

CURRENCY VIEWS AND VALUATIONS

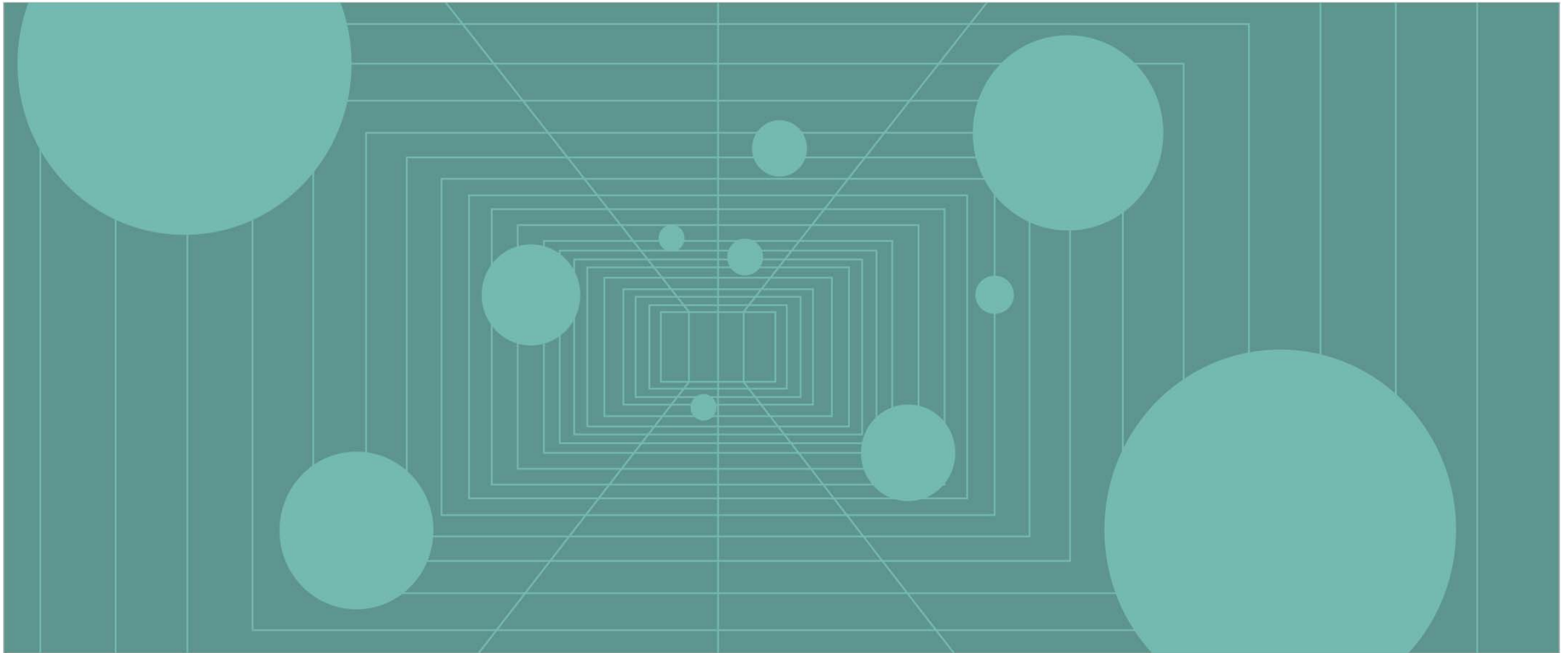


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Introduction

In April 2016, we published *From Dollar Dominance to Divergence*, a resource to help investors understand the behavior of currencies by presenting analysis of historical currency momentum, valuation, and fundamentals in five key base currencies: US dollar (USD), British pound (GBP), euro (EUR), Swiss franc (CHF), and Japanese yen (JPY).

This chart book provides updated analysis and commentary on four additional currencies—Australian dollar (AUD), New Zealand dollar (NZD), Canadian dollar (CAD), and Singapore dollar (SGD)—to help investors understand how these nine currencies behave against other major currencies. For more on developing a currency-hedging policy, please see our 2016 report, *Strategic Currency Hedging Policy: A New Framework*.

Summary of Currency Views

USD Breakout or Breakdown?

While the USD seems positioned for a breakdown in the recent upward trend, a less-dovish-than-expected Fed could see the USD resume its rally.

GBP The Brexit Waiting Game

Market positioning is very net short the GBP, increasing the odds of a sharp rebound if a hard Brexit is avoided. However, until there is clarity on Brexit, the pound will remain under pressure.

EUR Waiting for the Recovery

A sustained rally in the EUR requires evidence that the Eurozone economy is picking up and that the European Central Bank (ECB) will not be forced to resume its QE program.

CHF Holding the Line

Given lingering overvaluation, the Swiss National Bank is unlikely to tighten monetary policy and will continue to intervene, resisting any undue appreciation of the CHF, especially versus the EUR.

JPY Still a Safe Haven

Market positioning has shifted from very net short the JPY to now neutral. The currency does not look stretched from a momentum perspective, as the recent rally has been modest.

Summary of Currency Views (continued)

AUD
Weakening
Prospects

While the AUD does not look oversold on a momentum basis, market positioning is extremely net short the AUD. This increases the odds of a bullish reversal in the currency.

NZD
Carried
Away

Rate cuts by the Reserve Bank of New Zealand (RBNZ) have greatly reduced the positive carry offered by the NZD. Indeed, hedging USD exposures generates negative carry for the first time in almost 20 years.

CAD
Bucking
the Trend

The CAD has performed better than other “commodity currencies” such as the AUD and NZD, given that the Bank of Canada has been hiking rates alongside the Fed, rather than cutting rates.

SGD
Holding
the Line

The SGD is a pro-cyclical currency by design. Thus, further weakness in the global and Singapore economy would likely see the SGD weaken.

USD: Breakout or Breakdown?

- The USD rallied over the past year against a trade-weighted basket, supported by strong domestic economic data and political uncertainties in Europe.
- However, the USD rally is beginning to lose steam, with momentum starting to roll over and consensus forecasts expecting the USD to fall in second half 2019 against the EUR and GBP, but remain flat against the JPY and CHF.
- Dovish comments from the Fed and expectations of rate cuts this year partly explain the recent downward pressure on the dollar.
- At the same time, the USD appears expensive relative to most major currencies. However, market positioning remains very long the USD, which leaves the currency vulnerable in the near term.
- While the USD seems positioned for a breakdown in the recent upward trend, a less-dovish-than-expected Fed could see the USD resume its rally.
- Furthermore, the USD has historically rallied amid periods of market stress, which is why hedging typically reduces the volatility of foreign equities. Today, USD-based investors still earn positive carry from hedging back to the USD.

USD NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



Sources: Bank for International Settlements and Thomson Reuters Datastream.

USD CONSENSUS FORECASTS

As of July 8, 2019

	USD/EUR	USD/GBP	USD/JPY	USD/CHF
Current	0.89	0.80	108.0	0.99
Year-End 2019 Median Forecast	0.87	0.78	108.0	0.99
Percent Change	-2.2%	-2.5%	0.0%	0.0%

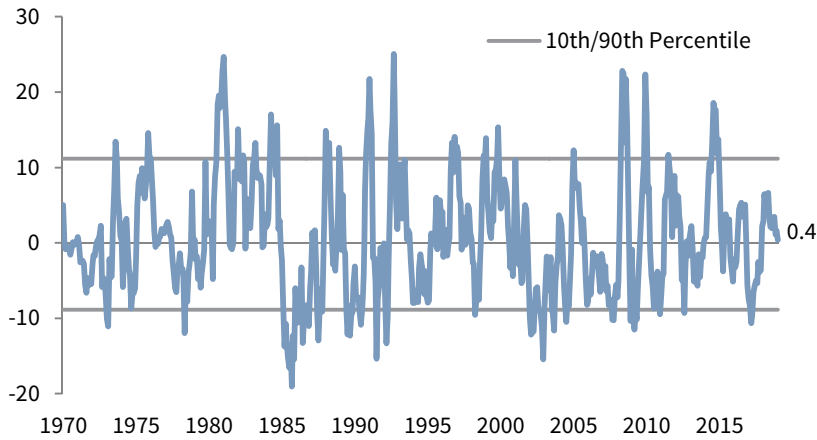
Source: Bloomberg L.P.

USD momentum has peaked and is rolling over

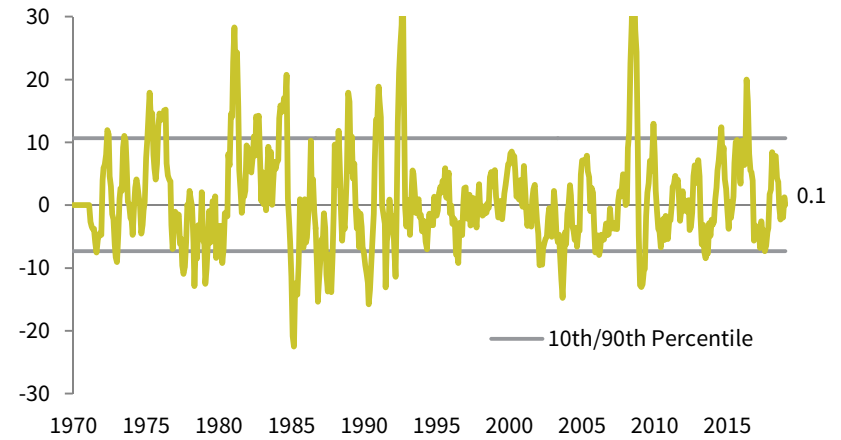
USD ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

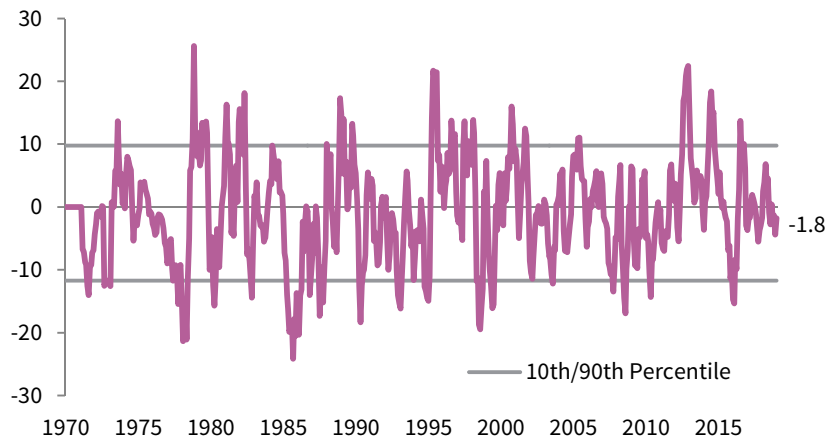
USD/EUR



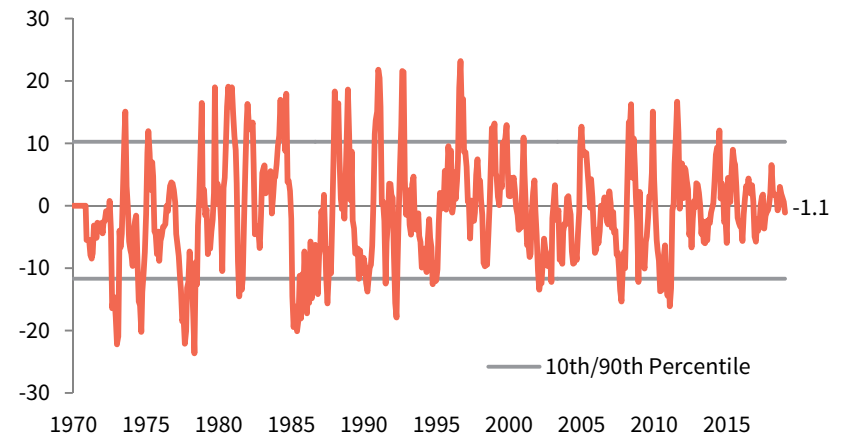
USD/GBP



USD/JPY



USD/CHF

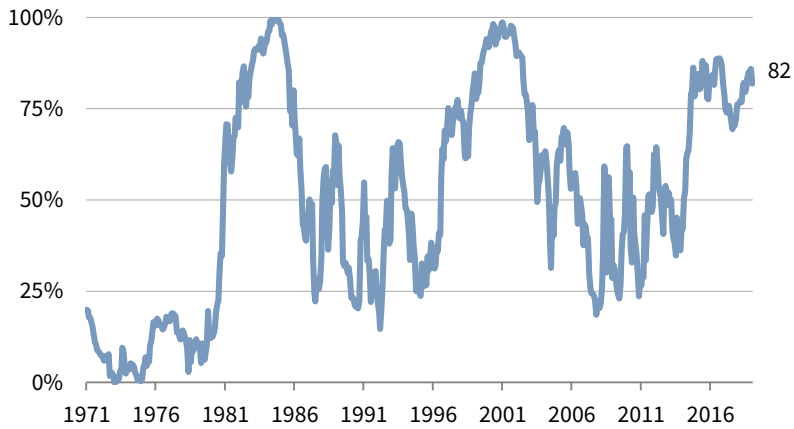


USD valuations are elevated vs the EUR, JPY, and GBP, but below median vs the CHF

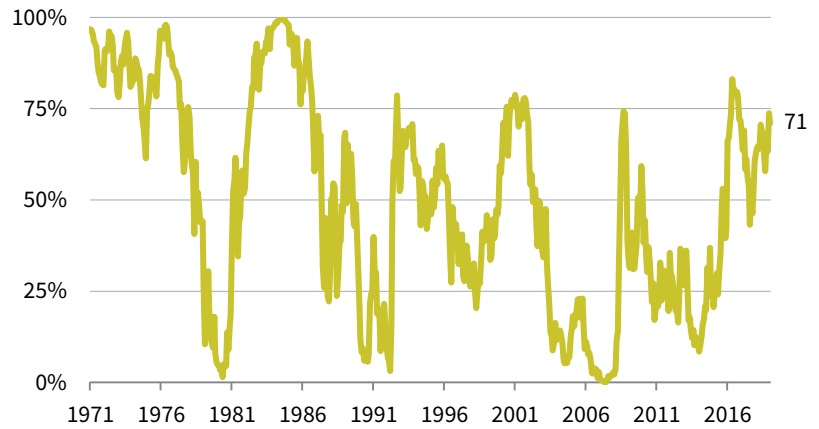
USD VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percentile (%)

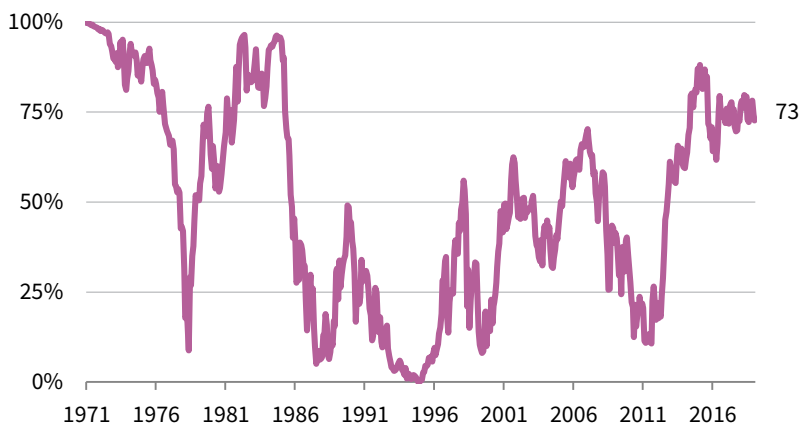
USD/EUR



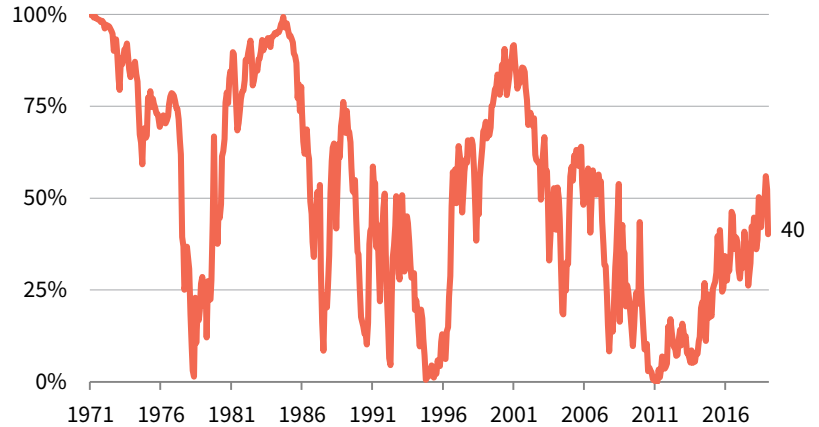
USD/GBP



USD/JPY



USD/CHF



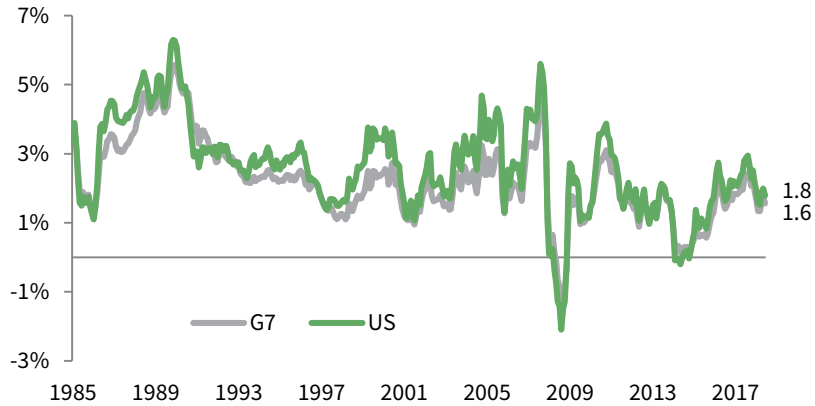
Declining positive carry may weigh on the USD

Negative correlation to equity market implies volatility benefit in hedging most DM currencies, save the JPY

USD FUNDAMENTALS

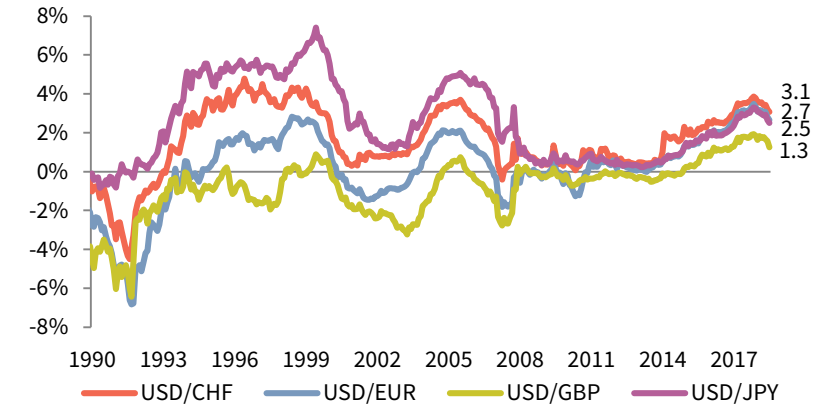
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



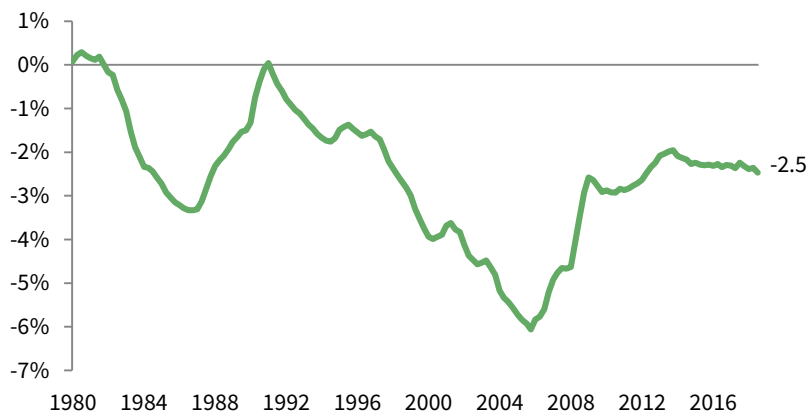
Implied Carry

December 31, 1990 – June 30, 2019



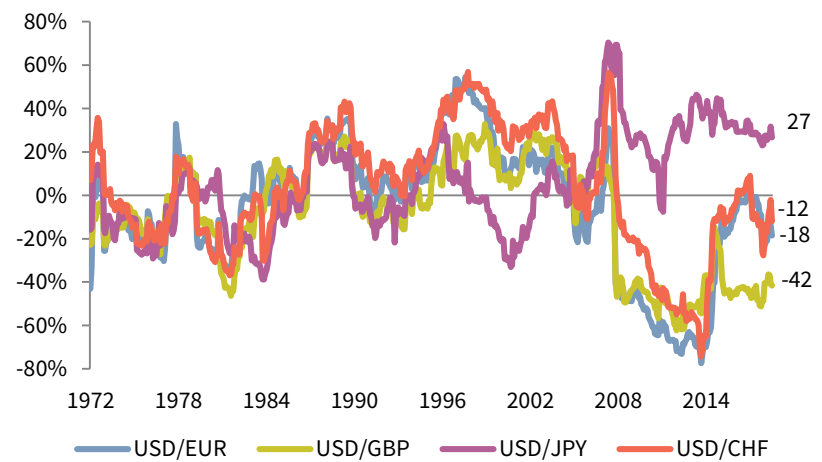
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

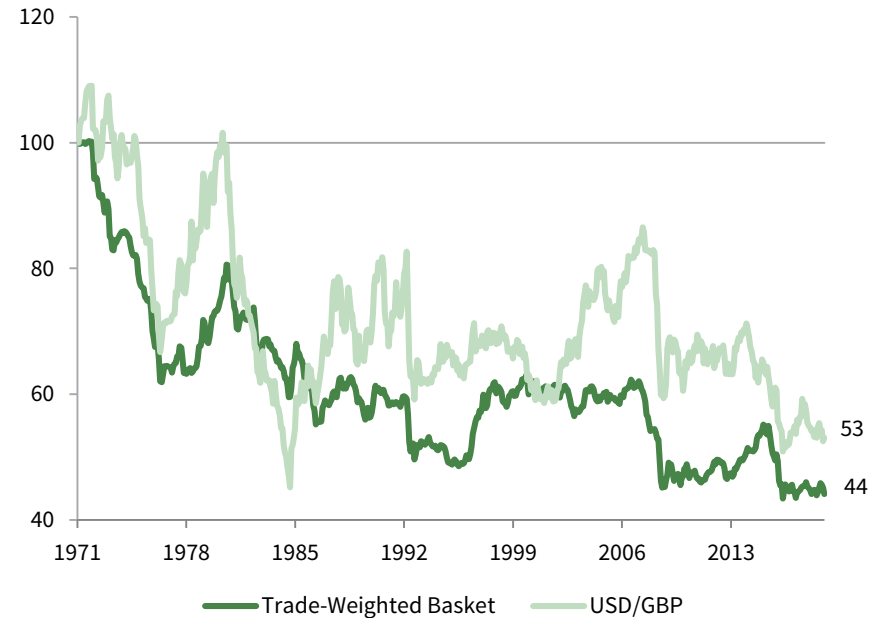


GBP: The Brexit Waiting Game

- The GBP has weakened against the USD for most of 2018 and 2019 as Brexit uncertainty continues to weigh on the currency. On a trade-weighted basis, however, the GBP has remained flat due to weakness in the EUR over the same period.
- Consensus forecasts expect the GBP will rally in second half 2019. However, this assumes a “hard Brexit” scenario can be avoided at the end of October and that the Bank of England is not forced to cut rates to support the economy.
- Despite recent weakness, the currency does not look oversold from a momentum perspective. Valuations are also mixed; the currency looks undervalued versus the USD and CHF, but elevated versus the EUR and JPY.
- Market positioning is very net short the GBP, increasing the odds of a sharp rebound should a hard Brexit be avoided.
- However, GBP-based investors should remain partially unhedged as the currency has become very pro-cyclical with high positive correlation to global equities; this implies unhedged exposure may offset equity volatility.
- While hedging back to GBP generates positive carry versus the EUR, CHF, and JPY, it creates negative carry versus the USD.

GBP NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

GBP CONSENSUS FORECASTS

As of July 8, 2019

	GBP/USD	GBP/EUR	GBP/JPY	GBP/CHF
Current	1.25	1.11	135.6	1.24
Year-End 2019 Median Forecast	1.28	1.12	137.6	1.27
Percent Change	2.4%	0.9%	1.5%	2.4%

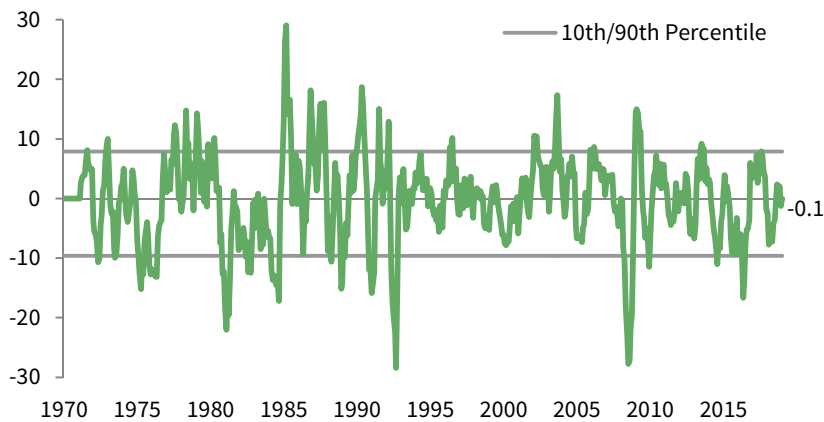
Source: Bloomberg L.P.

The GBP does not look oversold

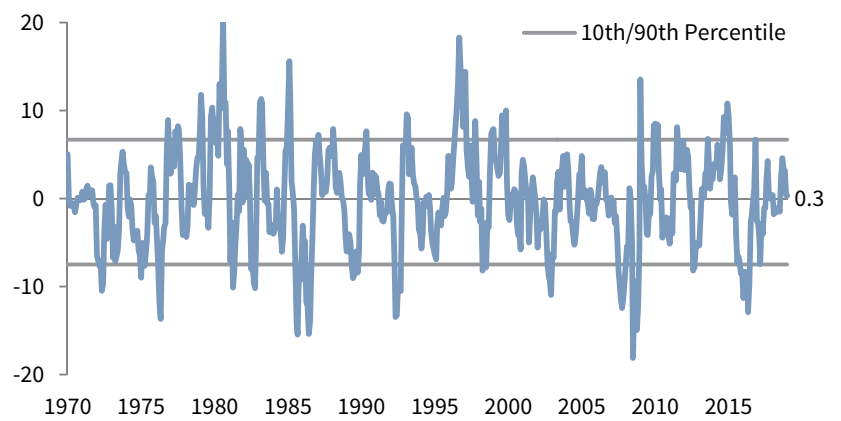
GBP ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

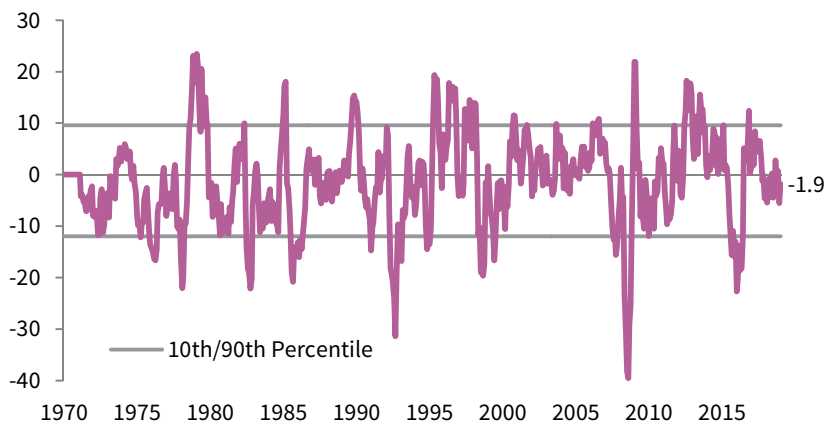
GBP/USD



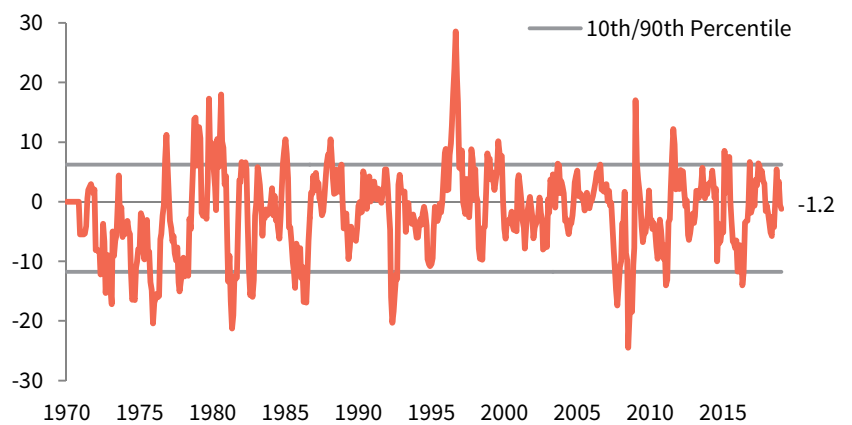
GBP/EUR



GBP/JPY



GBP/CHF

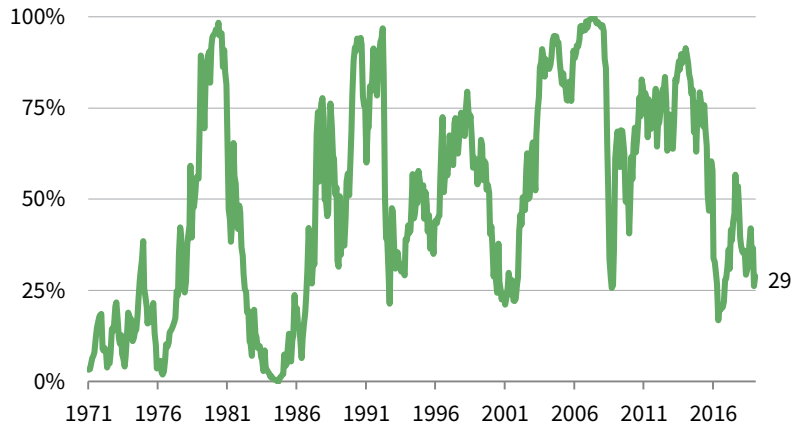


GBP valuations are low vs the USD and CHF, but elevated vs the EUR and JPY

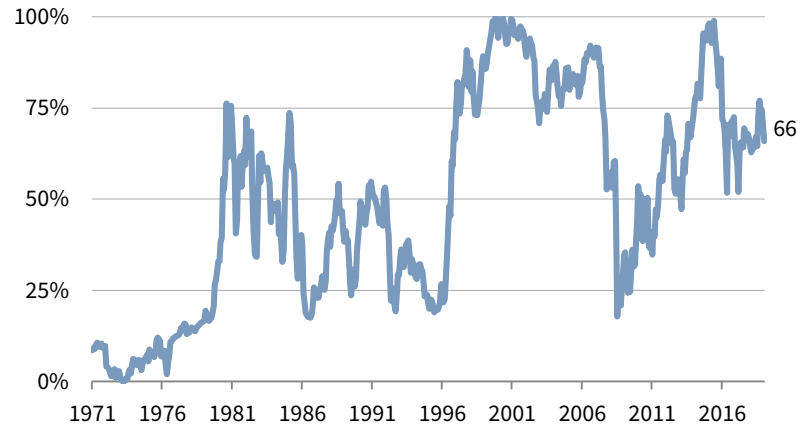
GBP VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percentile (%)

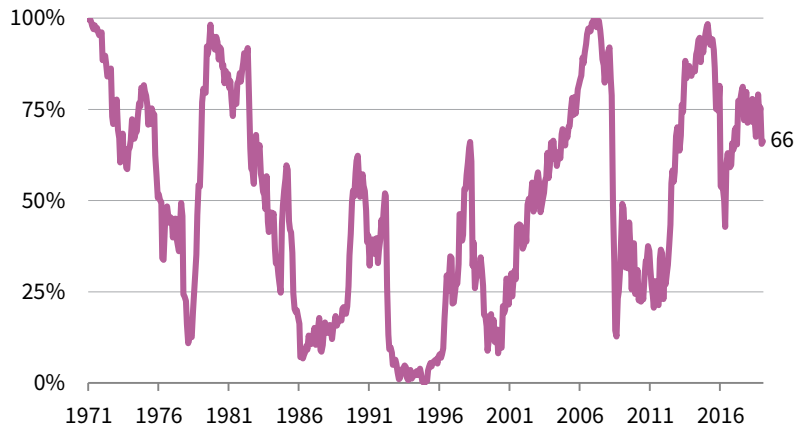
GBP/USD



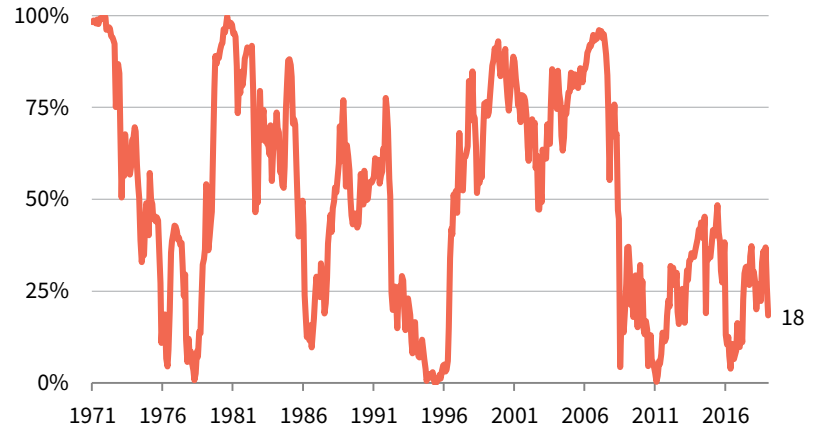
GBP/EUR



GBP/JPY



GBP/CHF



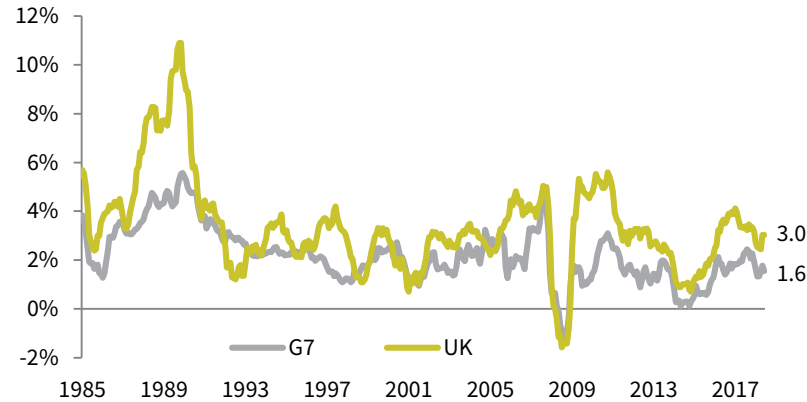
GBP is vulnerable given a large current account deficit

The GBP has become a very pro-cyclical currency with high positive correlation to global equities; this implies unhedged exposure lowers equity volatility

GBP FUNDAMENTALS

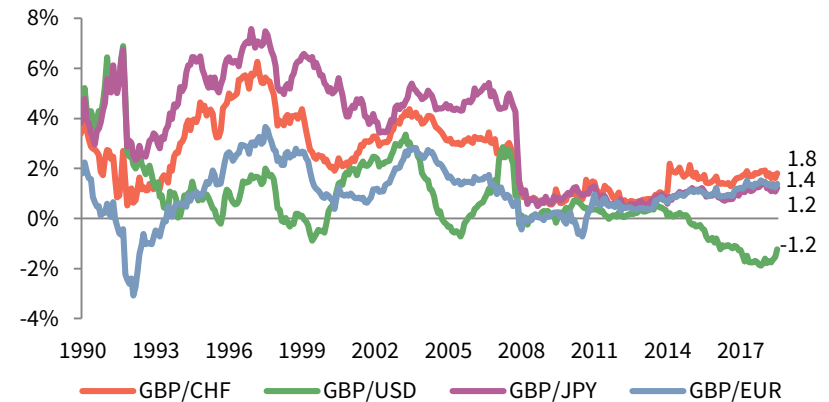
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



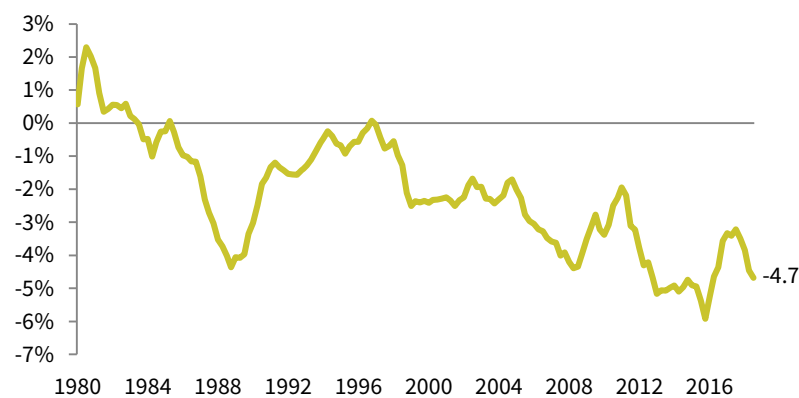
Implied Carry

December 31, 1990 – June 30, 2019



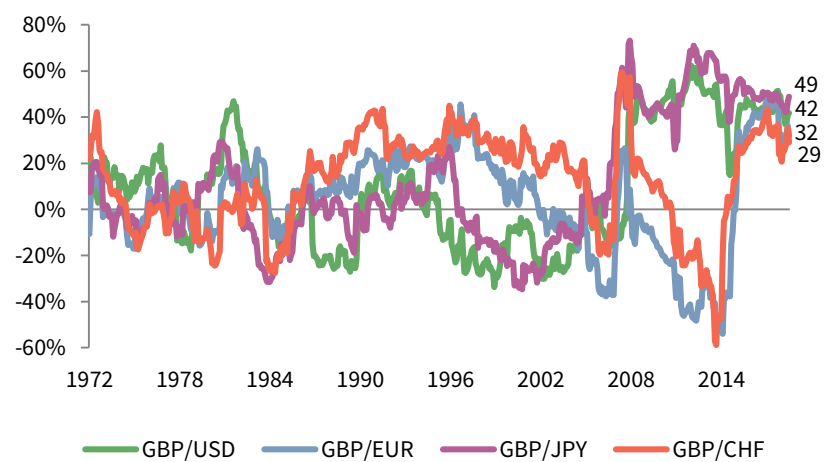
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

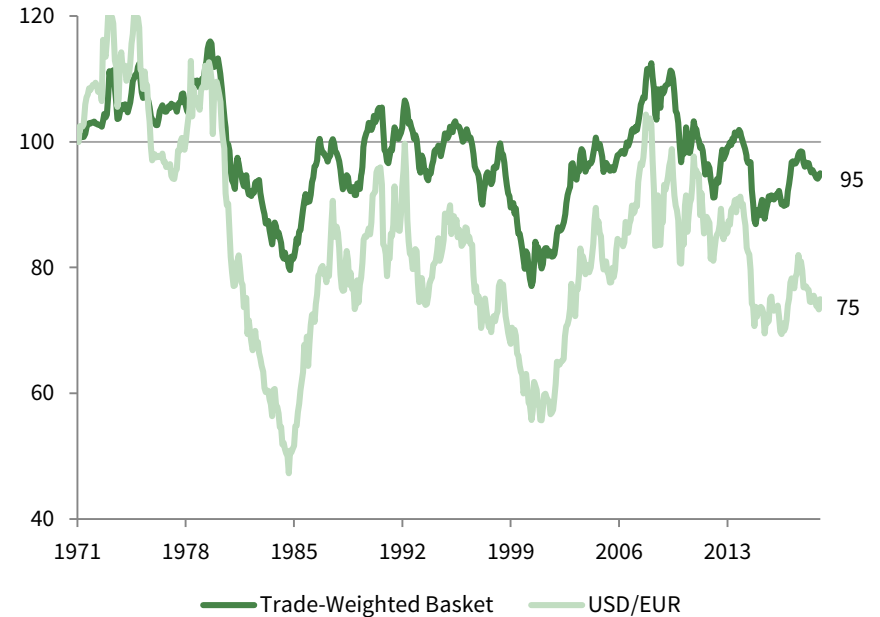


EUR: Waiting for the Recovery

- The EUR fell steadily over 2018 and 2019 versus the USD and on a trade-weighted basis, as disappointing growth dashed expectations of a recovery in Europe and, therefore, the need for ECB tightening.
- Consensus forecasts expect the EUR to strengthen against the USD, JPY, and CHF, but weaken against the GBP.
- On a momentum basis, the EUR does not look to be oversold. However, market positioning has swung from very net long in 2018 to net short in 2019, removing some of the downward pressure on the currency.
- EUR valuations are generally low, especially versus the CHF and USD, but are closer to median versus the JPY and GBP.
- However, a sustained rally in the EUR requires evidence that the Eurozone economy is picking up and that the ECB will not be forced to resume its QE program.
- EUR-based investors may want to consider leaving JPY exposure unhedged because of high positive correlation to global equities, while hedging GBP exposure, given a deep negative correlation.

EUR NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

EUR CONSENSUS FORECASTS

As of July 8, 2019

	EUR/USD	EUR/GBP	EUR/JPY	EUR/CHF
Current	1.12	0.90	122.0	1.11
Year-End 2019 Median Forecast	1.15	0.89	123.0	1.12
Percent Change	2.7%	-1.1%	0.8%	0.9%

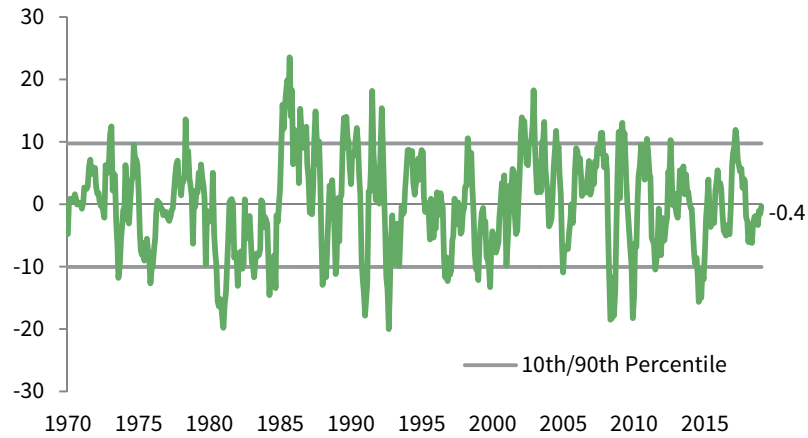
Source: Bloomberg L.P.

The EUR does not look oversold

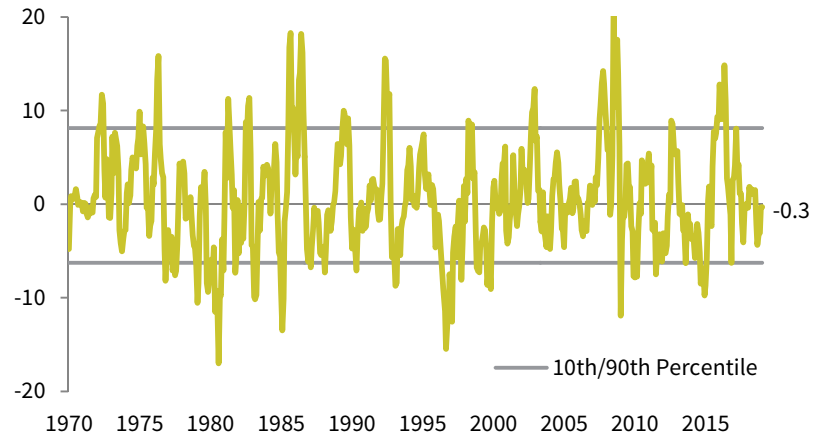
EUR ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

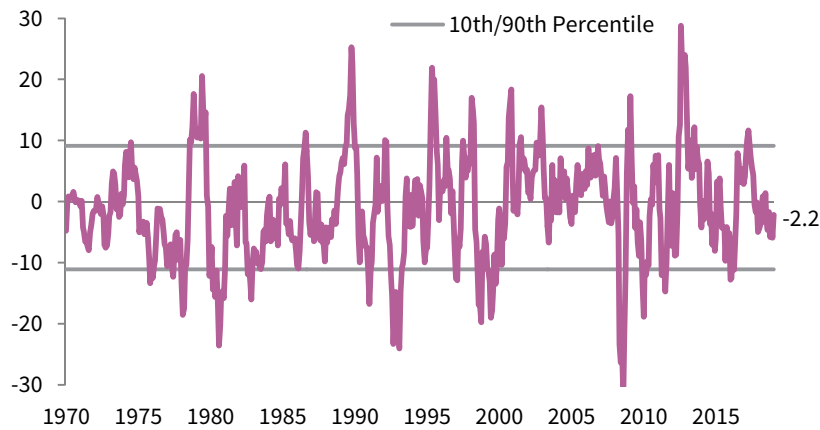
EUR/USD



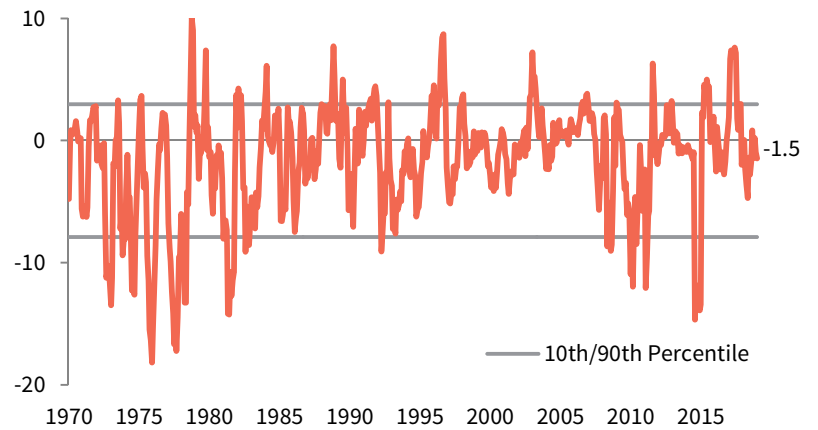
EUR/GBP



EUR/JPY



EUR/CHF

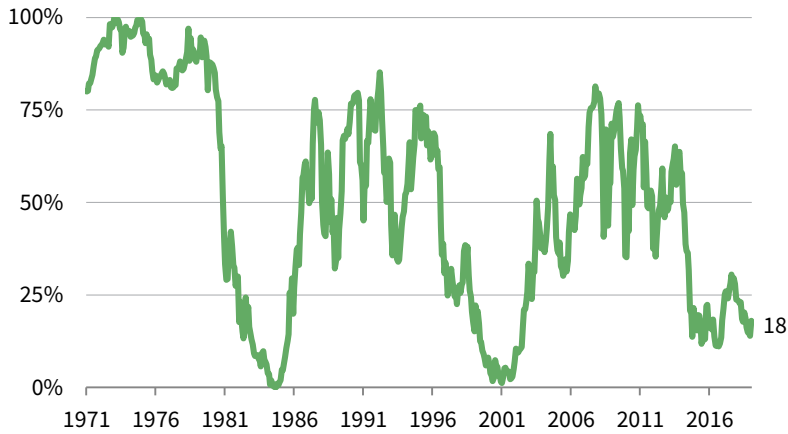


EUR valuations are low vs the CHF and USD, but closer to median for the JPY and GBP

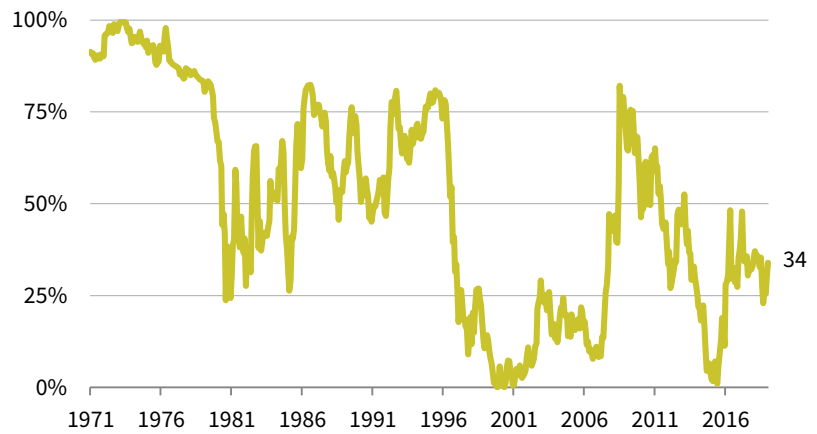
EUR VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percentile (%)

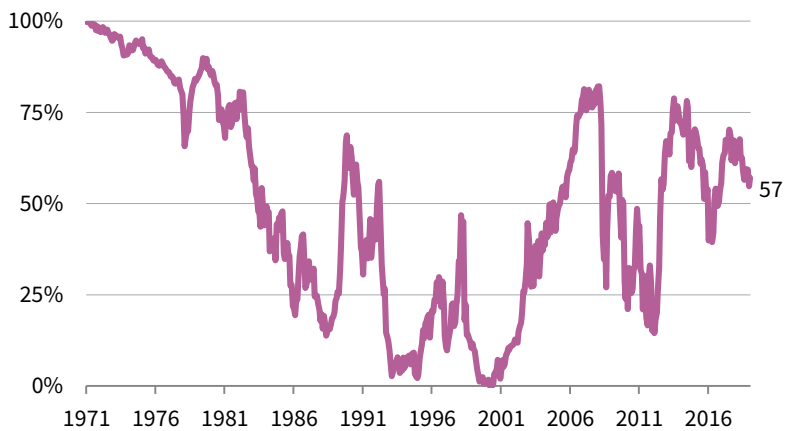
EUR/USD



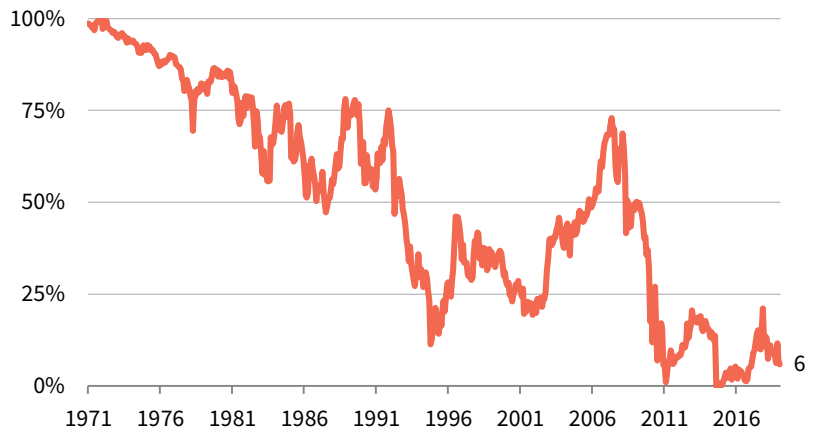
EUR/GBP



EUR/JPY



EUR/CHF



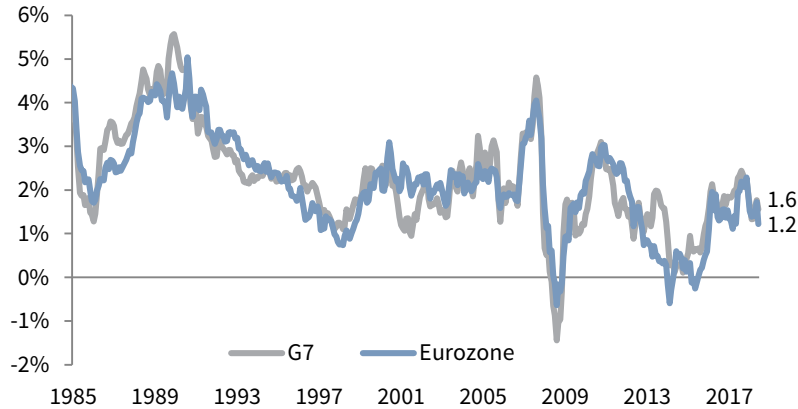
Negative carry and positive correlations to equities suggest being partially unhedged

However, deep negative correlation of EUR/GBP implies EUR-based investors should be hedged vs GBP for volatility reduction

EUR FUNDAMENTALS

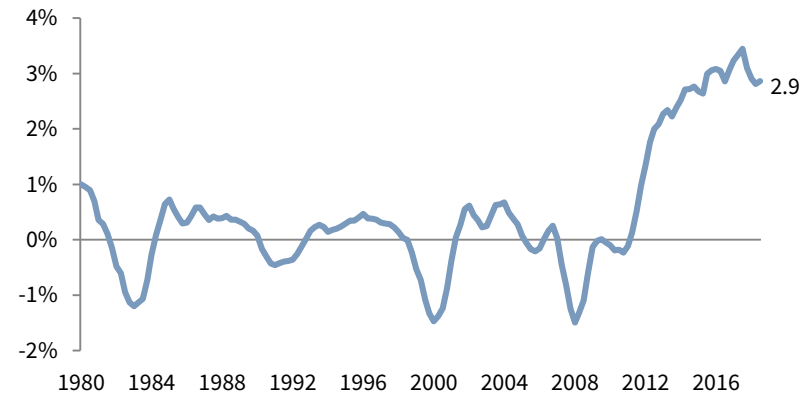
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



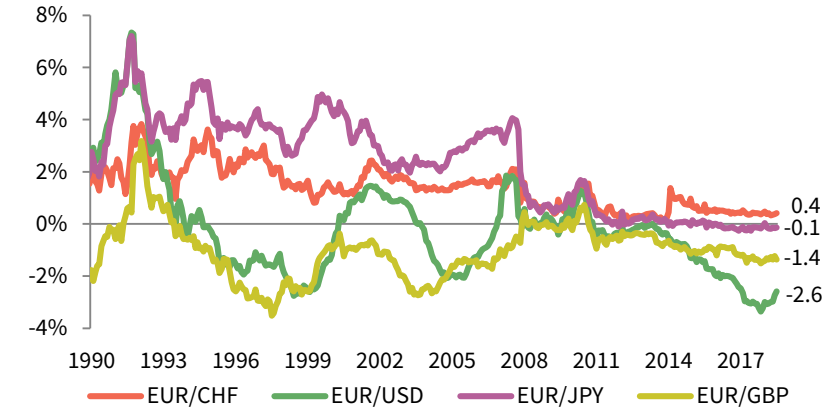
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



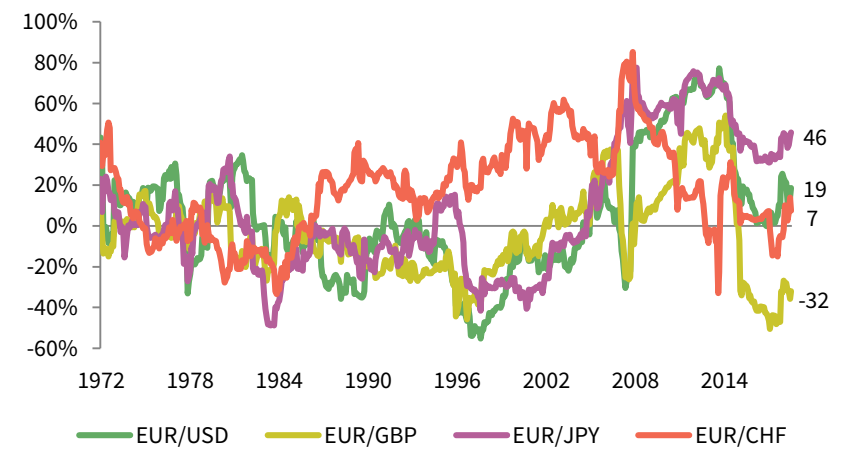
Implied Carry

December 31, 1990 – June 30, 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

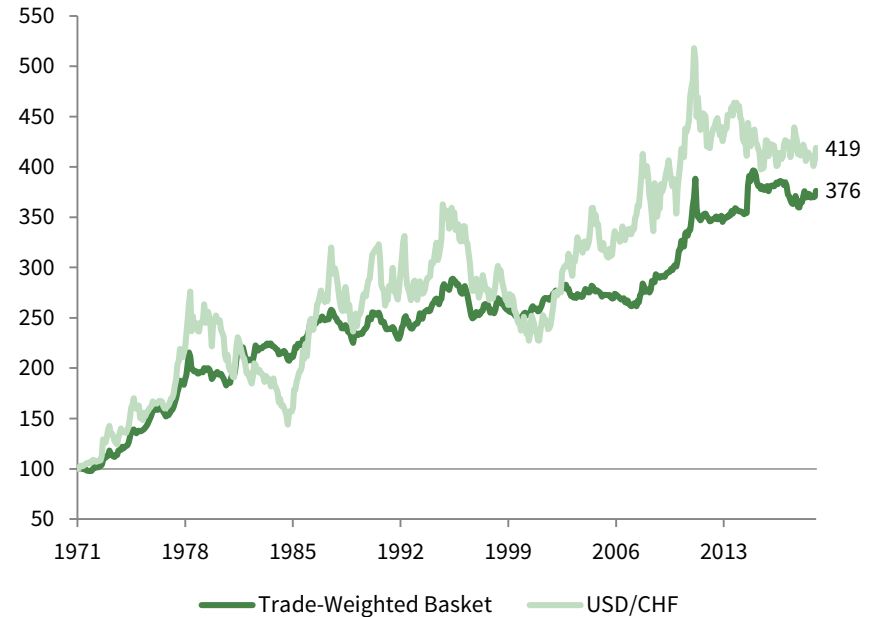


CHF: Holding the Line

- The CHF weakened against the USD, but gained modestly against the trade-weighted basket for 2018 and first half 2019. The latter is in part due to the weakness in the Eurozone, which comprises more than half of the CHF trade-weighted basket.
- Consensus forecasts see the CHF flat against the US for second half 2019, but weaken modestly versus the GBP, EUR, and JPY.
- From a valuation perspective, the CHF is slightly above historical median versus the USD, but quite elevated versus the EUR, GBP, and JPY.
- Given lingering overvaluation, the Swiss National Bank is unlikely to tighten monetary policy and will continue to intervene, resisting any undue appreciation of the CHF, especially versus the EUR.
- The above suggests that CHF-based investors should be partially unhedged, especially given the negative carry generated by hedging the USD.
- While the currency may rally amid renewed market volatility, the CHF has behaved less like a safe-haven currency in recent years than previously.

CHF NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

CHF CONSENSUS FORECASTS

As of July 8, 2019

	CHF/USD	CHF/EUR	CHF/JPY	CHF/GBP
Current	1.01	0.90	109.4	0.81
Year-End 2019 Median Forecast	1.01	0.89	108.6	0.79
Percent Change	0.0%	-1.1%	-0.7%	-2.5%

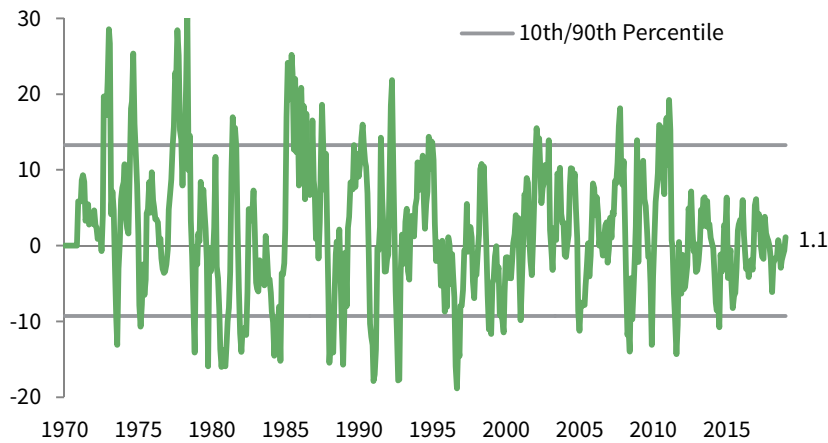
Source: Bloomberg L.P.

CHF momentum is neutral and less volatile than the recent past

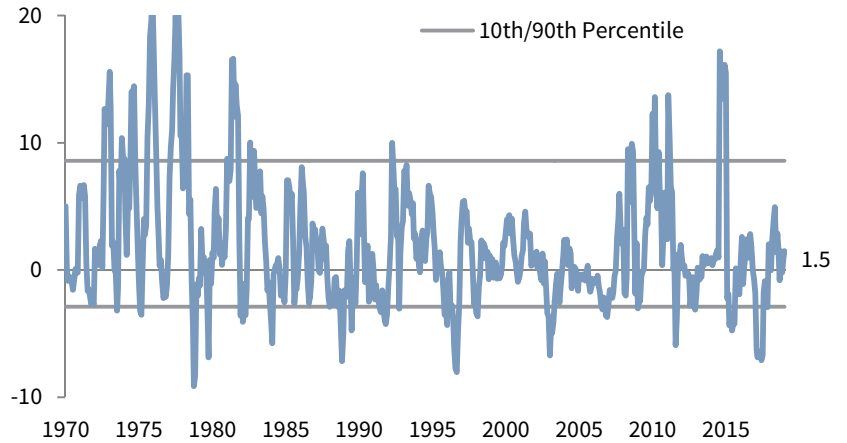
CHF ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

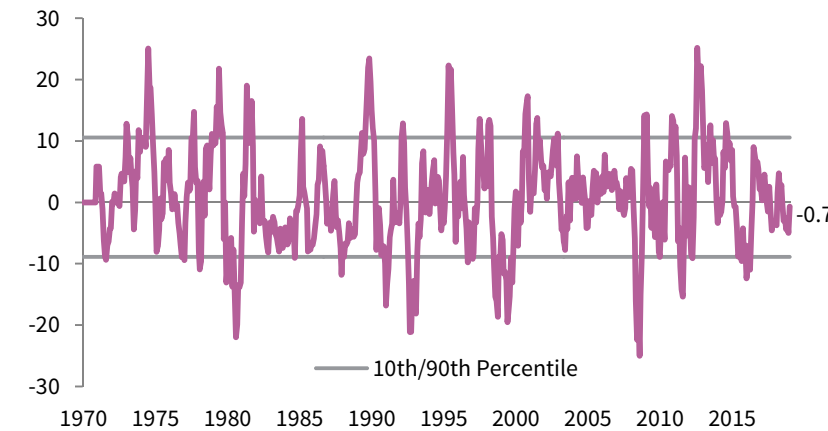
CHF/USD



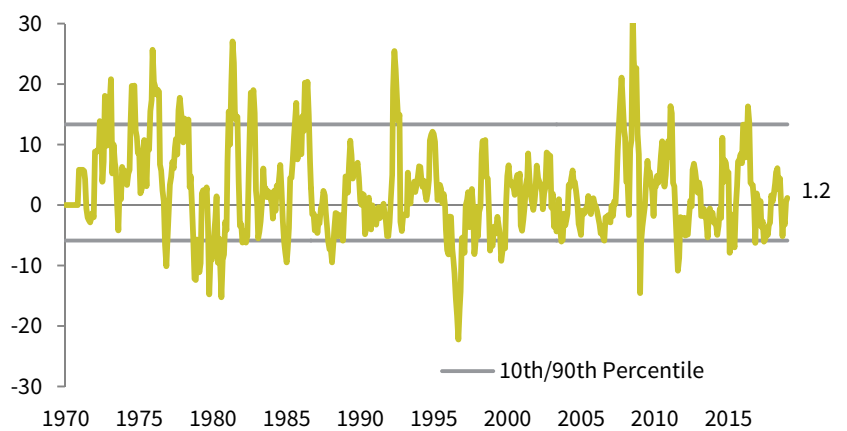
CHF/EUR



CHF/JPY



CHF/GBP

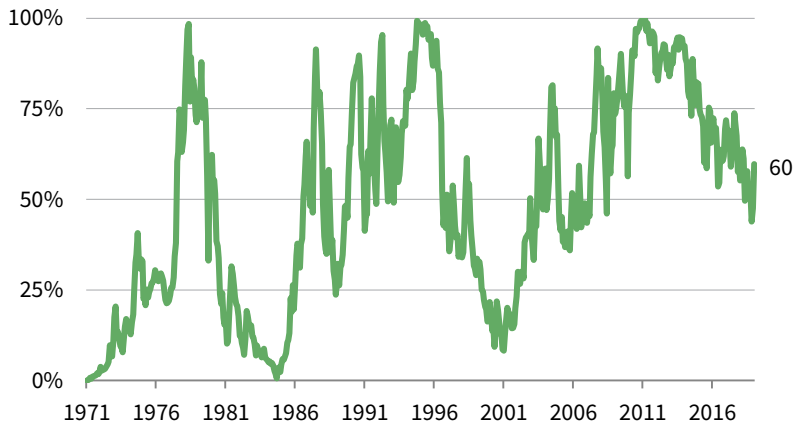


CHF valuations are slightly above median vs the USD, but quite elevated vs the EUR, JPY, and GBP

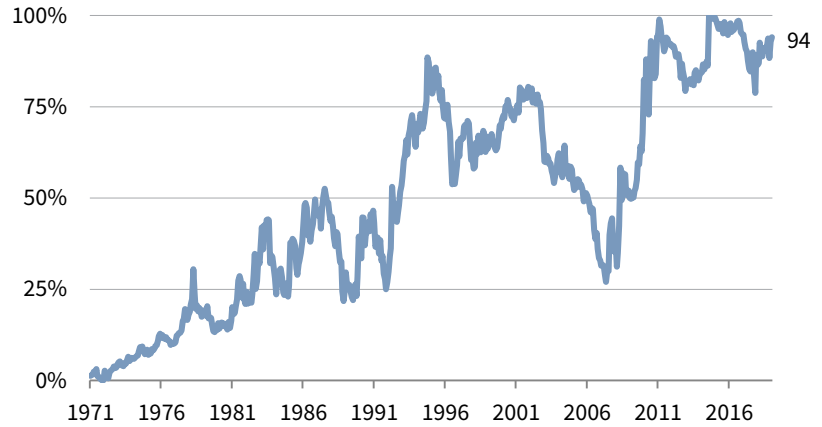
CHF VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percentile (%)

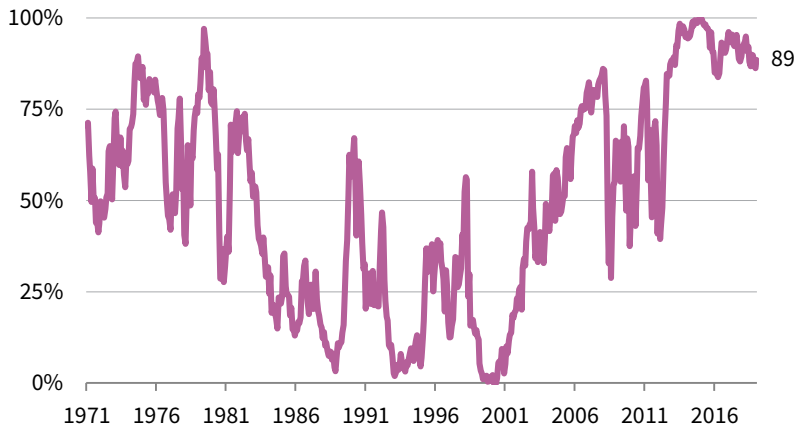
CHF/USD



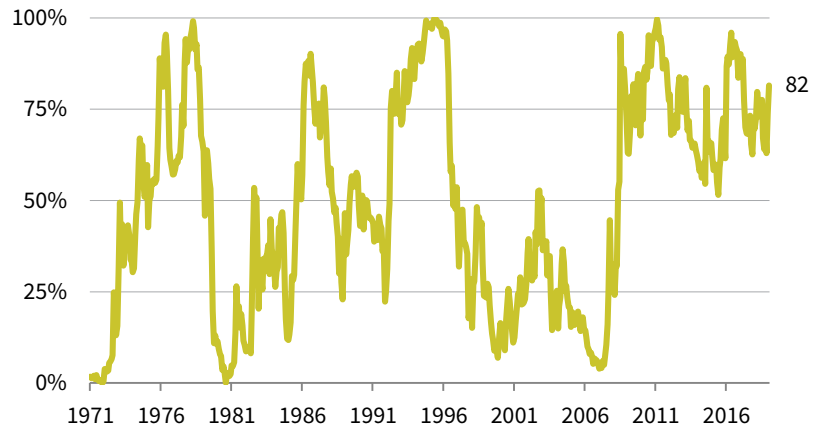
CHF/EUR



CHF/JPY



CHF/GBP



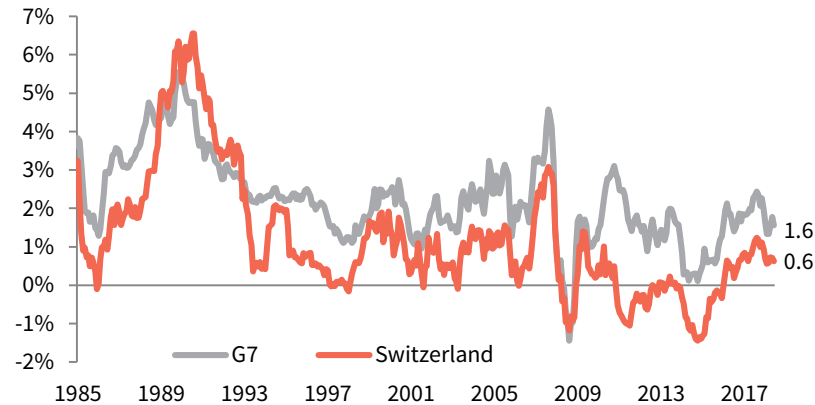
Mixed correlations imply the CHF is less of a safe-haven currency than in the past

Negative carry also suggests being partly unhedged, especially against the USD

CHF FUNDAMENTALS

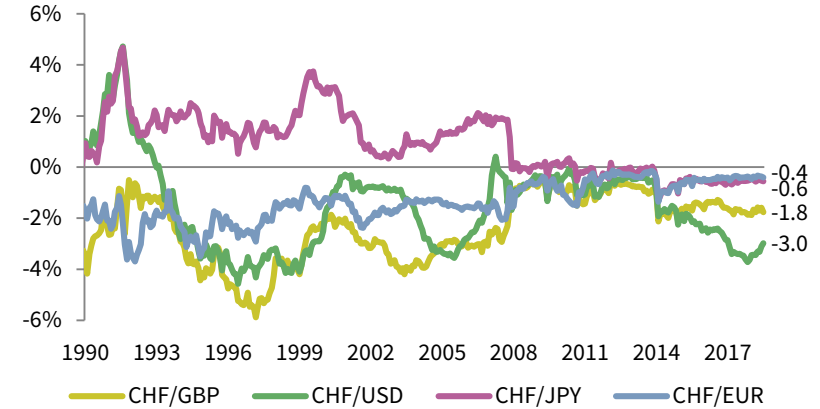
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



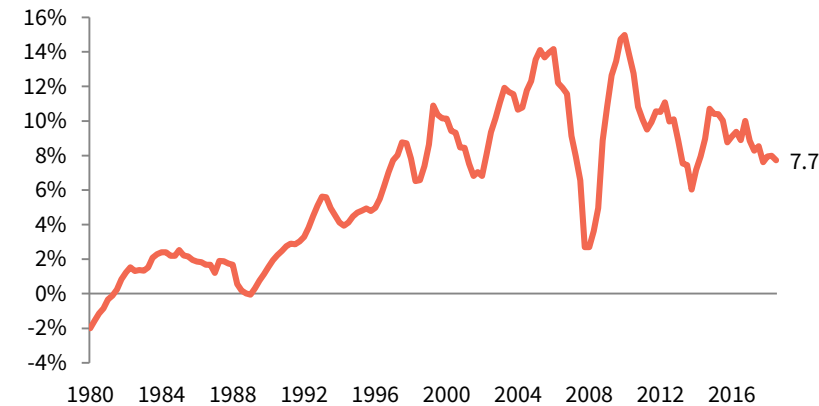
Implied Carry

December 31, 1990 – June 30, 2019



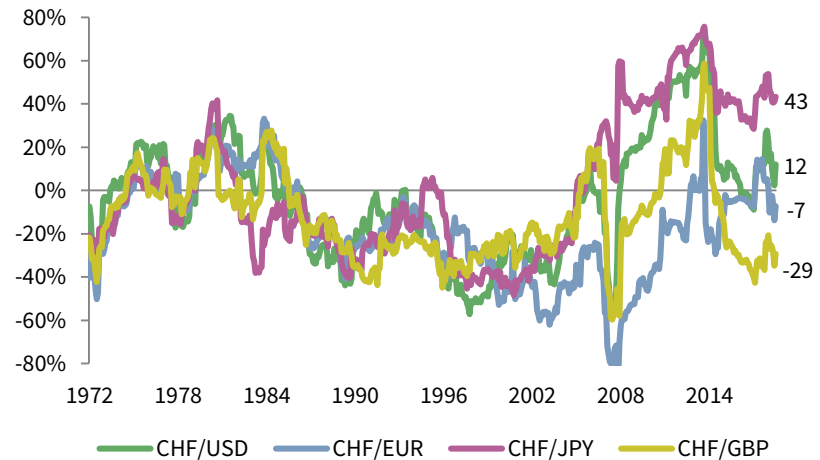
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

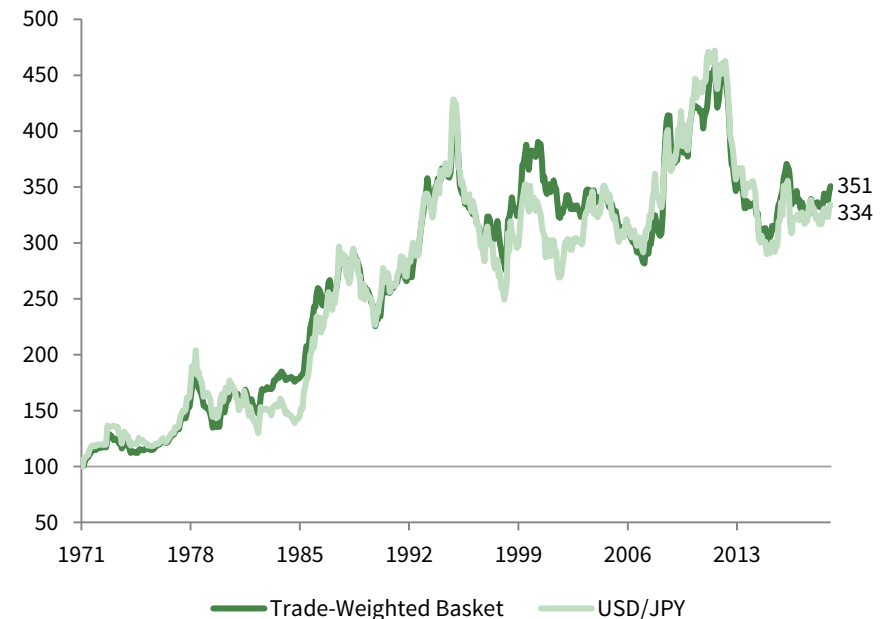


JPY: Still a Safe Haven

- The JPY gained modestly against the USD and the trade-weighted basket between 2018 and first half 2019, as the currency has benefited from “safe-haven” flows amid bouts of market volatility.
- Consensus forecasts expect the JPY to be flat versus the USD, weaken modestly versus the GBP and EUR, and rise modestly versus the CHF.
- The Bank of Japan is unlikely to change monetary policy in the near term. However, fiscal policy is set to tighten later this year via a consumption tax hike. This may weigh on economic growth.
- Market positioning has shifted from very net short the JPY to now neutral. The currency does not look stretched from a momentum perspective, as the recent rally has been modest. JPY valuations are also generally low, especially versus the CHF and USD.
- The undervaluation of the JPY implies non-JPY-based investors should be partially unhedged to benefit from potential JPY strength. This also helps reduce the volatility of Japanese equity exposure, as the JPY is negatively correlated with global equities.
- However, for USD-based investors, hedging JPY exposure generates positive carry.

JPY NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

JPY CONSENSUS FORECASTS

As of July 8, 2019

	USD/JPY	EUR/JPY	GBP/JPY	CHF/JPY
Current	108.0	122.0	135.6	109.4
Year-End 2019 Median Forecast	108.0	123.0	137.6	108.6
Percent Change	0.0%	0.8%	1.5%	-0.7%

Source: Bloomberg L.P.

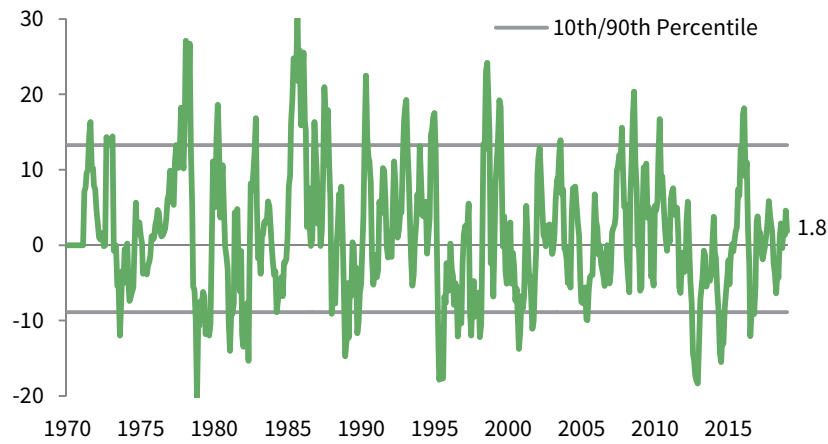
Note: JPY exchange rates are shown from the foreign currency perspective, and the percent change reflects the appreciation of the foreign currency.

JPY rebound does not seem overdone

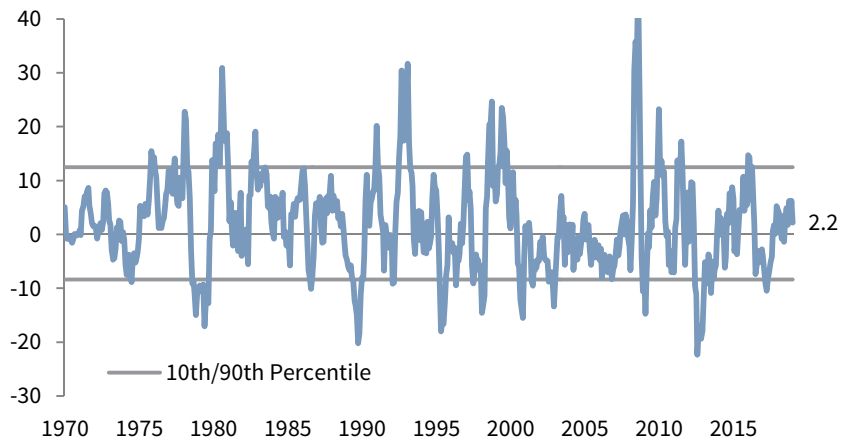
JPY ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

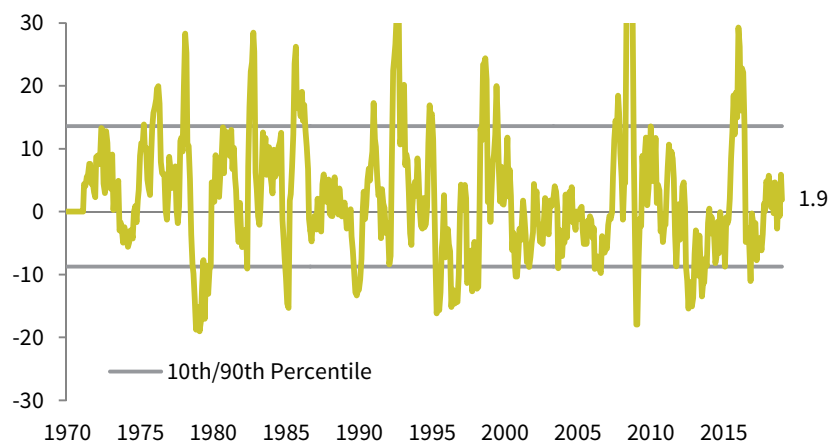
JPY/USD



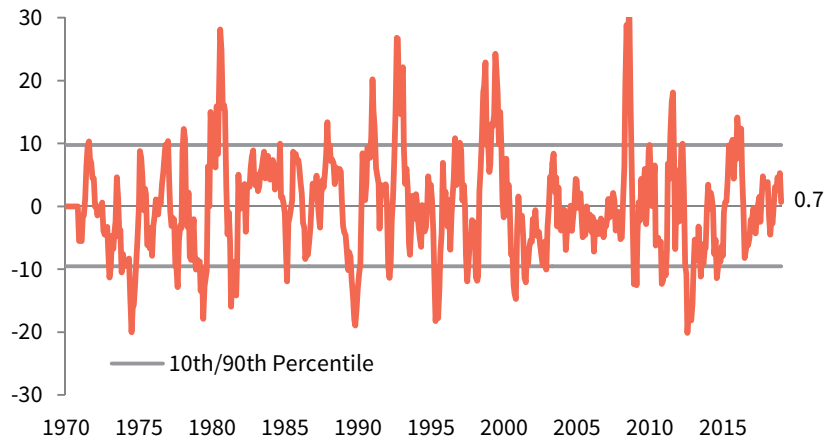
JPY/EUR



JPY/GBP



JPY/CHF

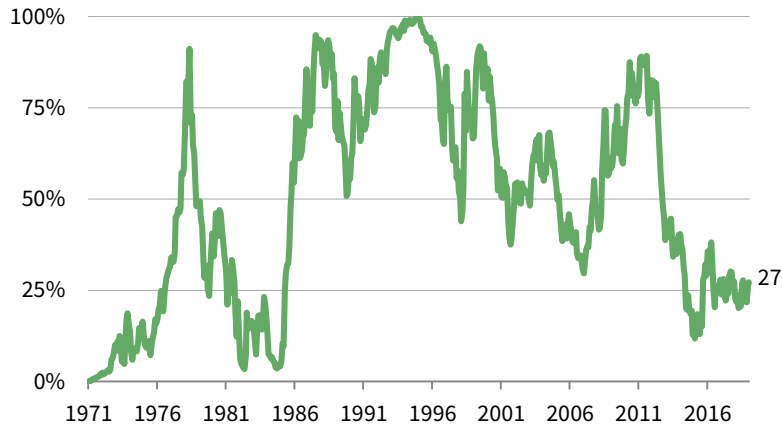


JPY valuations are generally low, although closer to historical median vs the GBP and EUR

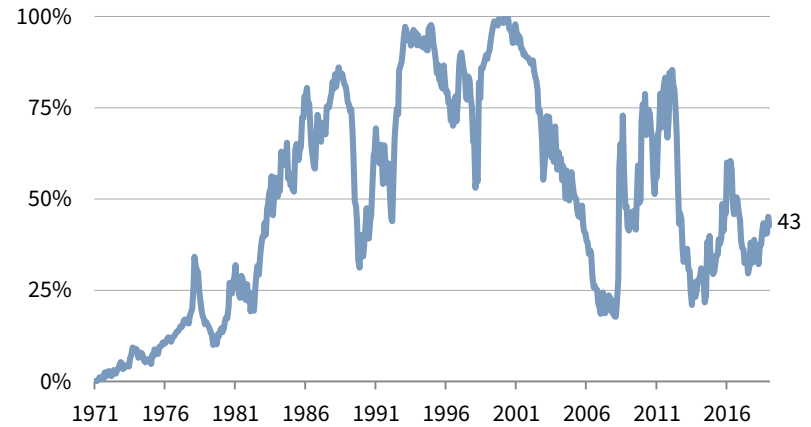
JPY VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percentile (%)

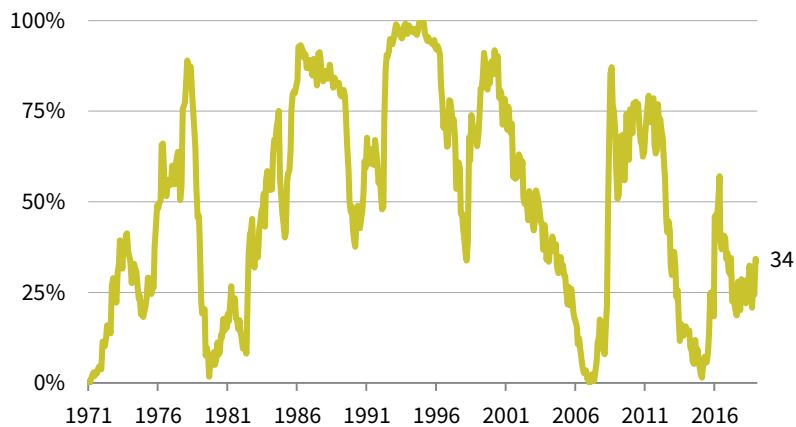
JPY/USD



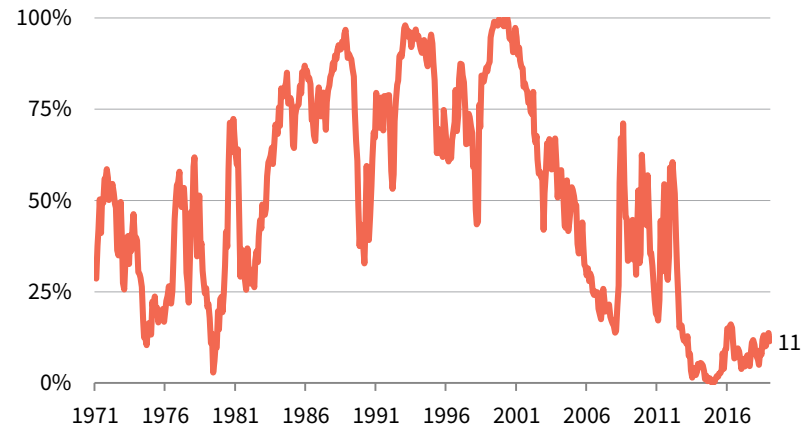
JPY/EUR



JPY/GBP



JPY/CHF



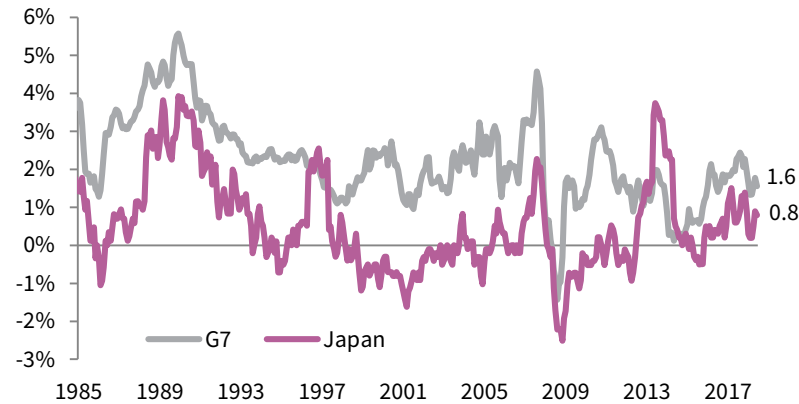
Negative correlations with equities imply volatility benefit from leaving JPY exposure unhedged for non-JPY-based investors

However, hedging the JPY generates positive carry for USD and GBP investors, while the carry drag for EUR and CHF investors is modest

JPY FUNDAMENTALS

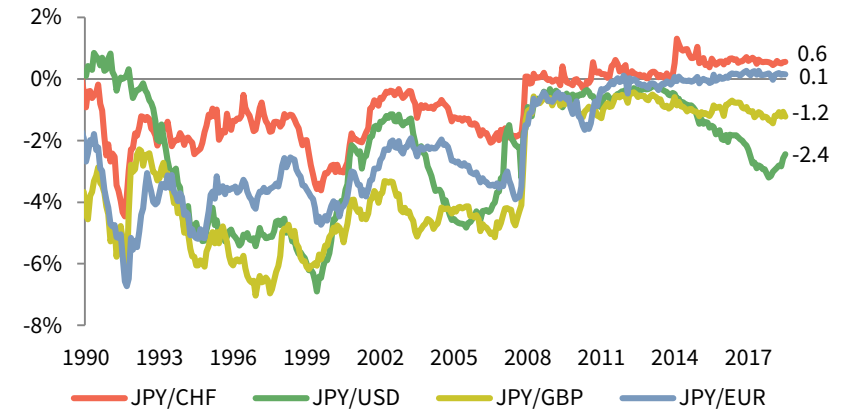
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



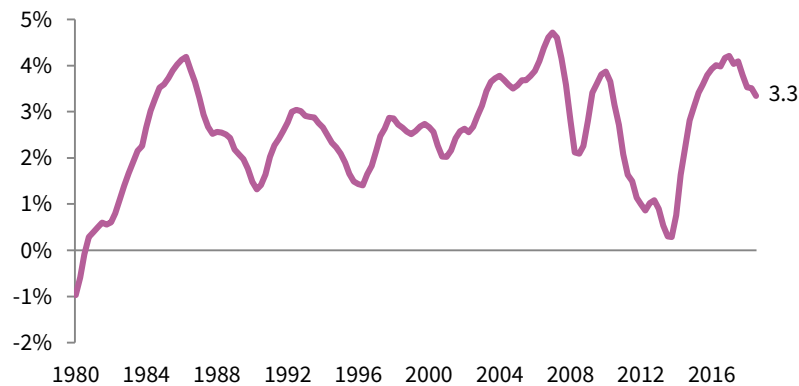
Implied Carry

December 31, 1990 – June 30, 2019



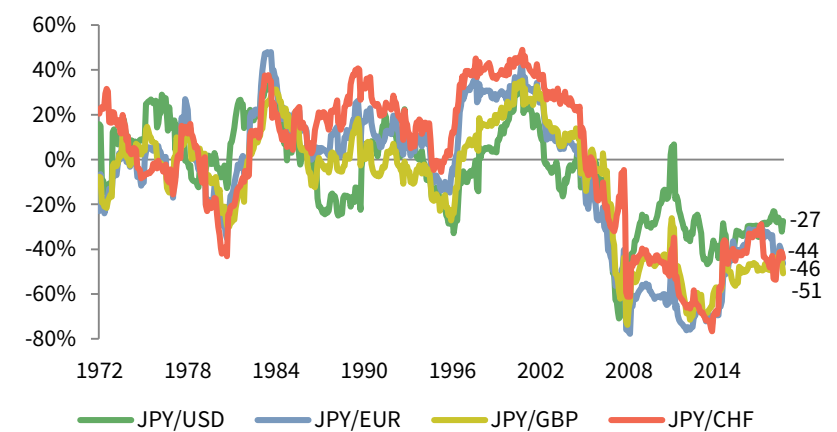
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

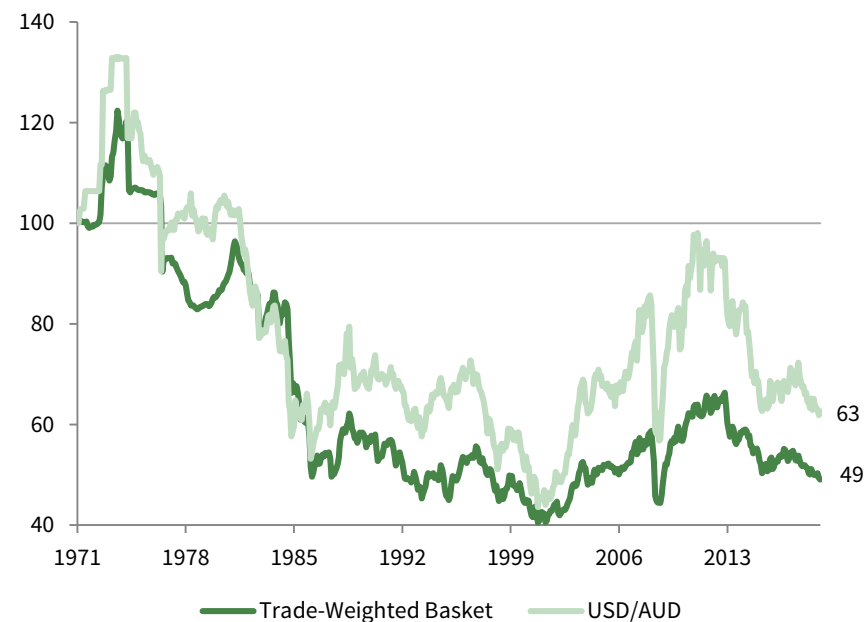


AUD: Weakening Prospects

- The AUD fell against the USD and its trade-weighted basket in 2018 and early 2019 amid concerns over the economy and housing market, triggering two rate cuts by the Reserve Bank of Australia in 2019.
- Consensus forecasts expect the AUD to remain flat against the USD for the rest of 2019, and to weaken against the other major currencies.
- While the AUD does not look oversold on a momentum basis, market positioning is extremely net short the AUD. This increases the odds of a reversal in the currency.
- The AUD has been declining steadily since 2013 and this has improved valuations, especially versus the USD. However, the AUD remains elevated versus the EUR.
- Rate cuts by the Royal Bank of Australia have greatly reduced the positive carry offered by the AUD. Indeed, hedging USD exposures generates negative carry for the first time in almost 20 years.
- As a result, AUD-based investors should consider remaining partially unhedged due to declining carry and high positive correlation with global equities, which results in lower equity volatility.

AUD NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

AUD CONSENSUS FORECASTS

As of July 8, 2019

	AUD/USD	AUD/EUR	AUD/JPY	AUD/GBP
Current	0.70	0.62	75.6	0.56
Year-End 2019 Median Forecast	0.70	0.61	75.3	0.55
Percent Change	0.0%	-1.6%	-0.4%	-1.8%

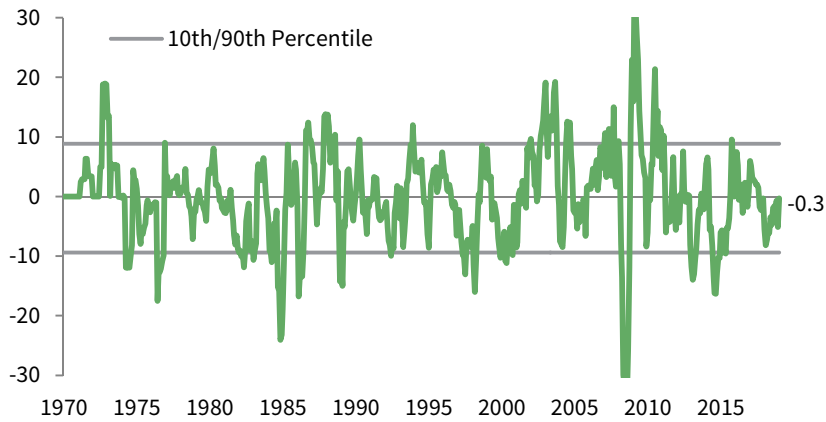
Source: Bloomberg L.P.

The AUD does not appear oversold

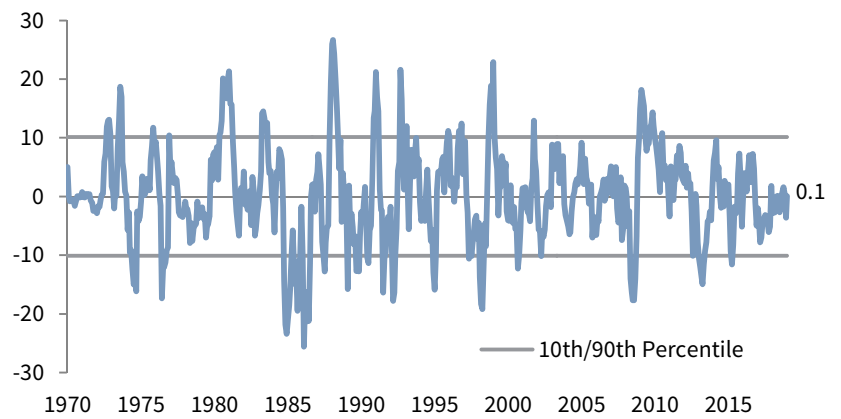
AUD ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

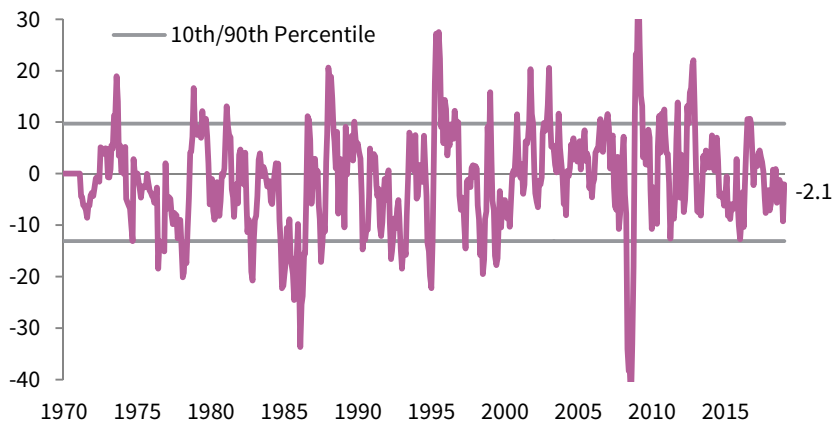
AUD/USD



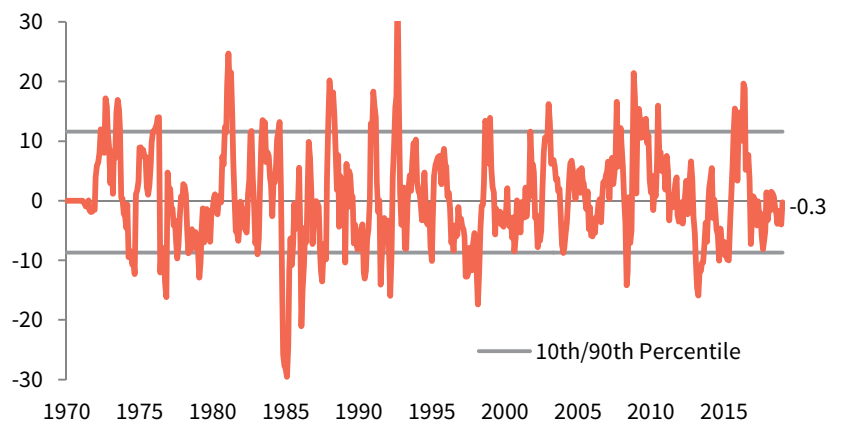
AUD/EUR



AUD/JPY



AUD/GBP

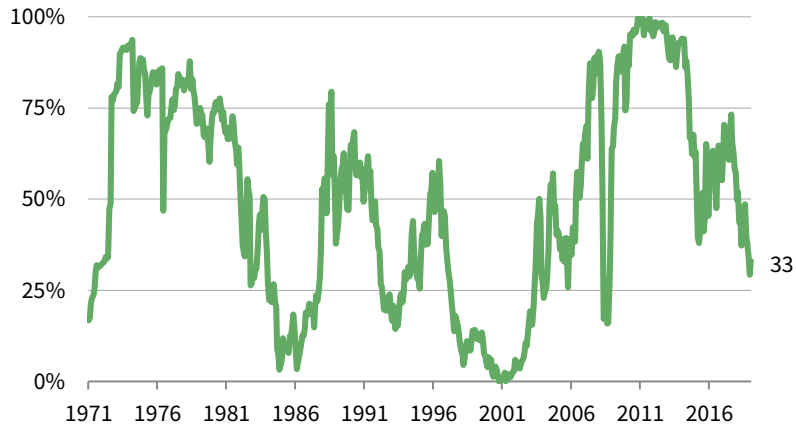


AUD valuations are low vs the USD, but still elevated vs the EUR

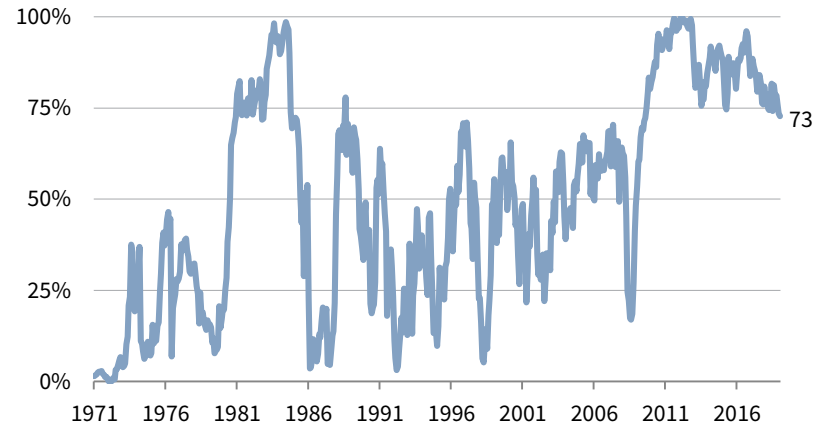
AUD VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percent (%)

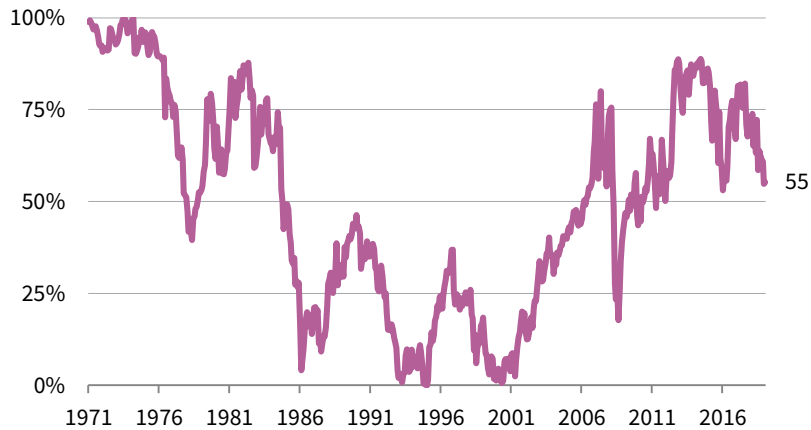
AUD/USD



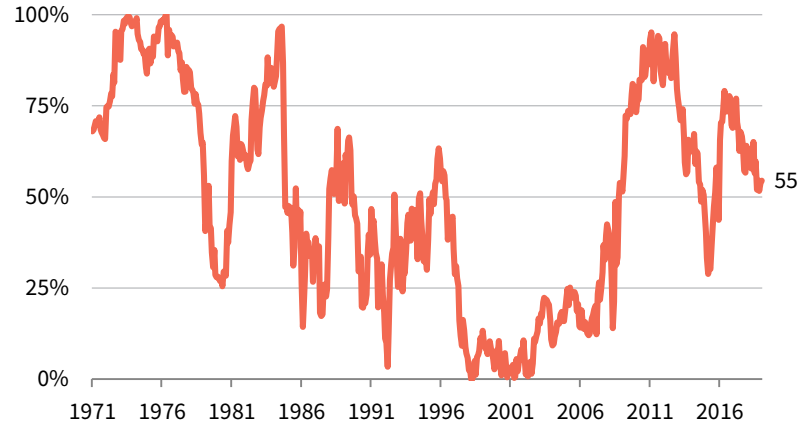
AUD/EUR



AUD/JPY



AUD/GBP



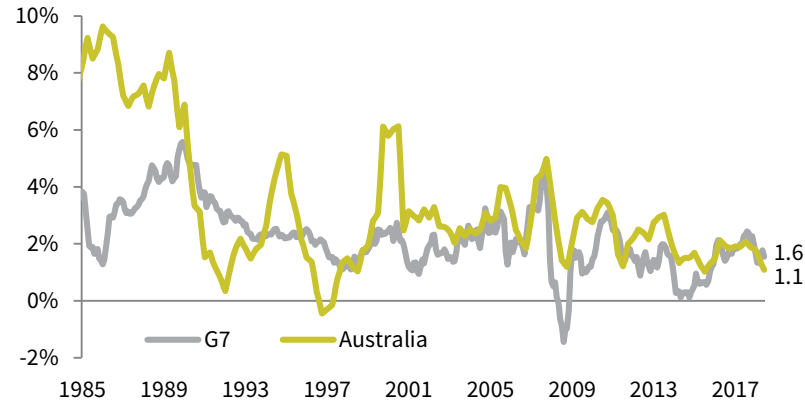
Shrinking current account deficit may help to support the AUD amid falling positive carry

Correlations with global equities are largely positive, implying that AUD-based investors with unhedged exposure could benefit from lower equity volatility

AUD FUNDAMENTALS

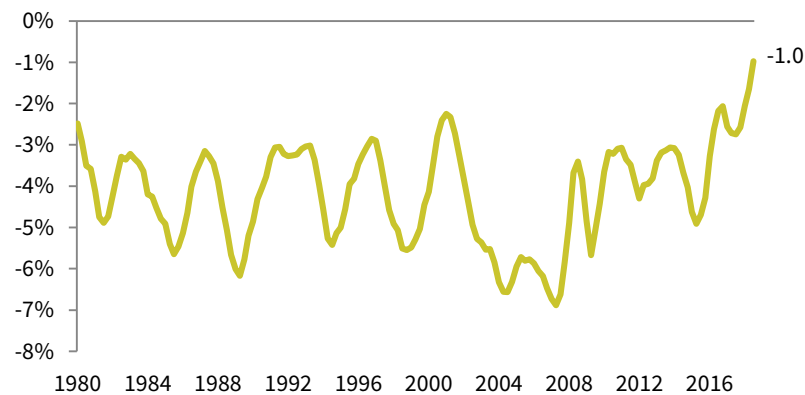
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



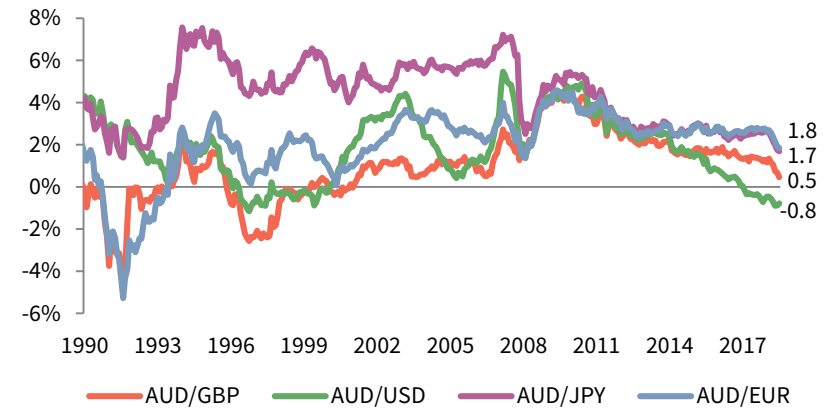
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



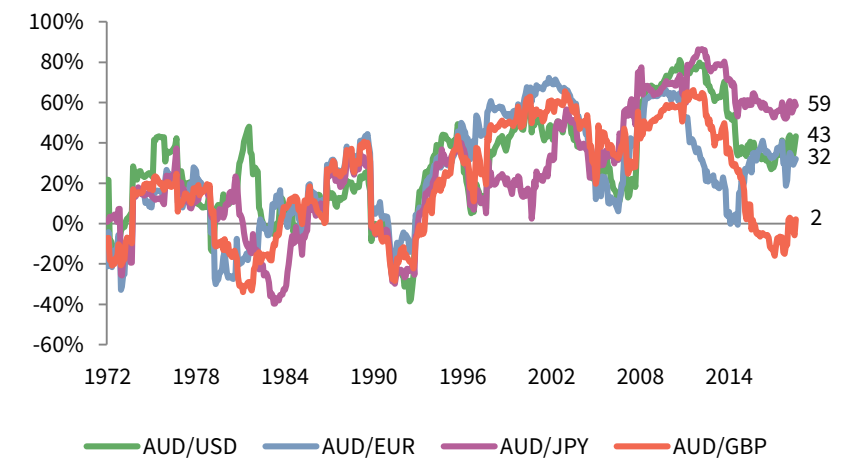
Implied Carry

December 31, 1990 – June 30, 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

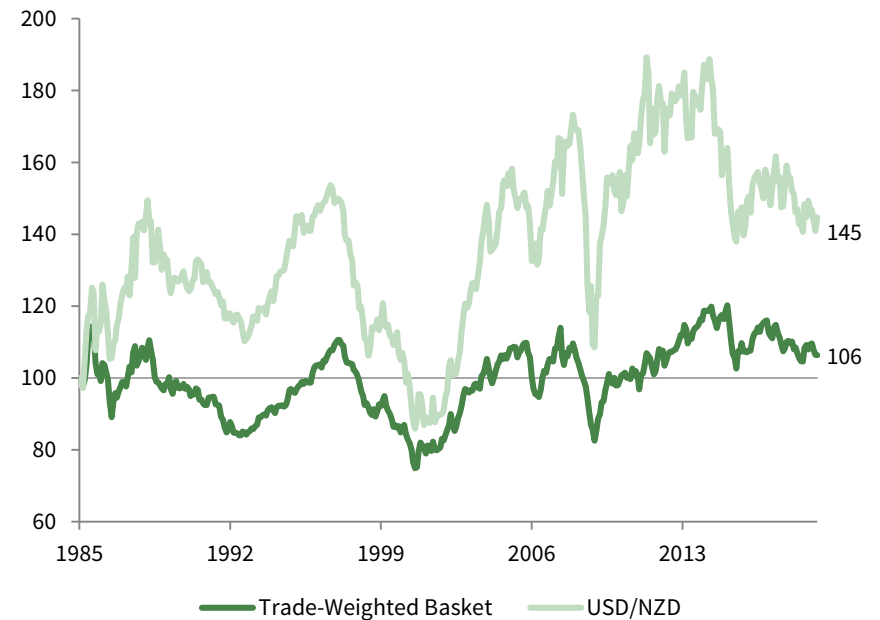


NZD: Carried Away

- The NZD fell against the USD and the trade-weighted basket from 2018 to date. This follows the Reserve Bank of New Zealand’s shift toward monetary easing, including a rate cut earlier this year and expectations of an additional cut in second half 2019.
- Consensus forecasts see the NZD flat against the USD for the rest of 2019, and weakening against the EUR, JPY and AUD.
- The NZD does not look oversold on a momentum basis, implying further downside potential. However, market positioning is extremely net short the NZD. This increases the odds of a reversal in the currency.
- Despite the recent fall, the NZD remains expensive against most currencies, although valuations versus the USD are now in line with historical median.
- The NZD’s overvaluation implies that NZD investors could still benefit from being partially unhedged.
- Furthermore, rate cuts by the RBNZ have greatly reduced the positive carry offered by the NZD. Indeed, hedging USD exposures generates negative carry for the first time in almost 20 years.

NZD NOMINAL EXCHANGE RATES

March 31, 1985 – June 30, 2019 • March 31, 1985 = 100



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

Note: Data for NZD starts from March 31, 1985 when the currency was allowed to float against all currencies.

NZD CONSENSUS FORECASTS

As of July 8, 2019

	NZD/USD	NZD/EUR	NZD/JPY	NZD/AUD
Current	0.66	0.59	71.8	0.95
Year-End 2019 Median Forecast	0.66	0.57	71.0	0.94
Percent Change	0.0%	-3.4%	-1.1%	-1.1%

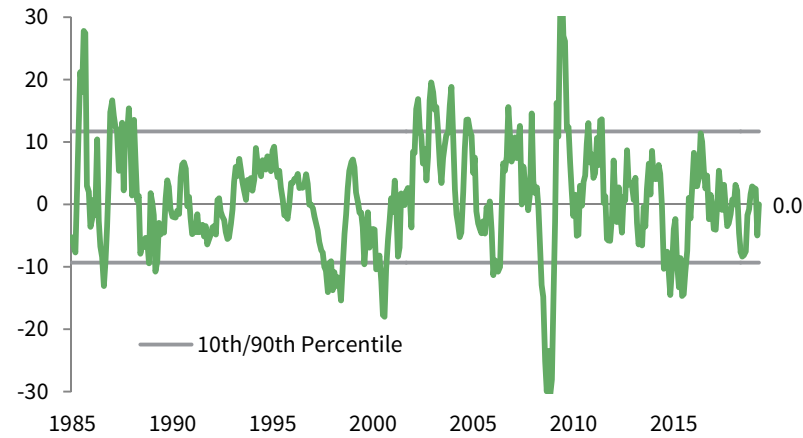
Source: Bloomberg L.P.

NZD does not look oversold

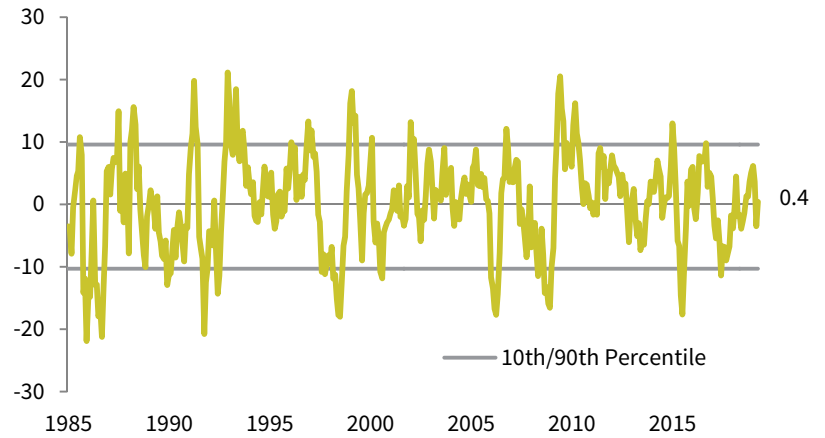
NZD ROLLING 6-MONTH PERCENT CHANGE

March 31, 1985 – June 30, 2019 • Percent (%)

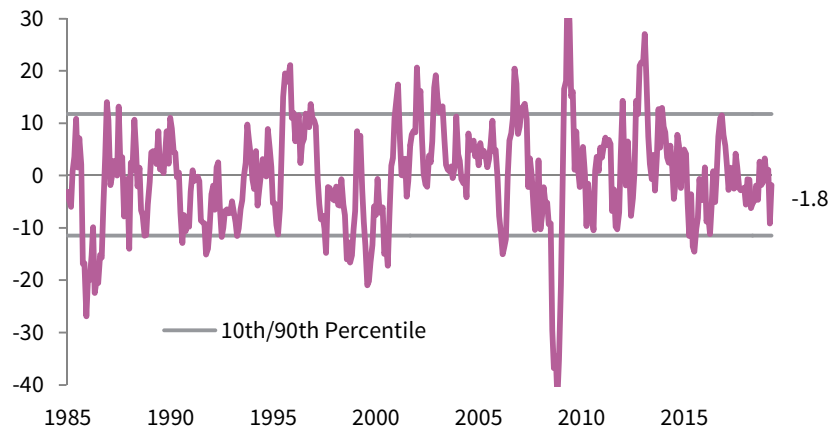
NZD/USD



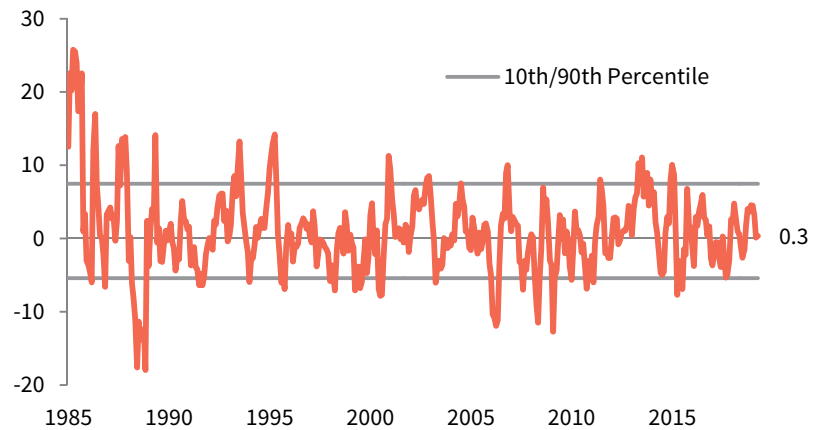
NZD/EUR



NZD/JPY



NZD/AUD

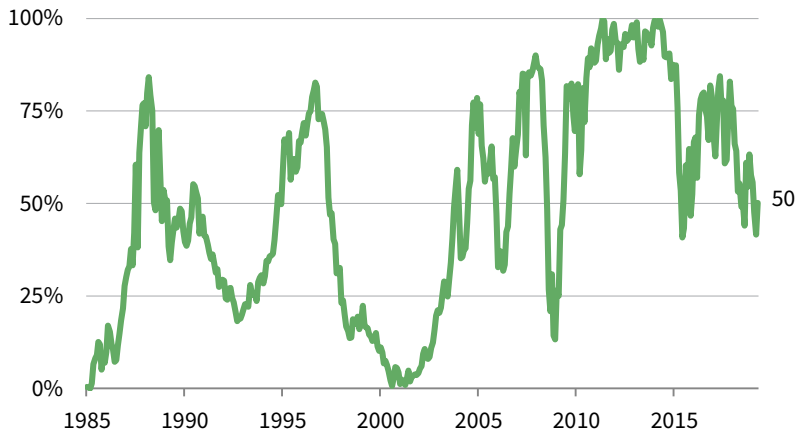


NZD valuations remain elevated vs most currencies, but in line with historical median vs the USD

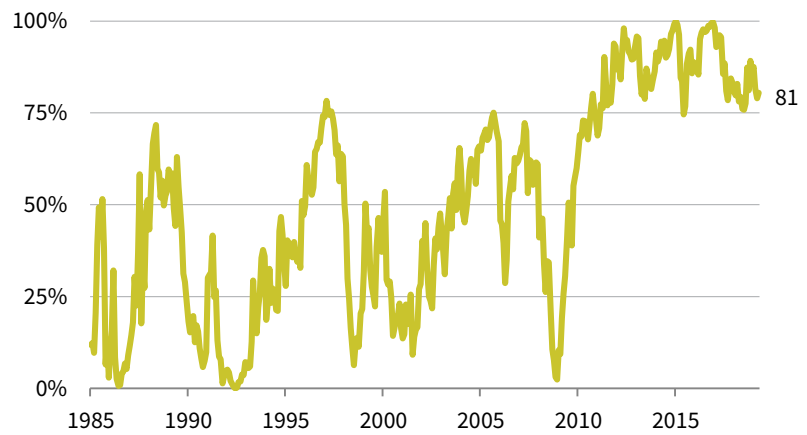
NZD VALUATION: REAL EXCHANGE RATE PERCENTILE

March 31, 1985 – June 30, 2019 • Percent (%)

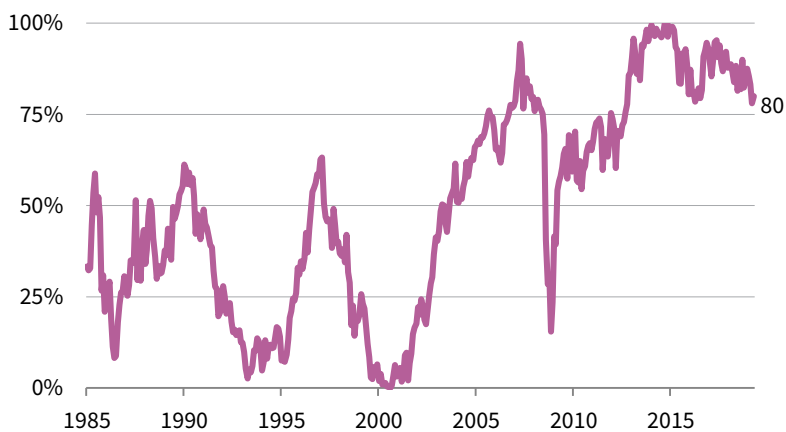
NZD/USD



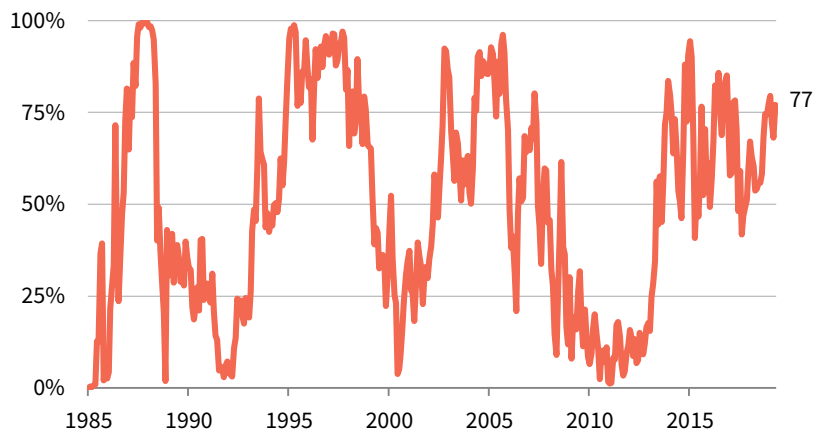
NZD/EUR



NZD/JPY



NZD/AUD



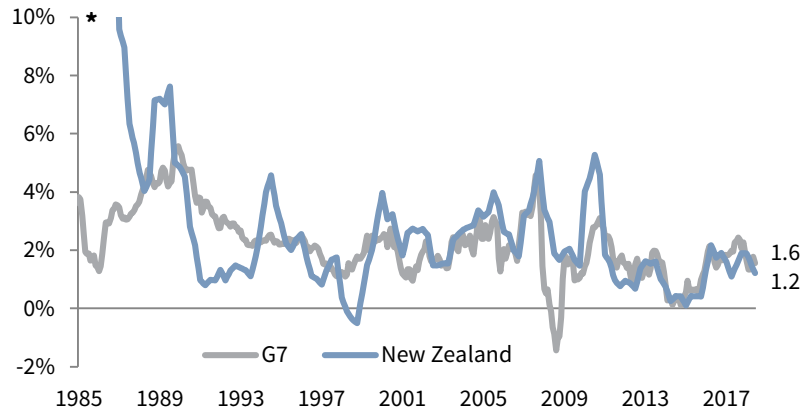
Declining carry may continue to weigh on the NZD, given the current account deficit

Positive correlations with global equities implies unhedged exposure for NZD investors lowers volatility, save for AUD equities.

NZD FUNDAMENTALS

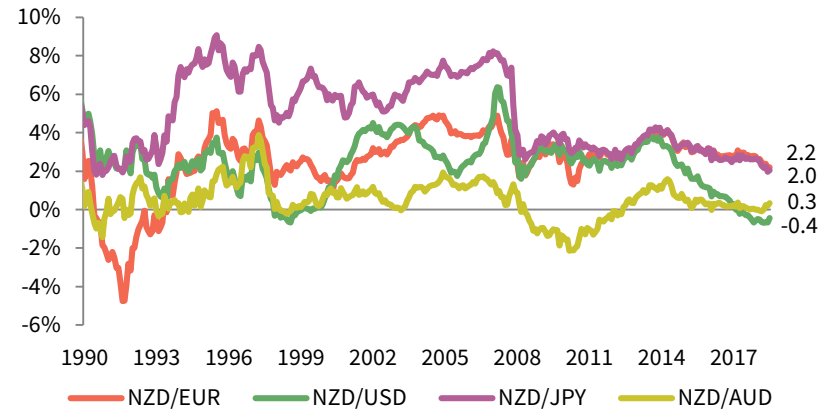
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



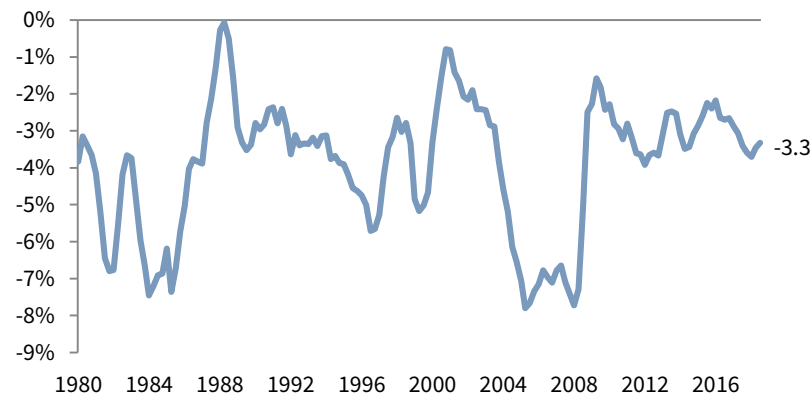
Implied Carry

December 31, 1990 – June 30, 2019



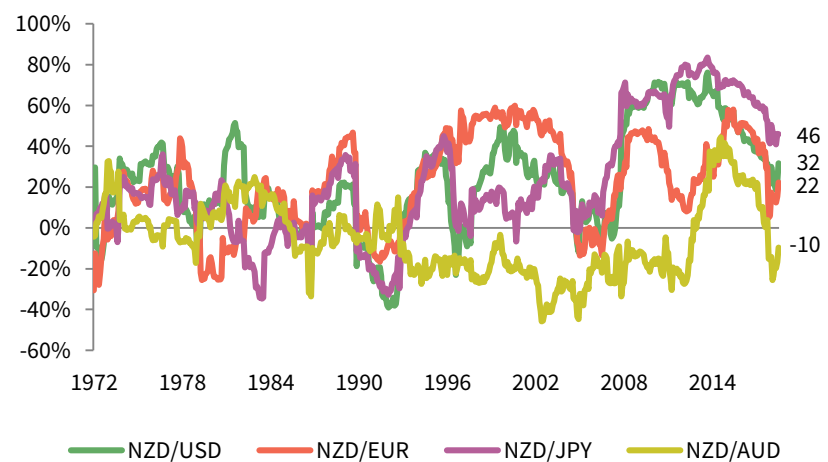
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019

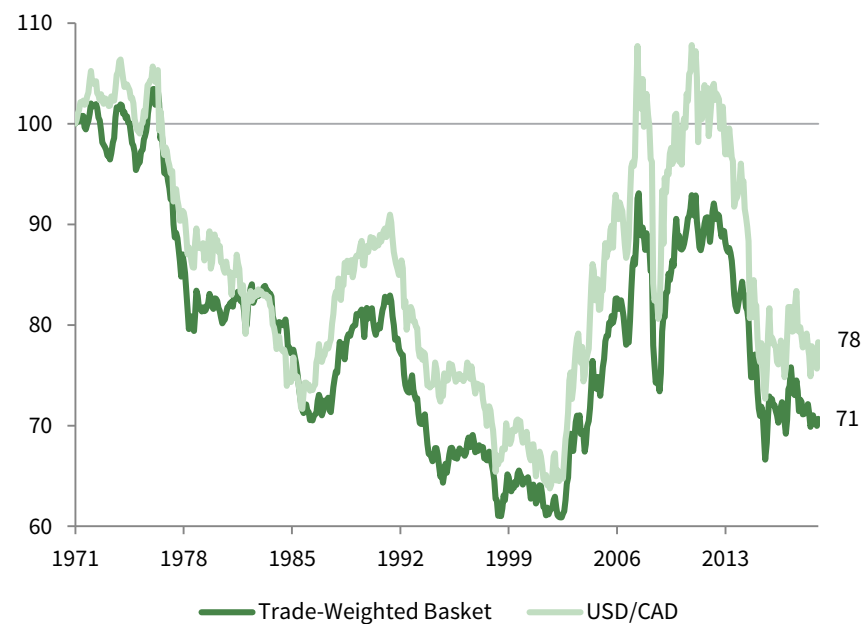


CAD: Bucking the Trend

- While the CAD weakened over much of 2018, it has been resilient so far in 2019. Indeed, the CAD has performed better than other “commodity currencies” such as the AUD and NZD, given that the Bank of Canada has been hiking rates alongside the Fed, rather than cutting rates.
- Consensus forecasts expect the CAD to remain flat against the USD for the rest of 2019, and to weaken against the EUR, JPY, and GBP.
- The recent rally has caused the CAD to appear overbought against the USD, but less stretched versus other currencies. However, market positioning is still net short the CAD, suggesting potential for more upside.
- CAD valuations are very low versus the USD, but closer to historical median versus the EUR, JPY, and GBP.
- Correlations with global equities are largely positive, implying unhedged exposure could lower equity volatility for CAD-based investors.
- However, the CAD still enjoys positive carry versus most currencies and only modest negative carry versus the USD.

CAD NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

CAD CONSENSUS FORECASTS

As of July 8, 2019

	CAD/USD	CAD/EUR	CAD/JPY	CAD/GBP
Current	0.76	0.68	82.7	0.61
Year-End 2019 Median Forecast	0.76	0.66	82.1	0.60
Percent Change	0.0%	-2.9%	-0.7%	-1.6%

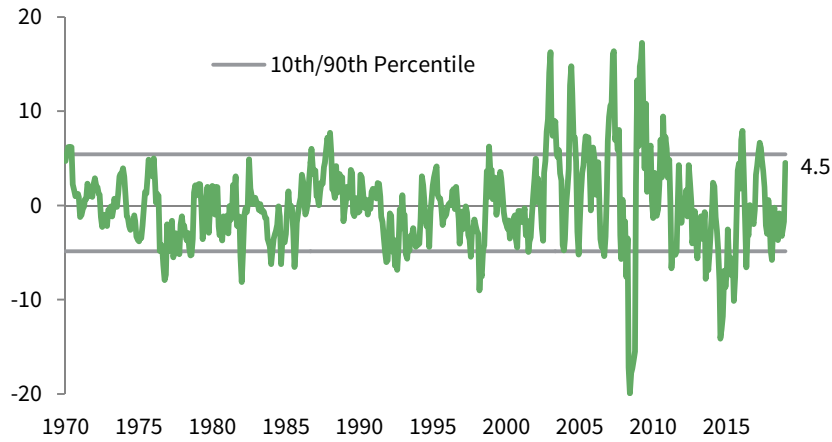
Source: Bloomberg L.P.

The CAD is looking slightly overbought vs the USD

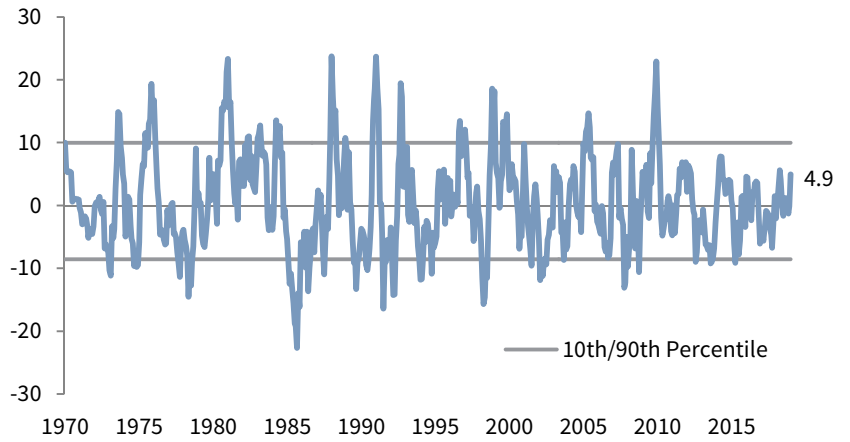
CAD ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

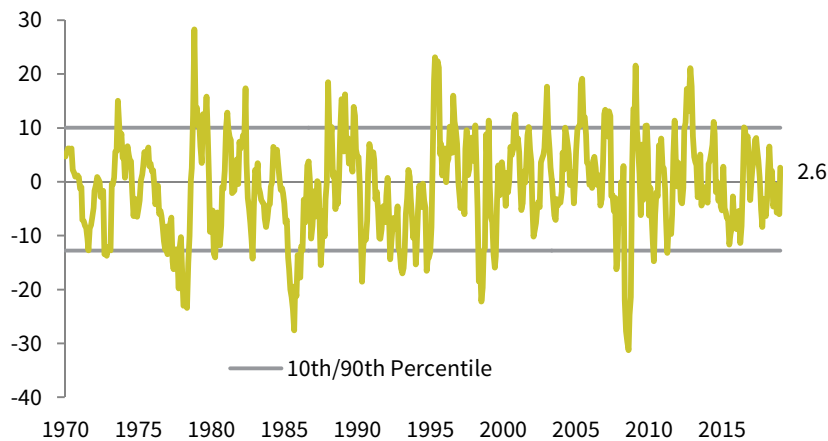
CAD/USD



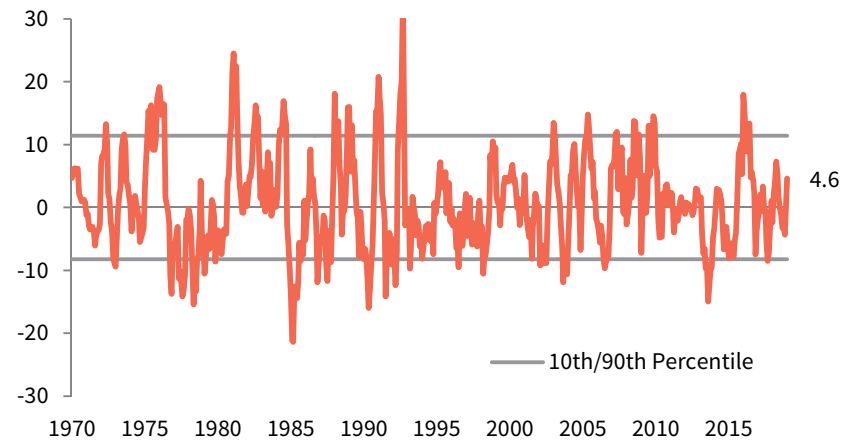
CAD/EUR



CAD/JPY



CAD/GBP

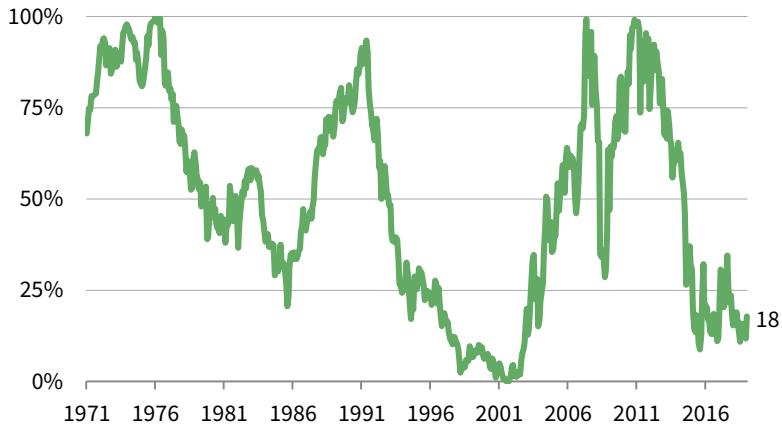


CAD valuations are low vs the USD, but in line with historical median vs other major currencies

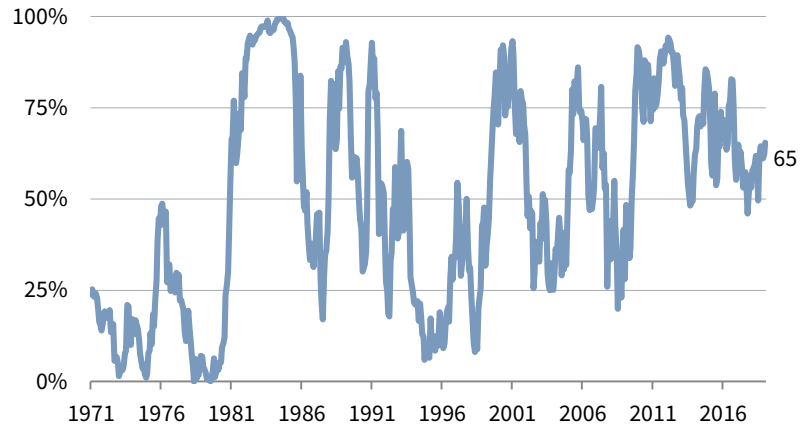
CAD VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percent (%)

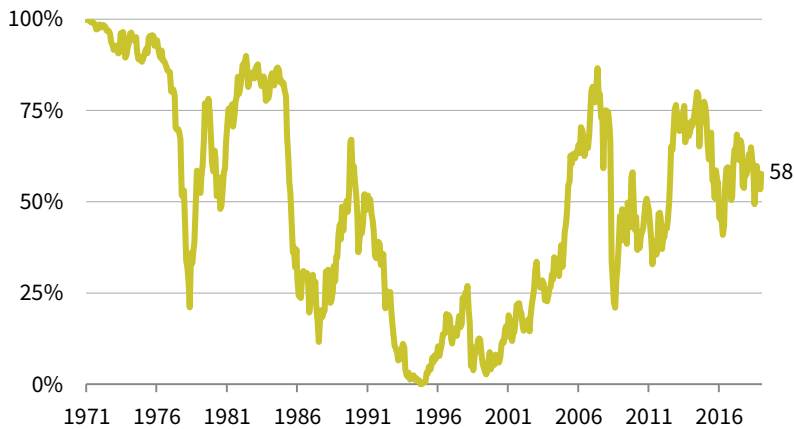
CAD/USD



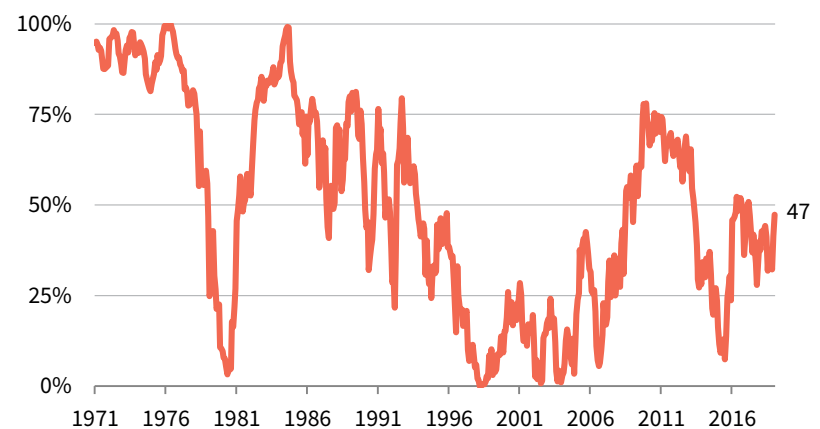
CAD/EUR



CAD/JPY



CAD/GBP



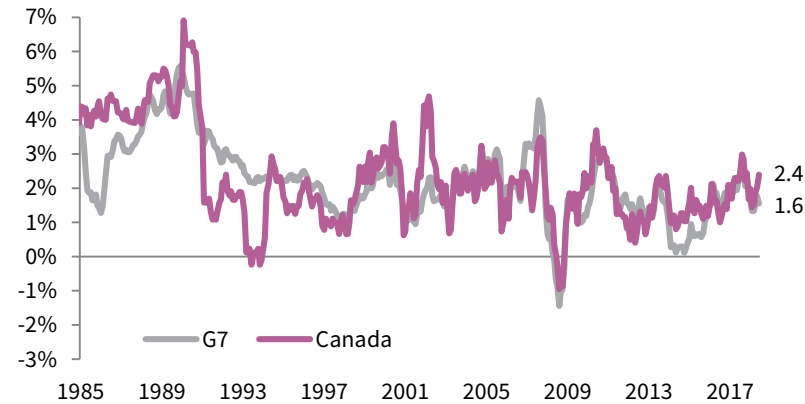
CAD still enjoys positive carry vs most currencies

Correlations with global equities are largely positive, implying unhedged exposure could lower equity volatility for CAD investors

CAD FUNDAMENTALS

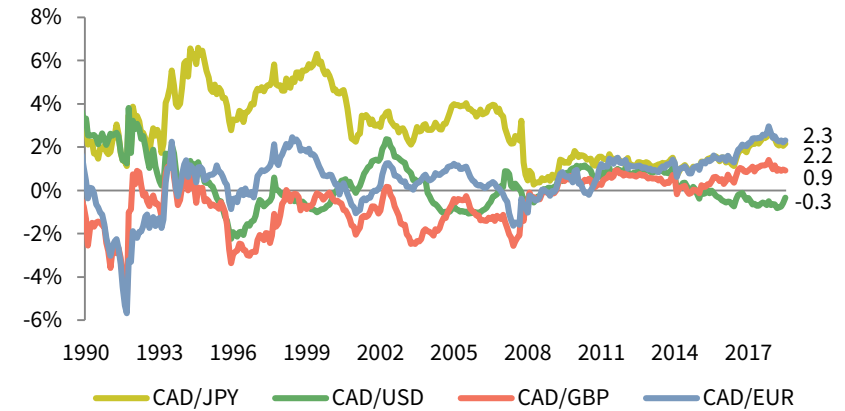
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



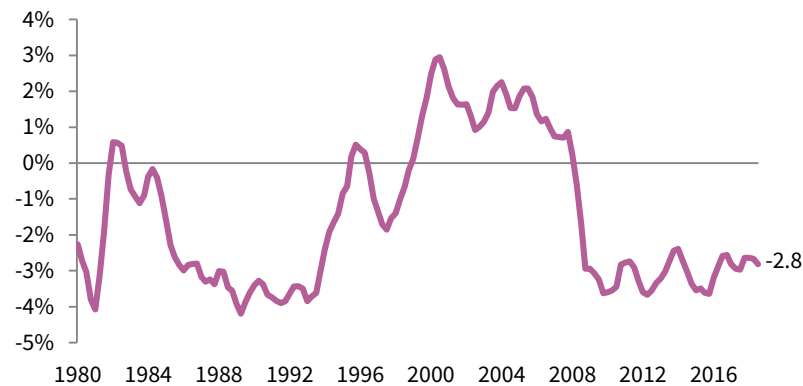
Implied Carry

December 31, 1990 – June 30, 2019



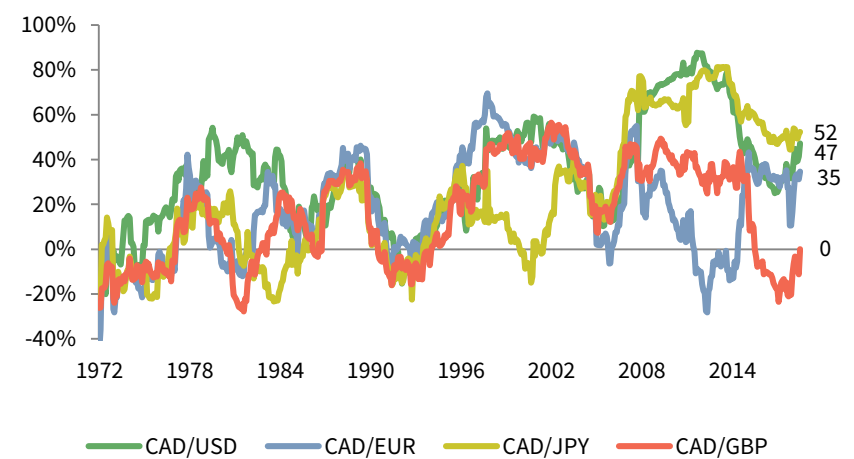
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019



SGD: Holding the Line

- The SGD fell against the USD in 2018 and first half 2019, but gained moderately in trade-weighted terms, in line with the stated policy of the Monetary Authority of Singapore, which targets the level of the exchange rate rather than interest rates.
- Consensus forecasts see the SGD gaining against the USD for the rest of 2019, but falling against the EUR, JPY and GBP. This implies the trade-weighted basket will remain relatively flat.
- However, the SGD is a pro-cyclical currency by design. Thus further weakness in the global and Singapore economy would likely see the SGD weaken.
- Indeed, SGD valuations remain slightly elevated relative to history, although less so versus the USD. This implies more scope for SGD weakness, if need be.
- Modest overvaluation of the SGD and generally positive correlations between the SGD and equities suggest that SGD-based investors should remain unhedged, which should help reduce the volatility of global equity allocations.
- However, the SGD currently offers positive carry versus most currencies (and only modest negative carry versus the USD). This is in contrast to history, as the SGD has typically been a “low yielding” currency.

SGD NOMINAL EXCHANGE RATES

June 30, 1971 – June 30, 2019 • June 30, 1971 = 100



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

SGD CONSENSUS FORECASTS

As of July 8, 2019

	SGD/USD	SGD/EUR	SGD/JPY	SGD/GBP
Current	0.73	0.65	79.7	0.59
Year-End 2019 Median Forecast	0.74	0.64	79.0	0.57
Percent Change	1.4%	-1.5%	-0.9%	-3.4%

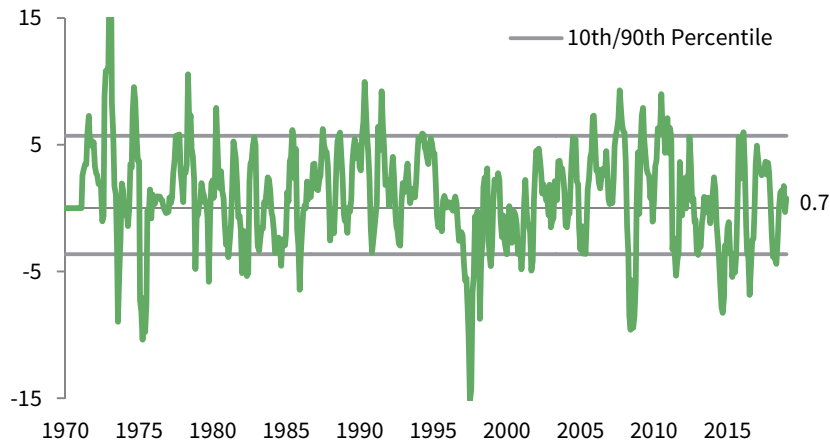
Source: Bloomberg L.P.

The SGD does not look overbought

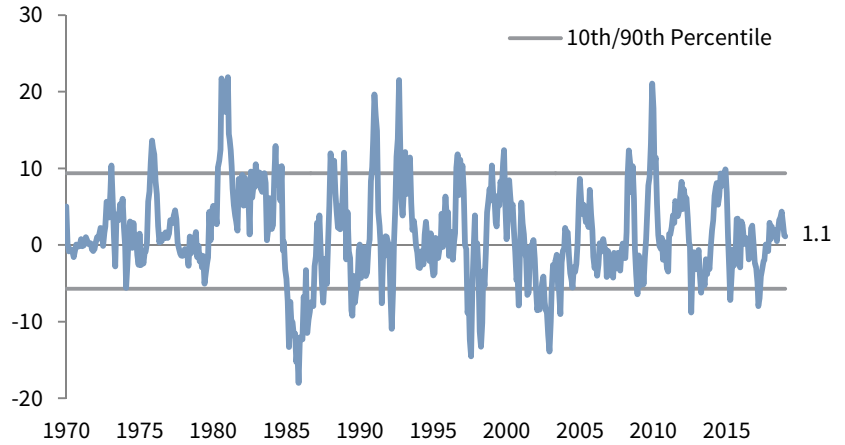
SGD ROLLING 6-MONTH PERCENT CHANGE

June 30, 1970 – June 30, 2019 • Percent (%)

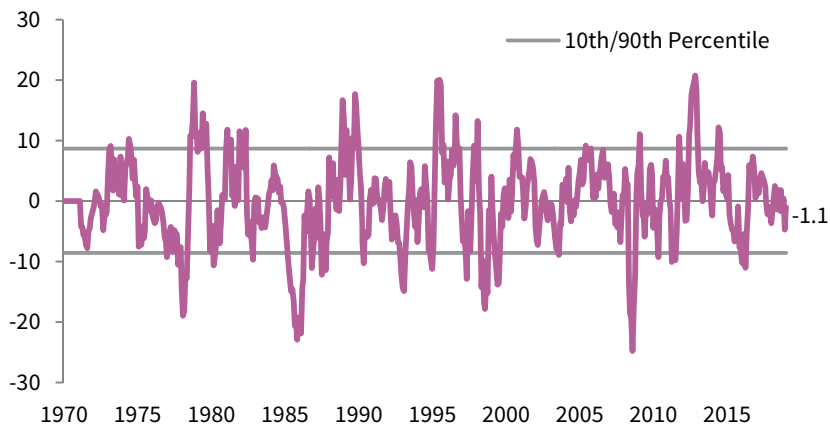
SGD/USD



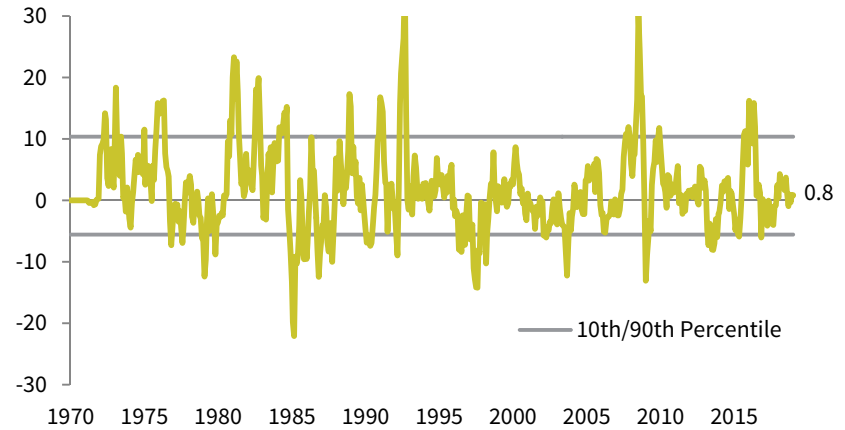
SGD/EUR



SGD/JPY



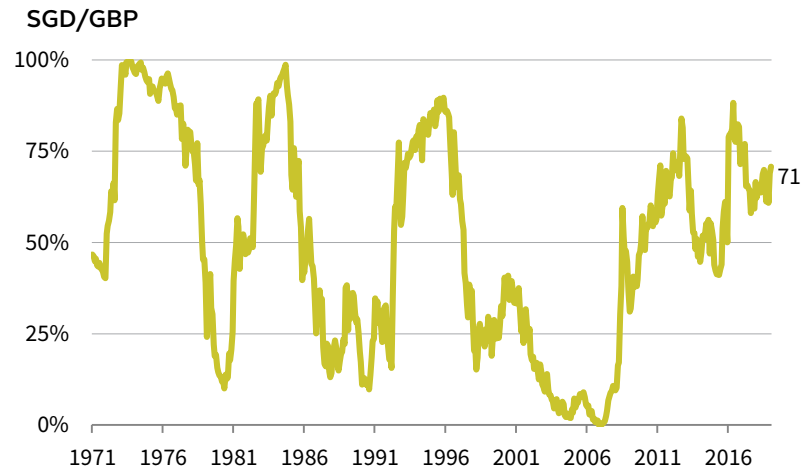
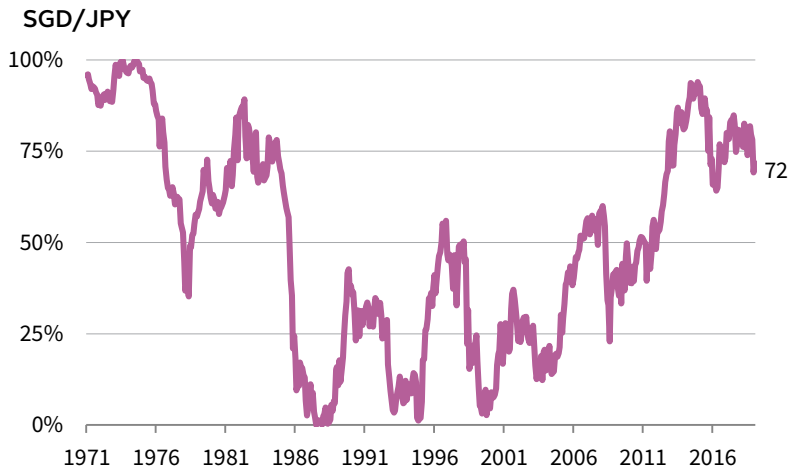
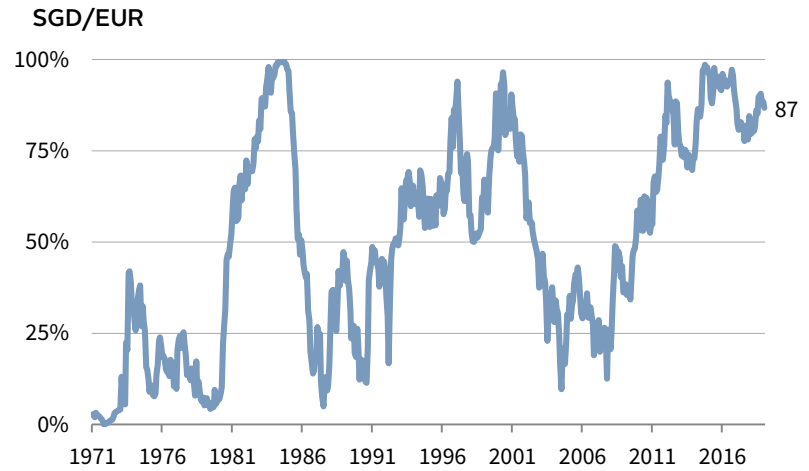
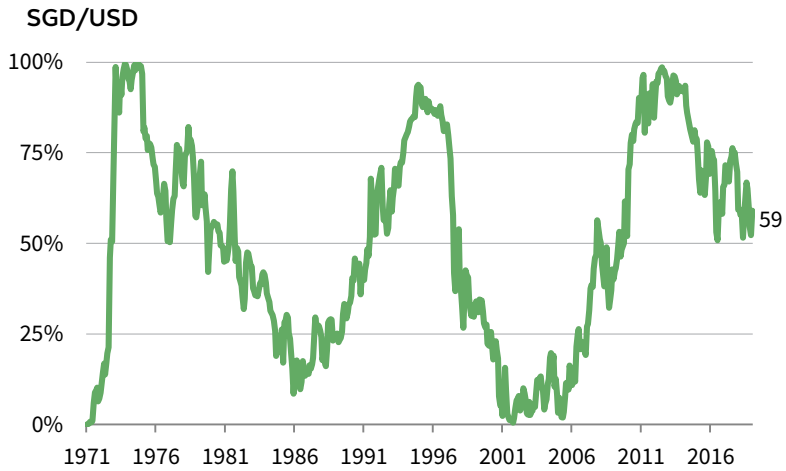
SGD/GBP



SGD valuations are still elevated relative to history, except for vs the USD

SGD VALUATION: REAL EXCHANGE RATE PERCENTILE

June 30, 1971 – June 30, 2019 • Percent (%)



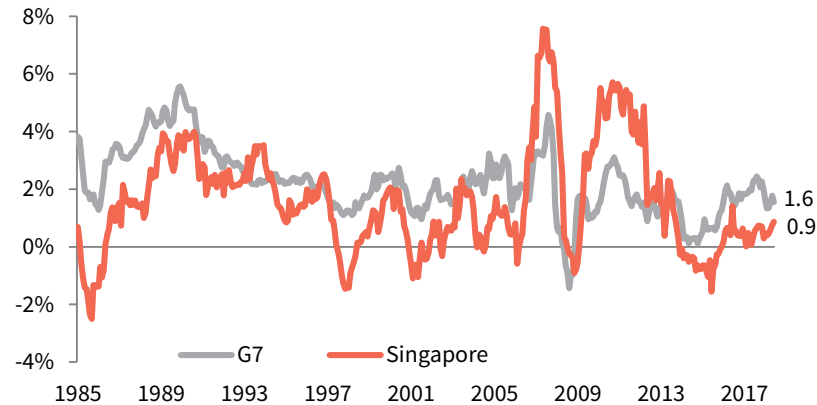
The SGD offers positive carry vs most currencies, unlike in the past

Correlations with equities are generally positive, although the deep negative correlation of the SGD/GBP implies that SGD-based investors should be hedged versus GBP for volatility reduction

SGD FUNDAMENTALS

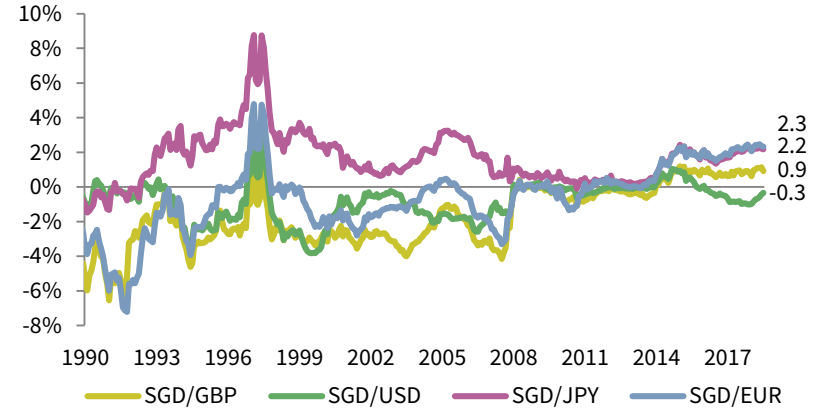
Inflation (Year-Over-Year %)

December 31, 1985 – May 31, 2019



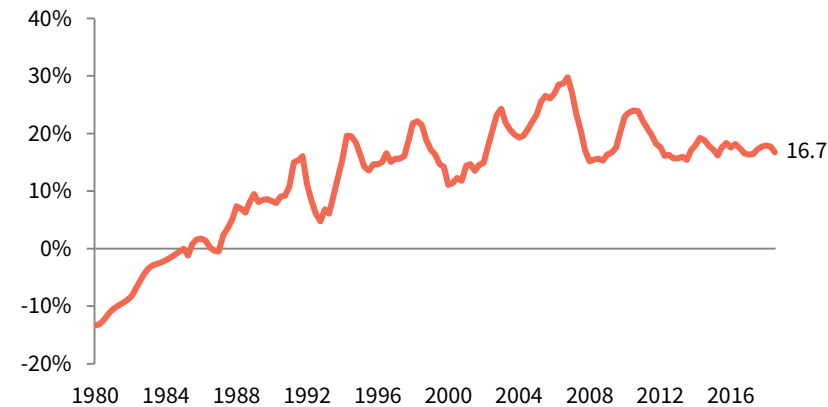
Implied Carry

December 31, 1990 – June 30, 2019



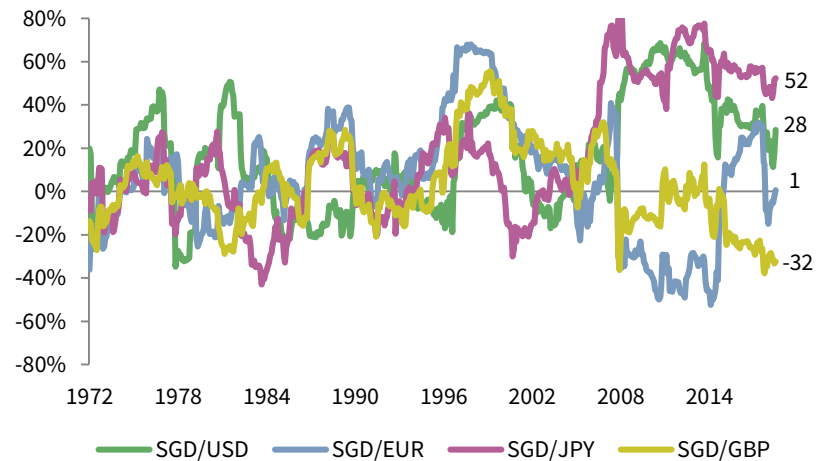
Current Account % GDP

Fourth Quarter 1980 – Second Quarter 2019



Rolling 36-Month Correlation With MSCI World

December 31, 1972 – June 30, 2019



APPENDIX



Currency Valuation Summary

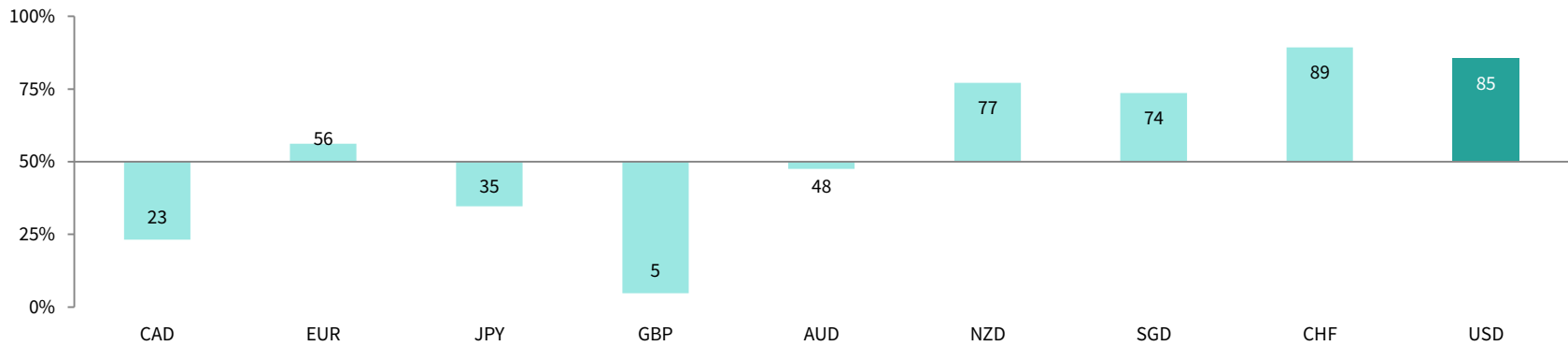
REAL EXCHANGE RATE VALUATION

As of June 30, 2019 • Percent (%)

Real Exchange Rate vs USD – Percentile



Trade-Weighted Real Exchange Rate – Percentile



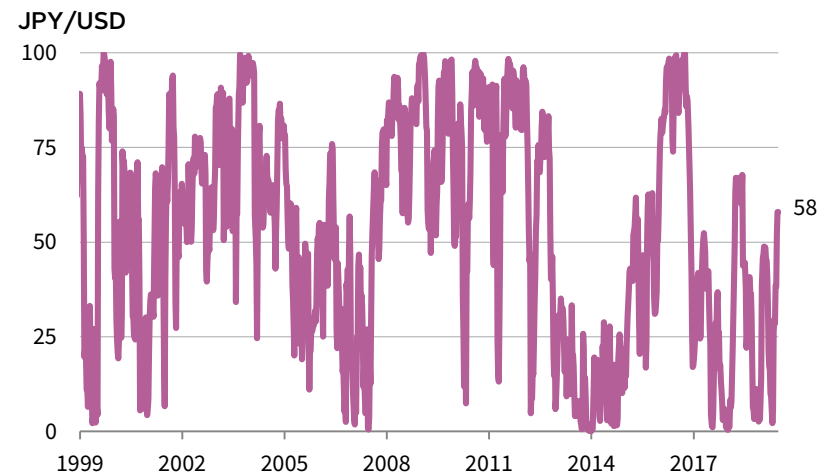
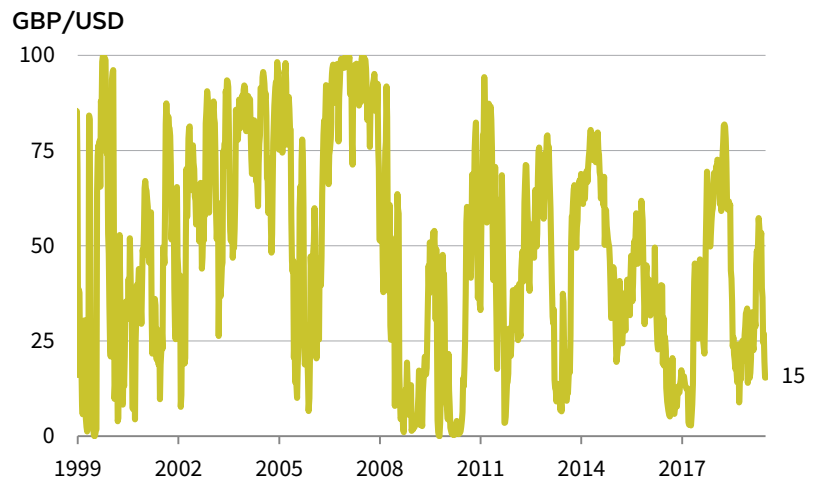
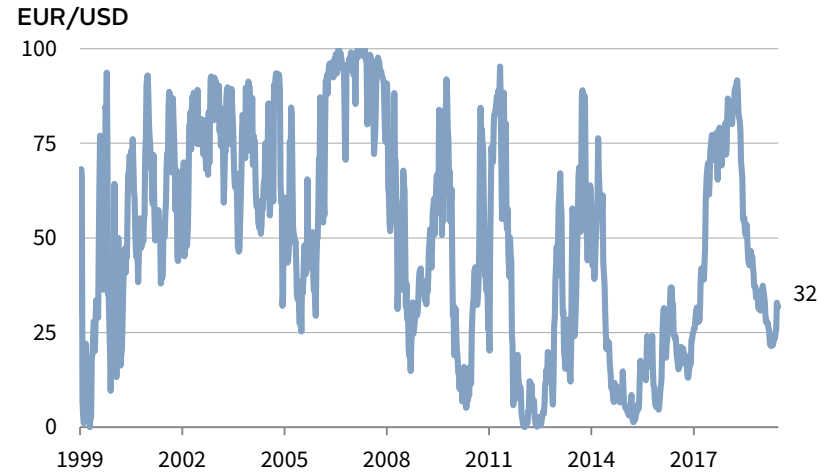
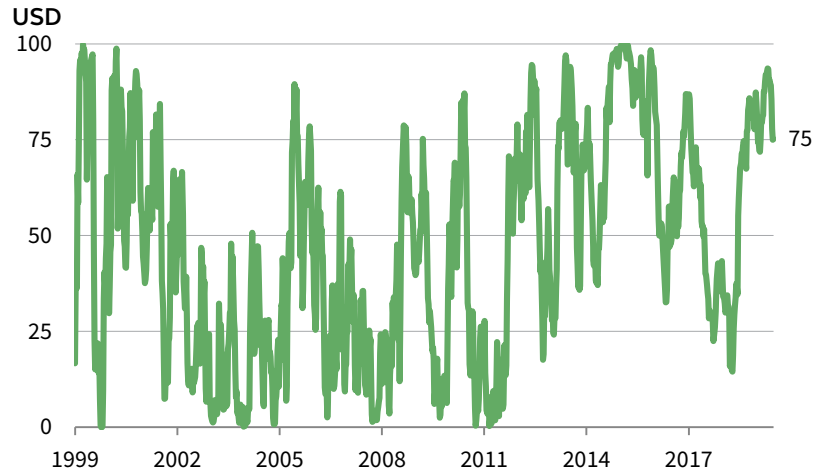
Sources: Bank for International Settlements, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: Real exchange rates are based on relative consumer prices. Historical median is calculated from June 1971 onwards, except for the New Zealand dollar, which starts from March 1985. Trade-Weighted Real Exchange Rates refer to BIS REER Narrow Indexes. The USD Basket represents USD valuation versus a weighted average of six currencies: euro (30%), British pound (20%), Japanese yen (20%), the Australian dollar (10%), Canadian dollar (10%), and Swiss franc (10%). Inflation data are as of May 31, 2019, except for Australia and New Zealand, which are as of March 31, 2019.

Investor Positioning in the Futures Market

NET SPECULATIVE POSITIONS AS % OF OPEN INTEREST – PERCENTILE

January 5, 1999 – July 2, 2019 • Percentile (%)



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

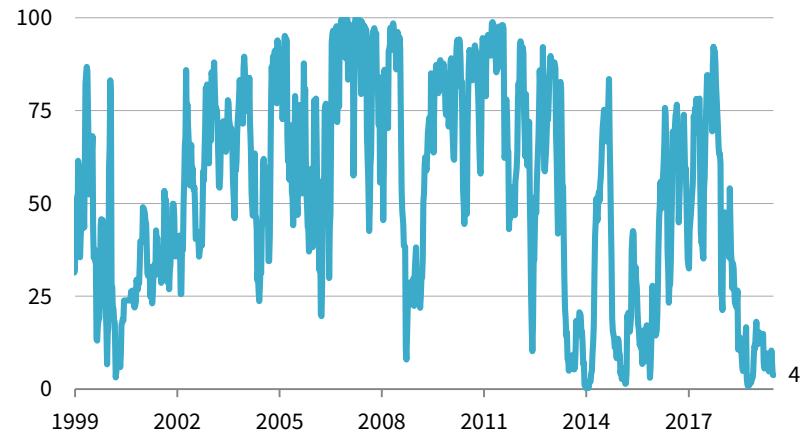
Notes: Data are updated weekly. USD positioning tracks the net aggregate futures positions of non-commercial speculators against the Australian dollar, Canadian dollar, euro, Japanese yen, New Zealand dollar, Swiss franc, and UK pound, traded on the Chicago Mercantile Exchange as a percent of the total open interest.

Investor Positioning in the Futures Market

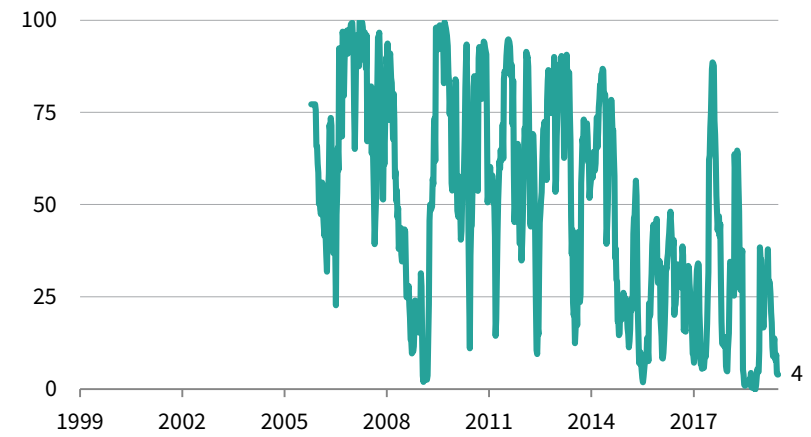
NET SPECULATIVE POSITIONS AS % OF OPEN INTEREST – PERCENTILE

January 5, 1999 – July 2, 2019 • Percentile (%)

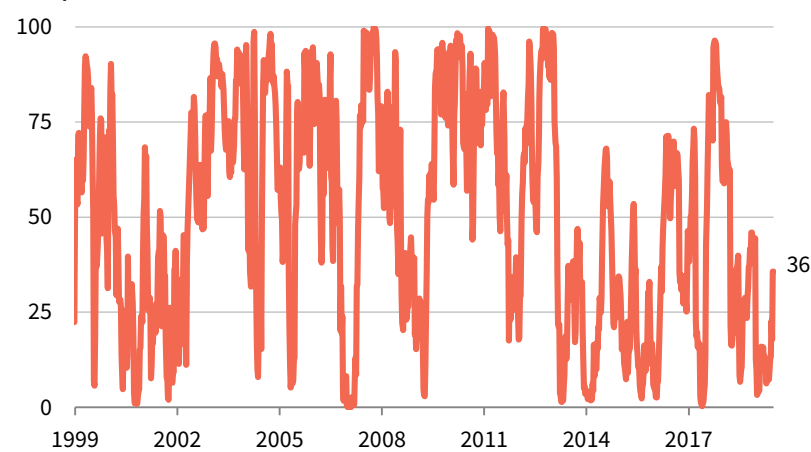
AUD/USD



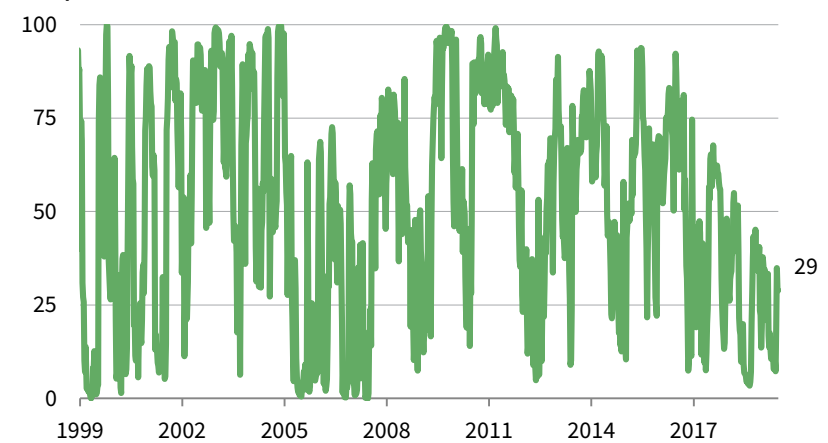
NZD/USD



CAD/USD



CHF/USD



Top 3 Constituents of the BIS Trade-Weighted Basket

BIS EFFECTIVE EXCHANGE RATE (NARROW NOMINAL INDEXES) – TRADE WEIGHTS

As of 2019 • Percent (%)

USD		GBP		EUR		CHF	
	Weight (%)		Weight (%)		Weight (%)		Weight (%)
Euro Zone	34.0	Euro Zone	63.5	US	30.0	Euro Zone	62.3
Canada	23.3	US	16.6	UK	21.5	US	15.6
Japan	14.1	Japan	4.0	Switzerland	11.4	UK	6.8
Others	28.6	Others	15.9	Others	37.1	Others	15.3

JPY		NZD		AUD		CAD	
	Weight (%)		Weight (%)		Weight (%)		Weight (%)
US	33.2	Australia	23.6	Euro Zone	27.6	US	75.5
Euro Zone	25.5	Euro Zone	22.1	US	24.6	Euro Zone	11.3
Korea	12.0	US	18.7	Japan	13.9	Japan	4.1
Others	29.3	Others	35.6	Others	33.9	Others	9.1

SGD	
	Weight (%)
Euro Zone	21.6
US	21.4
Japan	15.0
Others	42.0

Notes on the Data

Exchange Rates

- Historical exchange rates are provided by Thomson Reuters Datastream, based on Thomson Reuters closing spot rates. Data for the EUR before 1998 are based on a weighted basket of EMU legacy currencies calculated by Thomson Reuters.
- Trade-weighted exchange rates based on the Bank of International Settlements Nominal Narrow Effective Exchange Rate indexes. The BIS narrow nominal indexes are based on a basket of 26 developed economies with data dating back to 1964.

Consensus Forecasts

- FX forecasts are provided by Bloomberg and based on the median forecast as of July 8, 2019.

Momentum: Six-Month Rate of Change

- The six-month rate of change is a simple momentum measure that provides context on whether recent moves in a currency pair are extreme relative to history. Implicit in this analysis is that short-term movements are mean-reverting, and therefore extreme moves are prone to reversals.

Valuation: Real Exchange Rate Percentile

- Our primary valuation metric for currencies is real exchange rates. For each currency pair, we create a real exchange rate history based on nominal exchange rates divided by relative CPI inflation. This is analogous to the purchasing price parity (PPP) approach, which assumes relative inflation is the driver of currencies over the long run. However, our approach avoids reliance on a particular base year for the relative inflation calculation (which can have a meaningful impact on implied PPP) by comparing the real exchange rate to its own history.

Notes on the Data (continued)

Fundamentals

- **Inflation.** Over the long run, currencies with lower inflation should appreciate, per PPP theory. Rising relative inflation often signals a currency is becoming overvalued, unless offset by nominal FX depreciation.
- **Implied carry.** The implied interest rate differential priced into one-year FX forwards. Negative carry implies a drag from hedging the currency pair back to the base currency. Economic theory states currencies with high interest rate differentials should depreciate over the long run; this is often not the case in the short run.
- **Current account.** Countries with current account surpluses are less reliant on foreign inflows and are typically net creditors. Historically, currencies with persistent current account surpluses have appreciated over time.
- **Correlation to MSCI World.** The rolling 36-month correlation of the percent change in the currency pair and the MSCI World Index of developed markets equities in local currency terms. A negative correlation implies a “counter-cyclical” currency pair that moves inversely to equity markets, thereby increasing the volatility of unhedged exposure (equities down, base currency up/foreign currency down, unhedged return lower). A positive correlation implies a “pro-cyclical” currency pair that moves in line with equities, thereby reducing the volatility of unhedged exposure (equities down, base currency down/foreign currency up, unhedged return higher). In theory, investors should consider hedging countercyclical currency pairs to reduce volatility. However, currency correlations are unstable, and hedging decisions should be made in conjunction with views on carry, desired overall foreign currency exposure, and underlying asset class exposure.

Appendix

- **Net Speculative Positions as a % of Open Interest.** Based on CFTC weekly position data expressed as a percentile to allow comparison across currencies. This indicates how non-commercial investors (HFs and other investors) are positioned. Extreme positioning indicates potential for market reversal.



**CAMBRIDGE
ASSOCIATES**

Aaron Costello, Managing Director
Vivian Gan, Investment Analyst

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