps, compared to 8.17% and 645 bps for HY ex energy. We also continue to worry about the liquidity mismatch in this asset class (daily liquidity for relatively illiquid assets) when investors look to sell.

- Current yields, while higher than in the recent past, still offer inadequate compensation given the risks of the rate or credit cycle turning. Default rates remain low as the easy money environment has enabled virtually all companies to roll over debt; however, they have begun to tick higher as issuance has dried up and oil prices have stayed low. The quality of recent deals has also been quite poor.

- A large percentage of US shale companies are unprofitable at current oil prices, but the dramatic sell-off in this sector has likely also created opportunities, as many investors appear to have adopted a "shoot first" approach.

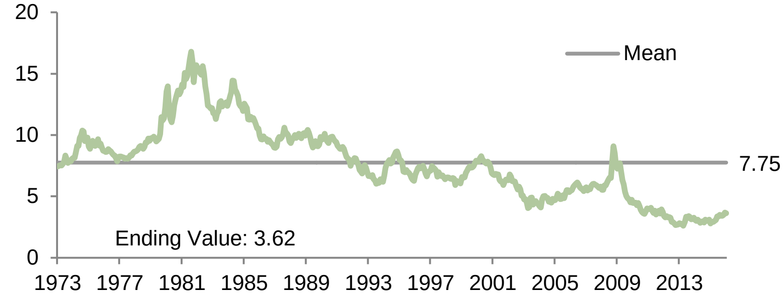
- Along similar lines, some managers are adding small long (and/or short) positions with challenged/stressed/even distressed companies, particularly in the energy sector and Europe, which they admit are likely to be early, and even lose them a little money. But in our opinion this is a sound strategy, as taking undersized positions gives them excellent information and perspective (and profit potential) on future market moves.

US Corporate Bonds (Overvalued)

Overvalued since July 2013

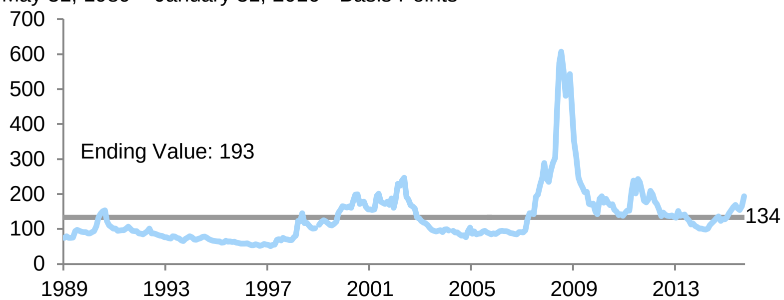
ABSOLUTE VALUATION: Yield on US Investment-Grade Corporates

January 31, 1973 – January 31, 2016 • Percent (%)



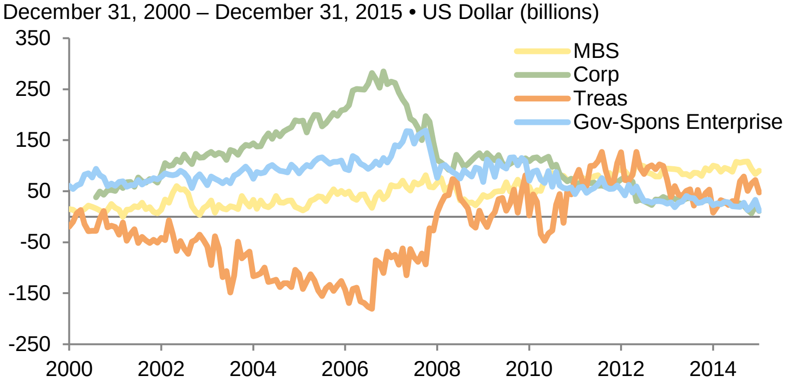
RELATIVE VALUATION: Corporate Option-Adjusted Spread

May 31, 1989 – January 31, 2016 • Basis Points



FUNDAMENTALS: US Dealer Inventories

December 31, 2000 – December 31, 2015 • US Dollar (billions)



Sources: Barclays, Federal Reserve, and Thomson Reuters Datastream.

Advice: Underweight

Little upside potential; could sell off if rates rise or macro conditions deteriorate

US investment-grade bonds are vulnerable to both rising interest rates and a weakening macro environment. While credit fundamentals remain sound, we would favor diversifying assets with greater upside potential.

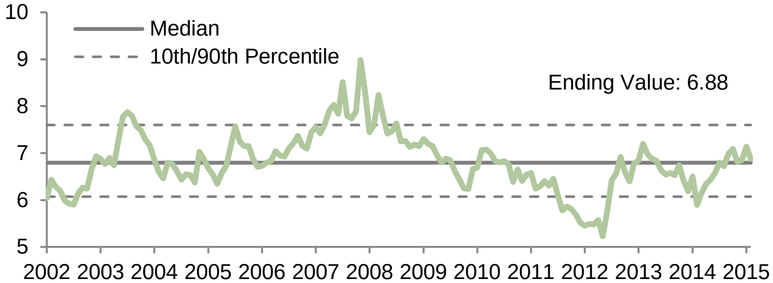
- Investment-grade bonds returned 0.4% in January, with yields ticking slightly lower. We continue to worry about the liquidity mismatch in this asset class (daily liquidity for relatively illiquid assets) as well as in high-yield bonds, as dealer inventories have plunged in recent years due mainly to new regulations.
- The 3.62% index yield remains within shouting distance of its April 2013 record low of 2.60%; while the current option-adjusted spread of 193 bps is above its historical average, this is due mainly to very low Treasury yields.
- Investment-grade bond issuance set its third consecutive record in 2015, with issuance of $1.23 trillion easily topping 2014's $1.13 trillion, and 2016 started strong, with $115 billion issued in January, $20 billion more than in January 2015.
- Companies are using cash for a variety of financial engineering projects—e.g., refinancing existing debt at more attractive rates, increasing leverage to boost returns for equity investors, and simply buying back stock—but few are employing it to ramp up capital expenditures.
- Defaults remain minimal, and while most believe this is unlikely to change unless and until the easy money environment changes, the rising threat of a US recession could upset this calculation.

Local Currency Emerging Markets Debt (Fairly Valued)

Fairly valued since August 2012

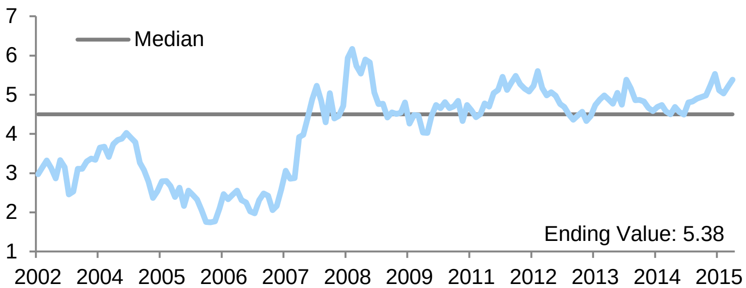
ABSOLUTE VALUATION: GBI-EM Global Div Nominal Yield

December 31, 2002 – January 31, 2016 • Nominal Yield (%)



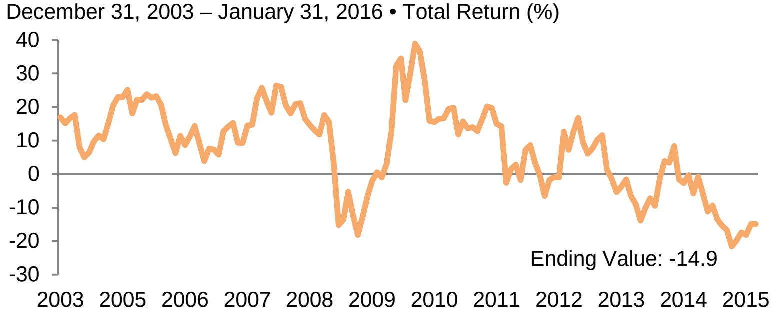
RELATIVE VALUATION: Nominal Yield Spread Over US Govt Bonds

December 31, 2002 – January 31, 2016 • Percentage Points



PERFORMANCE: 12-Month Total Return in US$ Terms

December 31, 2003 – January 31, 2016 • Total Return (%)



Sources: J.P. Morgan Securities, Inc. and Thomson Reuters Datastream.

Advice: Neutral

Concerns over EM currencies offset modestly attractive bond yields

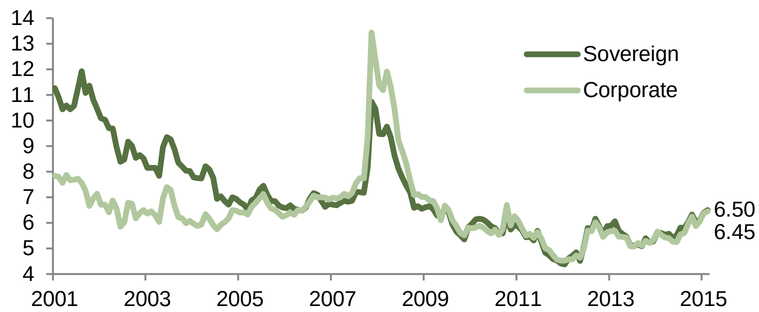
We remain cautious on EM local currency debt. Although yields remain high relative to most other fixed income segments, headwinds to EM currencies will remain a drag on returns. We still prefer active management in EM debt, especially managers with broad mandates across local and hard currency bonds.

- EM local currency bonds (as measured by the JPM GBI-EM Global Diversified Index) had a volatile January, at first selling off amid broader market turmoil, but ultimately yields rallied, to post a 1.6% return in local currency, modestly offsetting currency weakness.
- We view EM local currency bonds as fairly valued, given that index yields of 6.88% are in-line with their historical median. However, the index also offers a 538 bps spread over US Treasuries of similar maturity, which is high relative to history.
- While underlying bond yields appear attractive, we remain cautious on EM currencies. While we now view EM currencies as slightly undervalued, we expect continued headwinds given the backdrop of weak commodity prices and uncertainty over China and the RMB. Many of the largest constituents of the GBI-EM Global Diversified Index are commodity exporters and running current account deficits, leaving them vulnerable to rising rates.
- Still, given how oversold EM currencies are, a case could be made for a rebound in 2016, as was the case in 2009, 2012, and 2014. Yet it is too soon to expect a multi-year rally in the asset class, especially as yields are not yet undervalued. While we are neutral on EM local currency bonds as a "beta" exposure, we prefer active managers with broad mandates in both local and hard currency bonds, given the dispersion in underlying country, currency, and issuer fundamentals.

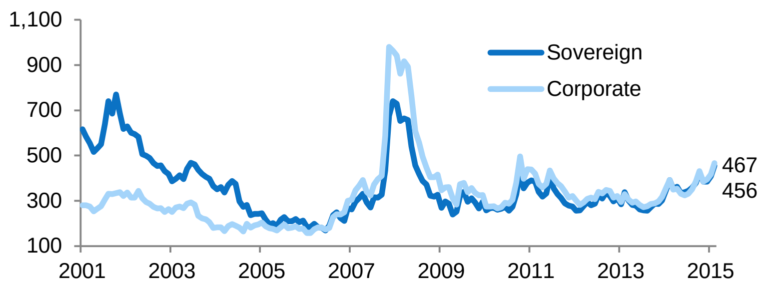
USD Denominated Emerging Markets Debt

Both corporate and sovereign debt are fairly valued

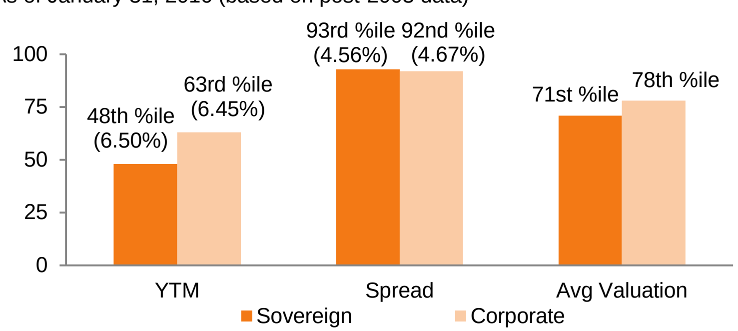
ABSOLUTE VALUATION: USD EM Debt Yields
December 31, 2001 – January 31, 2016 • Yield (%)



RELATIVE VALUATION: USD EM Debt Spread to US Treasuries
December 31, 2001 – January 31, 2016 • Basis Points



VALUATION: Percentile Rank for USD EM Debt
As of January 31, 2016 (based on post-2003 data)



Sources: Federal Reserve, J.P. Morgan Securities, Inc., and Thomson Reuters Datastream.

Advice: Neutral

Favor EM debt managers with broad mandates across local and hard currency bonds

We remain cautious on US$-denominated EM debt. Although yields are high relative to most other fixed income segments, the asset class is very sensitive to rising US rates and EM growth concerns. We still prefer active management in EM debt, especially managers with broad mandates across local and hard currency bonds.

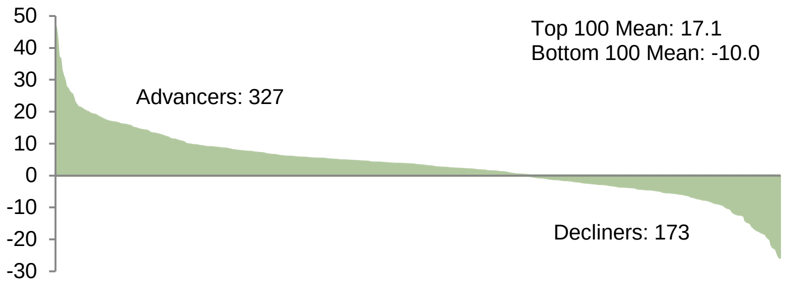
- US$-denominated EM sovereign and corporate bonds sold off in early January, although both segments rallied at the end of the month to post only small negative returns (as measured by the JPM EMBI Global Diversified and the CEMBI Diversified indexes).
- From a yield perspective, we consider both sovereign (6.50%) and corporate (6.45%) bonds as fairly valued, with yields near their post-2003 median. The higher yield of sovereign bonds reflects a slightly longer average maturity and duration of 10.5 and 6.7 years vs 8.5 and 5.8 years for corporates.
- Spreads vs matching US Treasuries are more attractive, with corporate bonds (467 bps) offering slightly more spread than sovereign (456 bps). Taking an average of yield and spread percentiles, sovereigns are still within our fair-value range (i.e., below the 75th percentile), while corporates are slightly above.
- Still, we are reluctant to consider US$-denominated EM debt undervalued. The issue today is the asset class's sensitivity to rising US rates and the risk of financial stress in emerging markets. Above-median spreads partly compensate for the former, but neither spreads nor yields provide a buffer to EM financial risks. Given the record amounts of EM debt issuance over the past few years, particularly in the corporate space and toward commodity producers, extra risk premiums seem in order.
- Overall, we remain cautious on US$-denominated EM debt, particularly the corporate sector. In general, we prefer EM debt managers with broad mandates across local and hard currency bonds, given the dispersion in underlying country, currency, and issuer fundamentals.

Long/Short Hedge Funds

We do not give a valuation to these strategies

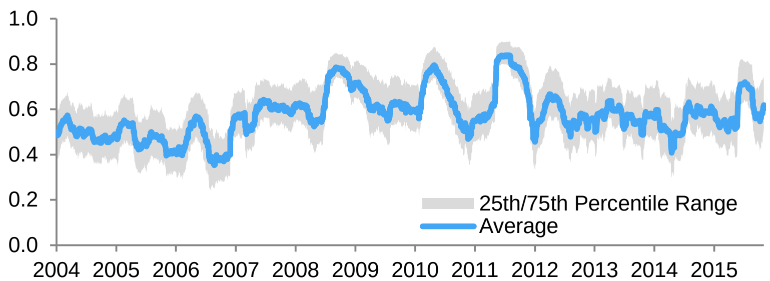
PERFORMANCE: Equity Dispersion for S&P 500 Trailing Three-Month Total Returns

As of January 31, 2016 • Percent (%)



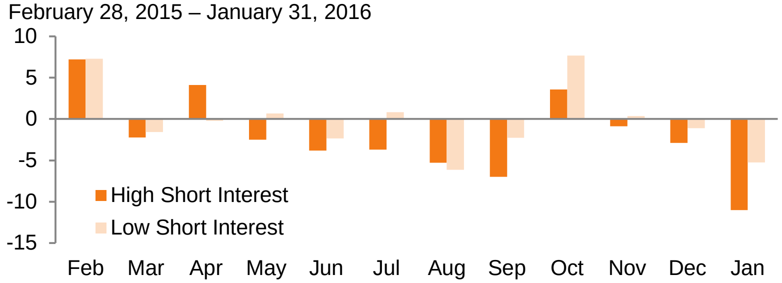
FUNDAMENTALS: 63-Day Average Correlation of S&P 500 Stocks

March 31, 2004 – January 31, 2016 • Percent (%)



PERFORMANCE: Monthly Returns for 50 Most Shorted vs the 50 Least Shorted Stocks in the S&P 500

February 28, 2015 – January 31, 2016



Sources: Bloomberg L.P., FactSet Research Systems, Standard & Poor's, and Thomson Reuters Datastream.

Advice: Neutral

Manager selection remains critical

Managers with demonstrated skill in fundamental security analysis and a robust portfolio management process and risk controls have outperformed both hedge fund and major market indexes over time.

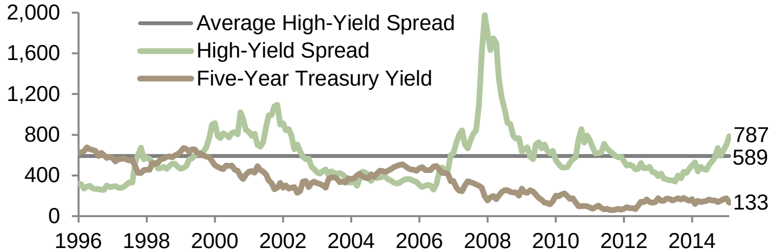
- Global equity markets sold off considerably in January, before rallying late in the month to finish down mid-single digits; long/short equity managers fared slightly better, but performance once again varied based on the strategy employed, exposure to various factors, sector tilts, or certain widely owned securities. The HFRI Equity Hedge (Total) Index lost 3.7% in January, while the S&P 500 and MSCI World indexes returned -5.0% and -6.0%, respectively.
- For the most part, managers remarked that performance held up relatively well particularly during the first half of the month thanks in part to strong short performance. The 50 most shorted stocks in the S&P 500 Index underperformed the 50 least shorted stocks by nearly 5.8% for the month. However, managers lamented that their long portfolios did not perform as well during the rally late in the month as breadth was alarmingly narrow. Managers remarked that the average stock's performance was much lower than that of cap-weighted indexes like the S&P 500 Index.
- Average correlations remained relatively steady in January and equity dispersion continues to suggest an improving stock-picking environment. However, managers highlighted several areas of weakness in January, namely that stocks widely held by hedge funds significantly underperformed broader indexes and that levered companies were being sold indiscriminately regardless of their proximity to debt maturities or their ability to generate sufficient cash flow to retire debt and buy back stock. For the most part, managers noted very little in terms of fundamental deterioration of portfolio holdings and many have maintained exposures amid the volatility including additions to high conviction positions.

Convertible Arbitrage (Fairly Valued)

Fairly valued since May 2009

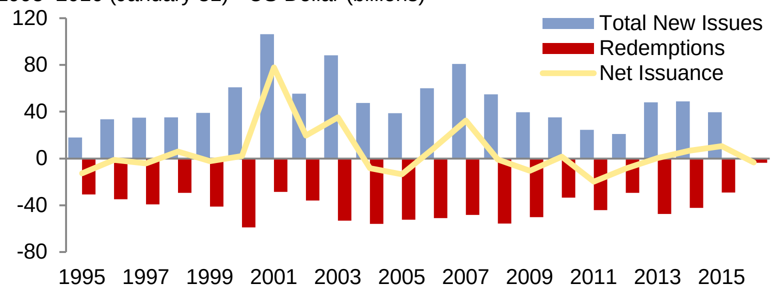
VALUATION: BofA Merrill Lynch High Yield Master II Bond Index: Spread Relative to Five-Year Treasury Bonds

December 31, 1996 – January 31, 2016 • Basis Points



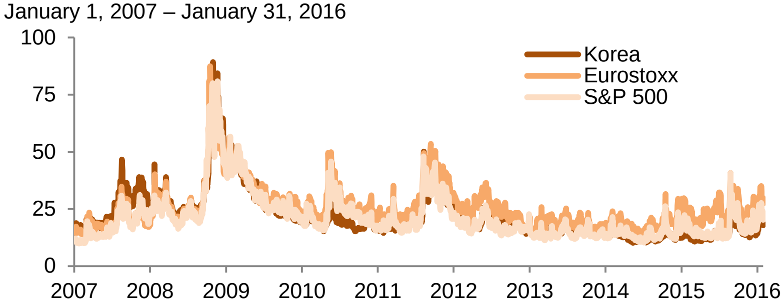
FUNDAMENTALS: US Convertible Bond Issuance

1995–2016 (January 31) • US Dollar (billions)



FUNDAMENTALS: Implied Volatility

January 1, 2007 – January 31, 2016



Sources: Barclays, Bloomberg L.P., BofA Merrill Lynch, BofA Merrill Lynch Convertible Research, and Thomson Reuters Datastream.

Advice: Neutral

Strategy is cyclical and may best be accessed via a flexible, multi-strategy mandate

Convertible bond strategies began 2016 like they ended 2015. Most convertible bond managers experienced losses during the period, but long-only strategies experienced larger drawdowns due to a lack of hedges. There was a single new issue in the US market during January.

- During the month, the Barclays US Convertible Bond Index lost 5.8% and the HFRX Relative Value: Fixed Income Convertible Arbitrage Index lost 1.8% as equity market declines significantly impacted convertible bond prices. A proxy for the equity of underlying convertible bond issuers was down over 11% in January while the S&P 500 (-5.0%) and the Russell 2000® (-8.8%) also posted losses, albeit to a lesser extent.
- Volatility remained somewhat elevated in January, which provided trading opportunities for arbitrageurs but negatively impacted new issuance. The month-ending VIX value settled at 20.20, up from December's final tally of 18.21, but reached as high as 27.59 on January 20.
- New US convertible bond issuance receded in January due to the sell-off in equities. According to Barclays, there was one new issue during the month–$300 million from pharmaceutical company Novavax, Inc. Last January, new convertible issuance in the United States reached $3.3 billion.

Event-Driven Investing (Fairly Valued)

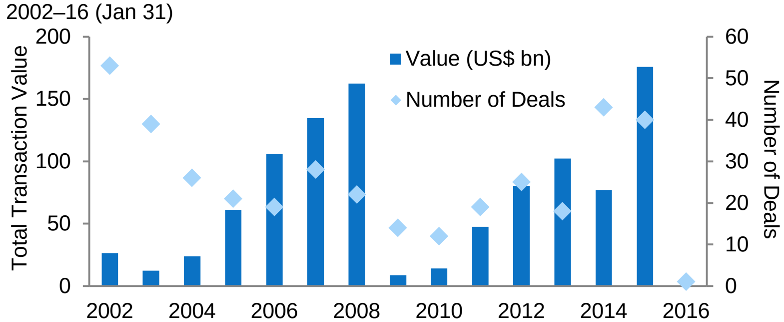
Fairly valued since June 2013

FUNDAMENTALS: Announced Global Merger & Acquisition Activity

2002–16 (Jan 31) • Deal Value (US$ trillions)

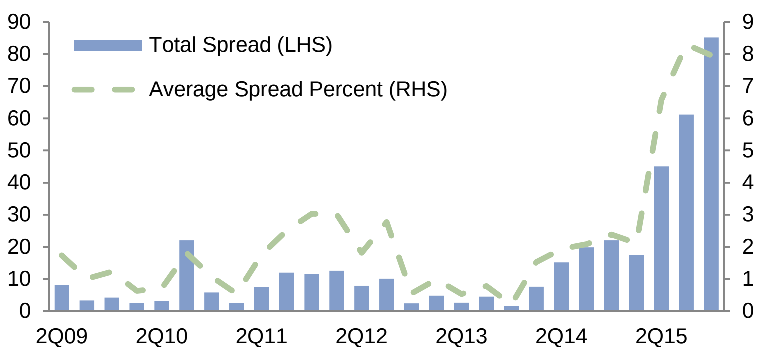
FUNDAMENTALS: US Spin-Offs

2002–16 (Jan 31)



FUNDAMENTALS: Historical Merger Arbitrage Spreads

Second Quarter 2009 – Fourth Quarter 2015 • US Dollars ($ billions)



Sources: Dealogic, Bloomberg, L.P., and Jefferies LLC

Advice: Neutral

The opportunity set may be improving

Merger spreads widened significantly in late 2015, reaching levels not seen in years, and in some cases, decades. Event-driven managers currently have a robust opportunity set in merger arbitrage and the ongoing disruption in credit may bring distressed opportunities later this year and into 2017.

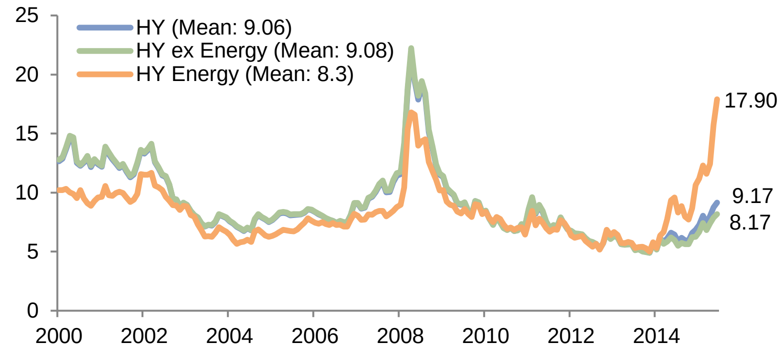
- After a disastrous year for the broader event-driven strategy, managers provided investors with some significant capital preservation during January's market rout. The Hedge Fund Research Event Driven (Total) Index lost 3.7% for the month, dramatically outperforming the Russell 2000®, MSCI World indexes, and S&P 500, which lost 8.8%, 6.0%, and 5.0%, respectively.
- After a record shattering 2015, global deal volume slowed in January as market volatility exploded. That being said, activity is still occurring, and there remains a large opportunity set of announced deals with wide spreads. Many deals are expected to close in the first half of 2016, providing options for managers to choose from.
- As long as value investing remains out of favor, as it did for much of 2015, event equities (i.e., not M&A equities) will remain a challenging space for managers to generate returns.
- Looking beyond equities, as turmoil in the credit markets continues, event-driven investors are also becoming excited at the prospect of another credit cycle, which has the opportunity to provide significant opportunities in distressed credit.
- Despite the modest optimism, many challenges remain for managers in the event-driven space. For many managers, 2015 was the second consecutive year of negative returns. As a result, organizational pressures are likely to increase, and those funds with weak capital bases may experience increased redemptions and/or potentially lose members of the investment team.

Distressed Investing: Non-Control (Overvalued)

Overvalued since June 2013

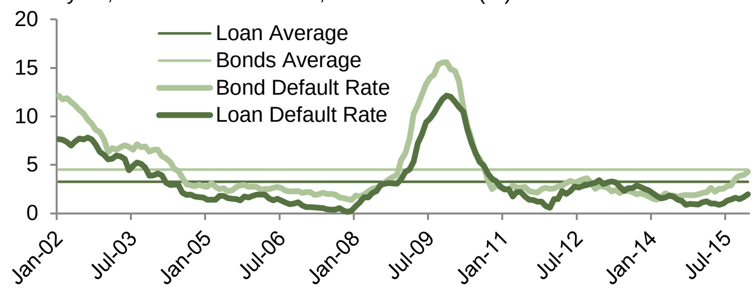
ABSOLUTE VALUATION: Yield on the Barclays US High Yield Index

August 1, 2000 – January 31, 2016 • Percent (%)



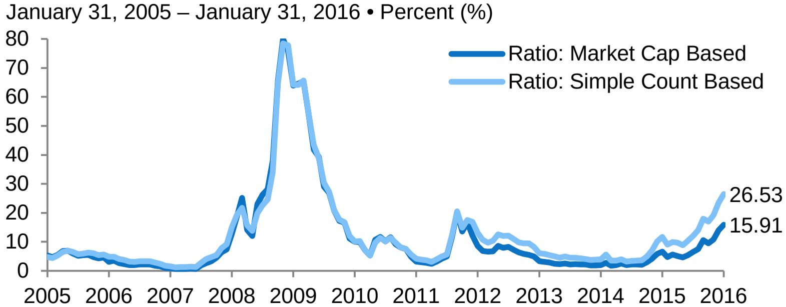
FUNDAMENTALS: US Default Rates

January 31, 2002 – December 31, 2015 • Percent (%)



FUNDAMENTALS: BofA ML High Yield Master II Index Distressed Ratio

January 31, 2005 – January 31, 2016 • Percent (%)



Sources: Barclays, BofA Merrill Lynch, Moody's Investors Service, and Thomson Reuters Datastream.

Advice: Underweight

For US distressed, a low-conviction view to underweight

The opportunity in large defaulted credit is limited. Managers appear to be selling into strength and holding cash. Middle-market distressed credit is most compelling, but investors must accept less liquidity. The plunge in oil prices has the potential to create new opportunities, but for now most managers are taking a "wait and see" approach.

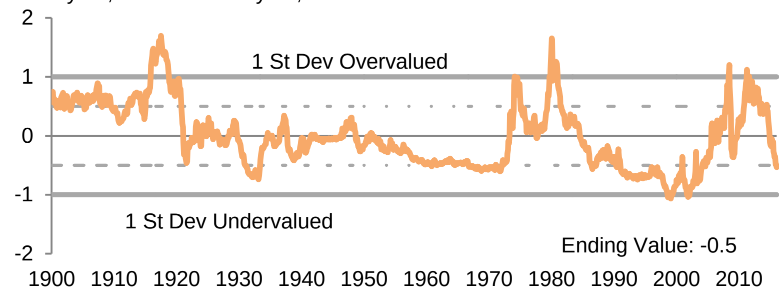
- We believe stressed/distressed credit is overvalued. Distressed credit managers have over the past few years seen more opportunities in Europe than the United States, but some are starting to shift their focus back toward the United States, at least on the margin.
- There are pockets of value including corporates, small balance loans, and real estate, but access to these markets is challenging without local sourcing relationships and jurisdictional knowledge. Further, liquidity is often thin, making it difficult to build/exit positions.
- Defaults remain low thanks to the easy money environment that has allowed just about any company to roll over debt; one result of this is a sharply reduced opportunity set for distressed managers. That said, some managers are adding small long (and/or short) positions with challenged/stressed/even distressed companies, particularly in the energy sector and Europe, which they admit are likely to be early, and even lose them a little money. But in our opinion this is a sound strategy, as taking undersized positions gives them excellent information and perspective (and profit potential) on future market moves.
- While yields and spreads have risen appreciably in the high-yield market, this has so far been concentrated in the energy market, and opportunities outside this area remain scarce.

Real Assets and Inflation-Linked Bonds

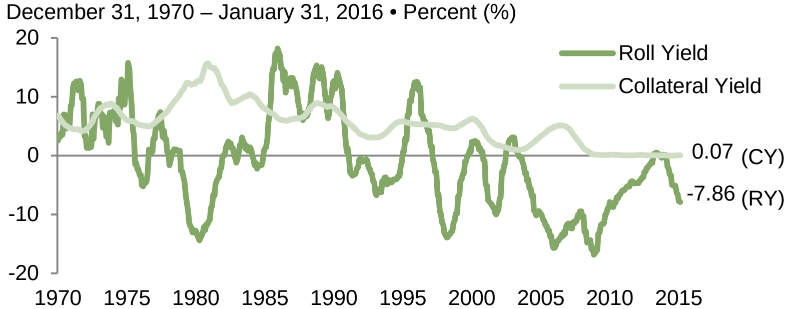
Commodities (Fairly Valued)

Fairly valued since November 2014

VALUATION: Commodity Basket Spot Price
January 31, 1900 – January 31, 2016 • Z-Score



FUNDAMENTALS: Trailing 12-Month Roll and Collateral Yield
December 31, 1970 – January 31, 2016 • Percent (%)



Sources: Bloomberg L.P., Cambridge Associates LLC, Global Financial Data, Inc., and Thomson Reuters Datastream.

Advice: Underweight

Opportunistic investment that does not currently look attractive versus other diversifying assets

We view commodities as fairly valued, noting market participants seem to remain highly uncertain about supply/demand factors. Spot prices have moved below long-term, inflation-adjusted average levels; however, we continue to recommend underweights given near-zero collateral yields and negative roll yields.

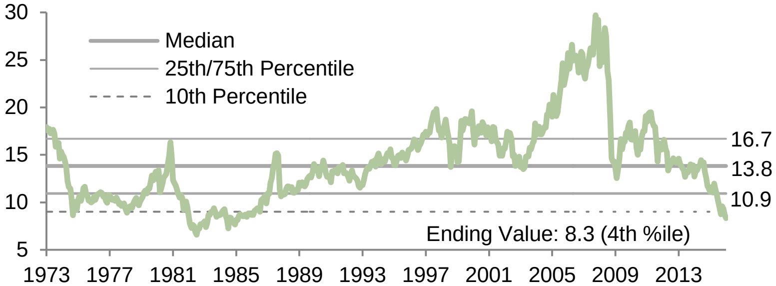
- Following an extended decline in commodity spot prices, our diversified basket is 0.5 standard deviation below its long-term, inflation-adjusted average level. Over one-third of the commodities in our basket are below their 2008–09 trough levels on an inflation-adjusted basis.
- The roll yield (the ongoing impact of rolling from a near-expiration futures contract to the next monthly contract) on a trailing 12-month basis is negative, with many individual commodities trading in contango.
- The cash collateral yield, which over the past four decades has been the largest return contributor for the S&P GSCI™ and Bloomberg indexes, has been negligible for around seven years. US-based commodity futures investors could begin to finally harvest meaningful collateral yields if the Federal Reserve boosts policy rates.
- The "commodity supercycle" appears to have ended. The moderation of global growth and the slowing pace of Chinese infrastructure and property development continues to pressure demand for some commodities. Technological drilling enhancements have pushed up the supply of oil & gas. Meanwhile, successive years of elevated commodity prices have spurred planting of certain agricultural crops and significant investment in productive capacity for some commodities such as metals.

Natural Resources Equities (Undervalued)

Undervalued since November 2015

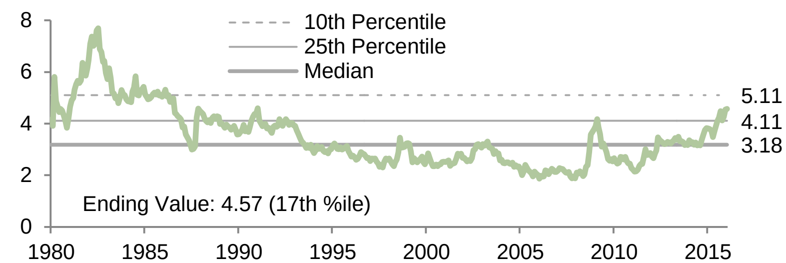
ABSOLUTE VALUATION: Composite Normalized P/E for Nat Res Equities

January 31, 1973 – January 31, 2016



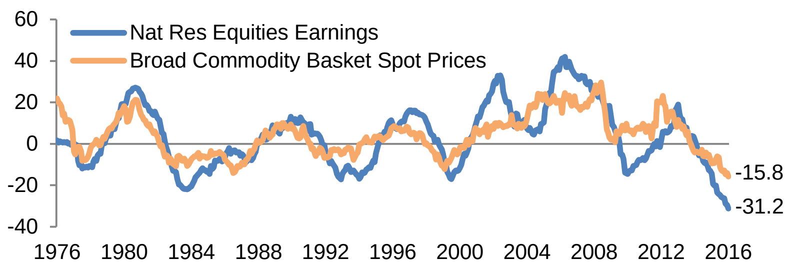
ABSOLUTE VALUATION: Natural Resources Equities Dividend Yield

January 31,1980 - January 31, 2016 • Percent (%)



FUNDAMENTALS: Real Three-Year AACR of Commodity Spot Prices vs Natural Resources Equities Earnings

January 31, 1976 – January 31, 2016 • Percent (%)



Sources: Cambridge Associates LLC, Global Financial Data, Inc., and Thomson Reuters Datastream.

Advice: Overweight relative to commodities

Attractive valuations, but earnings remain vulnerable as commodity prices continue their fall

We regard natural resources equities as undervalued and continue to view this asset class as attractive relative to commodity futures. Valuations for both energy and mining stocks are appealing versus their history and versus the broader equity set, although such discrepancies can persist for extended periods.

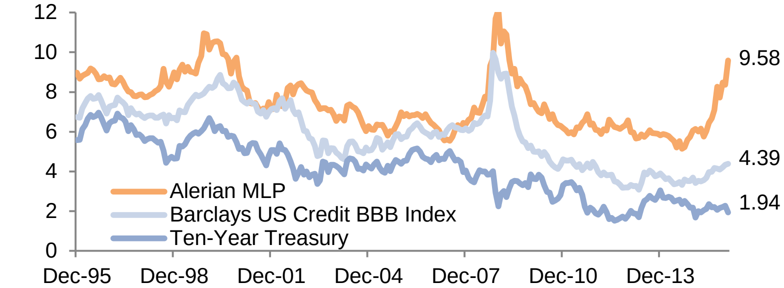
- A diversified basket of these firms trades at 8.3 times our composite normalized earnings and offers a dividend yield of 4.57%, which rank in the 4th and 17th percentiles of month-end observations, respectively.
- While our valuation metrics rely on normalized earnings assumptions that partially incorporate the recent commodity boom (which saw nominal earnings compound at a 17% clip during the ten years that ended in 2012), reported real earnings have collapsed. The decline has been by more than half from peak levels, and further declines are possible.
- Although oil prices likely fell enough to shrink production over time and balance today's robust supply with demand, low prices for a sustained period could sharply impact reserve values for energy producers. The mining sector is also particularly vulnerable to Chinese growth expectations. China consumes roughly 40% to 50% of the world's supply of key commodities including aluminum, coal, copper, and steel, and the country's slower growth trajectory may be secular rather than cyclical.
- Natural resources equities offer commodity exposure with fewer implementation headwinds than commodity futures markets and, given today's attractive valuations, could replace some commodities exposure for investors with inflation-sensitive allocations. Natural resources will likely hold up better than broad equities during an inflation spike, but they will tend to track broad equity markets more closely than either commodity indexes or inflation.

Energy Master Limited Partnerships (Undervalued)

Undervalued since August 2015

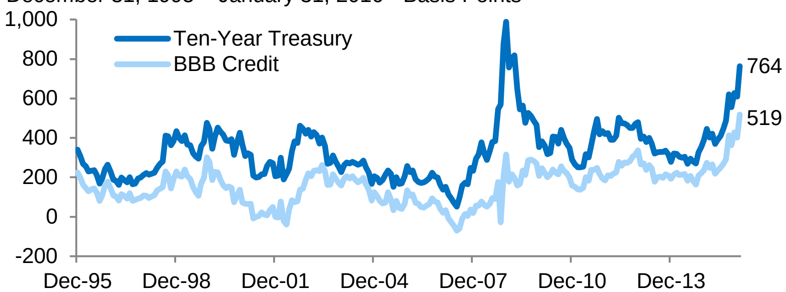
ABSOLUTE VALUATION: MLP Yields and Bond Yields

December 31, 1995 – January 31, 2016 • Percent (%)



RELATIVE VALUATION: MLP Spreads

December 31, 1995 – January 31, 2016 • Basis Points



Sources: Alerian, Barclays, and Thomson Reuters Datastream.

Advice: Overweight

Robust tax-advantaged yields are appealing; persistently low energy prices would be a concern

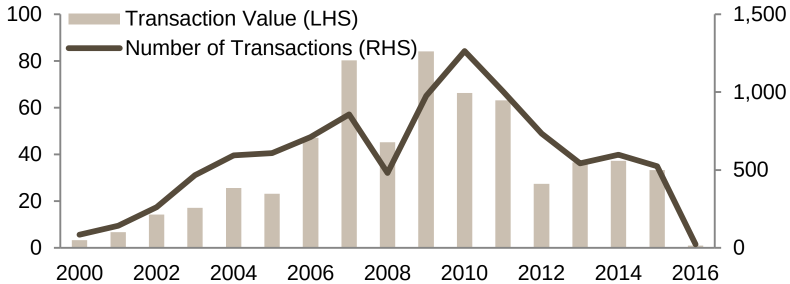
Tax-advantaged yields continue to be attractive, particularly considering many energy MLPs having little direct commodity exposure. However, an extended period of prolonged low energy prices could impact the usefulness and value of some MLP assets in higher-cost basins.

- The Alerian MLP Index offered a distribution yield of 9.6% at the end of January, following a volatile month in which yields spiked to as high as 11.4%. The volatility was linked to stresses in the oil market, which saw the price of crude drop below $30, its lowest level in over a decade.
- The yield spread of 519 bps over BBB corporate bonds is above its historical average level; however, corporate bond valuations are quite elevated. Further increases in bond yields could pressure MLP unit prices.
- An annual yield growth pace of 3% to 5% appears plausible, particularly as regulated pipeline tariffs may grow annually by 1.23% plus the producer price index for finished goods.
- Outside of the small upstream sector, MLPs are thought to have modest direct commodity price exposure. However, investors should be aware that a protracted period of low oil prices could impact the value of MLP assets that support high-cost basins. Overcapacity would pressure both revenues and dividend growth.
- Other risks include any changes to fracking regulations, or any major changes in tax law limiting the competitiveness of MLPs or their appeal to taxable investors.
- US taxable investors often appreciate the ability to shield most MLP income from tax until units are sold, while nonprofits may be subject to unrelated business income tax and its attendant filing burden.

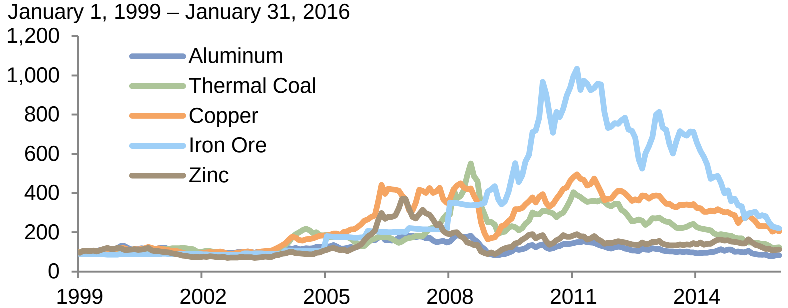
Private Metals and Mining (Undervalued)

Undervalued since November 2014, when our coverage began

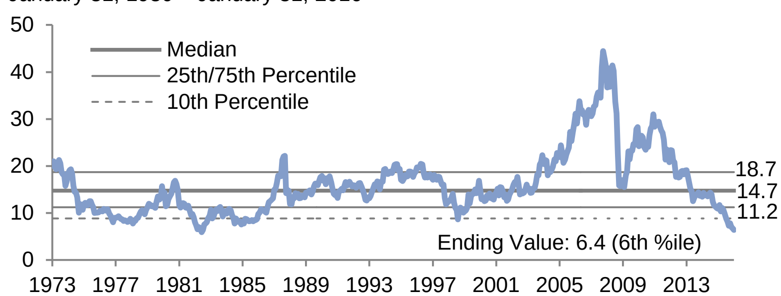
FUNDAMENTALS: Metals and Mining Equity Issuance
2000–16 (Jan 31) • US Dollar (billions)



FUNDAMENTALS: Real Metals Prices Rebased to 100 at December 31, 1998
January 1, 1999 – January 31, 2016



ABSOLUTE VALUATION: Composite Normalized P/E for Mining Equities
January 31, 1980 – January 31, 2016



Sources: Dealogic, International Monetary Fund, and Thomson Reuters Datastream.

Advice: Selectively commit to top-quality managers

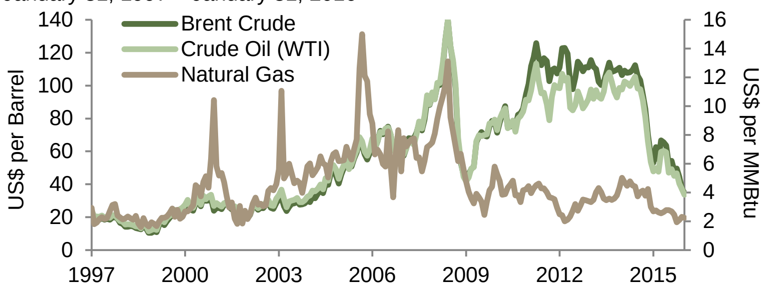
Favor managers with operational expertise

Private mining is attractive today and we recommend investors consider making an allocation to top-quality managers. We believe manager selection currently enjoys the tailwind of favorable market performance. However, the sector remains vulnerable to further slowdown in the Chinese economy.

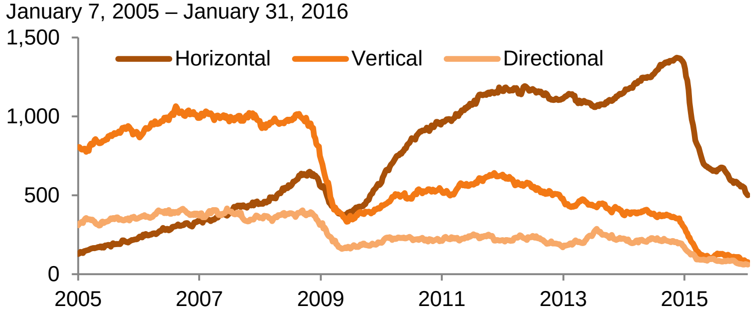
- The longer-term supply of some, but not all, metals will likely be challenged by rising structural costs, with new mines located in geographically remote areas with expensive infrastructure requirements, and production delays.
- There has been a proliferation of newly launched, dedicated private equity mining managers, though most managers have yet to deploy material amounts of their capital. Those that have been able to deploy capital in the past are finding exits hard to come by. Increasingly, managers must reserve enough follow on capital to guard against funding gaps in portfolio companies.
- In January, continued concern that slowing demand for metals in China and a weak response from producers drove prices lower.
- Industrial metals fell in 2015, dropping to the lowest levels since 2008. Copper declined for a third straight year, the longest slump since 1998, while nickel plunged making it the worst-performing metal on the London Metal Exchange in 2015.
- Private mining valuations are affected by public markets, relying on them for exits. Mining equities tend to be highly volatile, which affects marked-to-market pricing for private opportunities.

Private Oil, Gas, and Other Energy (Fairly Valued)

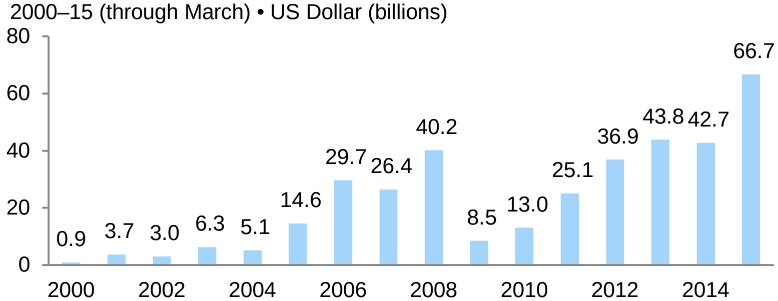
FUNDAMENTALS: Natural Gas and Oil Spot Prices
January 31, 1997 – January 31, 2016



FUNDAMENTALS: US Rig Count
January 7, 2005 – January 31, 2016



FUNDAMENTALS: Global Natural Resources Fund Raising
2000–15 (through March) • US Dollar (billions)



Sources: Baker Hughes Incorporated, Bloomberg, L.P., Cambridge Associates LLC, Global Financial Data, Inc., and Thomson Reuters Datastream.

Advice: Selectively commit to top-quality managers

Opportunities exist across the value chain

The precipitous decline in oil prices should create an attractive investment environment for private equity energy funds. However, oil and natural gas prices remain volatile and could decline further. As a result, we suggest adopting a cautious approach and allocating capital selectively to best-in-class managers.

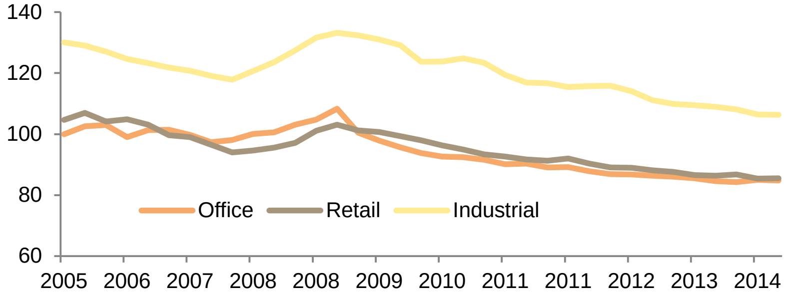
- Amid weaker demand from developing markets and increasing supply from North America, WTI oil prices declined from a peak of $107 per barrel in June 2014. Prices dropped further in early December 2015 and below $30 per barrel in January 2016 after OPEC opted against a production cut and Chinese growth slowed. Natural gas prices showed signs of strengthening in early 2016, but still remain at depressed levels between $2.00 and $2.30/MMBtu.
- While it is difficult, if not impossible, to predict the timing of a recovery in oil & gas prices, many market participants expect oil prices to begin recovering by 2017 as global supply and demand moves closer to equilibrium. US E&P companies continue to curtail drilling activities and cut capex budgets, which led to falling rig counts throughout 2015. However, debt capital offered by energy credit funds in early 2015 has provided a lifeline to stressed E&P firms, and various OPEC members, including Saudi Arabia, continue to increase production.
- There is less of a consensus around the future direction for natural gas prices, although most market participants see a price ceiling at around $4.00 to $4.50/MMBtu. This is largely a function of continued production growth from the prolific Marcellus and Utica Shales in Appalachia, where producers continue to perfect drilling and completion techniques, resulting in high-producing gas wells drilled at ever lower costs.
- M&A activity remained limited through the end of 2015 but has shown signs of picking up; as asset owners digest the "new normal" of lower-for-longer-oil prices, sellers are beginning to capitulate on transaction pricing.

Asian Private Property

Overvalued (Developed); Fairly Valued (Emerging)

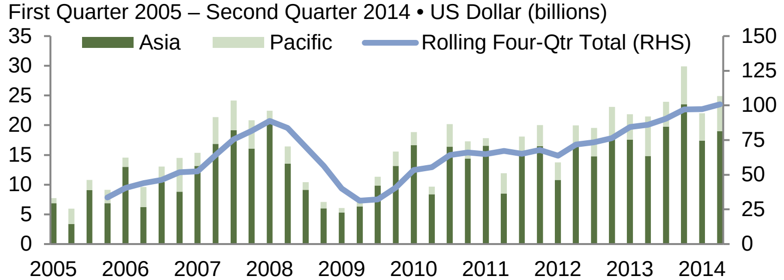
VALUATION: Asian Prime Property Yield Indexes by Type

Fourth Quarter 2005 – Second Quarter 2014 • Yield Indexes



FUNDAMENTALS: Total Commercial Real Estate Investment Turnover in Asia Pacific

First Quarter 2005 – Second Quarter 2014 • US Dollar (billions)



Source: CBRE Research.

Advice: Selectively commit to top-quality managers

Favor strategies not dependent on rental growth or cap rate compression

We see more downside risk than upside potential in core real estate given slowing growth in Asia, but increasing competition for core assets means cap rates are likely to remain low for an extended period. We prefer short-term, idiosyncratic, opportunistic, and value-add strategies of "manufacturing core assets" for sale to core investors.

- Total investment transaction volume for Q3 2015 was estimated at around $33 bn, bringing the year-to-date figure to $89 bn, about 2 % higher compared to the same period last year. JLL Research notes that larger deals on a portfolio/platform basis are being transacted in 2015 compared to the previous year. These large transactions have been dominated by Asian Capital (e.g., GE portfolio in Japan sold to PAG, M&G's purchase of the Lotte portfolio in Seoul, Ascendas's purchase of a 26 asset logistics portfolio in Australia).

- Office occupancy was mixed across Asia Pacific. Rental movements were primarily driven by supply factors. For example, in Shanghai, Hong Kong, and Tokyo where vacancy levels are tight, Grade A rents continued to increase whereas in Singapore, rents fell as landlords struggled to maintain occupancy rates. In such markets, well-located and older office stock (e.g., Grade B/C) could be well positioned for value-add strategies.

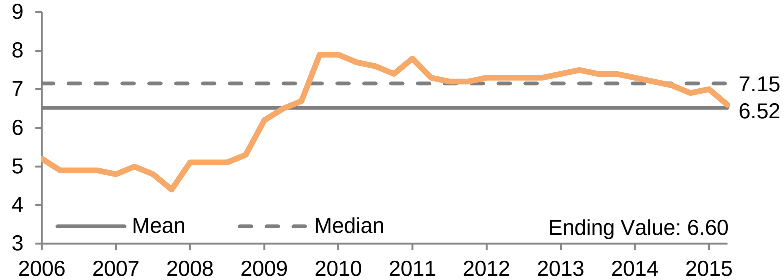
- Mixed retailer demand resulted in overall modest growth in Asia Pacific retail rents. In Australia and Japan, demand for retail space was led by international brands looking for quality space. However, the changing consumer patterns and growth of e-retailing are apparent in markets like Hong Kong and Singapore, where tenant sales are weakening and occupier turnover is high. In that light, the CBRE suggests that logistics total returns will accelerate and surpass that of retail going forward.

Cambridge Associates' February 2016 Asset Class Views

Europe ex UK Private Property (Fairly Valued)

VALUATION: Europe ex UK Property Yields

First Quarter 2006 – Second Quarter 2015 • Yield (%)



Source: Investment Property Databank Ltd. Investment Property Databank Ltd. data provided "as is" without any express or implied warranties

Advice: Selectively commit to top-quality managers

Target managers with seeded product and/or specialist focus

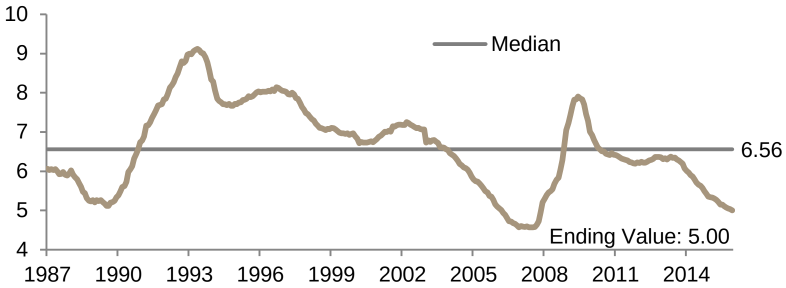
European real estate is generally fairly valued, albeit core real estate remains overvalued. Spreads between prime and secondary/tertiary locations have narrowed. Some non-traditional property types can provide better value but access through institutional funds is limited, albeit improving.

- European real estate investment volumes reached €230 billion in Q3 2015, showing continued growth on previous quarters. The three dominant markets throughout all of Europe remain the same; France, Germany, and the United Kingdom.
- Some alternative sectors such as student housing and senior living are emerging as better value, supported by demographic trends, but institutional investment options are limited. In the student housing sector for example, Europe has seen an increase in student and investment inflows over the last few years, particularly France, Germany, and the Netherlands.
- Office markets are seeing a return in rental growth, and after a subdued first half of 2015, leasing activity increased notably in Q3 2015. The JLL European Office Index rose by 1.2% over the quarter in Q3 and 3.1% over the year, which is the strongest since Q4 2014.
- The retail sector continues to see yield compression and high street cap rates are the lowest relative to the other sectors. In Paris, high street retail prime yields have compressed further in Q3 2015, to 3.00%, the lowest in continental Europe.
- The logistics sector has benefited from changes in the retail sector, and e-commerce related take up of logistics and industrial space was up 87% in Q3 2015, compared to a year ago. Demand for logistics has driven yields lower, reaching 6.1% in Q3 2015, down 50 bps from a year ago.

Cambridge Associates' February 2016 Asset Class Views

Core UK Private Property (Overvalued)

VALUATION: UK Property Yields
January 31, 1987 – December 31, 2015 • Yield (%)



Source: Investment Property Databank Ltd. Investment Property Databank Ltd. data provided "as is" without any express or implied warranties

Advice: Very selectively commit to top-quality managers

Target mispriced/undermanaged assets in best locations in London/large regional city locations

UK core real estate is overvalued, in particularly certain prime markets such as London, where yields are at ten-year lows. Consequently, the regions outside of London continue to attract capital seeking better value. Fundamentals remain healthy, driven by strong investor demand, lack of supply, and strong leasing activity in some markets. Bottom up manager selection remains critical to extracting value from a competitive market.

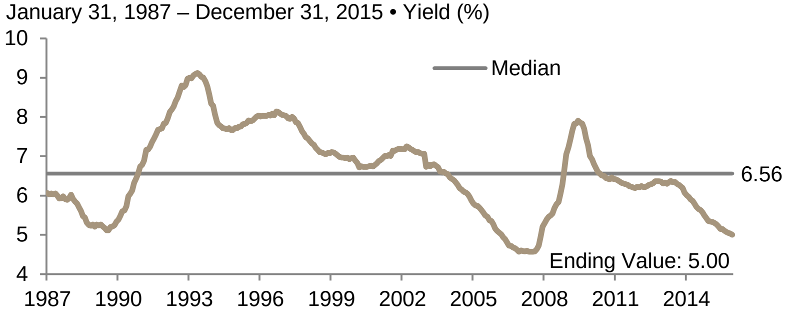
- Demand for stabilized assets remains strong, as both foreign and local investors remain attracted to properties with decent yields. UK prime yields ended last quarter 2015 at 5.00%.
- Investors continued to pay attention to the UK regions as opposed to London in search of higher yield. Prime office yields in London are reported at 3.50% in Q4 2015, while prime yields in the large regional cities outside of London, such as Birmingham and Manchester are trading at yields of 5.00%.
- Total transaction volume in UK reached £64 billion in 2015, surpassing £63 billion in 2014.
- In 2015 office real estate investment volumes in Central London reached £18.5 billion in line with last year's £18.6 billion, and the third consecutive year around this level.
- Across the UK, rental values continued to accelerate in Q4 2015, showing 1.3% growth over the quarter (and 5.0% year-on-year). Sector wise, High Street shops recorded the highest growth in terms of rental and capital values as a result of the sharp increase in rents in Central London luxury streets. Prime yields for High Street shops remained unchanged at 5.1% in Q4 2015. Prime yields for shopping centers also remained unchanged in Q4 at 4.7%.
- The Central London office market saw sustained strength in leasing activity in Q4 2015 with vacancy currently at 3.4%, according to Jones Lang LaSalle. West End recorded the lowest vacancy in Central London at 2.6%.

Opportunistic UK Private Property (Overvalued)

Overvalued since August 2015

VALUATION: UK Property Yields

January 31, 1987 – December 31, 2015 • Yield (%)



Source: Investment Property Databank Ltd. Investment Property Databank Ltd. data provided "as is" without any express or implied warranties

Advice: Selectively commit to top-quality managers

Target mispriced/undermanaged assets in best locations in London/large regional city locations

UK opportunistic real estate is overvalued, although it offers better value than core. Opportunistic managers can still find value in London and major cities, mainly in "up and coming" sub-markets and also in alternative property types. Fundamentals in the UK overall remain healthy, driven by strong investor demand, a lack of supply, and strong leasing activity in some markets. Bottom up manager selection remains critical to extracting value from the increasingly competitive market.

- Across the UK, rental values continued to accelerate in Q4 2015, showing 1.3% growth over the quarter (and 5.0% year-on-year). Sector wise, High Street shops recorded the highest growth in terms of rental and capital values.

- In Central London, prime rents in the West End were at £120 per sq ft in Q3 2015, a 14 % increase from Q3 2014, but certain regeneration projects are providing scope for further growth elsewhere and some opportunistic buyers are turning to these relatively cheaper sub-markets with potential for value add from regeneration or infrastructure improvements.

- For example, the £2 billion regeneration project in the King's Cross area, scheduled for completion in 2020, has attracted high-profile tenants such as Google, with prime rents at £77.50 per sq ft, significantly lower than prime West End.

- Alternative sub-sectors, such as student housing and senior living, offer better value than more traditional property types, including offices, retail, and industrial.

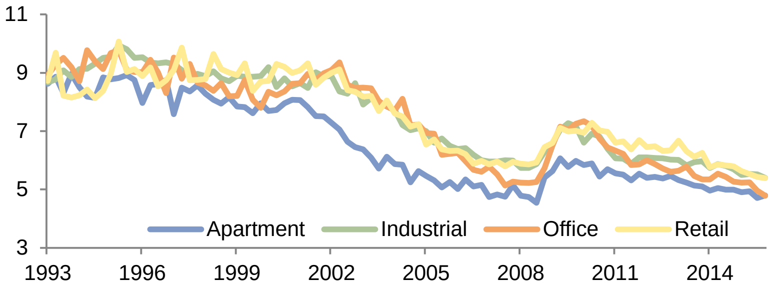
- Over the three, five, and seven years to end 2014, all property returns have been outperformed by alternatives such as student housing, health care, leisure, and the private rented sector (residential). Investment into these alternatives has continued to grow annually since 2009, with investment volumes in 2014 exceeding £8 billion.

Cambridge Associates' February 2016 Asset Class Views

Core US Private Property (Overvalued)

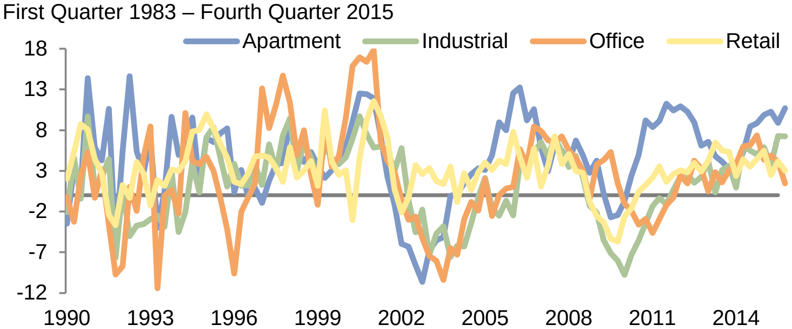
VALUATION: Cap Rates by Property Type

First Quarter 1993 – Fourth Quarter 2015 • Percent (%)



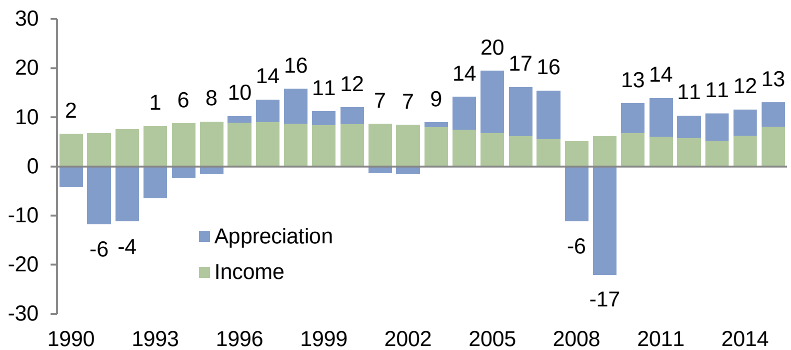
FUNDAMENTALS: Four Quarter Rolling NOI Growth by Property Type

First Quarter 1983 – Fourth Quarter 2015



PERFORMANCE: US Real Estate: Disaggregation of Total Return

1990–2015 (Dec 31) • US Dollar • Percent (%)



Source: National Council of Real Estate Investment Fiduciaries.

Advice: Very selectively commit to top-quality managers

Favor opportunistic over core mandates

US core real estate continues to see strong interest from domestic and foreign buyers; valuations remain high. Current exposures should be monitored, as this segment of the real estate market is most susceptible to rising interest rates.

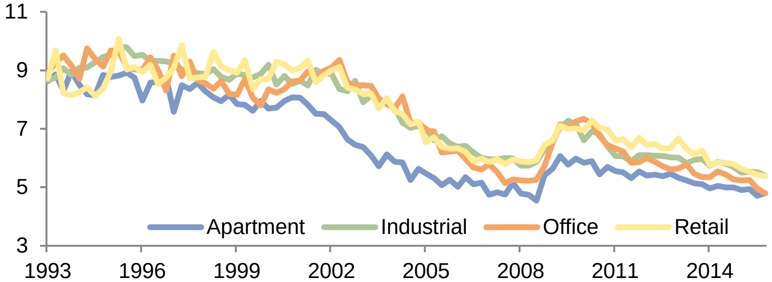
- US commercial real estate fundamentals are sound and improving. As of Q4 2015, vacancies continued to decline in the industrial sector and held steady across office, retail and apartment sectors. Occupancies in the NCREIF Property Index reached nearly 93% in Q3 2015, higher than the peak in the last cycle and the strongest since 2001.
- Supply risks appear manageable with new supply of office and industrial properties still well below historic levels. Although apartment construction remains elevated, demand remains strong and annual real rent growth remains positive.
- Property values for core assets have fully recovered and have contributed to CPPI levels 17% in excess of peak levels achieved in 2007; non-major markets are just 0.5% above the 2007 peak. Core assets are increasingly being priced at a premium over "replacement cost" as cap rates continue to fall across major property types.
- Rising interest rates will likely result in some expansion in cap rates from the current low levels. However, to the extent rising interest rates are reflective of healthy job growth and general economic conditions, higher net operating income (NOI) could offset this expansion in cap rates.
- In December 2015, the US government passed legislation, exempting qualified international pensions from FIRPTA. The impact of this reform is still uncertain, but, anecdotally, real estate investors believe the new regulation will continue to increase core competition and prices as qualified international pensions have traditionally focused on acquiring core, stabilized assets.

Opportunistic US Private Property (Overvalued)

Overvalued since September 2015

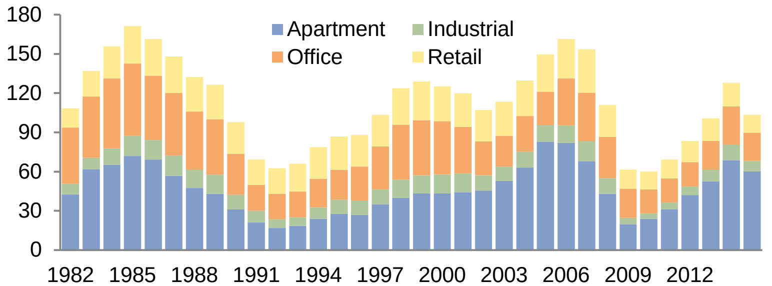
VALUATION: Cap Rates by Property Type

First Quarter 1993 – Fourth Quarter 2015 • Percent (%)



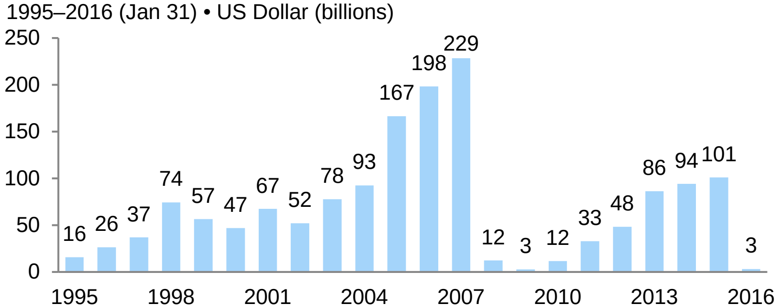
FUNDAMENTALS: US Construction Starts

1982–2015 (Sept 30) • US Dollar (billions) • Constant 2014 Dollars



MACRO: Annual US CMBS Issuance

1995–2016 (Jan 31) • US Dollar (billions)



Sources: CB Richard Ellis, F.W. Dodge: McGraw-Hill Construction Information Group, a Division of The McGraw-Hill Companies, Harrison Scott Publications, National Council of Real Estate Investment Fiduciaries, Torto Wheaton Research, and US Department of Labor - Bureau of Labor Statistics.

Advice: Selectively commit to top-quality managers

Favor opportunistic over core mandates

Value-add and opportunistic real estate plays continue to be more interesting than core given relative valuations. That said, investors should expect lower returns going forward due to the absence of distressed sellers, increased capital and competition for properties and more subdued future growth expectations given strong recent growth trends.

- Capital flows into value-add and opportunistic real estate funds continue to be strong, raising some concerns that it is late in the current real estate cycle. One source tallied approximately $244 billion of "dry powder" held by value add and opportunistic funds waiting to be invested globally in commercial real estate.

- Changes in real estate debt markets will likely have both positive and negative implications for the asset class. Stricter capital requirements for lenders (Basel III) and new regulations (Dodd-Frank) are increasing financing/operational costs, causing traditional lenders to exit certain markets. Upcoming changes related to risk-retention for CMBS issuers will likely have an adverse impact on the level of issuance, and credit spreads have started to widen at the lower end of the quality spectrum as a result. To the extent debt becomes less available and/or more expensive it will have an adverse impact on real estate valuations. However, this dynamic could also create opportunities for value-add and opportunistic funds to fill this financing void and originate new loans. The large volume of pre-crisis era CMBS loans maturing in 2016 and 2017 should create attractive opportunities for these non-traditional lenders.

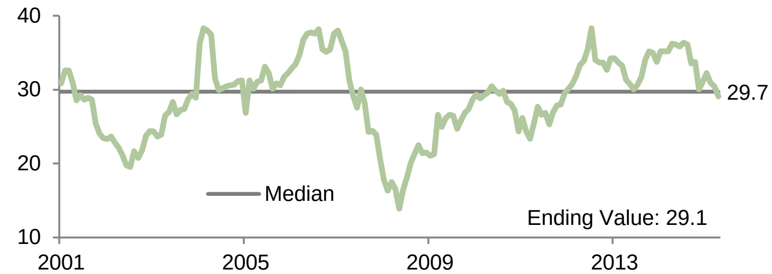
- Select opportunities remain for managers to redevelop, reposition, and re-tenant assets that have received little-to-no capital expenditure since the financial crisis, and then sell the renovated properties into a robust core market. Given healthy supply/demand dynamics in many markets, new development is likely to become a more meaningful component of opportunistic funds (and even core funds have begun to do so), increasing their risk profile.

Asian Property Securities (Fairly Valued)

Fairly valued since March 2012

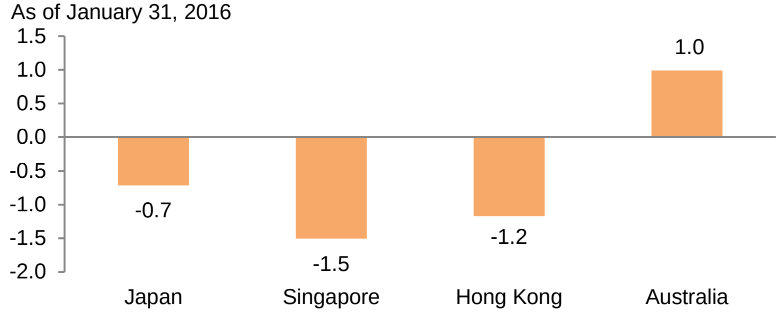
ABSOLUTE VALUATION: FTSE® EPRA/NAREIT Developed Asia Index P/D Ratio

October 31, 2001 – January 31, 2016



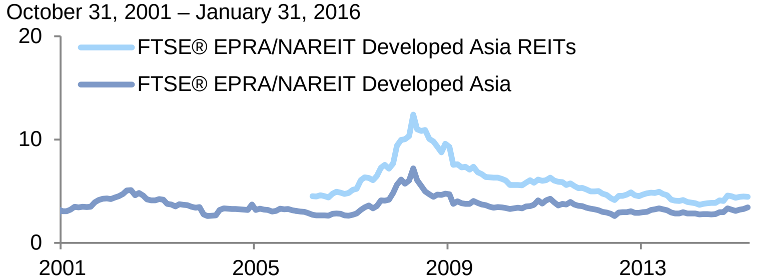
ABSOLUTE VALUATION: Z-Scores of Select Markets Within Developed Asia

As of January 31, 2016



RELATIVE VALUATION: Yields for FTSE® NAREIT Developed Asia Index vs Developed Asia REITs Index

October 31, 2001 – January 31, 2016



Sources: EPRA, FTSE International Limited, National Association of Real Estate Investment Trusts, and Thomson Reuters Datastream.

Advice: Neutral

Opportunistic investment with some markets attractively priced

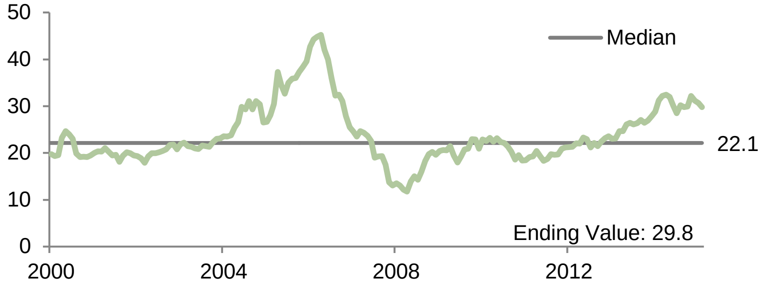
We consider this class to be fairly valued, as the price-to-dividend ratio is broadly in line with its historical median. However, we note that there is a degree of dispersion in the Asian property security market, with Australia relatively expensive and Hong Kong, Japan, and Singapore relatively cheap, according to the same metric.

- Dividend yields on Asian property securities rose 16 bps to 3.4%, and with benchmark government yields decreasing 17 bps on average, the spread widened from 143 bps to 176 bps. The sector lost 4.9% in January but gained 3.3% in 2015 in local currency terms.
- Although property securities offer a more attractive yield than other assets, they have considerable price risk given their sensitivity to economic conditions and dependence on credit and equity markets. In addition, the relative appeal stems in part from the increasingly desperate search for yield and steady cash flows, which have pushed sovereign yields to very low levels.
- Because the REIT structure is relatively new and some Asian countries have only begun to adopt it, we value property securities on a broader scale, including both REITs and developers.

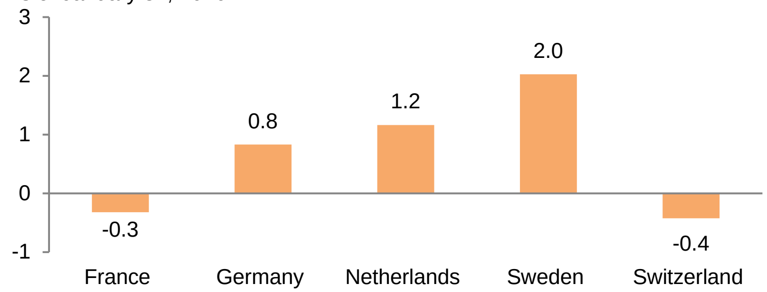
Europe ex UK Property Securities (Overvalued)

Overvalued since January 2015

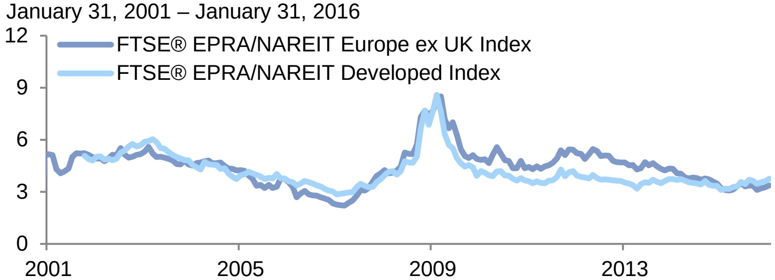
ABSOLUTE VALUATION: FTSE® EPRA/NAREIT Europe ex UK Index P/D Ratio
December 31, 2000 – January 31, 2016



ABSOLUTE VALUATION: Z-Scores of Individual Markets Within Europe
As of January 31, 2016



RELATIVE VALUATION: Yields for FTSE® EPRA/NAREIT Europe ex UK Index vs Developed Index
January 31, 2001 – January 31, 2016



Sources: EPRA, FTSE International Limited, National Association of Real Estate Investment Trusts, and Thomson Reuters Datastream.

Advice: Underweight

Opportunistic investment; currently expensively priced by some metrics

We view Europe ex UK property securities as overvalued based on its price-to-dividend ratio, which stands at nearly 1.3 standard deviations above its long-term median. We note that a high degree of dispersion in valuations exists within the Europe ex UK market.

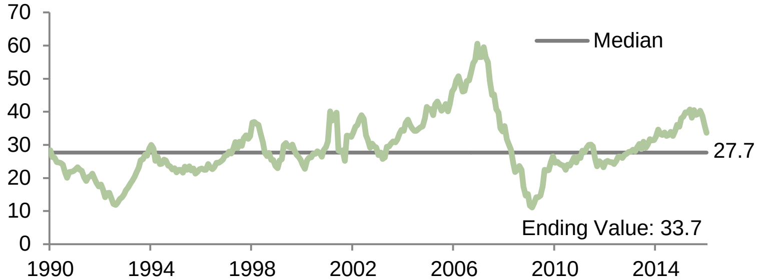
- Europe ex UK property securities lost 3.0% in January and currently offer a dividend yield of 3.36%. Despite the weak results this month, Europe ex UK property securities finished 2015 up 18.8% in local currency terms.
- The yield spread of Europe ex UK property securities over a basket of European bonds widened 42 bps to 255 bps, as the yield on the sovereigns fell by 32 bps on average.
- While some markets such as France (4.59% yield) and Switzerland (4.04% yield) still appear to offer attractive yields to investors, low yields in heavily weighted countries including Germany and Sweden offset them.
- Although property securities offer a more attractive yield than other assets, they have considerable price risk given their sensitivity to economic conditions and dependence on credit and equity markets. In addition, the relative appeal stems in part from the increasingly desperate search for yield and steady cash flows, which have pushed sovereign yields to very low levels.
- Because the REIT structure is relatively new and some European countries have only begun to adopt it, we value property securities on a broader scale, including both REITs and developers.

UK Property Securities (Overvalued)

Overvalued since March 2015

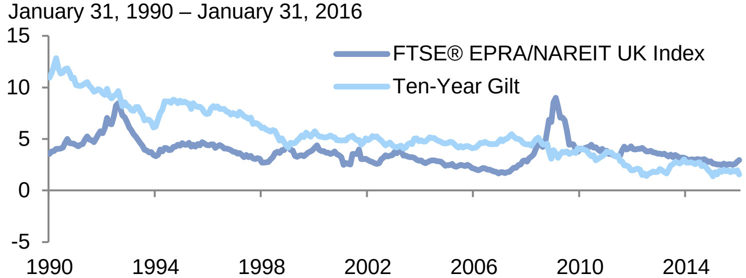
ABSOLUTE VALUATION: FTSE® EPRA/NAREIT UK Index P/D Ratio

January 31, 1990 – January 31, 2016



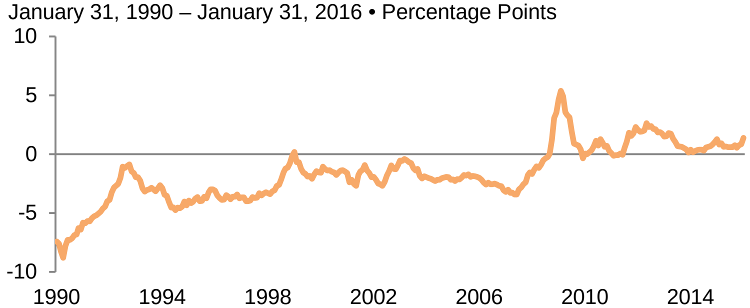
RELATIVE VALUATION: FTSE® EPRA/NAREIT UK Index DY and Ten-Year Gilt Yield

January 31, 1990 – January 31, 2016



RELATIVE VALUATION: Spread Between DY and Ten-Year Gilt

January 31, 1990 – January 31, 2016 • Percentage Points



Sources: FTSE International Limited, EPRA, National Association of Real Estate Investment Trusts, and Thomson Reuters Datastream.

Advice: Underweight

Opportunistic investment; currently expensively priced by some metrics

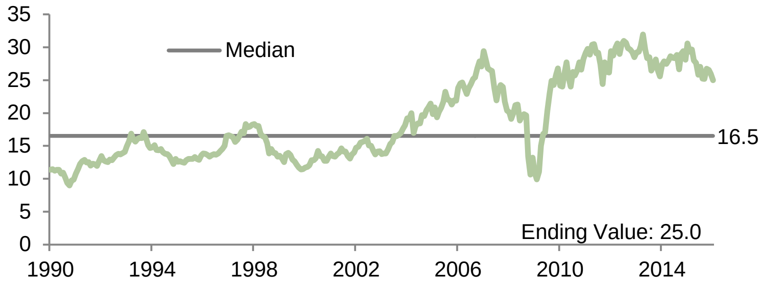
We view UK property securities as overvalued, judging based on its price-to-dividend ratio, noting that it has moved closer to fairly valued territory in recent months. Commercial property appears to be less expensive relative to residential, judging by the ratio of sector prices.

- UK property securities lost 5.7% in January and now offer a dividend yield of 3.0%. In 2015, UK property securities returned 12.1% in local currency terms.
- The spread over ten-year gilts rose this month to 140 bps, as the yield on government bonds fell 39 bps to 1.57%. While the gap between property yields and gilt yields is high compared to historical levels, bond yields remain close to all-time lows.
- Although property securities offer a slightly more attractive yield than other assets, they have considerable price risk given their sensitivity to economic conditions and dependence on credit and equity markets. In addition, the *relative* appeal stems in part from the increasingly desperate search for yield and steady cash flows, which have pushed gilt yields to very low levels.
- Because the REIT structure is relatively new in the United Kingdom, we value property securities on a broader scale, including both REITs and developers.

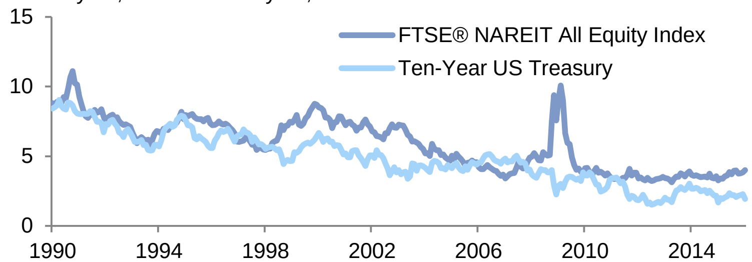
US REITs (Overvalued)

Overvalued since December 2009

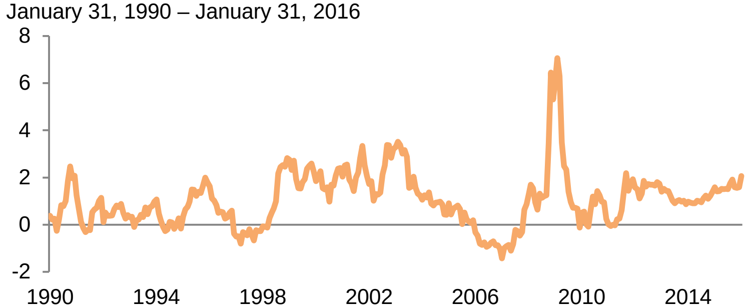
ABSOLUTE VALUATION: FTSE® NAREIT All Equity Index P/D Ratio
January 31, 1990 – January 31, 2016



RELATIVE VALUATION: FTSE® NAREIT All Equity Index DY and Ten-Year Treasury Yield
January 31, 1990 – January 31, 2016



RELATIVE VALUATION: Spread Between DY and Ten-Year Treasury
January 31, 1990 – January 31, 2016



Sources: FTSE International Limited, National Association of Real Estate Investment Trusts, and Thomson Reuters Datastream.

Advice: Underweight

Opportunistic investment; currently expensively priced by some metrics

We view US REITs as overvalued, judging by our preferred price-to-dividend (P/D) metric. Spreads over Treasuries imply a more normalized valuation in the context of a low rate environment.

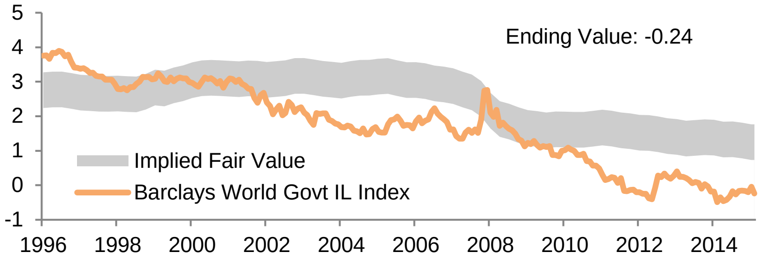
- With a current P/D ratio of 25.0, US property securities stand at 1.5 standard deviations above the full-period median of 16.5. The spread over ten-year Treasuries increased 48 bps to 206 bps, a level wider than two-thirds of historical data points.
- Although property securities offer an attractive yield, they have considerable price risk given their sensitivity to economic conditions and dependence on credit and equity markets. In addition, the relative appeal stems in part from the increasingly desperate search for yield and steady cash flows, which have pushed US Treasury yields to very low levels. That said, US REITs have performed well in seven of the nine rising rate cycles since 1990.
- In 2015, US REITs raised approximately $32 billion and $27 billion in debt and equity capital, respectively. While US REITs fell short of the $77 billion of capital raised in 2013, the sector raised its fourth highest amount.
- In December 2015, Congress passed legislation permitting a foreign investor to own up to 10% of a publicly traded REIT from 5% before triggering a tax liability imposed by the Foreign Investment in Real Property Tax Act (FIRPTA). The legislation also exempted foreign pension funds from any tax liabilities associated with FIRPTA. Both of these reforms should provide for an easier flow of capital from foreign investors into publicly traded REITs.

Global Inflation-Linked Bonds (Overvalued)

Overvalued since July 2013

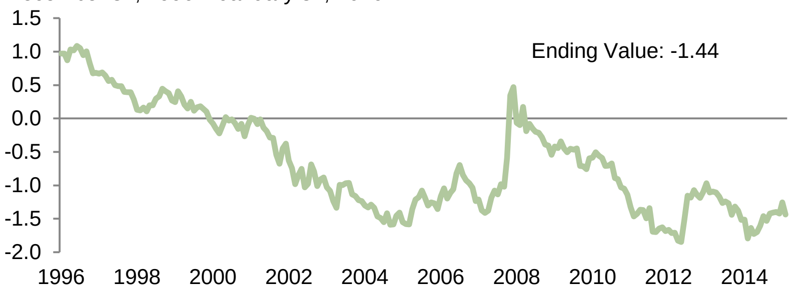
ABSOLUTE VALUATION: Barclays World Govt IL Index Yield vs Implied Fair Value

December 31, 1996 – January 31, 2016 • Percent (%)



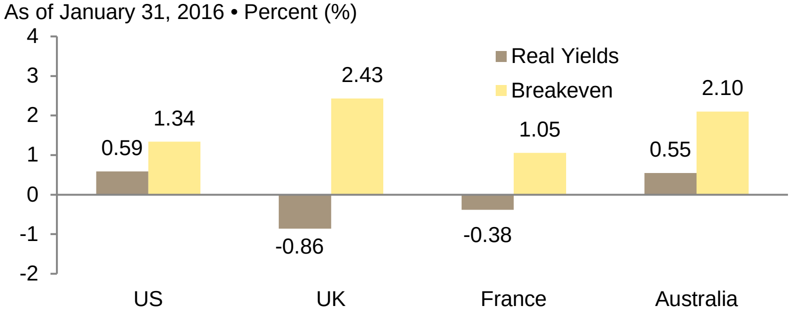
ABSOLUTE VALUATION: Barclays World Govt IL Index Z-Score

December 31, 1996 – January 31, 2016



RELATIVE VALUATION: Breakeven Inflation Near Ten Years

As of January 31, 2016 • Percent (%)



Sources: Barclays and Thomson Reuters Datastream.

Advice: Underweight

Low real yields imply low long-term returns and impaired inflation protection

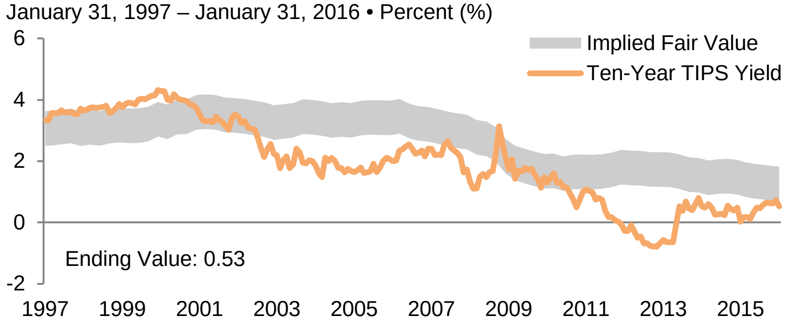
Global inflation-linked bonds are overvalued, with a -0.24% real yield at the end of January for the long-maturity Barclays index that we follow. Low-yielding linkers offer slim long-term return prospects, and we continue to recommend underweighting them.

- Real yields on linkers in developed markets proxied by the Barclays World Government Inflation-Linked Bond Index are -0.24%, which we characterize as overvalued. This is primarily due to negative real yields on UK and French linkers, and there is an argument for substituting US TIPS for at least part of an allocation to global inflation-linked bonds.
- We believe that fair value for this asset class is a real yield in the range of 0.7% to 1.8%, based on the ten-year average level of real economic growth in the major issuing countries. Although short-run returns are anyone's guess, we believe long-term returns from this starting point will be somewhat disappointing and will struggle to keep up with inflation if real yields normalize.
- Breakeven inflation over the next ten years has eroded recently to 1.3% for the United States, 2.4% for the United Kingdom, 1.1% for France, and 2.1% for Australia. These levels are generally below average historical inflation levels so this provides some support.
- Investors should focus on the purpose of their policy exposure to linkers (typically to support spending in the event of an unanticipated inflation spike that depresses asset values) and, given current valuations, should continue to underweight linkers.

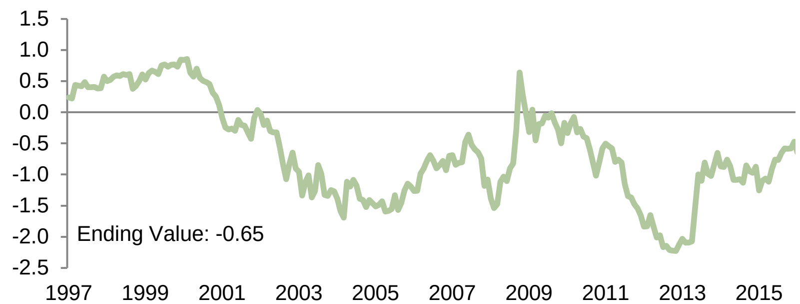
US Inflation-Linked Bonds (Overvalued)

Overvalued since July 2013

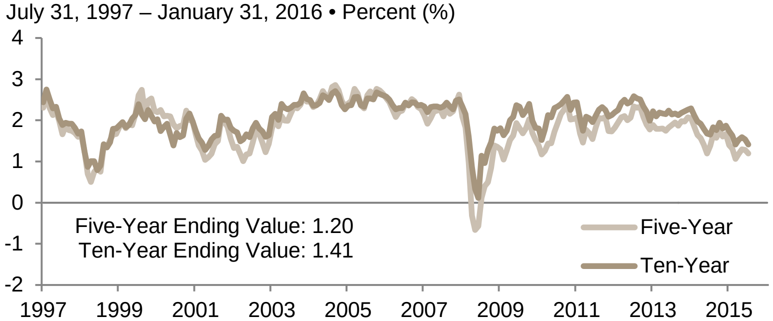
ABSOLUTE VALUATION: Ten-Year TIPS Yield vs Implied Fair Value
January 31, 1997 – January 31, 2016 • Percent (%)



ABSOLUTE VALUATION: Ten-Year TIPS Z-Score
January 31, 1997 – January 31, 2016



RELATIVE VALUATION: Breakeven Inflation
July 31, 1997 – January 31, 2016 • Percent (%)



Sources: Barclays, Global Financial Data, Inc., and Thomson Reuters Datastream.

Advice: Underweight

Real yields are positive but low; underweight for now

With real yields of 0.53% for ten-year TIPS at the end of January, we believe TIPS are overvalued compared to history and implied fair value of about 1.3% real. US TIPS look competitive relative to some European peers that are even more overvalued. We advise investors continue to underweight.

- Ten-year TIPS yields have come down again with nominal yields and moved away from our fair value range of 0.7% to 1.8%. Ten-year breakeven yields of around 1.4% at the end of January suggest that expectations have slipped back to low levels, in step with renewed weakness in commodity and oil prices. With the Fed's 0.25% rate hike behind us and the pace of future hikes uncertain, yields could remain under pressure.

- Investors should recall the purpose of TIPS targets within their policy portfolio (typically to support necessary spending during any periods of unanticipated inflation shocks). Given current valuations, the ability of TIPS to protect against inflation is reasonable although the current low real yields imply some risk, and so investors should underweight TIPS for now.

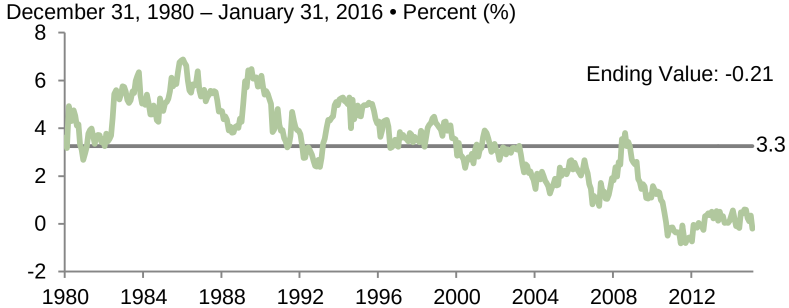
- Lower break-even inflation rates provide some support although these could erode further in the short term.

Deflation Hedges

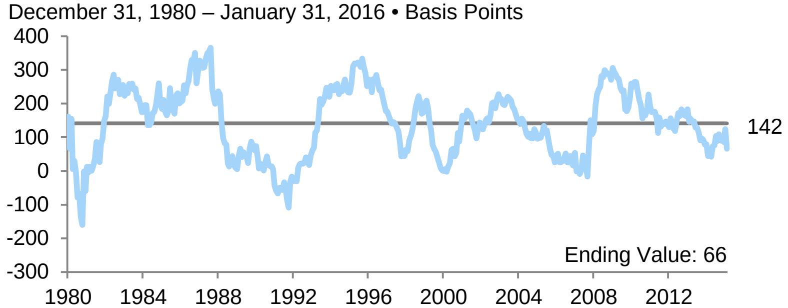
Core EMU Sovereign Bonds (Very Overvalued)

Very overvalued since July 2014

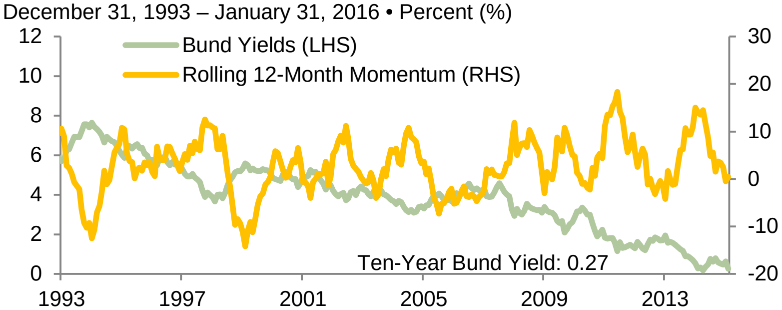
ABSOLUTE VALUATION: Real Ten-Year Bund Yields and Average
December 31, 1980 – January 31, 2016 • Percent (%)



RELATIVE VALUATION: Ten-Year Bund Spread Over Cash and Average
December 31, 1980 – January 31, 2016 • Basis Points



MOMENTUM: Nominal Ten-Year Bund Yields and Momentum
December 31, 1993 – January 31, 2016 • Percent (%)



Source: Thomson Reuters Datastream.

Advice: Underweight; favor cash

Core country bond yields are well below ECB's 2% inflation target and carry duration risk

Upside is extremely limited, and premium to cash rates is below average. Long-dated bonds offer very little upside relative to downside. Nominal and real returns expected to be negative over the medium term except in an ongoing deflationary scenario. We recommend maintaining some cash for part of the allocation to deflation hedges.

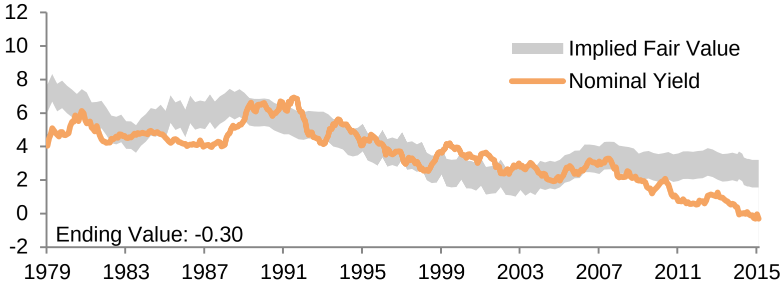
- Eurozone growth has climbed to about 1.5% year-over-year helped by a weak euro, the ECB's €60 billion monthly bond purchase program, and cheaper oil. Annual inflation was a touch firmer at around 0.4% in January.
- Austerity policies have supported bond prices, and the fundamental budgetary position underlying core bonds is strong.
- Real yields are much lower than the historical average and suggest a strongly negative real return over the medium term given the ECB's inflation target of below but close to 2.0%.
- Ten-year yields fell to 30 bps in January after ECB President Mario Draghi's further loosening of monetary policy in December, with the recent hint of perhaps more to come at the March meeting.
- The yield curve has flattened even as two-year core bond yields have fallen to fresh lows of around -0.5%.
- On balance, given the negatively skewed risk-reward profile of core bonds and poor valuations, cash is a substitute for part of the deflation hedge.

Swiss Government Bonds (Very Overvalued)

Very overvalued since January 2015

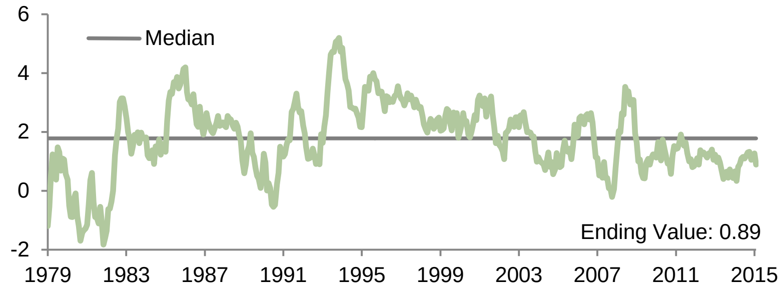
ABSOLUTE VALUATION: Ten-Year Swiss Bond Yield vs Implied Fair Value

December 31, 1979 – January 31, 2016



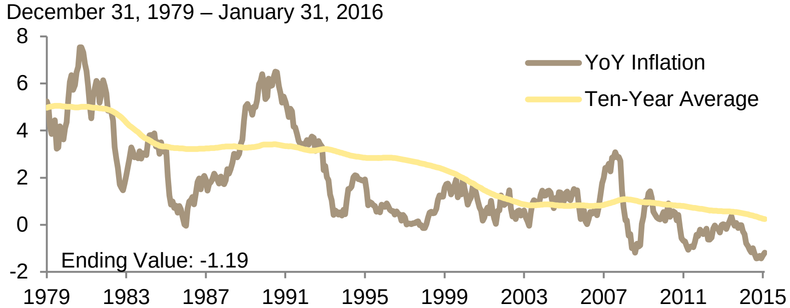
ABSOLUTE VALUATION: Real Ten-Year Swiss Bond Yield and Median

December 31, 1979 – January 31, 2016



MACRO: Year-over-Year Swiss Inflation and Ten-Year Average

December 31, 1979 – January 31, 2016



Source: Thomson Reuters Datastream.

Advice: Seek to maintain low duration risk

Yields at record lows are poor value and do not justify duration risk; hold some cash

Swiss government bonds remain far from our measure of fair value, although deepening deflation and negative cash rates are supportive in the short term. Negative nominal yields up to medium-term maturities present an unfavorable risk/return profile, so we recommend maintaining part of a deflationary hedge in cash.

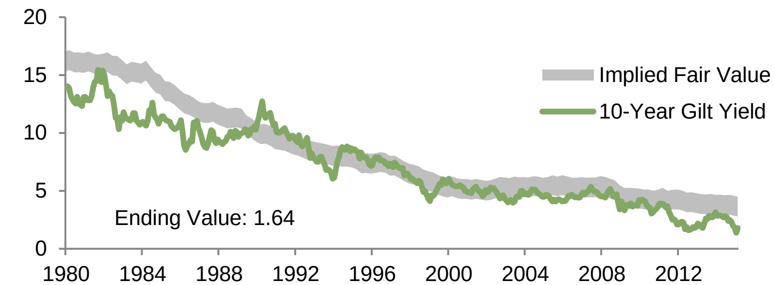
- We view Swiss government bonds as very overvalued. Near record negative nominal yields of -0.30% for ten-year bonds at the end of January are well below our fair value range of 1.56% to 3.20%, based on the trend in nominal GDP growth. Yields remain well below the trailing ten-year median of 1.8%.
- Real yields in Switzerland have moved down to 0.89% as nominal yields have plunged back to record lows of -0.30% at ten-year maturities. The surprise unpegging of the Swiss franc versus the euro in January 2015 and the continuing collapse in oil prices have kept consumer prices firmly in deflationary territory at -1.2% at the end of December.
- Deflationary pressures should abate as the Swiss franc unwinds its jump against other currencies last January and commodity prices stabilize.
- Swiss bonds are more expensive than US bonds (which are overvalued) in both absolute and inflation-adjusted terms but appear attractive relative to core Eurozone bonds. However the latter's yields are distorted downwards by the ECB's massive QE program.
- The spread to negative yields on cash is too low to compensate for the duration risk.
- On valuation and risk grounds, investors should seek to keep some of their deflation hedge in cash.

UK Gilts (Overvalued)

Overvalued since March 2015

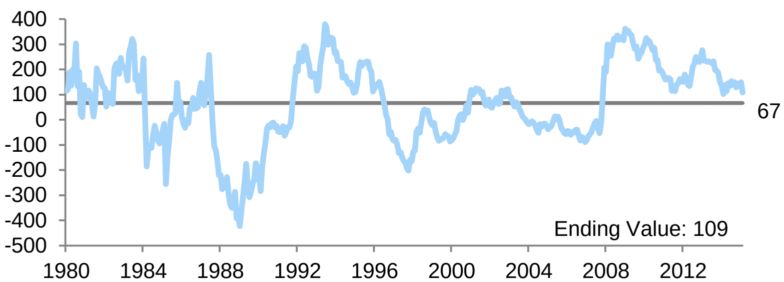
ABSOLUTE VALUATION: Ten-Year Gilt Yield vs Implied Fair Value

December 31, 1980 – January 31, 2016 • Percent (%)



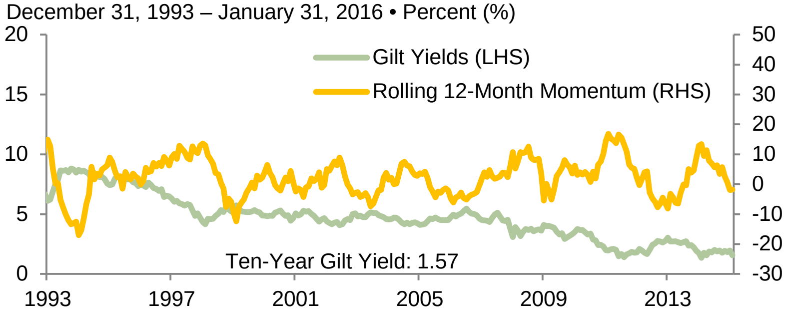
RELATIVE VALUATION: Ten-Year Gilt Spread over Cash and Average

December 31, 1980 – January 31, 2016 • Basis Points



MOMENTUM: Nominal Ten-Year Gilt Yields and Momentum

December 31, 1993 – January 31, 2016 • Percent (%)



Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.

Advice: Underweight; favor cash

Limited upside, low real yields, duration risk

Valuations have retreated from extremely rich levels but are over-valued at around 1.6% nominal yield for ten-year maturities. The positive carry to cash provides insufficient protection against duration risk, although the market does not see rates rising before late 2016. Continue to hold some cash for part of the allocation to deflation hedges.

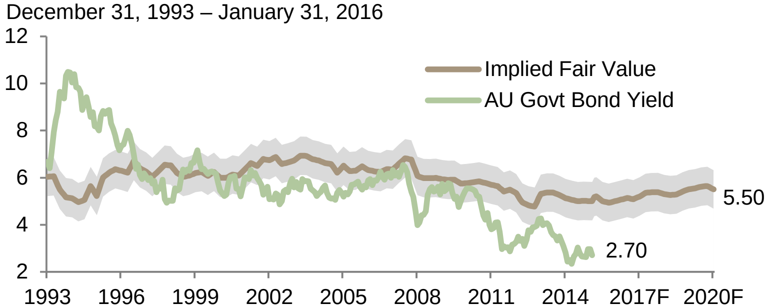
- Implied real yields are negative as inflationary expectations refuse to come down much below 2.5% or approach the Bank of England's 2% target. Investors risk low to negative nominal returns over the medium term except in a deflation scenario. The market consensus is still that the United Kingdom will probably hike rates within the next year.
- David Cameron's negotiations with Brussels, prior to a referendum expected this summer on remaining within the EU under new terms, could unsettle sterling assets if the deal on offer is not enough to appease the doubters on Europe.
- Ten-year benchmark yields are closing in on the January 2015 record lows of 1.36% as the global economy appears to be cooling and oil prices dipped below $30 during January. Timing of the first rate hike keeps being postponed, but there is evidence of a tightening labor market that could translate into higher pay settlements.
- The notion of risk has returned to risk assets and any further weakness in equities could trigger a fall in yields back towards the lows.
- Long term, the unfavorably skewed risk/return potential and skimpy prospective real yields argue for holding some cash as a substitute for gilts as a deflation hedge.

Australian Govt Bonds (Overvalued)

Overvalued since April 2014, when our coverage began

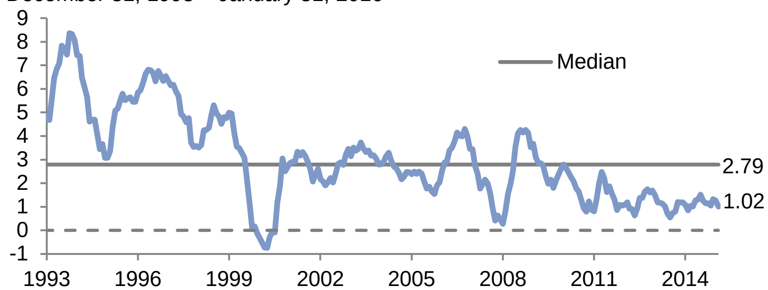
ABSOLUTE VALUATION: AU Govt Bond vs Implied Fair Value

December 31, 1993 – January 31, 2016



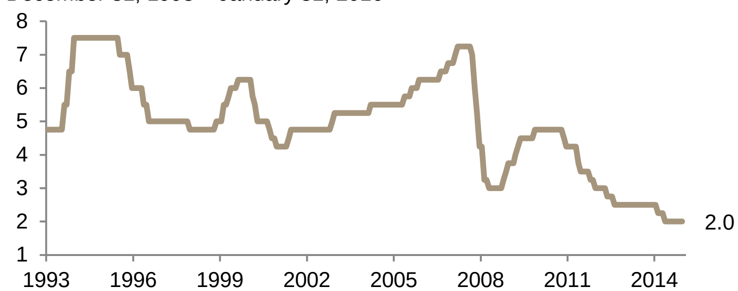
ABSOLUTE VALUATION: Ten-Year AU Govt Bond Real Yields

December 31, 1993 – January 31, 2016



FUNDAMENTALS: RBA Cash Rate

December 31, 1993 – January 31, 2016



Sources: Oxford Economics, Reserve Bank of Australia, and Thomson Reuters Datastream.

Advice: Underweight vs cash

Macro risks remain but yield curve is flat

Australian government bond yields are far below fair value, and the yield curve is nearly flat. However, macro risks remain. We advise having exposure to both bonds and cash.

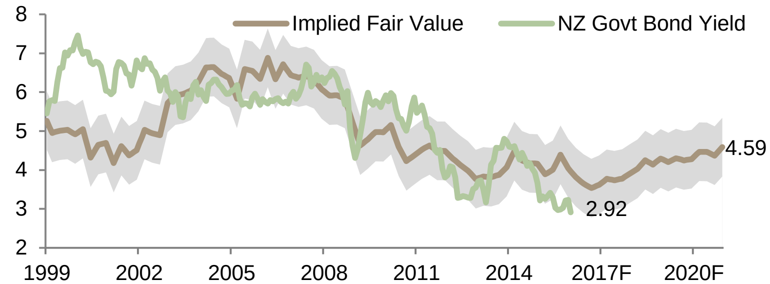
- At the end of January, Australian ten-year government bonds yielded 2.70%, which is far below our fair value estimate of 5.00%. Similarly, the asset class is expensive on a real yield basis (nominal yield minus annualized inflation) with real yields at 1.02%, well below the long-term median of 2.79%.
- Nominal yields on Australian government bonds appear attractive versus other developed markets. However, with inflation at 1.7% versus 0% in other major markets, Australian real yields look less appealing. Overall, we view Australian government bonds as overvalued.
- After market volatility in January, the consensus is forecasting more muted growth in Australia although inflation is still forecasted to pick up over the next several quarters. However, with uncertainties regarding the impact of a slowing Chinese economy and changes to global monetary policy, it is hard to be certain about the future direction of growth and inflation.
- After cutting rates twice in February and May last year to 2.0%, the Reserve Bank of Australia (RBA) has so far decided to keep rates constant. It judged that lower interest rates and the fall in the AUD have provided support to the economy. Having said that, with inflation below its 2%–3% target range, the RBA has scope to further cut rates if needed.
- On balance, we suggest holding both bonds and cash. Substituting some bond allocations for cash makes sense, given a flat yield curve. However, keeping some exposure to bonds is warranted given macro uncertainties.

New Zealand Govt Bonds (Overvalued)

Overvalued since November 2015

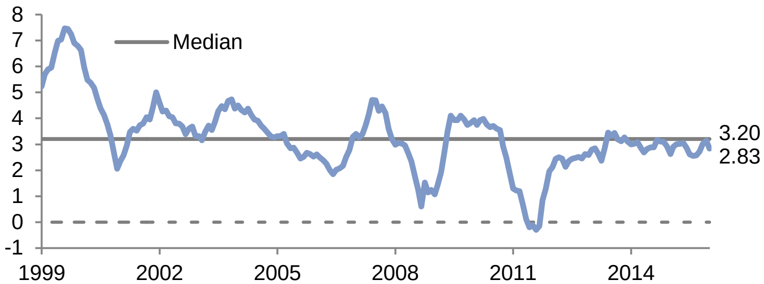
ABSOLUTE VALUATION: NZ Govt Bond vs Implied Fair Value

January 31, 1999 – January 31, 2016



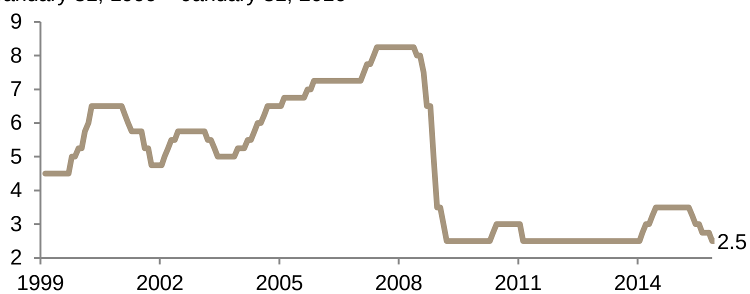
ABSOLUTE VALUATION: Ten-Year NZ Govt Bonds Real Yields

January 31, 1999 – January 31, 2016



FUNDAMENTALS: RBNZ Cash Rate

January 31, 1999 – January 31, 2016



Sources: Oxford Economics, Reserve Bank of New Zealand, and Thomson Reuters Datastream.

Advice: Underweight vs cash

Macro risks remain but yield curve is flat; attractive versus DM peers

New Zealand government bond yields are low, yet remain rather generous compared to other developed markets peers. However, the flattening of the yield curve has almost eliminated their carry versus cash. We advise having exposure to both bonds and cash.

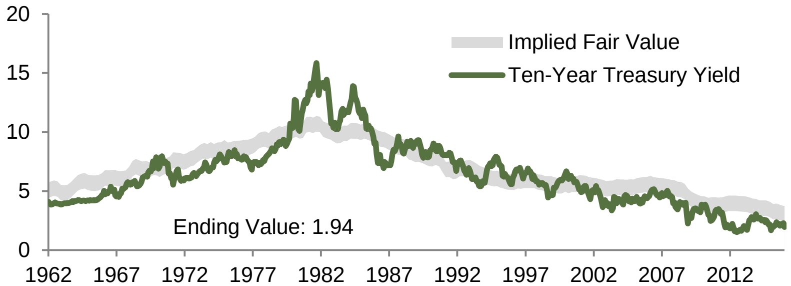
- At the end of January, New Zealand ten-year yields of 2.92% were below our fair value estimate of 4.0%. On a real yield basis (nominal yield minus 12-month inflation), the asset class is yielding around 2.83%, which is below the historical median of 3.20%.
- Despite that, NZ government bonds are still attractive versus other developed markets both on a nominal and real yield basis. Overall, we view the asset class as overvalued.
- Currently, forecasts are for NZ growth to weaken and inflation to pick up over the next several quarters. However, with uncertainties regarding the impact of a slowing Chinese economy and changes to global monetary policy, it is hard to be certain about the future direction of growth and inflation.
- In an attempt to boost the economy and put a leash on the strengthening NZD, the Reserve Bank of New Zealand cut rates in December by 25 bps to 2.5%, the fourth rate cut in 2015. Although the central bank kept rates constant in January, it retains an easing bias given inflation at close to 0%, well below its target range of 1%–3%, and uncertainties as to the direction of dairy prices and the NZD.
- On balance, we suggest holding both bonds and cash. Substituting some bond allocations for cash makes sense, given a flat yield curve. However, keeping some exposure to bonds is warranted given macro uncertainties.

US Treasuries (Overvalued)

Overvalued since July 2013

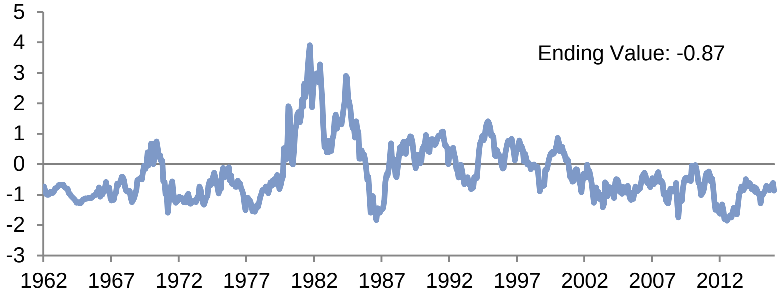
ABSOLUTE VALUATION: Ten-Year Treasury Yield vs Implied Fair Value

January 31, 1962 – January 31, 2016 • Percent (%)



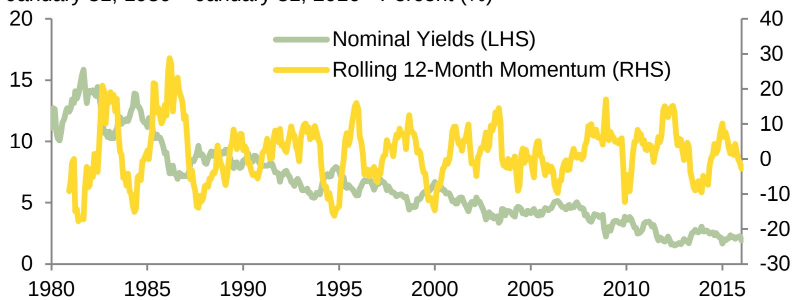
ABSOLUTE VALUATION: Ten-Year Treasury Z-Score

January 31, 1962 – January 31, 2016



MOMENTUM: Nominal Ten-Year Treasury Yield and Momentum

January 31, 1980 – January 31, 2016 • Percent (%)



Source: Thomson Reuters Datastream.

Advice: Underweight; favor cash for part allocation

Downside risk if economic recovery gains steam and job market continues to tighten

Benchmark ten-year yields fell to 1.94% at the end of January as risk assets fell. The yield premium to cash is too skinny compared to risk but attractive relative to core Eurozone equivalents and Japanese bonds. Actual and implied real returns are much lower than average, barring prolonged deflationary conditions. Given the skewed risk return profile for Treasuries cash can form part of the allocation to deflation hedges.

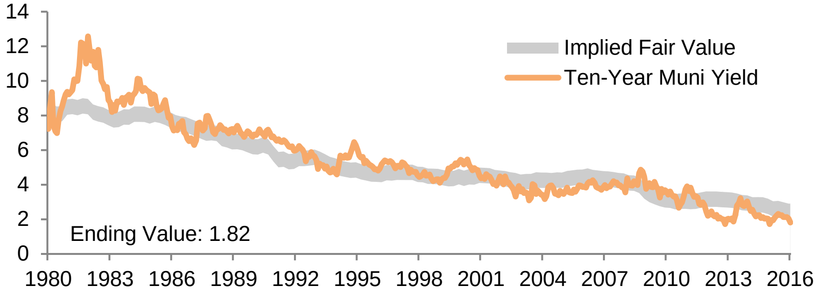
- Risk assets are re-pricing for a prolonged low growth, low return world, triggering a flight to perceived safety such as Treasuries and gold.
- The downward pull in yields has been exacerbated by ultra-low Eurozone and Japanese bond yields as well as negative cash rates in the Eurozone and now Japan. Our implied fair value metric—which is based on rolling ten-year average nominal US GDP growth—is drifting down as well at around 3.1%, with the low point of the fair value range now at 2.4% for ten-year maturities.
- The Barclays US Treasury Index returned about 2.1% in January, more than for the whole of 2015, and two-year yields fell back to 0.76%. The market has now discounted the probability of any rate rise by the Fed during 2016.
- Upside/downside for Treasuries is negatively skewed, barring prolonged deflation, with little protection from coupons if yields return to fair value.
- Cash is an acceptable substitute for part of the deflation hedge in current conditions.

US Tax-Exempt Bonds (Fairly Valued)

Fairly valued since September 2015

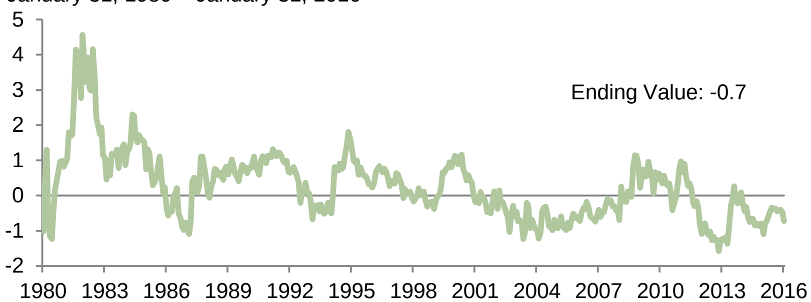
ABSOLUTE VALUATION: Ten-Year Muni Yield vs Implied Fair Value

January 31, 1980 – January 31, 2016 • Percent (%)



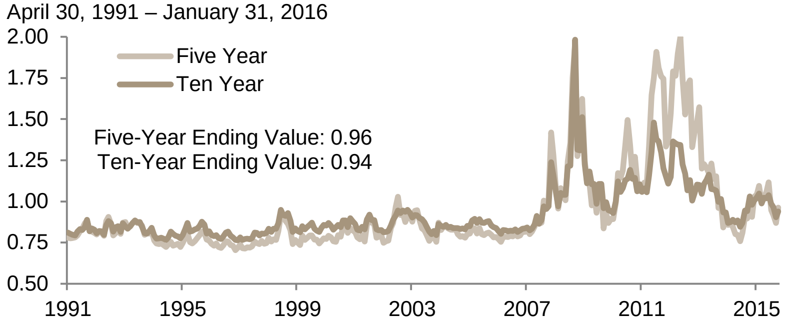
ABSOLUTE VALUATION: Ten-Year Muni Z-Score

January 31, 1980 – January 31, 2016



RELATIVE VALUATION: Ratio of Muni Yields to Treasury Yields

April 30, 1991 – January 31, 2016



Sources: Barclays and Thomson Reuters Datastream.

Advice: Neutral

Munis are currently superior to taxable bonds for US taxable investors

Municipal bonds are fairly valued, and a neutral allocation is warranted for taxable investors.

- Muni bonds rallied along with Treasuries in January, with ten- and five-year yields closing at 1.82% and 1.28%, respectively. Relative valuations versus Treasuries actually improved, with five- and ten-year maturities now yielding 96% and 94% of comparable Treasuries pre-tax (after-tax, muni yields remain well above those of Treasuries for high-bracket investors).
- We remain neutral on the asset class, but for taxable investors the after-tax yields of muni bonds are superior to those of taxable bonds of comparable quality.
- While Puerto Rico's ongoing debt drama has not precipitated widespread selling of munis, it is possible a large PR default would broadly impact muni prices.
- As noted in prior months, despite well-publicized troubles in certain locales, these remain the exception—the vast majority of muni debt should remain money good for the foreseeable future, absent some sort of exogenous shock.
- While we remain hopeful elected and appointed officials will eventually take necessary steps to stabilize and rationalize underfunded pension plans and ensure that municipal finances are sustainable, there is as yet little evidence of such progress.

Currencies and Gold

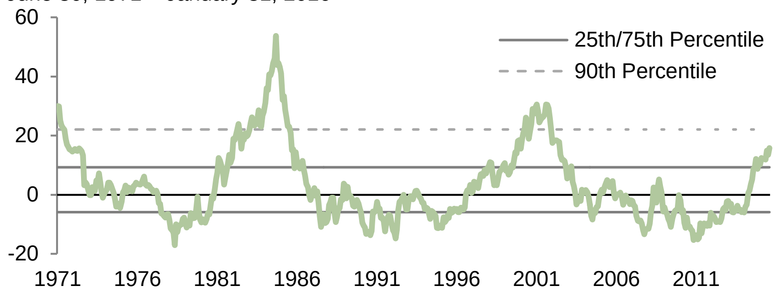
Cambridge Associates' February 2016 Asset Class Views

US$ vs Developed Markets Currencies (Overvalued)

Overvalued since March 2015

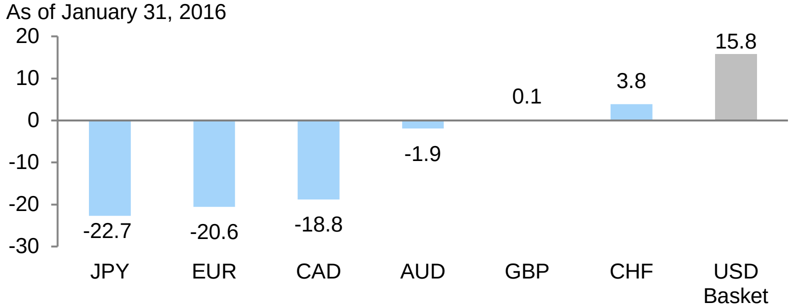
VALUATION: US Dollar Basket Real Exchange Rate: % From Median

June 30, 1971 – January 31, 2016



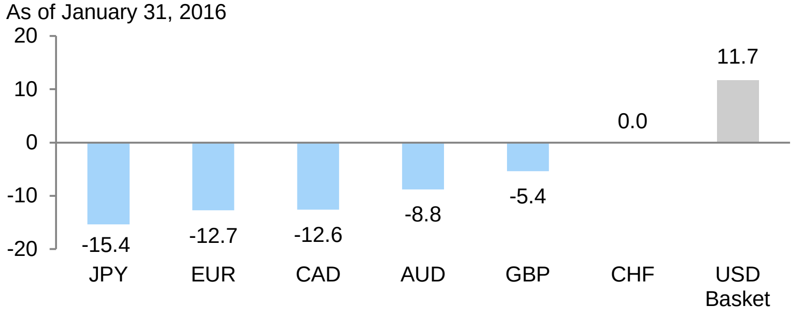
VALUATION: Real Exchange Rate vs the US Dollar: % From Median

As of January 31, 2016



VALUATION: Fair Value Estimates vs the US Dollar: % Above/Below Fair Value

As of January 31, 2016



Advice: Neutral

Consider strategic hedging given currency volatility

The USD remains expensive by most metrics. However, the USD has more scope to rise on a long-term basis, as valuations are not as extreme as previous peaks in the USD. While the USD may remain choppy in the near term, ultimately the USD cycle has more to run.

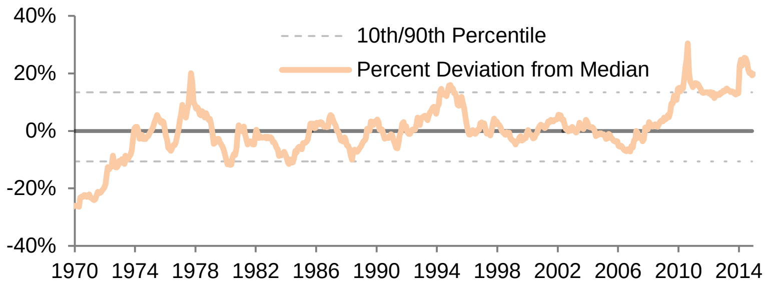
- While our USD basket rose to new highs in January, the dollar sold off sharply in early February amid uncertainty over the outlook for interest rates, with markets questioning whether the Federal Reserve will be forced to reverse December's rate hike.
- From a valuation perspective, the USD remains expensive. On a real exchange rate basis, our dollar basket is 15.8% above its historical median and above our fair value range.
- Looking at individual currencies, the JPY, EUR, and CAD look undervalued based both on real exchange rates and econometric fair value models, while the AUD, GBP, and CHF appear closer to fairly valued.
- Currency valuation is only a rough guide to currency movements, and the USD has more to rise before reaching very overvalued levels such as 1985 or 2002. While the USD may weaken further in the near term as markets price in a dovish Fed, we continue to view the current environment as supportive of the USD given negative interest rates and quantitative easing in other major economies.
- We continue to advocate partial dollar hedges, as investors are not always compensated for the added volatility that foreign currency exposure can add to portfolios. Furthermore, the USD offers positive carry versus most major currencies.
- Investors considering a hedging program should think of it as a way to reduce volatility rather than to try to time a dollar rally.

Sources: Goldman, Sachs & Co., J.P. Morgan Securities, Inc., and Thomson Reuters Datastream.

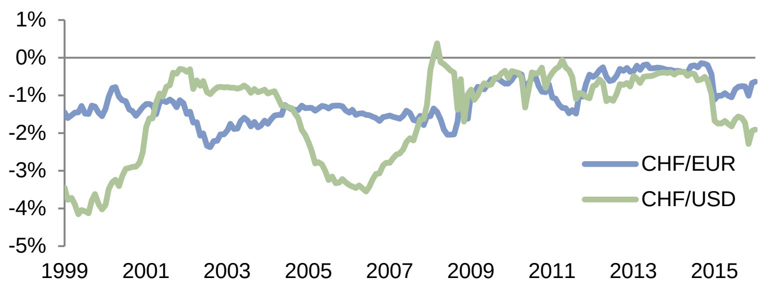
Swiss Franc (Very Overvalued)

Very Overvalued since January 2015

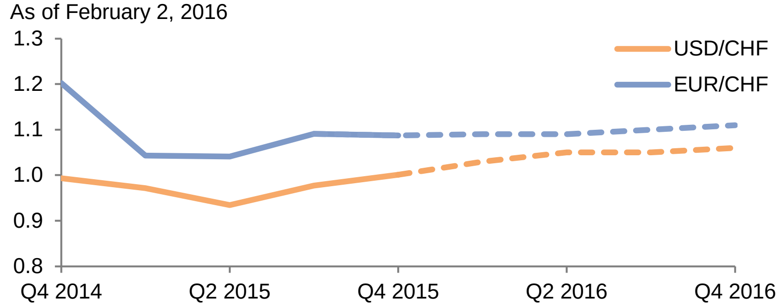
VALUATION: Swiss Franc Real Effective Exchange Rate
January 31, 1970 – January 31, 2016



FUNDAMENTALS: Cost of One-Year FX Forward
As of January 31, 2016



FUNDAMENTALS: Consensus Forecasts
As of February 2, 2016



Sources: Bank for International Settlements, Bloomberg L.P., MSCI Inc., and Thomson Reuters Datastream.

Advice: CHF-based investors should remain partially hedged

Reduce USD hedges while maintaining EUR hedges.

CHF-based investors should remain hedged, especially versus the euro, given ongoing easing by the ECB and general uncertainty over the near-term outlook for currency markets. However, extreme overvaluation suggests the need for the CHF to depreciate in the intermediate term, especially versus the USD.

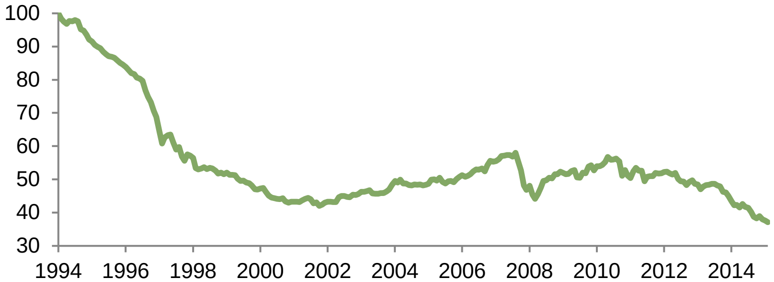
- The CHF surged in January 2015 following the surprise decision by the Swiss National Bank to abandon its floor versus the euro. While the currency drifted lower for much of 2015, as of early February it has rallied versus the USD, but fallen versus the euro.
- We still view the currency as very overvalued. The real effective exchange rate (REER) at the end of December (most recent data) was 20% above the post-1969 median, which remains above the 90th percentile, which we deem very overvalued. This compares to 30% in August 2011 when the SNB first implemented the floor, citing "extreme" overvaluation as a reason to halt the franc's rise.
- The consensus outlook is for the CHF to weaken over 2016 versus both the USD and EUR. The imposition of negative short-term rates in Switzerland should place downward pressure on the currency. Our view is that the CHF needs to fall to offset deflationary pressures in the economy. However, upward pressure could remain in the short term, especially if ECB monetary easing pushes down the EUR.
- For CHF-based investors, the prudent course of action in the near term is to remain hedged, especially versus the euro. However, over the intermediate term we expect the CHF to fall, especially versus the USD. The increasing negative carry from hedging USD exposure suggest reducing USD hedges, while maintaining EUR hedges.

Emerging Markets Currencies (Undervalued)

Undervalued since October 2015

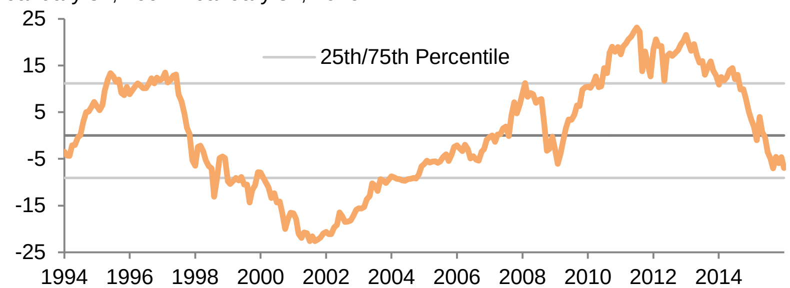
PERFORMANCE: EM Currency Basket vs USD

December 31, 1994 – January 31, 2016



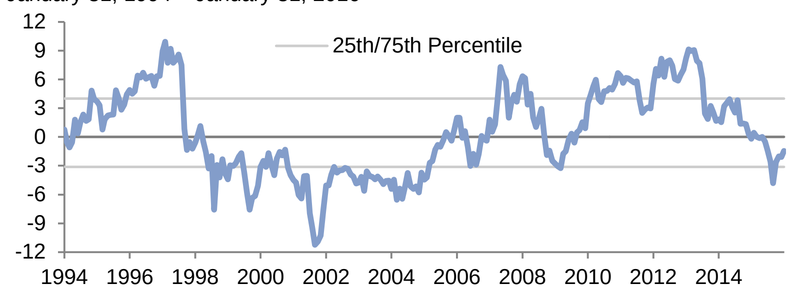
VALUATION: EM Currencies Real FX vs USD % Deviation from Historical Median

January 31, 1994 – January 31, 2016



VALUATION: EM Currencies Real Effective Exchange Rate % Deviation from Historical Median

January 31, 1994 – January 31, 2016



Sources: Bank for International Settlements, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Advice: Neutral

EM currencies remain vulnerable in the near term

While we view emerging markets currencies as slightly undervalued in aggregate, they remain vulnerable in the near term. Yet given current fundamentals we do not expect a repeat of the 1990s currency crises.

- EM currencies have been hit hard amid renewed weakness in the RMB and commodity prices, as well as uncertainty over US rate hikes. Our equal-weighted basket of 20 currencies fell 13.3% in 2015 and 1.3% in January 2016 versus the US dollar. The basket is 34.7% below its 2011 peak and its lowest level in 21 years.
- We primarily value currencies based on real exchange rates, which adjust for inflation differentials. Thus a currency must fall more than what relative inflation implies for the currency to cheapen in real terms and become more competitive. With inflation running below average in the developed world, but average to above average in most of the emerging world, real exchange rates have not fallen as much as nominal rates suggest.
- Relative to the USD, the median EM currency is 6.9% undervalued relative to history, which is slightly above the 25th percentile threshold that forms the lower end of our fair-value range. On a trade-weighted real effective exchange rate (REER) basis, the median EM currency fell through the 25th percentile, but has rallied recently due to weakness in the RMB.
- Overall, we view EM currencies as slightly undervalued, and may be primed for a relief-rally given oversold conditions. A weak USD amid a dovish Fed may be the catalyst. Yet, we still view EM currencies as vulnerable and unlikely to undergo a sustained rally given the headwinds of a weakening RMB, depressed commodity prices, and rising uncertainty over the US and global outlook.

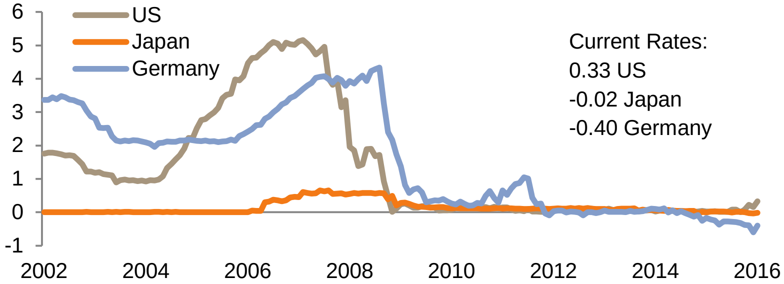
Cambridge Associates' February 2016 Asset Class Views

Cash

We do not give a valuation to this asset

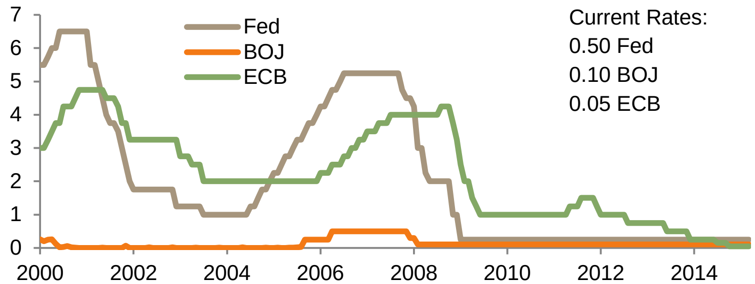
FUNDAMENTALS: US, Japan, and German T-Bill Rates

January 31, 2002 – January 31, 2016 • Percent (%)



MACRO: Fed, BOJ, and ECB Policy Rates

November 30, 2000 – January 31, 2016 • Percent (%)



Source: Thomson Reuters Datastream.

Advice: Overweight versus deflation-hedging assets

Given sovereign bonds' asymmetric return profile, prefer cash for part of deflation hedge despite near zero/negative yields

Monetary policy and risk aversion have driven yields on secure assets in developed markets to unpalatable levels; three-month US T-bill yields have risen marginally to 33 bps, while German cash yields are deeply negative.

- Cash holdings are important for near-term liquidity needs, which in the current environment should include any cash cushion believed necessary to meet exigencies (particularly for investors with sizeable private investment programs with significant unfunded commitments, or currency and other hedging overlays that may require cash settlement).
- Historically, we have recommended investors keep cash holdings to a minimum given the risk that inflation erodes the value of cash in real terms and the opportunity costs for not investing in assets with higher return potential.
- Given unattractive valuations for many deflation hedges like high-quality sovereign bonds, and the low or negative inflation environment in developed markets, in recent years we have encouraged investors to hold cash as a substitute for a portion of such bonds. We suggest investors await more attractive valuations before rebalancing out of cash although US TIPS are beginning to look competitive for US$-based investors.
- Investors choosing to hold cash should stick to secure instruments such as US (or base currency) T-bills. Non-government money market funds may attempt to boost returns by buying short-term liabilities whose yield may not be commensurate with their risk. Investors that choose the money market option should review relevant documentation and ensure such funds are not exposed to risks related to securities lending.

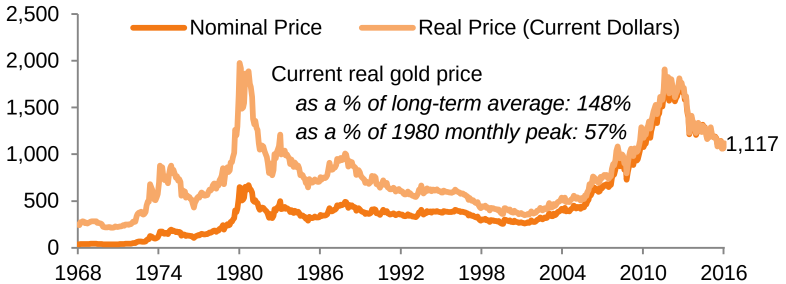
Cambridge Associates' February 2016 Asset Class Views

Gold

Because gold does not provide cash flow, valuation measures are less reliable.

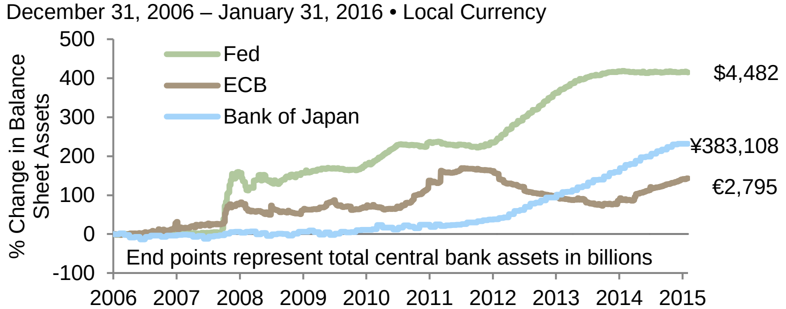
FUNDAMENTALS: Gold Bullion Month-End Prices

January 31, 1968 – January 31, 2016 • Dollars per Troy Oz



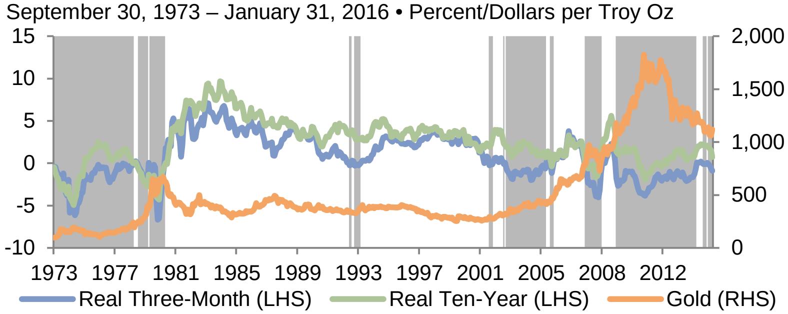
FUNDAMENTALS: Growth in Total Assets of Central Banks

December 31, 2006 – January 31, 2016 • Local Currency



FUNDAMENTALS: Gold Prices and Real Yields

September 30, 1973 – January 31, 2016 • Percent/Dollars per Troy Oz



Note: Gray areas represent periods with negative real three-month yields.

Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.

Advice: Overweight (relative to our standard position of none)

Investors concerned about currency debasement may well benefit from a modest allocation to gold

The continuation of quantitative easing by some major central banks, still-elevated debt levels, and efforts to promote economic growth via weaker exchange rates and negative real rates, increase the risk of diminished faith in paper currencies. Investors concerned about the potential consequences may wish to hold a small allocation to gold.

- While the gold price in real terms has fallen by approximately 41% since its 2011 peak, it is still 40% above its US inflation-adjusted average of around $760/ounce dating back to 1968, not long before President Nixon suspended dollar convertibility into gold.
- Gold fell for a third consecutive year in 2015 , retreating by about 11% in US$ to give up around 50% of its bull market gains from 2001 to 2011 in real terms. While Chinese and Asian long-term buying of bullion remained positive, this was more than offset by selling from disappointed investors in Gold ETFs, suggesting the more short-term momentum-driven financial investors are being driven out. Ultimately this probably sets the scene for a renewed bullish phase although it is hard to say how close we are to completing this change of ownership.
- Gold has an expected real return of around zero over the long term which makes it problematic for institutions tasked with meeting a real spending objective. However, investors concerned about the extreme monetary policies pursued by some countries may hold a modest allocation to gold tied to spending needs and risk tolerance. Gold may benefit from safe-haven flows in periods of rapid currency debasement, or other hostile investment environments. This could occur if the overhang of global debt levels relative to incomes is not reduced by other means, or geopolitical tensions flare up.
- While the very long period of low or negative real interest rates and quantitative easing has been supportive, an increase in real rates could pressure gold prices further.

Notes on the Data

Notes on Our Price-Earnings Calculations

- For most equity markets, we construct a composite normalized price-earnings (P/E) ratio. The composite normalized P/E is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings (the level of earnings based on a linear regression of real earnings growth), and ROE-adjusted earnings (adjusts current earnings for the ratio of current ROE to long-term average ROE). Unadjusted P/E ratios often appear understated at earnings cycle peaks, just as they overstate valuations at cyclical troughs as earnings collapse, sending P/E ratios sharply higher. Normalized P/E ratios attempt to adjust valuations for earnings cyclicality.
- On our equity valuation charts, we use a consistent approach to our median and percentile calculations for P/E ratios across all regions. All charts are labeled to indicate the current valuation's percentile versus the historical median. We typically consider the range from the 25th to the 75th percentile as fairly valued. Valuations in the 75th to 90th percentile are typically overvalued relative to history, and in the 10th to 25th percentile, undervalued. The top 10th and bottom 10th percentile generally represents very overvalued and very undervalued relative to history, respectively. An asset class's valuation call takes into account valuations, fundamentals, momentum, sentiment, and other factors, and calls do not mechanistically change with percentiles; rather these ranges are used as guides for our valuation calls.

Notes on Specific Data Providers

- Dealogic updates its database on a regular basis, therefore historical data may change.
- Hedge Fund Research data are preliminary for the preceding five months.
- US CPI data lag by one month.

Notes on Specific Asset Classes/Strategies

Frontier Markets Equities: Because of MSCI Frontier's short history and recent changes in member weightings, we have created a new valuation methodology as of February 28, 2015. Using nations that are in the MSCI Frontier Index today, we group nations together on a regional basis and calculate a monthly regional median. We then take the regional medians and calculate a weighted average based on the region's weight in today's index; we use this weighted average figure for representing index-level valuations. In our Frontier Regions graph, we use the following abbreviations for grouping together MSCI Frontier Market Index nations: C&EE for Central & Eastern European nations, GCC for Gulf Cooperation Council nations, MENA x GCC for Middle East and North Africa nations (excluding GCC nations), LatAm for Latin American nations, and SSA for Sub-Saharan African nations.

Asian Private Equity: M&A data are based on disclosed deals only.

European Private Equity: Private equity–backed M&A data are based on disclosed deals only.

Latin American Private Equity: M&A data are based on disclosed deals only.

US Private Equity: For the top chart, figures for capital raised based on calendar year fund raising. Estimated capital paid in based on the percentage paid in by funds tracked by Cambridge Associates in each vintage year. Estimated uninvested figure calculated assuming a ten-year lifespan with a 1.5% management fee decreasing linearly over the life of a fund, and no re-investment of capital.

US Venture Capital: For the middle chart, the scale is capped at 100. Maximum value reached for later-stage round during 2014, with a value of $207.6 million.

Leveraged Loans: Discount margin assumes a three-year life and represents the yield to maturity above and beyond the current Libor rate, assuming all loans are paid off at par with no defaults.

Notes on the Data (continued)

Long/Short Hedge Funds: The middle chart graphs the median 63-day correlation of each of the index's constituents to the index itself.

Event Driven Investing: The bottom chart shows spreads for global merger & acquisition deals above $1 billion.

Convertible Arbitrage: For the top chart, yield spreads are based on the difference between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for high-yield bonds and the yield-to-maturity for five-year Treasury securities. For the middle chart, data prior to 2003 come from BofA Merrill Lynch Convertible Research, with market capitalization figures based on the BofA ML All US Convertible Index. From 2003 to the present, data come from Barclays, with market capitalization figures based on the Barclays US Convertibles Composite Index.

Distressed Investing (Non-Control): For the middle chart, data are annual trailing 12-month figures. The bottom chart shows percentage of high-yield bonds trading 1,000 or more bps over ten-year Treasury bonds.

Commodities: We track a diversified basket of commodity spot prices, similar in construction and weightings to the 2013 target weights of the Bloomberg Commodity Index, to provide us with insights into the valuation of current spot prices relative to the long-term inflation-adjusted average prices for each commodity (commodity spot prices have roughly tracked inflation over the past century). The number of constituent commodities in the basket varies from 12 in 1900 to 22 today; a small number of the commodities included in the basket have been periodically subject to official price controls, rationing, or other government actions that may have distorted spot prices compared to true market-clearing levels, but we believe that the diversified basket is broadly representative of price changes over time for the current commodity composition of the Bloomberg Commodity Index. The basket includes cattle, coffee, copper, corn, cotton, gold, hogs, silver, sugar, wheat (soft), WTI oil, and zinc from 1900, aluminum from 1910, soybean oil from 1911, soybeans from 1913, nickel from 1926, soy meal from 1929, wheat (hard) from 1956, Brent crude oil from 1957, heating oil from 1967, natural gas from 1976, and unleaded gasoline (RBOB) from 2003. Collateral yield is the return from investing futures collateral in cash instruments. Roll yield is the return premium gained (paid) when rolling futures contracts to the next month, when a commodity is in backwardation (contango). The roll and collateral yields shown on the second chart represent the GSCI prior to January 1991 and the Bloomberg Commodity Index after. Over the nearly four-decade history of the S&P GSCI™, the cash collateral return was the largest contributor to returns. The roll return of the reasonably well-diversified Bloomberg Commodity Index amounted to -7.9% over the past 12 months, pulling investor returns below the spot price return because of the contango condition of some commodities' futures curves.The index's average monthly roll return since its early 1991 inception is -0.4%, an annualized -5.0% drag (though the pre-2005 monthly average was -0.2%, and the average since 2005—arguably when commodity allocations by institutional investors became widespread—has been -0.7%).

Natural Resources Equities: For natural resources equities valuations, we track a basket composed of 80% Datastream World Oil & Gas Index and 20% Datastream World Mining Index. Datastream indices span both developed and emerging markets. Our broad commodity basket, shown on the second chart, includes cattle, coffee, copper, corn, cotton, gold, hogs, silver, sugar, wheat (soft), WTI oil, zinc, aluminum, soybean oil, soybeans, nickel, soy meal, wheat (hard), Brent crude oil, heating oil, natural gas, and unleaded gasoline (RBOB). Prices are adjusted to current dollars.

Energy Master Limited Partnerships: Valuation metrics for master limited partnerships (MLPs) are a work in progress. While varied payout ratios limit the utility of dividend yield–based valuation metrics for most equity categories, MLP yields are closely linked to the distributable cash flows generated by the partnerships. P/E metrics are useless for MLPs because GAAP earnings are depressed by massive upfront depreciation and exhibit little or no relationship to investor returns. Price-to-EBITDA and enterprise value–to-EBITDA multiples are slightly more representative, but recent trends that limit general partner compensation growth and boost future limited partner payouts may boost EBITDA multiples (and thus the apparent level of valuation) without impacting potential returns.

Private Oil, Gas, & Other Energy: Data in the middle chart are weekly. Data in bottom chart include global dedicated natural resources funds (excluding timber and agriculture) included in Cambridge Associates' benchmark statistics. Data based on total fund capitalization by vintage year, not annual fund-raising figures. Data for vintage year 2013 are preliminary and may vary as funds close.

Europe ex UK Private Property: For the top chart, the IPD Monthly Index measures returns to direct investment in commercial property. Initial yield is current net income divided by gross capital value.

Notes on the Data (continued)

Core/Opportunistic UK Private Property: The IPD Monthly Index measures returns to direct investment in commercial property. Initial yield is current net income divided by gross capital value.

UK Property Securities: Dividend yield data for the United Kingdom based on the Datastream Index from January 31, 1990, to January 31, 2001, and the FTSE® EPRA/NAREIT UK Index from February 28, 2001 to the present.

Global Inflation-Linked Bonds: For the top chart, implied fair value based on Barclays World Government Inflation-Linked Index yield history related to the rolling ten-year average composite real GDP growth of the United States, United Kingdom, and Eurozone. For the bottom chart, data are based on the Barclays Inflation-Linked Bond and Breakeven series.

US Inflation-Linked Bonds: For the top chart, implied fair value is based on TIPS yield history related to the rolling ten-year average real US GDP growth.

Australian Govt Bonds: For the top chart, we calculate the implied fair value yield for nominal bonds by adding rolling five-year real GDP growth and rolling five-year inflation. Real GDP and inflation data in forecast periods are based on Oxford Economics forecasts. For the middle chart, we calculate real yield by subtracting annualized inflation from nominal yield.

New Zealand Govt Bonds: For the top chart, we calculate the implied fair value yield for nominal bonds by adding rolling five-year real GDP growth and rolling five-year inflation. Real GDP and inflation data in forecast periods are based on Oxford Economics forecasts. For the middle chart, we calculate real yield by subtracting annualized inflation from nominal yield.

US Treasuries: For the top chart, we estimate the fair value yield of Treasuries using the rolling ten-year average of nominal US GDP growth.

US Tax-Exempt Bonds: For the top chart, implied fair value based on Barclays Municipal Bond Index yield history related to the tax-adjusted rolling ten-year average of nominal US GDP growth. We apply a 20% discount to the implied fair value yield for Treasury notes (reflecting the net impact of municipal bonds' tax advantages and liquidity disadvantages).

US$ vs DM Currencies: Real exchange rates are based on relative consumer prices. Historical median is calculated from July 1971 onwards. Fair value model estimates are derived from econometric models that take into account several variables such as PPP, interest rate differentials, fund flows, etc., to produce an equilibrium exchange rate. These fair value estimates differ from currency forecasts, as it is not always assumed that currencies revert to fair value over the forecast horizon. Average fair value model estimates for each currency reflect a simple average using Goldman Sachs and J.P. Morgan data. The USD Basket is a weighted average of six currencies: the Australian dollar (10%), British pound (20%), Canadian dollar (10%), euro (30%), Japanese yen (20%), and Swiss franc (10%).

EM Currencies: Our EM currency basket includes 20 currencies. The real effective exchange rate (REER) is based on the median of 20 emerging markets trade-weighted indexes produced by the Bank for International Settlements.

Gold: For the top chart, real prices are inflation adjusted to today's dollars. For the middle chart, endpoint values represent the actual amounts on bank balance sheets in local currency.