What's Next for the US Dollar?

March | 2015

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Introduction

The US dollar has been strengthening since mid-2011, and as of February 2015 has risen 30% versus a basket of developed markets currencies, rallying 13% in the past six months alone. This dramatic rise has left the dollar looking expensive on the currency valuation metrics we track, and vulnerable in the near term.

Yet we still recommend USD-based investors consider hedging a portion of their non-USD exposures, given the potential for an overshoot in the dollar, and the fact that hedging reduces volatility and may provide positive carry going forward.

This chart book provides context on previous USD rallies and where the USD is in the current cycle.

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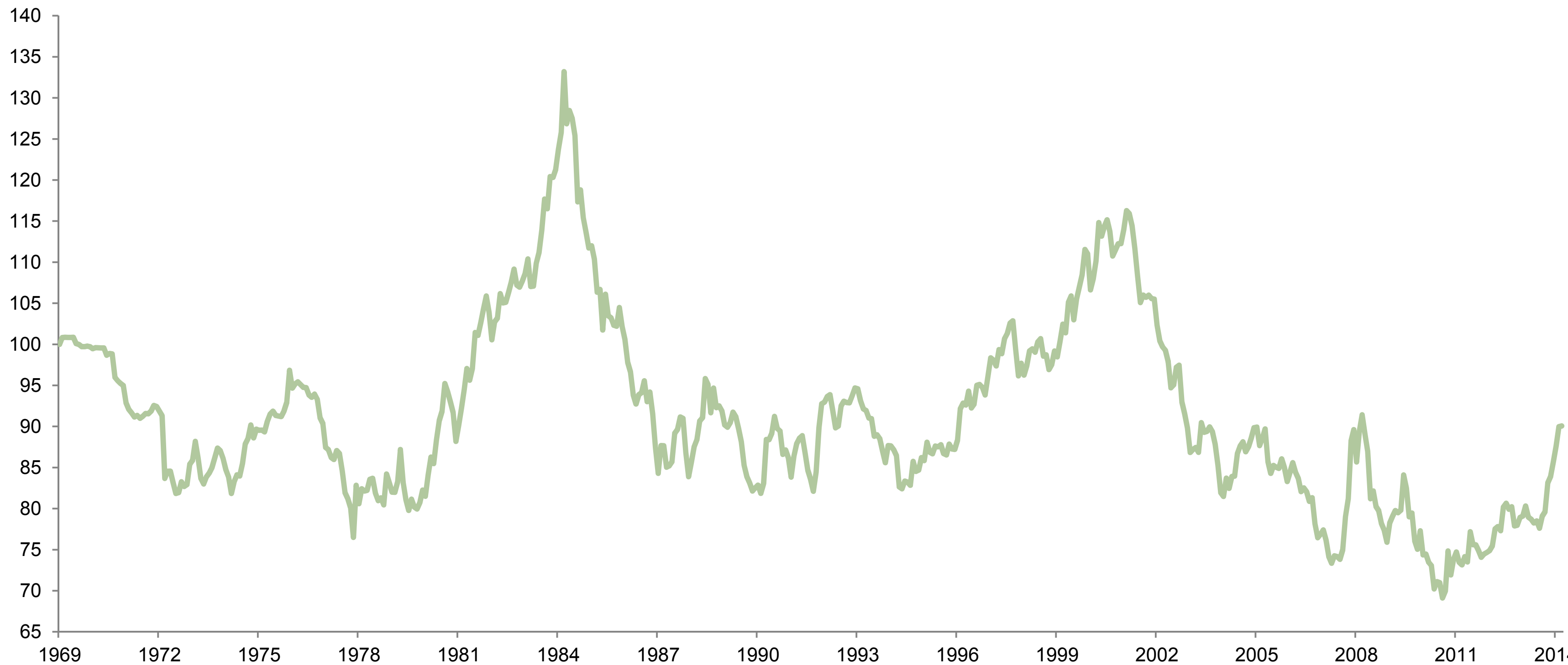
- The USD is halfway through a typical up-cycle
  - The previous two cycles were ~7 years in duration and saw the USD rise between 41% and 74%
    - In the current cycle the dollar is up 30% over 3.5 years
    - A repeat of the 1978–85 cycle (up 74%) is unlikely. The 1995–2002 cycle is a better roadmap
- The USD looks vulnerable in the near term
  - Momentum is stretched and sentiment/positioning too bullish
  - The USD is also becoming expensive relative to history
  - A pause in the cycle is typical before a final overshoot
    - A delay in anticipated Fed rate hikes or a slowing US economy could trigger a short-term dollar reversal
- USD-based investors should still consider hedging a portion of their foreign currency exposure
  - Hedging reduces volatility, may produce positive carry going forward, and protects against the risk of a dollar overshoot
  - An overshoot could be triggered by macro risk
    - The final surge in the USD over 1999–2002 was triggered by the bursting of tech bubble and a global recession
  - Non-USD investors should not underweight the dollar in portfolios

Where Is the US Dollar in the Cycle?

Since mid-2011 the USD has rallied 30% vs an equal-weighted basket of developed markets currencies. The previous “strong dollar” cycles both lasted between six and seven years, with the dollar rising between 41% and 74%, in nominal terms. Thus, if this history is any guide, the dollar is about halfway through the typical cycle in terms of duration, and between 40% and 70% complete in magnitude.

USD Equal-Weighted Index

January 1, 1970 – February 28, 2015 • December 31, 1969 = 100



Source: Thomson Reuters Datastream.

Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

Where Is the US Dollar in the Cycle?

The cycles are very much the same, regardless of how you weight your dollar basket. We will focus on an equal-weighted basket, composed of the AUD, CAD, CHF, EUR, GBP, and JPY. A static basket allows for a consistent comparison across time periods, as opposed to trade or equity weights, which have shifted substantially over time.

USD Cycles

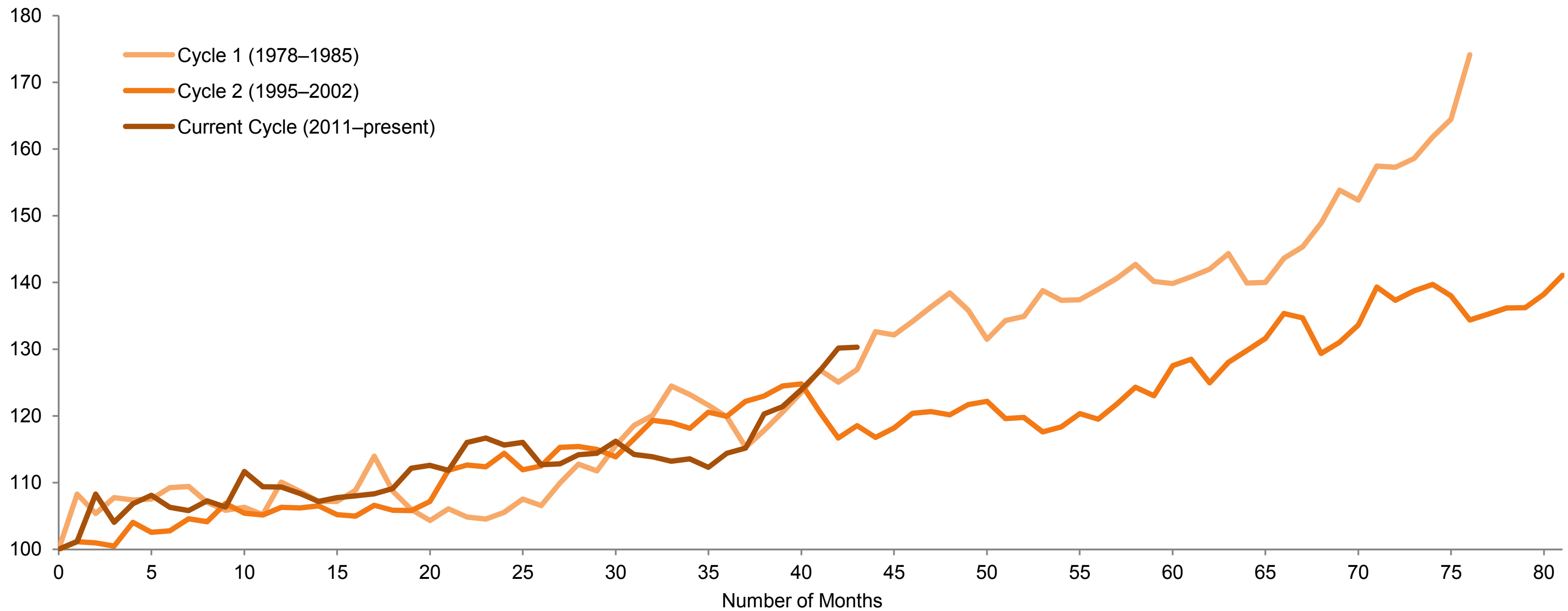
USD Trade-Weighted						**Current**
Peak/Trough Dates (mm/yy)	11/76 – 10/78	**10/78 – 2/85**	2/85 – 4/95	**4/95 – 1/02**	1/02 – 4/11	**4/11 – 2/15**
Performance (%)	-17.8	**62.1**	-44.8	**40.7**	-39.6	**31.6**
Duration (Years)	1.9	**6.3**	10.2	**6.8**	9.2	**3.8**
USD Equity-Weighted						
Peak/Trough Dates (mm/yy)	12/69 – 10/78	**10/78 – 2/85**	2/85 – 4/95	**4/95 – 1/02**	1/02 – 7/11	**7/11 – 2/15**
Performance (%)	-35.4	**68.9**	-53.3	**47.6**	-38.5	**26.7**
Duration (Years)	8.8	**6.3**	10.2	**6.8**	9.5	**3.6**
USD Equal-Weighted						
Peak/Trough Dates (mm/yy)	2/70 – 10/78	**10/78 – 2/85**	2/85 – 4/95	**4/95 – 1/02**	1/02 – 7/11	**7/11 – 2/15**
Performance (%)	-24.2	**74.1**	-38.1	**41.1**	-40.5	**30.3**
Duration (Years)	8.7	**6.3**	10.2	**6.8**	9.5	**3.6**

Source: Thomson Reuters Datastream.
Note: The USD Trade-Weighted Index represents the US Federal Reserve's Major Currencies Index. The USD Equity-Weighted Index uses the MSCI World ex US Index. The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

The current rally is moving in line with previous dollar cycles. A repeat of the 1978–85 cycle is not our base case, given different economic drivers in place today. The 1995–2002 cycle is perhaps a better road map; the current rally has outpaced the 1995–2002 rally at this stage of the cycle, implying the USD is overdue for a correction.

Current vs Past USD Cycles

Rebased to 100 at the start of each cycle

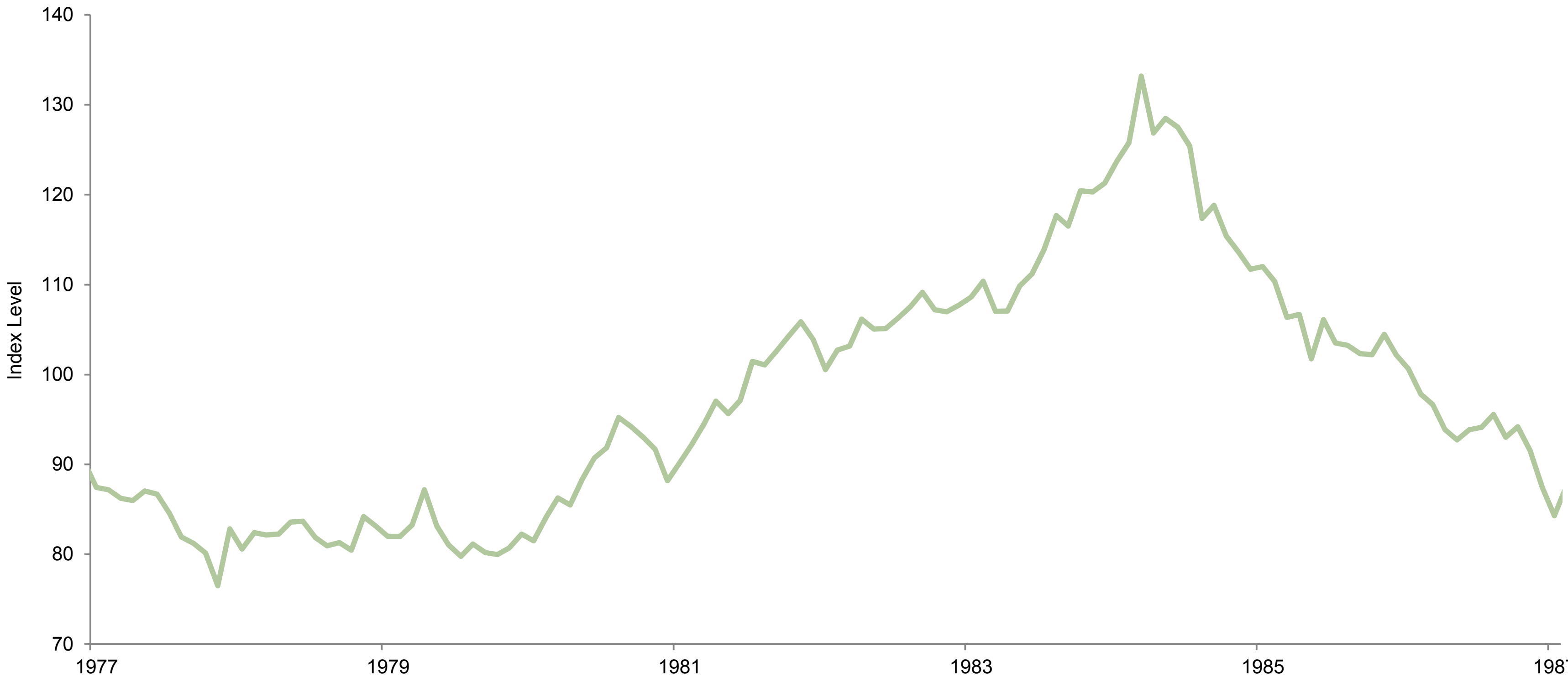


Source: Thomson Reuters Datastream.

Note: Data for current cycle are through February 28, 2015.

The 70%+ rise over this cycle was arguably an overshoot caused by Fed Chair Paul Volcker's quest to crush inflation with double-digit interest rates, which gave the dollar a sizable yield advantage and drove it higher. The extreme rally culminated in the Plaza Accords, a coordinated devaluation of the USD vs the DEM and especially the JPY. This resulted in the equally dramatic decline in the USD over 1985–87 (with the JPY moving from USD/JPY 250 to USD/JPY 120).

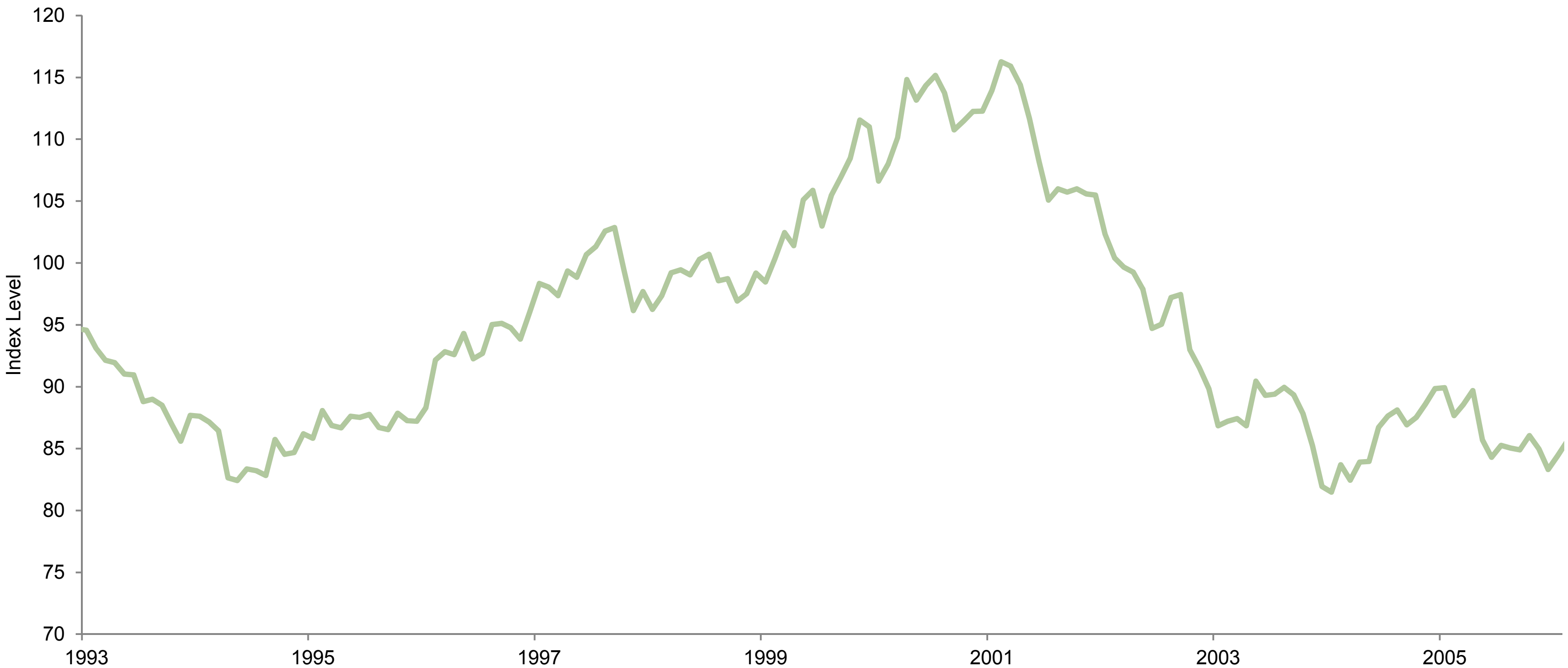
USD Equal-Weighted Index
December 31, 1977 – December 31, 1987



Source: Thomson Reuters Datastream.
Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

The 1995–2002 rally can be viewed as three distinct periods. The first was a 25% rise amid a strengthening US economy over 1995–98, followed by a soft period amid Fed rate cuts in 1998 and the resumption of rate hikes in 1999. The final phase was a 20% rise over late 1999–2002 amid a “flight to safety” during the global recession following the bursting of the tech bubble and 9/11.

USD Equal-Weighted Index
December 31, 1993 – December 31, 2006

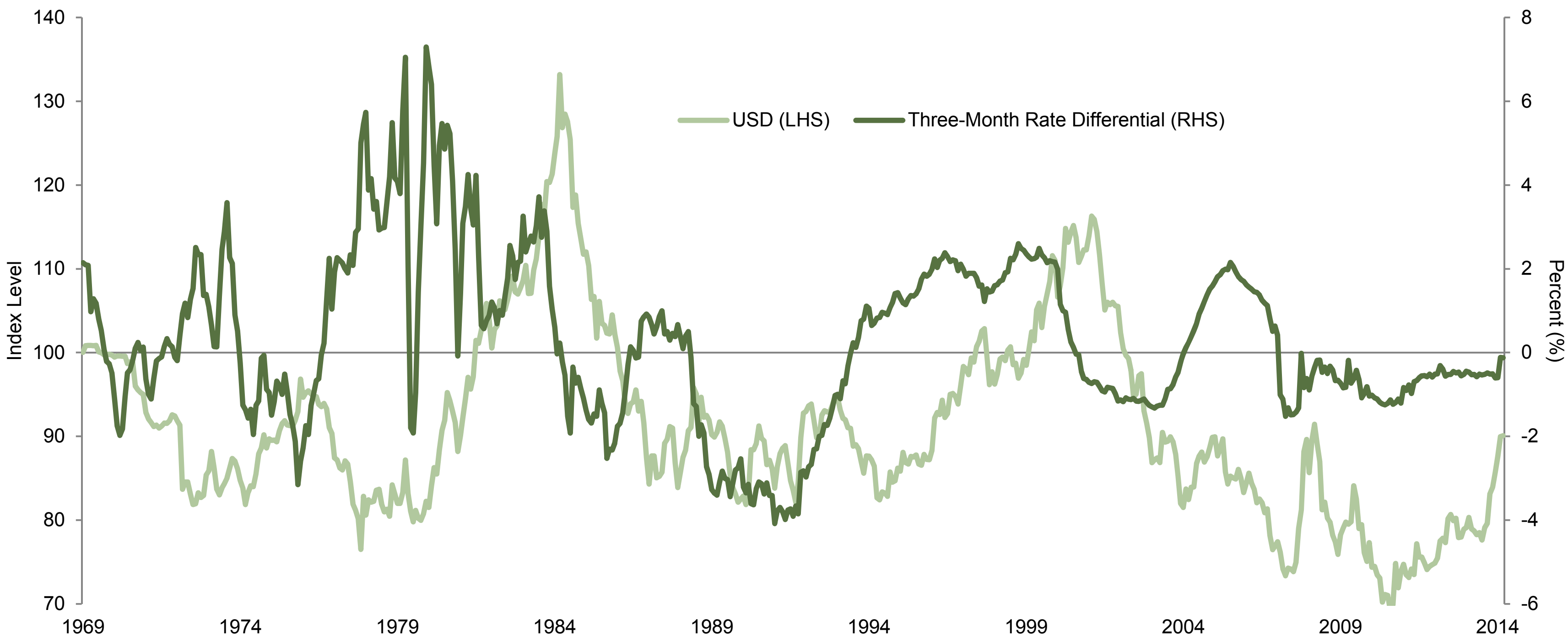


Source: Thomson Reuters Datastream.
Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

High relative interest rates helped stabilize the USD during the late 1970s and drove the dollar higher over the early 1980s. In contrast, the USD remained weak for much of the late 1980s and early 1990s due to negative interest rate differentials. However, the dollar can still rally amid declining rate differentials, such as 1984–85 and 2001–02.

USD Equal-Weighted Index vs Interest Rate Differentials

December 31, 1969 – February 28, 2015



Source: Thomson Reuters Datastream.

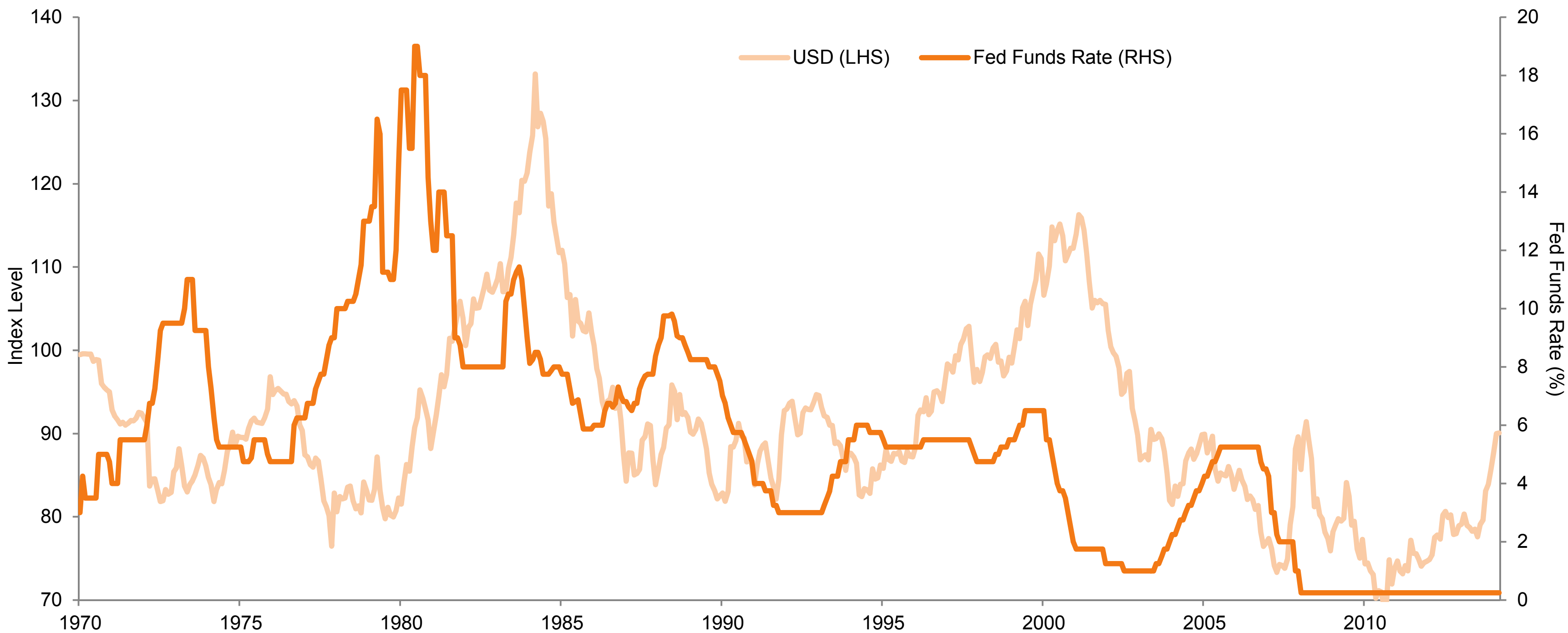
Notes: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc. The rate differential is based on the average interbank rate of these six currencies.

How Does the US Dollar React to Changes in the Fed Funds Rate?

Changes in the Fed Funds rate and the USD do not show a consistent relationship. The dollar weakened over 1994 at the start of a Fed rate cycle amid concern rising rates would send the US economy back into recession. The dollar strengthened over 2001–02 amid rate cuts.

USD Equal-Weighted Index vs Fed Funds Rate

December 31, 1970 – February 28, 2015



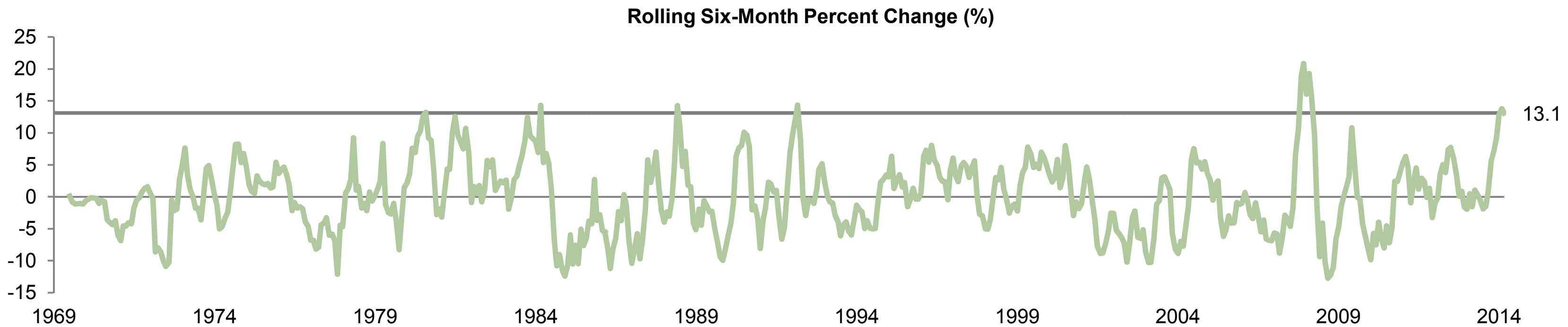
Source: Thomson Reuters Datastream.

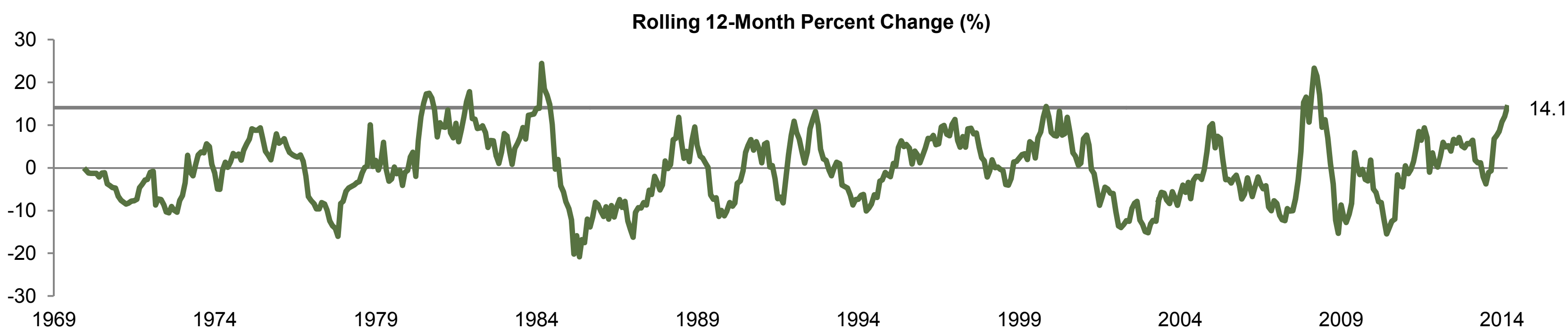
Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

Given that the USD has already risen 30%, a period of consolidation is likely in order. The 13% rise over the past six months is in line with previous peaks in momentum (save during 2008), and the 14% rise over the past 12 months is also in line with typical rallies outside of overshoots such as 2008, 1985, and 1981–82.

USD Equal-Weighted Index

December 31, 1969 – February 28, 2015





Source: Thomson Reuters Datastream.

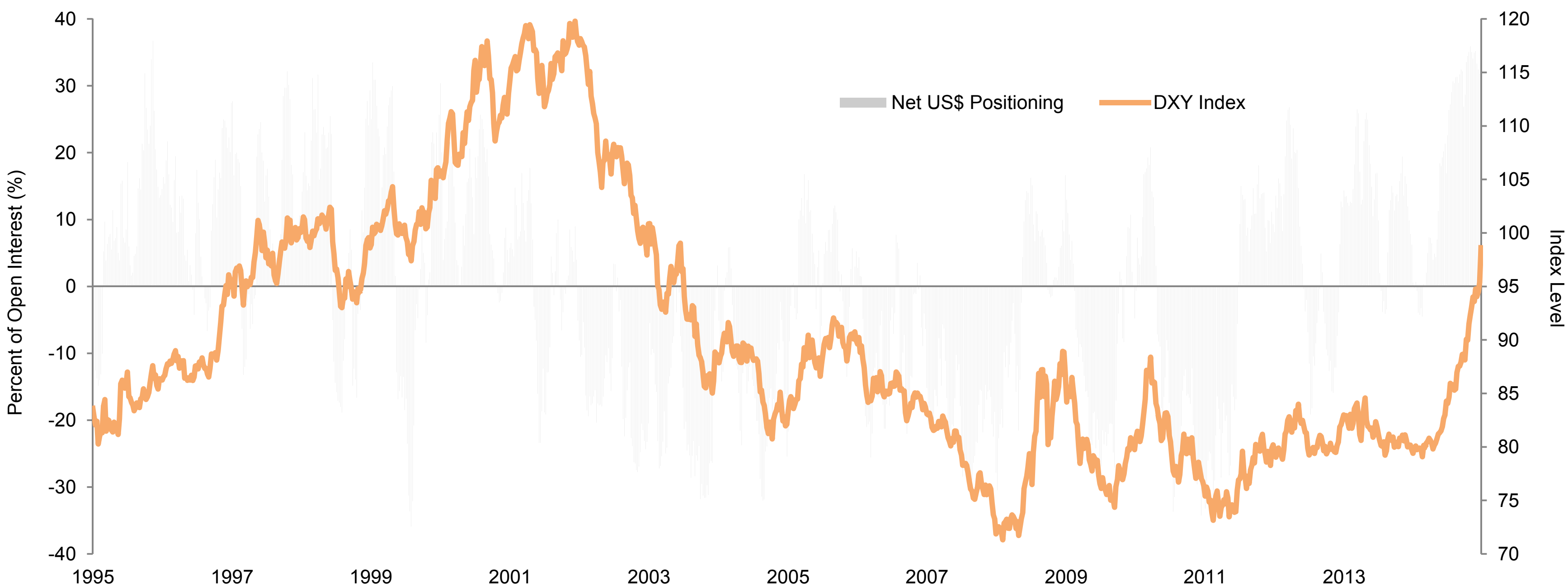
Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

The US Dollar Is Vulnerable in the Near Term

Traders have near-record long-dollar positions as a percent of open interest, making the USD a crowded trade. A delay in Fed rate hikes or signs of a weakening US economy could trigger a sell-off. How the USD would respond to aggressive rate hikes is unclear; the currency may stall given potential negative impact on US economy, or rally further amid a sell-off in risk assets and rising relative rates.

Net Aggregate Non-Commercial Positioning of the US Dollar

March 21, 1995 – March 10, 2015



Sources: Thomson Reuters Datastream and US Commodity Futures Trading Commission.

Notes: Data are weekly. US$ positioning tracks the net aggregate futures positions of non-commercial speculators against the Australian dollar, Canadian dollar, euro, Japanese yen, Mexican peso, New Zealand dollar, Swiss franc, and UK pound traded on the Chicago Mercantile Exchange as a percent of the total open interest. A negative number indicates a net short position on the dollar while a positive number indicates a net long position. The DXY Index is a contract traded on the Intercontinental Exchange (ICE) based on the trade-weighted value of the dollar.

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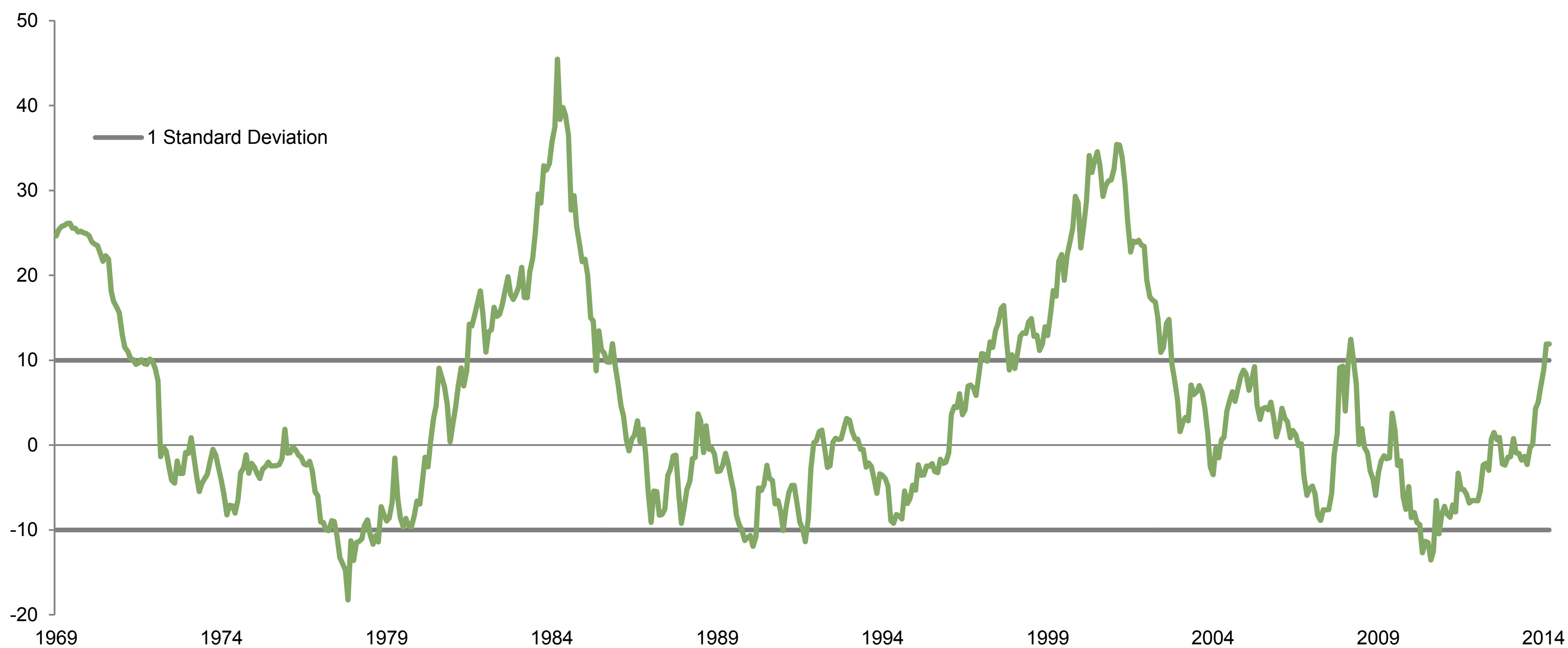
Our valuation rating for the USD moved from undervalued to fairly valued in October 2014 given dollar strength. Since October the dollar has surged further, with the real exchange rate now 12% above its long-term median. This is a 1 standard deviation move, and similar to the levels seen in 2009 and 1998. We now view the USD as overvalued. However, the currency remains well below previous peaks; the USD was 35% overvalued in 2002 and 45% overvalued in 1985.

USD Real Equal-Weighted Index

December 31, 1969 – February 28, 2015 • Percent from Median (%)

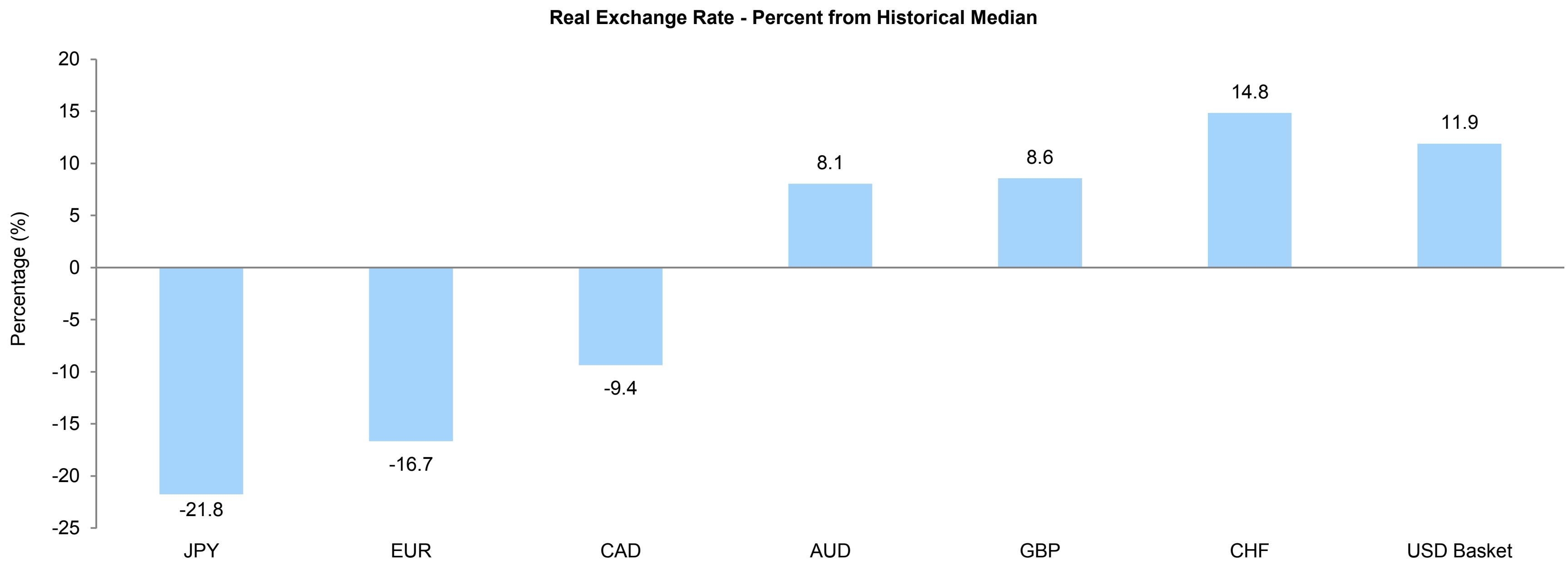


Source: Thomson Reuters Datastream.

Notes: Median is calculated on the post-1971 data. The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

While the USD appears expensive on a basket basis, there remains dispersion among individual currencies. The JPY, EUR, and CAD appear undervalued on both a real exchange rate and econometric fair value estimate basis, while the AUD and GBP appear fairly valued. The CHF remains expensive. For commentary and charts on each of the six major developed currencies, please see pages 18–23.

Valuation Versus the US Dollar: Developed Markets Currencies
As of February 28, 2015



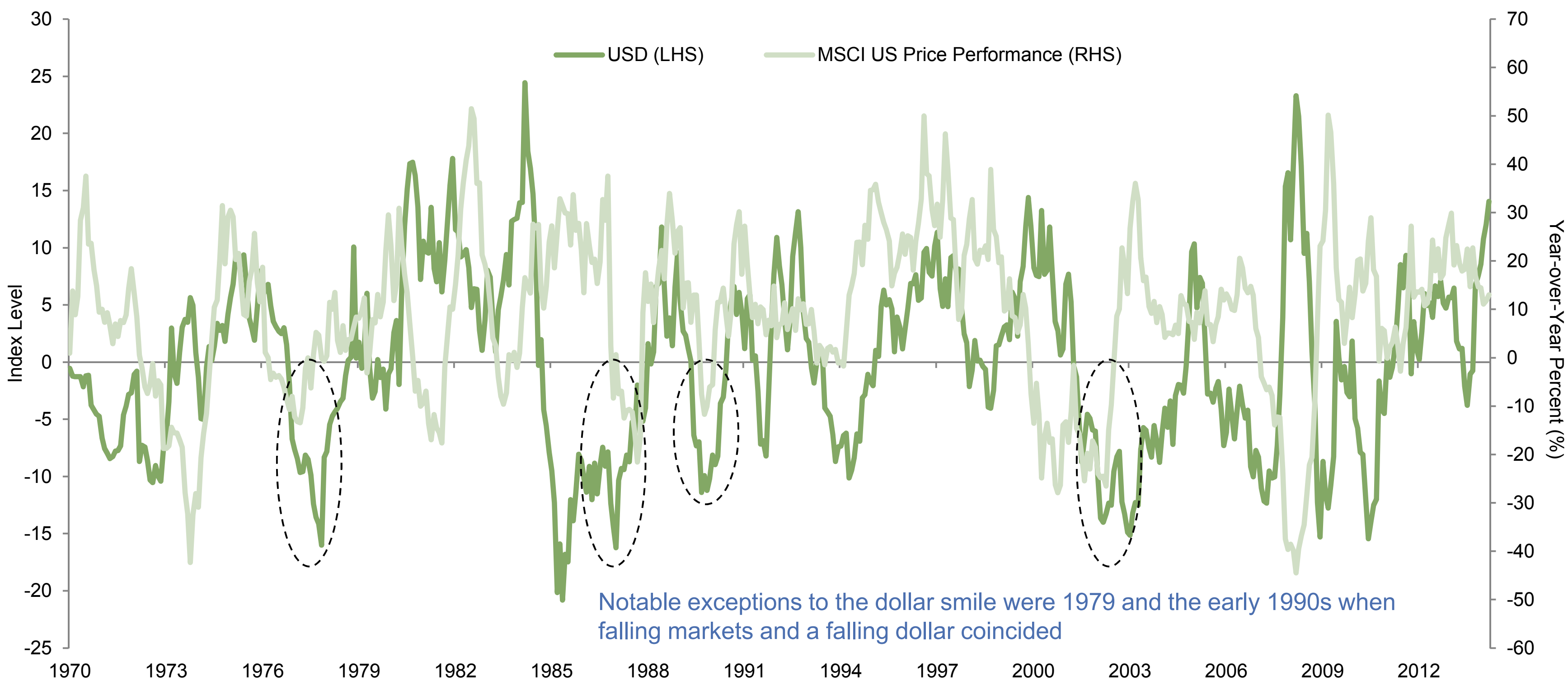
Sources: Thomson Reuters Datastream, MSCI Inc., Goldman, Sachs & Co., and J.P. Morgan Securities, Inc. MSCI data provided "as is" without any express or implied warranties.

Notes: Real exchange rate takes into account each country's nominal exchange rate versus the US dollar and its inflation relative to the United States. Historical median is calculated from July 1971 onward. USD Basket is equal weighted.

How Much Higher Can the US Dollar Go?

Historical cycles and valuations suggest the dollar is about halfway through a “strong dollar” cycle in duration and 40%–70% complete in magnitude, with potentially 10%–20% more upside over the next three years. Sustained economic growth and rising relative rates, or a bout of global market turmoil, typically drive the dollar higher. This is known as the “Dollar Smile” in that the USD rallies when US growth (and therefore rates) are well above other markets, or when global risk aversion rises sharply.

USD Equal-Weighted Index vs MSCI US Price Performance
December 31, 1970 – February 28, 2015



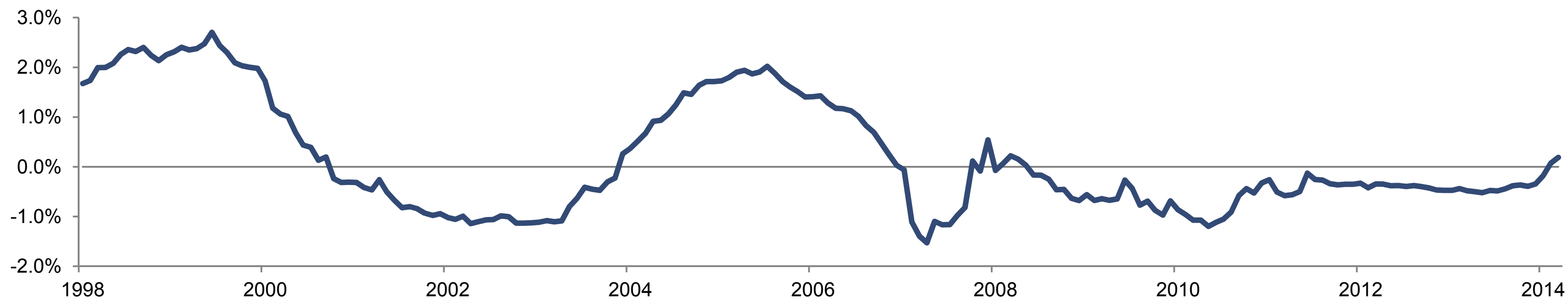
Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: The USD Equal-Weighted Index is an equal-weighted basket of six currencies: the Australian dollar, British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

Should US$-Based Investors Still Hedge?

Despite the dollar's vulnerability to a near-term pull back, USD-based investors should consider hedging a portion of their non-USD exposures. Such hedging will reduce the impact a potential USD overshoot may have on the portfolio should aggressive monetary easing by global central banks continue to send the dollar sharply higher. Hedging allows investors to potentially overweight undervalued non-US assets without being substantially underweight the USD versus their benchmark. Hedging does add cost and complexity, but investors should ask whether they are comfortable with their current currency exposures.

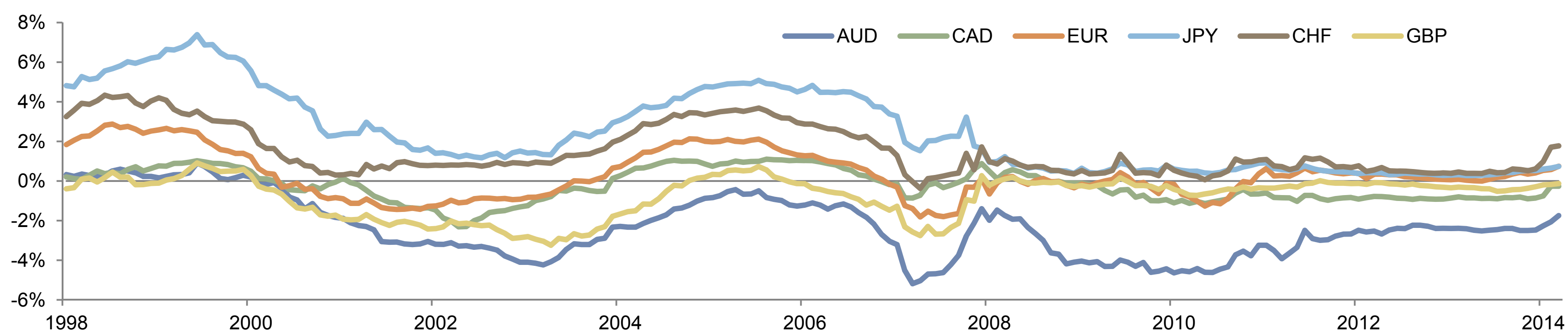
Average Implied Carry from One-Year Forwards: USD Basket

December 31, 1998 – February 28, 2015



Implied Carry from One-Year Forwards: Developed Markets Currencies

December 31, 1998 – February 28, 2015



Source: Thomson Reuters Datastream.

Outlook for Individual Currencies versus the US Dollar

The following pages provide commentary on the outlook for six major developed market currencies. As the table below highlights, most currencies remain well above their 2002 lows, although some currencies have made much larger adjustments than others.

Developed Markets Currencies Versus the USD: Today's Level Relative to Recent Peaks and Troughs
As of March 11, 2015

	Current	2011 Peak	2008 Low	2002 Low	% From 2011 Peak	% From 2008 Low	% From 2002 Low	Decline to 2002 Low
AUD/USD	0.76	1.10	0.65	0.51	-31%	16%	50%	-33%
CAD/USD	0.78	1.05	0.81	0.62	-26%	-3%	26%	-20%
CHF/USD	0.99	1.27	0.82	0.58	-22%	21%	70%	-41%
EUR/USD	1.06	1.48	1.27	0.86	-29%	-17%	23%	-19%
GBP/USD	1.49	1.67	1.44	1.41	-10%	4%	6%	-5%
USD/JPY	121	76	109	134	-37%	-11%	10%	-9%

Source: Thomson Reuters Datastream.

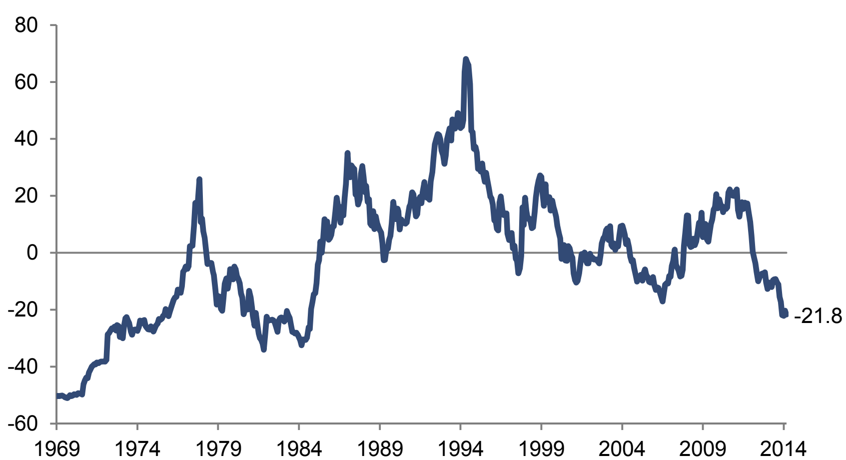
Japanese Yen: Can the BOJ Achieve Inflation?

The JPY has fallen 37% from its 2011 peak. At USD/JPY 121, the currency is already below its 2008 low. Consensus forecasts see the JPY hitting 125 by the end of 2015, with a forecast range of 112–132. A move back to its 2002 low of 134 implies 9% downside from current levels.

From a valuation perspective, the JPY is already 22% undervalued, and back to its pre-2008 low. The outlook for the JPY depends heavily on whether the economy can actually achieve sustained inflation. The JPY has exhibited persistent strength since the early 1990s as the economy slipped into deflation (as per economic theory). Thus, while today the JPY appears cheap on an inflation-adjusted basis, rising inflation would alter the valuation picture, implying more downside for the JPY. The risks of a JPY overshoot to the 130 level or beyond would require continued aggressive easing by the BOJ.

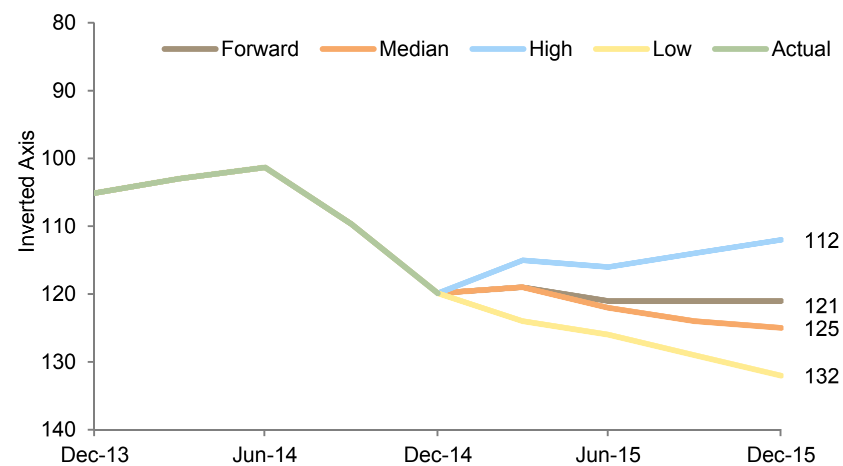
USD/JPY Real Exchange Rate

December 31, 1969 – February 28, 2015 • Percent from Median (%)



USD/JPY: Consensus Forecast

As of March 10, 2015



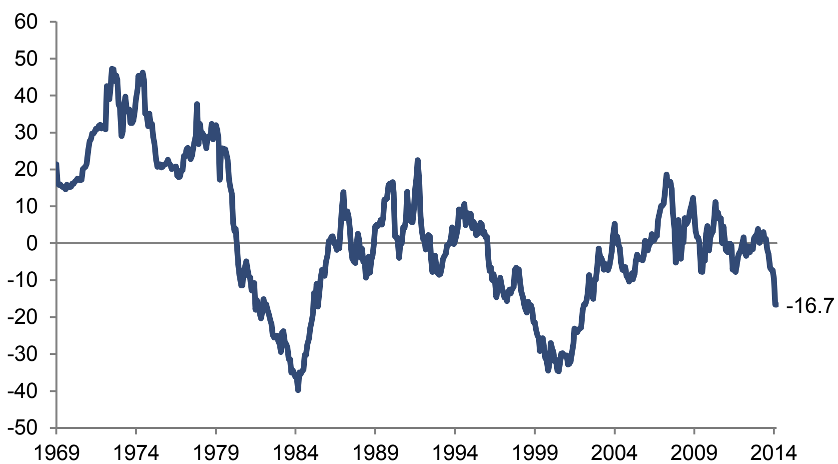
Sources: Bloomberg L.P. and Thomson Reuters Datastream.

The EUR has fallen 29% from its 2011 high and at EUR/USD 1.06, is at its lowest level since 2002. The consensus expects the EUR to stay near current levels for the rest of the year, although with a forecast range of 0.98–1.20. A move back to the EUR's 2002 low of 0.86 implies another 19% decline.

From a valuation perspective the euro is 17% undervalued. The currency has sold off sharply, anticipating the impact of the ECB's QE program launched in early March. While the consensus sees the currency stabilizing at current levels, a move to parity or below seems very possible, if not desired by the ECB.

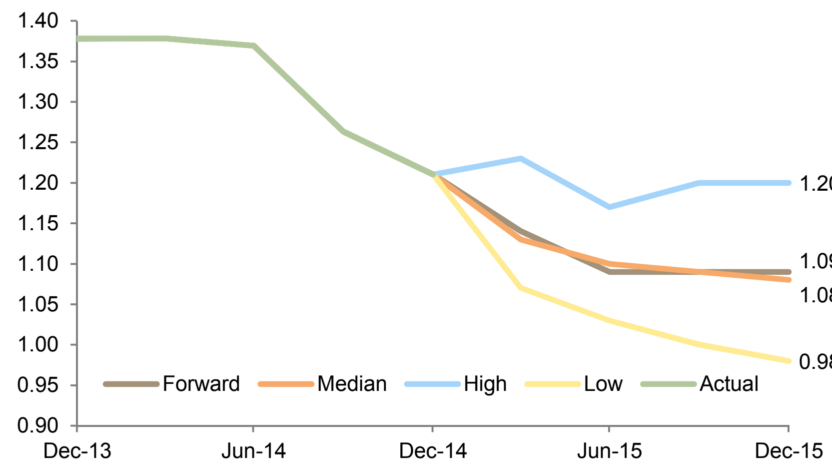
EUR/USD Real Exchange Rate

January 31, 1969 – February 28, 2015 • Percent From Median (%)



EUR/USD: Consensus Forecast

As of March 10, 2015



Sources: Bloomberg L.P. and Thomson Reuters Datastream.

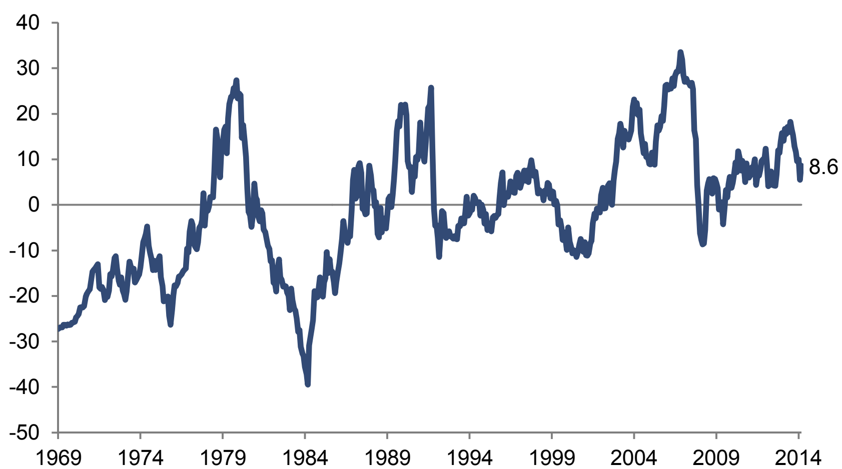
British Pound: Steady versus the Dollar, Strong versus the Euro

The GBP has been the most resilient currency vs the USD, falling only 10% from its 2011 high. At GBP/USD 1.49, the GBP is roughly in line with where consensus forecasts see the currency ending the year, with a forecast range of 1.38–1.63. From a valuation perspective, the GBP remains 8.6% expensive on a real basis.

The GBP has one of the clearest long-term resistance levels, never falling below 1.40 over the past 30 years, despite “testing” this level in early 1993 (when George Soros famously broke the BOE), 2001–02, and 2008. The GBP breaking 1.40 would be significant, and would require the BOE to resume its own QE program. More likely, the GBP could remain somewhat steady vs the USD while appreciating more versus the EUR. There is 5% downside for GBP vs the USD to 1.40, but arguably 21% upside vs the EUR back to GBP/EUR 1.70, as occurred over 2001–02.

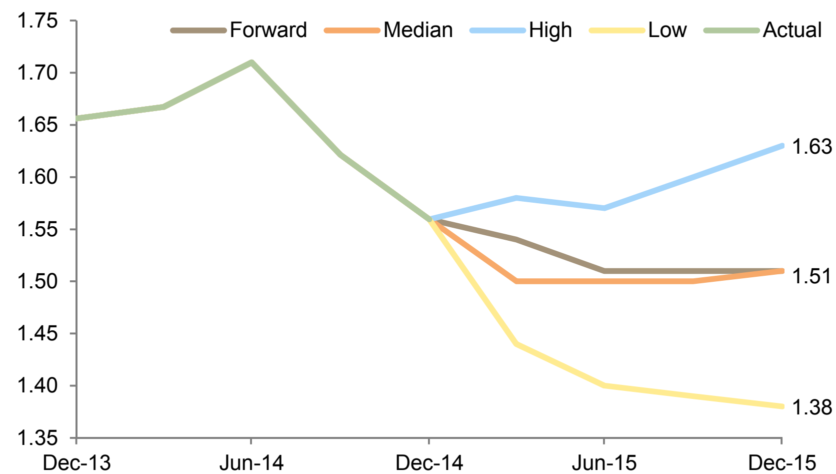
GBP/USD Real Exchange Rate

January 31, 1969 – February 28, 2015 • Percent From Median (%)



GBP/USD: Consensus Forecast

As of March 10, 2015

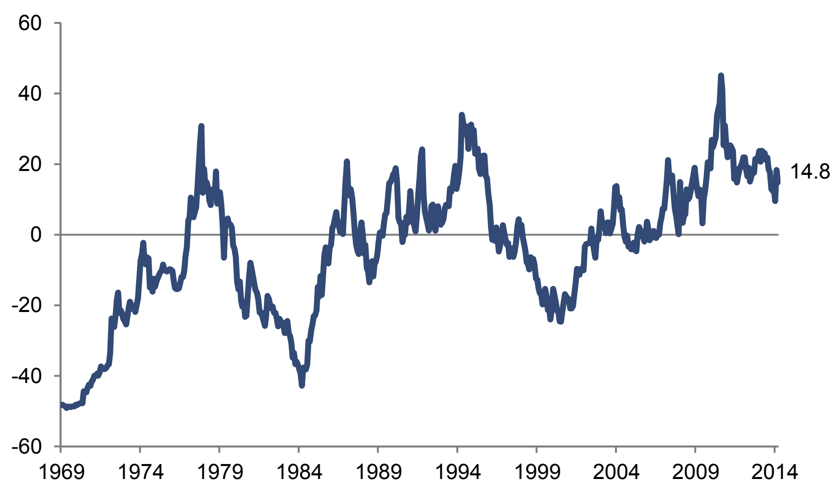


Sources: Bloomberg L.P. and Thomson Reuters Datastream.

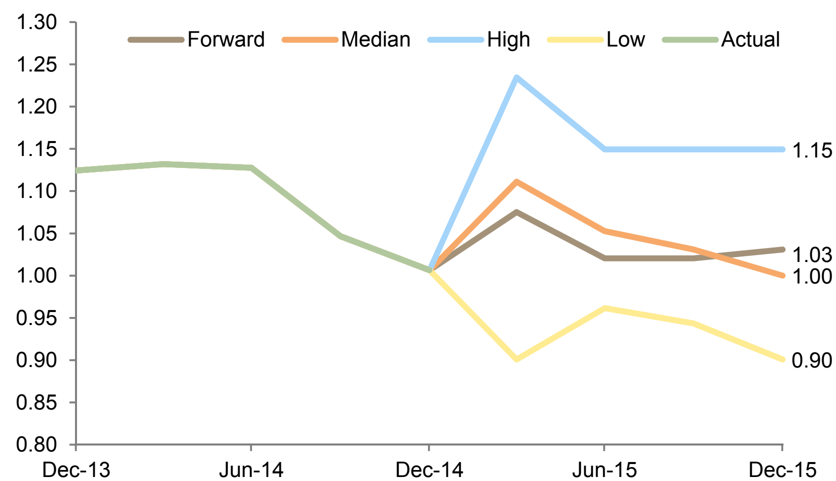
The CHF has fallen 22% from its 2011 high. At CHF/USD 0.99, the CHF is in line with where the consensus forecasts sees the currency ending 2015, albeit with a wide range of 0.90–1.15, given the recent volatility in the currency following the SNB's decision to remove the CHF's cap vs the EUR.

The CHF is 15% expensive on a real basis, and remains 21% above its 2008 low. A return to its 2002 low of 0.58 requires an extreme 41% decline. Such a move seems unlikely, and would likely require a rapid rise in inflation in Switzerland, as opposed to current lingering deflation. The most likely path for the CHF is continued weakness vs the USD, but relatively stable vs the euro amid ECB QE.

CHF/USD Real Exchange Rate
January 31, 1969 – February 28, 2015 • Percent From Median (%)



CHF/USD: Consensus Forecast
As of March 10, 2015



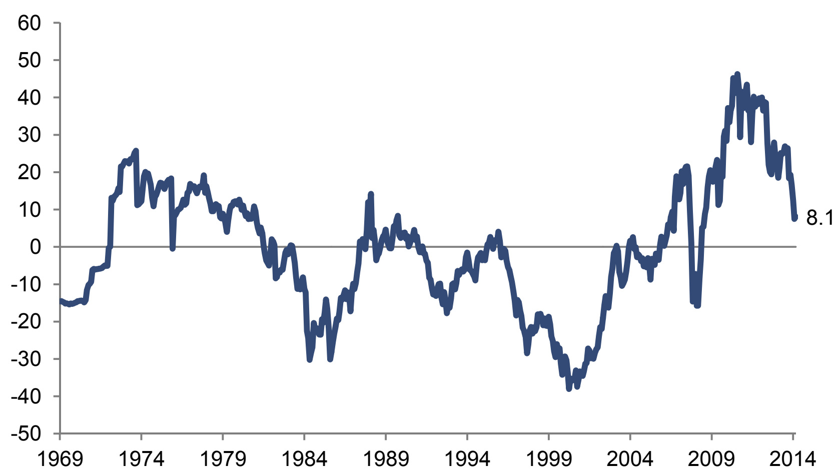
Sources: Bloomberg L.P. and Thomson Reuters Datastream.

Australian Dollar: Falling Commodity Prices a Headwind

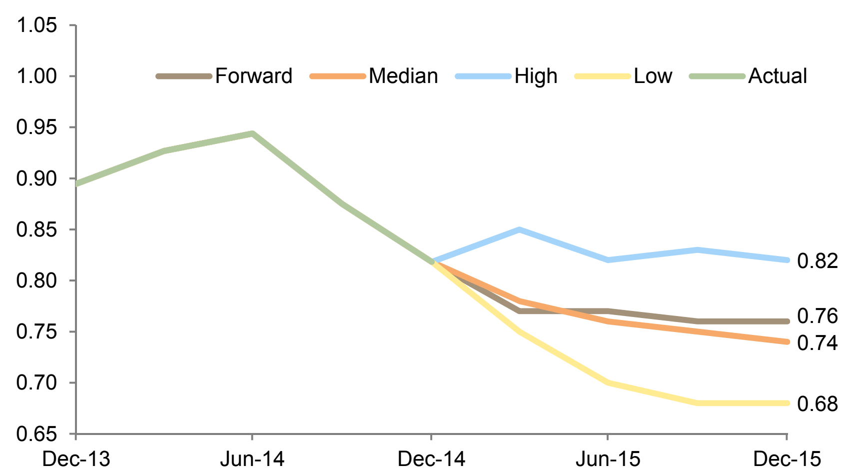
The AUD has fallen 31% vs the USD since 2011. Consensus forecasts have the AUD/USD exchange rate ending the year at 0.74, only modestly lower than the current value of 0.76, which is also the level RBA governor Glenn Stevens mentioned was "an appropriate level."

The AUD remains 8% overvalued despite its large fall vs the USD, given the extreme overvaluation seen in 2011. While the Aussie bottomed at 0.51 in 2001–02, representing 33% downside from today's level, the currency has typically found support at around 0.65, a level reached in 2008, 1992, and 1987, which implies 15% downside. The AUD will remain under pressure if the RBA is forced to cut interest rates further, and remains sensitive to Chinese demand for commodities. An AUD overshoot is likely amid a China scare.

AUD/USD Real Exchange Rate
January 31, 1969 – February 28, 2015 • Percent From Median (%)



AUD/USD: Consensus Forecast
As of March 10, 2015



Sources: Bloomberg L.P. and Thomson Reuters Datastream.

Canadian Dollar: Keyed to Commodity Prices

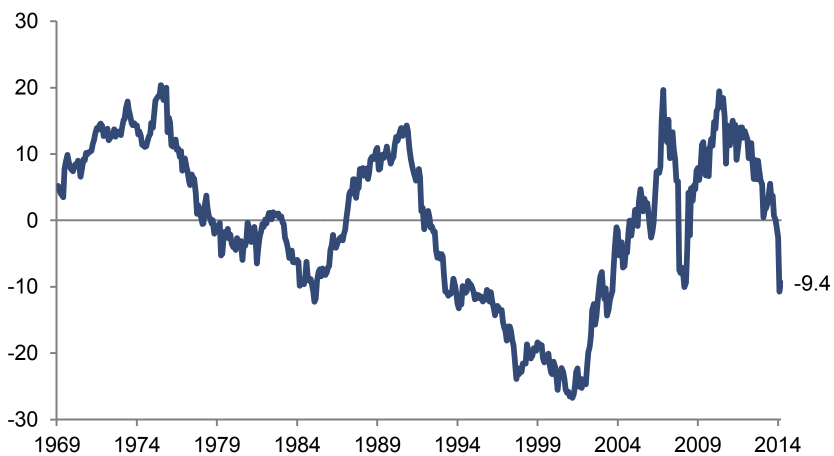
The CAD has fallen 26% from its 2011 high. At CAD/USD 0.78, the CAD is back to its lowest level since 2009, and is roughly in line with where consensus forecasts expect the currency to end the year.

The CAD also appears cheap vs the USD, although less so than the EUR or JPY. A move back to the 2002 low of 0.62 would represent a 20% decline from today's levels.

Commodity prices, especially oil, will be a key factor in CAD strength, as well as whether the RBC hikes rates in line with the Fed, given the interconnectedness of the two economies.

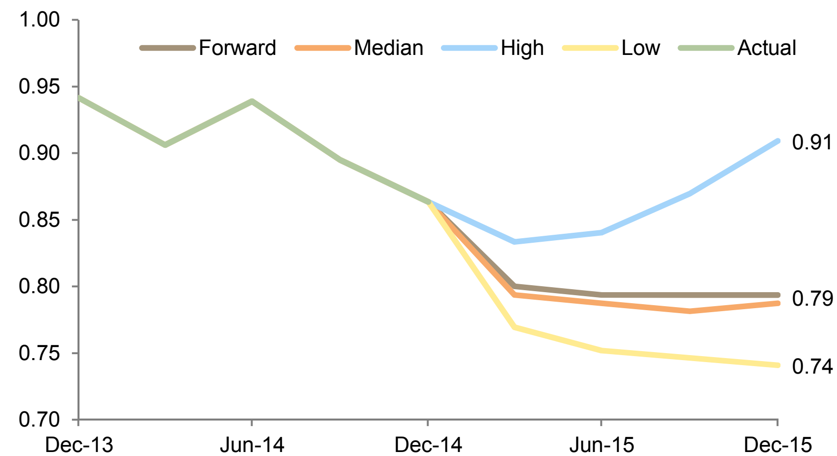
CAD/USD Real Exchange Rate

January 31, 1969 – February 28, 2015 • Percent From Median (%)



CAD/USD: Consensus Forecast

As of March 10, 2015



Sources: Bloomberg L.P. and Thomson Reuters Datastream.