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Markets Research

Emerging Markets

Economics
Foreign Exchange
Rates

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EM Currency Handbook 2015

Stress Testing EM FX

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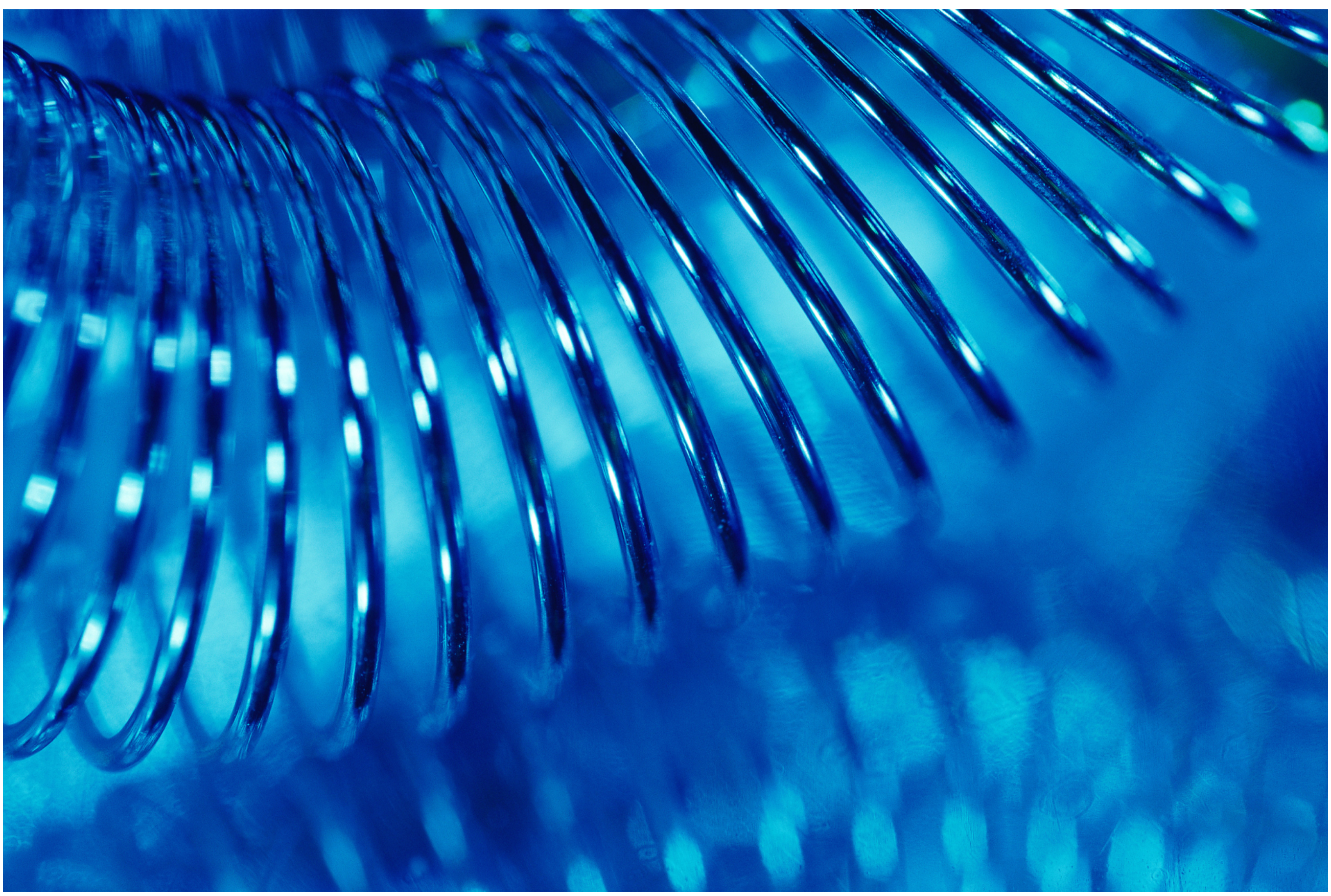

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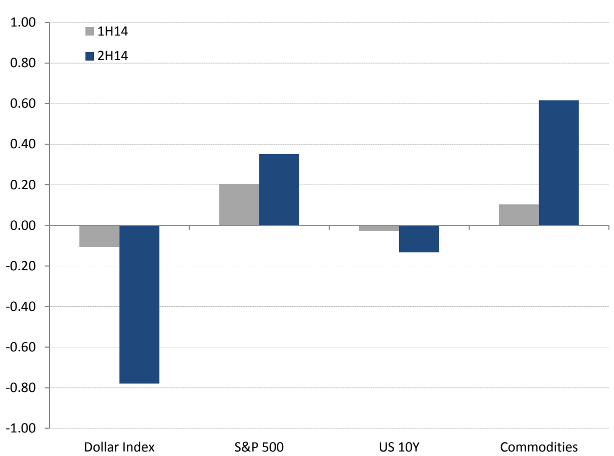
The uphill battle continues in 2015

The year 2014 was particularly difficult for EMFX investors. Not only did diverging domestic fundamentals underpin considerable differentiation across currencies, but also external shocks proved difficult to anticipate, sizeable in magnitude, and dynamic in nature. A heavy electoral calendar, heightened geopolitical risks and policies accounted for a substantial share of variation across countries. These have been compounded by external shocks that not only evolved but also intensified later in the year. The USD gained over 10% vs. the EUR and oil prices are about half the levels of mid-2014. Consequently, the USD and oil have overtaken equities and UST as the main external drivers of EMFX in 2H14 (chart).

External shocks - The evolving nature of risks

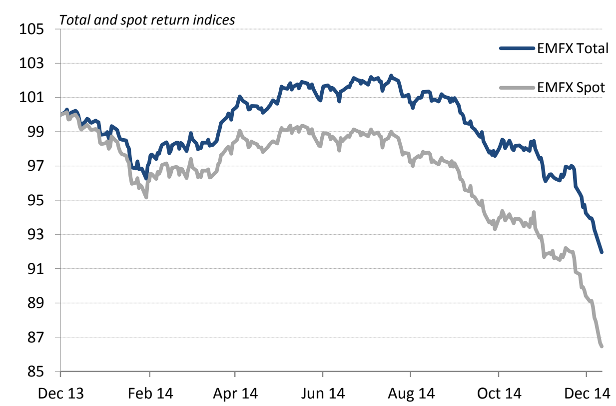


Note: scaled betas from multivariate regressions of an EMFX index on external drivers
Source: Deutsche Bank, Bloomberg Finance LP

Not surprisingly, performance vs. the USD was poor in 2014. EMFX is closing the year about 13% down vs. the USD (which compares with the 10% upward move in DXY) after holding up well during the first half of the year (chart). More encouragingly, EM currencies have fared better vs. the JPY (just slightly weaker) and they have depreciated about 3% vs. the EUR despite surging risk aversion. In perspective, this performance seems in line with a year where lower UST yields favored fixed income, oil collapsed, the USD rallied, and EM growth posted one of the lowest rates in 15 years.

We expect this uphill battle to extend into 2015 as the main forces that drove EMFX in 2014 are still in place. However, we believe that these headwinds are poised to ease as the year unfolds, since we believe that: 1) the upside for the USD into 2015 is about one-third of what we saw in 4Q14 (and possibly concentrated in 1Q15); 2) oil prices have already approached the bottom of our expected range; 3) the political calendar will be considerably lighter; 4) policy uncertainty has reduced; and 5) EM growth will likely pick up some steam over the next year. On aggregate, we forecast EMFX spot slightly stronger in 2015. This, plus the usual contribution from carry, as the chart below shows, should eventually benefit portfolio flows.

Another difficult year – with the usual carry attenuation



Source: Deutsche Bank

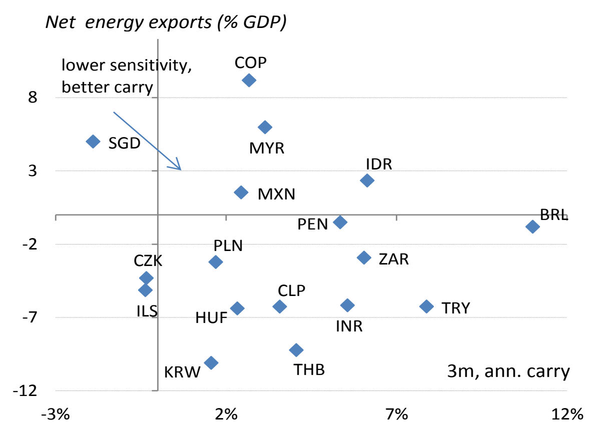
Central banks: Not to the rescue. As one important by-product of the recent fall in commodities, investors will still face mostly dovish central banks. In addition to reduced inflationary pressures (mostly outside LatAm), central banks see EM currencies as their main line of defense against external and domestic shocks. This – in addition to policy divergence and differences in exposure to oil – have underpinned our preference for INR, IDR, TRY vs. BRL, RUB – and to a lesser extent ZAR (where downgrade risks will linger) – among the high-yielders.

Although we believe that the dovishness of central banks is to a large extent priced among the low yielders in EMEA, it will likely continue to weigh on Asia FX. With the JPY, food and energy prices down, we expect the need to preserve value to drive policy in SGD, KRW, and THB. We also see BNM shifting its line of MYR defense to 3.50, while PHP remains vulnerable to perceptions that monetary policy is falling "behind the curve". In LatAm, the room for easing monetary policy is a lot less given high inflation and the region's FX exposure to commodities, but we believe that further easing will keep CLP undervalued in the first part of 2015, at least.

Oil: The aftermath. The most important headwind into 2015, however, should remain USD strength and oil prices. While USD strength is unfolding gradually, oil prices are simply collapsing. The first pass of differentiating between winners and losers from the latter is relatively straightforward, as prices have shown and as the chart below indicates.

Rather than a zero-sum game across net exporters and importers, however, oil prices have reached levels that could weigh on FDI, domestic investment, and creditworthiness, thus fueling overall risk aversion. This is already proving an extra burden for net oil importers with low reserves such as Turkey and also for solid economies such as Mexico, where the potential FDI benefits of reforms have been called into question.

Trading off carry benefits vs. oil prices exposure



Source: Deutsche Bank, Bloomberg Finance LP
Sample: 3Y

EM's lines of defense against external shocks have been strengthened over the years. Many countries have built reserves further and – for the most part – they seem adequate. The table on the right shows reserve coverage for 25 emerging economies, assuming relatively benign oil prices (averaging 15 points higher than current prices), a robust recovery in the US, and a gradual repricing of US rates that would not disrupt capital flows – our baseline for 2015.

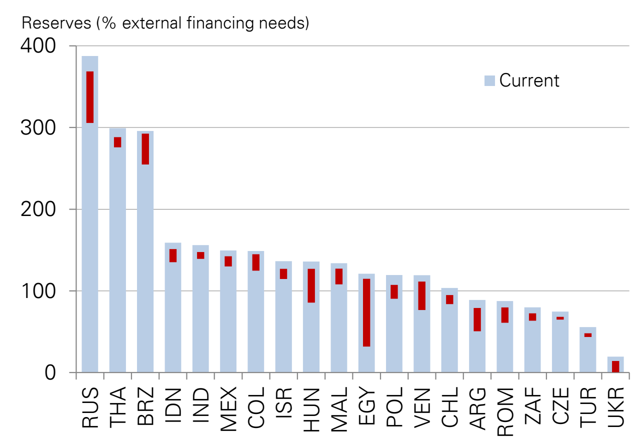
However, what seemed a stress scenario as of a couple of months ago is now well within reach. In the chart on the right we consider shocks to reserves in two ways. First we assume Brent at $55 (thus another 10% drop). Second, we consider three additive shocks to the capital account, encompassing a: 1) 90% reduction in external debt rollover; 2) 2% of GDP common reduction in capital flows; and 3) country-specific shock to the capital account based on historic volatility. The red bars in the chart show the range of the combined impact of these shocks. Reserves coverage would drop close to or below 100% in many cases. Although only in less important FX markets such Ukraine, and Egypt they would approach zero, the coverage ratio would be low in larger FX markets such as Turkey and South Africa.

Reserves: Comfortable across EM – with exceptions

	Current account deficit ($bn)	Short-term debt ($bn)	External fincnaing needs ($bn)	Foreign reserves: $bn	Foreign reserves: % external financing needs
China	-315	819	505	3906	774
India	35	175	210	327	156
Indonesia	16	55	70	112	159
Korea	-92	158	66	371	564
Malaysia	-10	108	98	132	134
Philippines	-13	13	1	81	13483
Taiwan	-73	172	99	429	434
Thailand	-5	63	58	172	299
Czech Republic	2	64	65	49	75
Egypt	5	9	14	17	121
Hungary	-5	36	32	43	136
Israel	-10	74	64	88	136
Poland	-15	93	78	93	119
Romania	2	49	51	44	87
Russia	-96	204	108	420	387
South Africa	17	44	60	48	80
Turkey	40	167	206	115	56
Ukraine	3	59	62	12	19
Argentina	1	31	31	28	89
Brazil	85	42	127	377	296
Chile	5	34	39	41	104
Colombia	19	12	32	47	149
Mexico	38	102	140	210	150
Peru	10	8	18	80	440
Venezuela	4	14	18	21	119

Current account figures are DB forecasts for 2015. Short-term debt is at residual maturity where available or original maturity otherwise.
Source: Haver Analytics, Deutsche Bank

Impact of combined oil and capital flows shocks



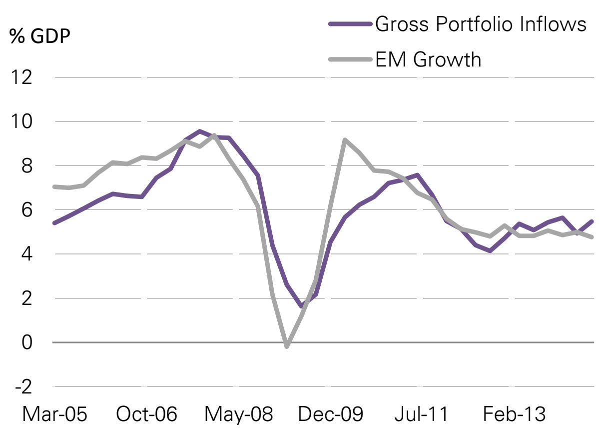
Source: Haver Analytics, Deutsche Bank

What will drive differentiation? Despite heightened risk aversion, we believe that differentiation will remain crucial and we expect it to follow closely currency sensitivities to external shocks (oil and US markets in particular) and the quality of domestic policies. In our view, EM currencies are going through a realignment of relative prices, rather than a systemic "sudden-stop" in capital flows.

Accordingly, as the US economy expands and lower oil prices benefit demand in advanced economies, we expect risk aversion to ease and manufacturing economies to benefit. This would favor the more competitive manufacturing currencies such as Central European FX (PLN, HUF, and CZK) as well as the MXN (as it overcomes the drag from oil and elevated skepticism on FDI and portfolio flows).

Current account adjustments: A more protracted process. It seems consensus among investors that outflows from local markets have hindered CA adjustments and weighed heavily on EMFX. However, less timely but more comprehensive data on portfolio flows reveals a more benign backdrop on this front. In fact, as the chart below indicates, gross portfolio inflows have been stable over the past years despite EM's lackluster growth performance. This means that higher-frequency flows data showing relentless outflows (such as EPFR) can be quite misleading.

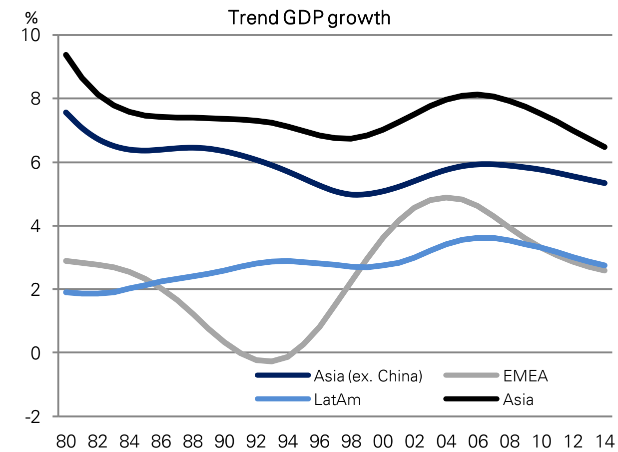
Gross portfolio inflows strongly tied with EM growth



Source: Deutsche Bank, IMF, Haver Analytics

Still, the outlook for portfolio flows remains lackluster at best. On the bright side, since EM portfolio inflows and growth are closely related, our forecast of a mild increase in the pace of EM growth bodes for some improvement. However, we would caution that the recent deceleration in EM growth is to a large extent structural, as we discuss in our 2015 EM Outlook and as the chart below shows.[1] Altogether, while not a primary drag, capital inflows seem unlikely to provide any meaningful aggregate boost to EMFX anytime soon. This and that fact that global trade will likely continue to grow at dismal rates (also for structural reasons) will likely continue to drag current account adjustments.

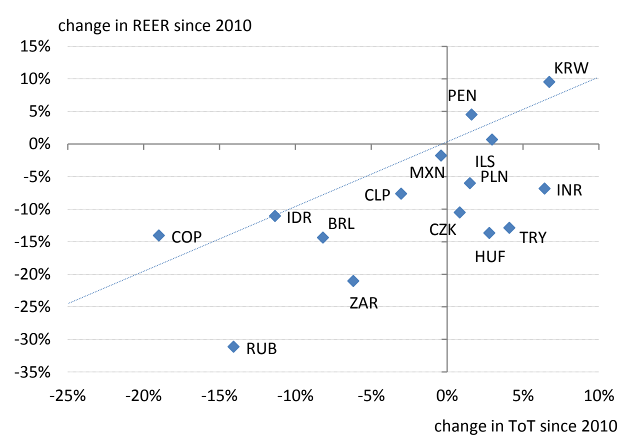
Sustainable growth: Likely stabilizing at a lower level



Source: IMF WEO, and Deutsche Bank

Silver lining: Better valuation and lighter positioning. To finish on a more encouraging note, EMFX valuations have improved and positioning is relatively light. As the chart below suggests, several currencies seem to have overshot the recent change in external prices. If EMFX headwinds ease as we expect, valuation and lighter positioning will likely provide meaningful boosts.

EMFX has overshot deterioration in Terms of Trade



Source: Deutsche Bank

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[1] See Emerging Markets 2015 Outlook: Stress Testing EM

Macroeconomic indicators for 2015

Latin America

	Argentina	Brazil	Chile	Colombia	Mexico	Peru
Nom. GDP (USD bn)	519	2,093	256	399	1,408	217
Inflation (YoY%)	38.7	6.2	2.9	3.3	3.5	2.2
O/N rate ***	19.80	11.75	3.00	4.50	3.00	3.50
Govt. debt/GDP, %	16.4	52.4	14.3	38.5	37.3	25.2
Domestic	3.9	-15.3	12.4	28.0	25.6	10.4
External	12.5	63.7	1.4	10.5	11.7	8.9
Total ext.debt/GDP	28.0	26.0	56.9	23.3	23.1	28.6
Budget bal./GDP, %	-6.7	-4.9	-2.4	-3.0	-4.2	-0.1
Growth (5y avg), %	4.1	2.8	4.5	4.8	3.3	5.9
CA bal./GDP, %	-0.9	-4.2	-2.0	-4.9	-2.5	-4.7
FDI/GDP, %	0.5%	3.1%	2.9%	3.8%	2.1%	3.5%

EMEA

	Czech Republic	Egypt	Hungary	Israel	Kazakhstan	Nigeria	Poland
Nom. GDP (USD bn)	190	320	121	280	220	522	520
Inflation (YoY%)	1.3	11.0	2.6	1.4	9.0	9.5	1.5
O/N rate ***	0.05	9.25	2.10	0.25	5.50	13.00	2.00
Govt. debt/GDP, %	44.9	96.0	76.3	67.6	13.3	12.6	47.5
Domestic	31.5	84.5	44.2	55.9	na	10.4	30.1
External	13.4	11.5	32.1	11.8	na	2.2	17.4
Total ext.debt/GDP	49.4	16.6	112.0	31.1	74.8	2.8	71.8
Budget bal./GDP, %	-2.1	-10.5	-2.7	-3.6	2.4	-4.2	-2.9
Growth (5y avg), %	1.0	2.7	1.1	3.7	5.9	na	3.0
CA bal./GDP, %	-0.8	-1.6	3.7	3.5	2.1	0.1	-2.9
FDI/GDP, %	2.7%	1.8%	14.6%	1.7%	6.3%	0.5%	1.2%

EMEA

	Romania	Russia	Saudi Arabia	South Africa	Turkey	UAE	Ukraine
Nom. GDP (USD bn)	194	1,798	698	358	852	390	101
Inflation (YoY%)	2.5	8.0	3.3	5.3	6.8	2.8	14.0
O/N rate ***	2.75	17.00	2.00	5.75	8.25	0.10	14.00
Govt. debt/GDP, %	40.8	12.1	4.4	47.5	34.4	12.8	74.0
Domestic	20.8	8.7	4.4	43.7	24.1	9.2	20.8
External	20.0	3.6	0.0	3.8	10.3	3.7	53.2
Total ext.debt/GDP	68.8	32.8	8.7	33.8	50.8	37.6	108.0
Budget bal./GDP, %	-2.5	-1.4	-11.2	-3.4	-1.8	-2.0	-4.5
Growth (5y avg), %	1.5	2.8	6.0	2.4	5.4	4.0	0.6
CA bal./GDP, %	-1.3	5.3	-0.4	-4.2	-4.7	3.9	-2.5
FDI/GDP, %	1.2%	-0.3%	0.5%	0.8%	1.0%	1.0%	-1.5%

Asia

	China	Hong Kong	India	Indonesia	Malaysia	Philippines	Singapore	South Korea	Thailand	Taiwan	Vietnam
Nom. GDP (USD bn)	10,137	303	2,201	934	338	295	301	1,348	361	525	201
Inflation (YoY%)	2.8	3.0	5.6	5.2	3.9	3.7	1.8	2.2	1.3	1.3	5.3
O/N rate ***	2.75	0.50	8.00	7.75	3.25	6.00	0.43	2.00	2.00	1.88	6.50
Govt. debt/GDP, %	21.0	9.3	63.0	27.0	68.4	56.6	121.8	36.1	46.7	39.9	62.0
Domestic	20.5	8.9	60.1	15.5	66.8	37.8	121.8	35.3	45.7	39.5	31.0
External	0.5	0.4	2.9	11.5	1.6	18.8	1.0	0.8	1.0	0.4	31.0
Total ext.debt/GDP	10.5	459.5	23.9	33.3	62.9	19.5	392.1	32.0	40.2	36.2	38.3
Budget bal./GDP, %	-2.5	2.9	-4.0	-1.7	-3.4	-2.2	6.8	-0.5	-2.5	-1.8	-5.3
Growth (5y avg), %	8.5	3.7	6.4	6.0	5.8	6.2	6.1	3.8	3.5	4.4	5.8
CA bal./GDP, %	3.4	2.0	-1.7	-1.7	2.9	4.3	19.6	6.8	1.4	13.9	3.5
FDI/GDP, %	1.5%	-5.9%	1.4%	1.3%	-0.9%	0.4%	8.3%	-1.5%	4.2%	-2.7%	4.7%

*** Current Overnight Rate

Source: Deutsche Bank

Monetary Frameworks

Latin America	Argentina	Brazil	Chile	Colombia	Mexico	Peru
Autonomy [1]	No	No	Yes	Yes	Yes	Yes
Tenure (years)	6	4	10	4	6 & 8	5
Board* (# members)	10	7	5	7	5	7
Monet. target	M2 growth	Inflation	Inflation	Inflation	Inflation	Inflation
2015 target	Not Explicit	4.5% +/- 2%	3% +/-1%	2.0% - 4.0%	3% +/-1%	2% +/-1%
Annual meetings	12	8	12	12	12	12
Inflation reports	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Three
Policy rate	Call	Selic	TPM	Overnight	Tasa de fondeo	Reference
Main pol. instr.	M2	Selic	TPM	Overnight	Tasa de fondeo	Reference
FX intervention	Continuous	Frequent	Occasional	Frequent	Occasional	Frequent

EMEA	Croatia	Czech Republic	Egypt	Hungary	Israel	Kazakh	Nigeria	Poland
Autonomy [1]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tenure (years)	6	6	n/a	6	5	n/a	5/3	6
Board [2] (# members)	14	7	15	7	6	9	12	10
Monet. target	FX stability	Inflation	Core inflation	Inflation	Inflation	Infl & FX	Infl & FX	Inflation
2015 target	Not explicit	2% +/- 1%	6% - 8%	3% +/- 1pp	1% - 3%	6% - 8%	Not explicit	2.5% (+/-1%)
Annual meetings	n/a	8	8	12	12	n/a	6	12
Inflation reports	None	Quarterly	Not published	Quarterly	Quarterly	Quarterly	None	3 per year
Policy rate	Repo	2w Dep Rate	O/N Lend & Deposit	Base rate	Discount	Ref. Rate	MPR	7-day Ref.
Main pol. instr.	Repo	2w Dep Rate	O/N Lend & Deposit	Base rate	Discount	Ref. Rate	MPR	7-day Ref.
FX intervention	Continuous	Never	Frequent	Occasional	Frequent	Continuous	Continuous	Occasional

EMEA	Romania	Russia	Saudi	South Africa	Turkey	UAE	Ukraine
Autonomy [1]	Yes	Yes	No	Yes	Yes	No	Yes
Tenure (years)	5	4	4/5	5/3	5/3	n/a	7
Board [2] (# members)	9	12	6	14	7	7	16
Monet. target	Inflation	Inflation	USD peg	Inflation	Inflation	USD peg	Infl & FX
2015 target	2.5% (+/-1%)	4% (+/- 1.5%	3.75 / USD	3-6%	5% (+/- 2%)	3.6725/USD	No explicit
Annual meetings	2 per quarter	12.0	n/a	6	12	n/a	n/a
Inflation reports	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	None	None
Policy rate	1w deposit	Key rate	Rev. repo	Repo	Repo	Repo	Discount
Main pol. instr.	1w deposit	Key rate	Rev. repo	Repo	Repo	Repo	Discount
FX intervention	Frequent	Continuous	Continuous	Frequent	Frequent	Continuous	Continuous

[1] Central Bank autonomy is defined as legal autonomy; in practice, some "autonomous" Central Bank decisions are influenced by politics and/or pressure from the Treasury.
[2] Including Governor

Source: Deutsche Bank

Monetary Frameworks

Asia	China	Hong Kong	India	Indonesia	Malaysia	Philippines	Singapore
Autonomy [1]	No	Yes	Yes	Yes	Yes	Yes	Partial
Tenure (years)	5	-	Up to 5	5	5	6	2
Board [2] (# members)	15	8	20	6-9	10	7	9
Monet. target	M2 & Inflation	Ccy Board	CPI Inflation	Inflation	Multiple	Inflation	SGDNEER appreciation
2015 target	M2: 14% (est.)	USD/HKD 7.75-7.85	<6% by Jan 2016	4% +/-1%	-	2-4%	2% p.a. appreciation (till Apr '15)
Annual meetings	4	12	6	12	6	8	2
Inflation reports	Quarterly	Monthly	Monthly	Quarterly	Monthly	Quarterly	Monthly
Policy rate	1Y Deposit	Base Rate	Repo	Overnight	Overnight	Repo/RRP	SGD-NEER
Main pol. instr.	1Y Deposit, RRR, OMO	Ccy Board	Repo	BI rate	OPR	Repo/RRP	SGD-NEER
FX intervention	Frequent	At policy band	Volatility Management	Frequent	Occasional	Occasional	At policy bands

Asia	South Korea	Sri Lanka	Thailand	Taiwan	Vietnam
Autonomy [1]	Yes	Yes	Yes	Yes	No
Tenure (years)	4	6	4	5	-
Board [2] (# members)	7	5	7	15	-
Monet. target	Inflation	CPI Inflation	Core Inflation	M2 & Inflation	Price stability
2015 target	2.5-3.5%	5-5.5%	0.5-3%	M2: 2.5-6.5%	5%
Annual meetings	12	12	8	4	-
Inflation reports	Semiannual	Monthly	Quarterly	Quarterly	-
Policy rate	7D Repo	SDFR & SLFR	1D Repo	Discount	Discount
Main pol. instr.	7-day repo	SLFR	1-day repo	OMO	Prime Rate
FX intervention	Volatility Management	Frequent	Frequent	Regular	Frequent

[1] Central Bank autonomy is defined as legal autonomy; in practice, some "autonomous" Central Bank decisions are influenced by politics and/or pressure from the Treasury.
[2] Including Governor

Source: Deutsche Bank

China

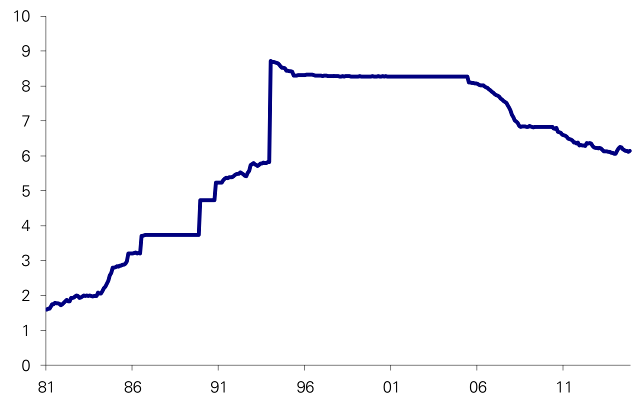
During the 1950s and 1960s, China adjusted its FX rate frequently to encourage exports and restrict imports, pegging to USD and then to GBP. With the breakdown of Bretton Woods in the early 1970s, the anchor was shifted to a broad basket. Under a new opening policy in the 1980s, authorities created a multiple FX structure and moved to a controlled float to address trade competitiveness. The early 1990s was marked by a brief shift to a more market-determined FX regime as China sought to meet GATT accession criteria. The "official rate" was moved to the prevailing swap rate on Jan 1, 1994 and the yuan was be managed against an undisclosed basket of currencies; however, shortly after the heavy volatility in global FX markets in 1995, China quietly abandoned its basket and reverted to a straightforward USD peg at 8.28.

The People's Bank of China was created in September 1983 and was charged with setting monetary policy. PBoC's main policy tool is the 1Y deposit rate, though in practice it relies on several policy tools including administrative measures and liquidity management via OMOs and Reserve Ratio Requirements. The central bank tends to pursue several monetary targets in addition to inflation, such as M2 growth.

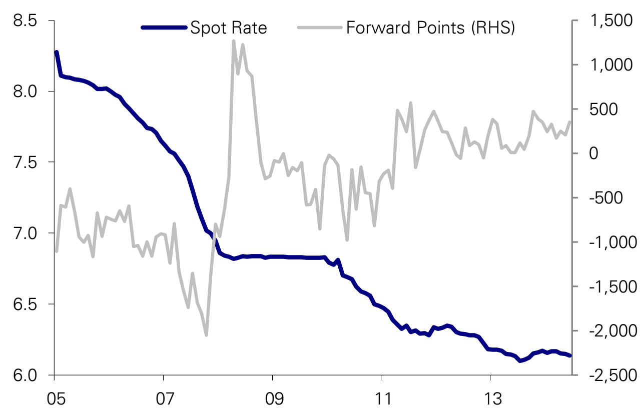
In July 2005, China adopted a managed float regime, with the daily fluctuation range of USD/CNY capped at +/-0.3% around a fixing. The fixing is announced daily at 9:15am before trading begins. The bandwidth was widened in May 2007 to +/-0.5%, in April 2013 to +/-1%, and then again in March 2014 to +/-2% around the fixing. According to PBOC, the RMB is managed with reference to a basket of currencies, although its constituents are undisclosed and adherence to a basket framework has not been consistent. Authorities tend to regard FX as a monetary tool against inflation, although the relationship has weakened over the past year.

RMB internationalization has become an important policy objective and progress towards capital account convertibility is underway. The creation of the offshore CNH market in 2010 was an important milestone. The RMB is now freely tradeable offshore in HK, Singapore, Taiwan and London. The offshore RMB deposit base has grown and RMB cross-border trade settlement scheme has steadily expanded, with RMB now the second most used currency in trade finance globally. RMB capital financing via CNH bond issuance has become widespread. RMB ODI and FDI are permitted. The liberalization of QFII and RQFII quotas has steadily been upsized, and the Shanghai-Hong Kong Stock Connect has allowed increased cross-border flow of capital between equity markets, subject to quotas.

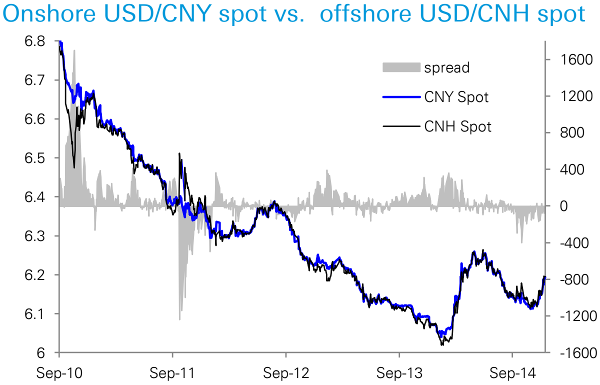
USD/CNY exchange rate



USD/CNY spot rate and 3M NDF premium



Onshore USD/CNY spot vs. offshore USD/CNH spot



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The State Administration of Foreign Exchange (SAFE) regulates exchange controls (http://www.safe.gov.cn, while the People's Bank of China (PBOC) is responsible for implementing monetary policy and ensuring overall stability in the financial sector (http://www.pbc.gov.cn).
- In March 2003, the Central Banking Regulatory Commission (CBRC) was established to assume the financial supervisory role once undertaken by PBoC (http://www.cbrc.gov.cn).
- Since July 2005, China has adopted a managed float regime, with the daily fluctuation range against the USD initially set at +/-0.3%. In May 2007 the interbank spot-trading band was widened to +/-0.5%, and was widened further in April 2011 to +/-1%. PBoC again widen the trading band to 2% in March 2014. The range against non-USD currencies was initially set at +/-1.5% but in Sep 2005, this has since been widened to +/-3%.
- The Chinese authorities intend to reduce exchange controls at a gradual pace to allow market forces to play a bigger role.
- There are three types of foreign currency accounts for Foreign Investment Enterprises (FIEs): capital accounts (for investment and repatriation), current accounts (for trade) and loan accounts (for receiving and repaying loans).
- Cross border transactions such as those related to trade are permitted, and will use the CNY onshore rate. This, however, must (1) occur through designated clearing banks and (2) be supported by appropriate documentation.

Onshore CNY products

FX spot

Regulatory: Only licensed onshore counterparties are allowed. . CNY spot can currently be traded against USD, HKD, EUR, GBP, JPY, AUD, CAD, MYR and RUB on CFETS, China's inter-bank FX trading system. Corporates executing CNY spot are required to submit supporting documentation. Currently, AUD/USD, EUR/USD, EUR/JPY, GBP/USD, USD/CAD, USD/CHF, USD/JPY, USD/CHF, and USD/SGD are tradable on CFETS. Certain kinds of conversion under non-trade and capital items require pre-approval from SAFE.

Daily spot trading in USD/CNY is executed through the National Foreign Exchange Trading Center (NFETC) using the China Foreign Exchange Trade System (CFETS). CFETS is the trading system that electronically links the various designated foreign exchange banks (DFEBs). The market is open from 9 am until 4:30 pm. Every morning at 9:15am (local) a fixing is announced based on weighted average of market makers with discretion and published on Reuters page < SAEC >. USD/CNY is then allowed to trade within a +/-0.5% band around this fixing.

Avg. ticket size: USD 10 – 20mn

Bid/ask spread: CNY 0.0005 – 0.0020

Avg. daily vol: USD 25 – 35bn

Ref. source: Reuters page <CNY=CFXM>, DB Reuters page < DBSHFX>,

Trading hours: 9:30am – 4:30pm, Beijing time

FX forward/swap/long-dated FX forward

Regulatory: Banks with a derivative license can apply for a separate license to trade USD/CNY forwards in the interbank market after they sign the Chinese version of Master Agreement (NAFMII Agreement) regulated by PBOC. Banks are permitted to trade USD/CNY FX swaps (with no interest rate swaps allowed in the trade) after 6 months of trading forwards. Banks can also apply for trading USD/CNY forwards with corporate clients and are permitted to trade USD/CNY FX swaps after 6 months of trading forwards when SAFE filing procedure is conducted. Non-FI can only conduct FRA for hedging purpose.

Avg. ticket size: USD 10 – 20mn

Avg. daily vol: USD 2-4bn

Tenor: Up to 1 year with liquidity. Longer than that has poor liquidity

Bid/ask spread: CNY 5 - 10 pips below 6mth tenor, 10-20pips 6mth to 1year tenor

Ref. source: DB Reuters page < DBSHFX >, Broker Reuters broker page TPSC

FX options

Regulatory: Banks with FX forwards license can apply for a separate license to trade vanilla European call and put option in the inter-bank market. Corporations are allowed to trade vanilla options and risk reversals to hedge their FX exposures as long as they are not net receivers of premium.

Avg. ticket size: USD 5 – 10mn

Avg. daily vol: USD 10-20mn

Tenor: Up to 1 year with liquidity.

Bid/ask spread: 0.3-0.5 vols

Ref. source: Reuters page <CNYVOL>

IRS

Regulatory: Financial Institutions (including DB China) can trade IRS with other FIs, while only FIs who have bond market maker licenses or agent banks can trade IRS with non-FI clients. Non-FI can only conduct IRS for hedging purpose.

Avg. ticket size: CNY 1000 – 200mn

Tenor: Up to 10 years, but more liquid up to 5 years only

Bid/ask spread: 3 – 5bps

Ref. page: Reuters Page <CNYIRS> (onshore), <PNDIRS> (Broker pages, like PNDIRS)

Fixing page: Reuters page <CNREPOFIX=CFXS>

Short-term money market instruments (BA/CP/repo)

Regulatory: Repo markets exist in both the inter-bank and exchange markets. SHIBOR market only exists in the inter-bank market.

Liquidity: Tenors range from O/N to 12 months for inter-bank market and 1 day to 182 days for exchange market, with the 1 day and 7 day repo being the most liquid funding tool. The SHIBOR market has tenors of 1 day to 12 months. The most actively traded tenors are the O/N and the 1-week instruments.

Avg. daily vol: CNY 600 - 800bn for inter-bank repo

Government bond

Regulatory: Government bonds are traded in both the inter-bank market and exchange markets. From a size perspective, the inter-bank market is much deeper and larger than exchange market. Only players registered with CFETS are allowed to trade inter-bank and banks cannot enter exchange market

Foreign investors can currently access China's domestic bond market (interbank and/or stock exchange) under three separate programmes: (1) the PBoC interbank programme, (2) the QFII programme, and (3) the R-QFII programme. However, the process to obtain the license and quota is heavily regulated by the People's Bank of China (PBoC), China Securities Regulatory Commission (CSRC) and State Administration of Foreign Exchange (SAFE).

PBoC's interbank bond programme allows four types of institutions (foreign central banks, Renminbi settlement banks, Renminbi clearing banks and insurance companies) to invest in the interbank bond market within quotas approved by the PBoC.

The Qualified Foreign Institutional Investors (QFII) programme is available to investors that meet minimum requirements (AUM, years of operation, etc.) outlined by the CSRC. The programme requires licence approval by the CSRC followed by quota approval by SAFE.

Additional PBoC approval is needed if the investors require access to the interbank bond market in addition to securities traded on Shanghai/Shenzhen stock exchanges.

For the Renminbi Qualified Foreign Institutional Investor (R-QFII) programme, given the recent push to further internationalised RMB, Australia, UK, European, Korea, Singapore and Hong Kong-based financial institutions (to name a few) are now eligible. Into 2015, it is likely other countries such as Taiwan would be eligible to the programme. According to the regulation, application requires PBoC/CSRC/SAFE approval.

Avg. ticket size: CNY 30 – 50m depending on tenors in inter-bank market

Bid/ask spread: 3 – 5bp for shorter than 5Y and 2 - 4bps for longer tenors

Offshore Non-Deliverable CNY products

Non-Deliverable Forward (NDF)

Regulatory: Onshore corporates and onshore banks are not allowed access.

Fixing: Every morning at 9:15am (local) a fixing is announced based on weighted average of market makers with discretion and published on Reuters page < SAEC >.

Avg. ticket size: USD 20mn

Bid/ask spread: CNY 0.003 – 0.004

Avg. daily vol: USD 3 bn

Ref. source: Reuters page < NDF=DBQS >, <PNDF>

Fixing page: Reuters page <SAEC>, 9:15am Beijing time, 2 business days before value date.

Cross fixing: EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory: Onshore corporates and onshore banks are not allowed access.

Avg. ticket size: USD 50mn

Bid/ask spread: 0.30 vols

Avg. daily vol: USD 200mn

Ref. source: DB autobahn

Fixing page: Reuters page <SAEC>, 9:15am Beijing time

Offshore NDS

Regulatory: Onshore corporates and onshore banks are not allowed access.

Avg. ticket size: USD 10m for tenors up to 5Y, USD 5mn for 7-10Y tenors

Tenor: Up to 10 years

Bid/ask spread: 10- 20bps

Avg. daily vol: USD 50m

Ref. source: Reuters page <INDIRS>

Fixing page: Reuters page <SAEC>, 9:15am Beijing time

Clearing and settlement regulation

There are two clearing and settlement platforms - the China Government Securities Depository Trust and Clearing Company (CDC) and the China Securities Depository and Clearing Company (CSDCC). The former clears transactions in the interbank market in real time while CSDCC is the sole depository, clearing and registration company for securities traded on the Shanghai and Shenzhen stock exchanges and provides settlement on T+1 basis. The CDC is under the regulatory supervision of the PBoC and CBRC, while the CSDCC is under the supervision of the CSRC.

Besides, the CDC, the Shanghai Clearing House (SCH) was established in November 2009. The Shanghai Clearing House (SHCH) provides centralized and standardized clearing services for spot and derivatives transactions in RMB and foreign currencies as well as RMB cross-border transactions approved by the PBoC. In addition, SHCH is the depository and clearing house for all ST financing and private placement notes.

Taxation

Foreign investments in government bonds are not subject to tax on interest income. For non-government debt such as corporates bonds, there is a 10% withholding tax and 5% business tax on interest income. However, tax on capital gains for foreigners has not been officially clarified yet.

Offshore Deliverable CNH products

- On 19 July 2010, HKMA/PBoC allowed the transfer of RMB funds between accounts and across banks for any purpose in the offshore. This led to the development of an offshore OTC CNH market, and below are some of the regulations for the offshore market (http://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2010/20100719e1.pdf)
- Non-resident individuals, corporates and institutions are now allowed to buy/sell RMB in the offshore CNH market, and are allowed to freely transfer RMB between deposits accounts in Hong Kong.
- Non-residents are allowed to invest in CNH bonds or RMB structured products issued in Hong Kong.
- Corporates with underlying trade settlement will be able to buy/sell RMB at the onshore USD/CNY spot rate, provided that the annual RMB quota assigned by the China to the RMB clearing bank in HK (Bank of China) has not been exhausted. Clients buying or selling RMB without underlying trade transaction can only buy or sell RMB at the offshore USD/CNH rate.
- Companies are allowed to issue CNH bonds in Hong Kong, but approval from SAFE is required before the RMB funds raised can be remitted back to Mainland China.
- The introduction of a daily USD/CNH fix has also facilitated the development of a CNH derivatives market
- On 14 June 2012, HKMA launched a RMB liquidity facility to help banks in managing their short-term liquidity needs, including rolling over the borrowings under this facility for the purpose of trade settlement (http://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2012/20120614e1.pdf and http://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2012/20120614e2.pdf).
- On 25 April 2013, the Hong Kong Monetary Authority (HKMA) further eased restrictions on the CNH market by removing the Net Open Position (NOP) limit and the 25% Liquidity Ratio on CNH. This was to provide equal treatment to CNH compared with other currencies with respect to liquidity and FX risk management. This again is to aid banks' management of liquidity and should ultimately result in better asset deployment (http://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2013/20130425e2.pdf).
- Since the announcement of a series of policy measures by Mainland regulators in 2010, HKEx has strived to engage market participants in preparing for the listing, trading and clearing of RMB products in its markets. There have been a number of RMB-denominated instruments, including debt securities, equities and real estate investment trust, listed and available for trading in Hong Kong since March 2011.
- PBOC also simplified cross-border RMB business procedure in July 2013 (http://www.pbc.gov.cn:8080/publish/zhengwugongkai/1373611409412/_fileupload/D1B79613.pdf)
- The HKMA removed the renminbi conversion limit of RMB20,000 placed on retail investors. Beginning 17 November 2014, retail investors in Hong Kong can freely convert renminbi.
- The HKMA introduced the intra-day repo facility on 3 November 2014. This is a supplement to the existing overnight, 1-day and 1-week liquidity facilities. Authorised institutions can obtain intra-day RMB funds of up to RMB10bn from the central bank and the pricing will be made with reference to the prevailing overnight interest rate. (http://www.hkma.gov.hk/eng/key-information/press-releases/2014/20141103-4.shtml)

FX spot

Regulatory:	No restrictions for spot CNH transactions in Hong Kong.
Fixing:	The offshore RMB fixing rate is calculated by averaging the quotes after excluding the highest two and lowest two quotes provided to Treasury Markets Association of Hong Kong by contributing banks. This is published on Reuters page <CNHFIX=> at 11.15am local time. Fixing has to be done 1 business day before value date.
Avg. ticket size:	USD 10mn
Avg. daily vol:	USD 3 - 4bn
Bid/ask spread:	5 – 10bps
Ref. source:	DB Reuters page <DBQM1>, Bloomberg page <DBHK>, Broker Reuters page <TRADCNY3>

FX forward/swaps forward

Regulatory:	No restrictions for forward CNH transactions in Hong Kong.
Avg. ticket size:	USD 50mn (1-3mth), USD 20mn (6-12mth)
Avg. daily vol:	USD 4bn (1-3mth), USD 3bn (6-12mth)
Tenor:	t/n – 1year
Bid/ask spread:	3-8 pips for 1M, 10-20 pips for 3M, 30 pips for 6M, 20pips for 1Y
Ref. source:	DB Reuters page <DBQM1>, Bloomberg page <DBHK>, Broker Reuters page <TRADCNY3>

FX options

Regulatory:	Deliverable CNH options are available without restriction to any non-individual counterparty as long as they have physical CNH nostro account in Hong Kong
Avg. ticket size:	USD 100mn
Bid/ask spread:	0.6 vols
Avg. daily vol:	USD 500mn
Ref. source:	DB Autobahn
Fixing page:	Reuters page <CNHFIX>

Offshore CCS

Avg. ticket size:	USD 10-20mn
Tenor:	1-5Y
Bid/Ask Spread	3-8bps
Avg. daily vol:	USD 400 -500mn
Ref. source:	Reuters <DBQM1> for short dated CCS
Fixing	No fixing ; traded as CNH fixed leg

Clearing and settlement regulation

CNH bonds can be settled using Euroclear and Clearstream internationally or in Hong Kong using the domestic settlement system of the HKMA (the Central Money Markets Unit CMU). As a result this ensures issuer takes no payment risk at settlement.

Taxation

Provided that the investor is not carrying on business in Hong Kong, capital gains are not taxed in Hong Kong. Coupon or capital gains tax on the bonds however could still be subject to tax at the place of residence of the issuer.

Hong Kong

While several foreign currencies circulated in Hong Kong's early years of existence, a local currency unit pegged to silver came into existence in 1905. Subsequently the HKD was pegged to GBP (1935-1972), then to USD (1972-1974), then allowed to float freely between 1974 and 1983, and then shifted back to a peg vs. USD in 1983. Since 1983 the Hong Kong dollar has been linked to the US dollar at the rate of approximately HKD7.8 to one US dollar. Essentially, in all but 11 years of its existence, Hong Kong has maintained a pegged exchange rate regime of some sort. In recent years, a growing chorus of investors and analysts have noted that Hong Kong is no longer as cyclically aligned with the US as it used to be. Consequently there is a growing belief that Hong Kong will ultimately shift from a USD peg to a peg against the Chinese renminbi, or a trade-weighted basket.

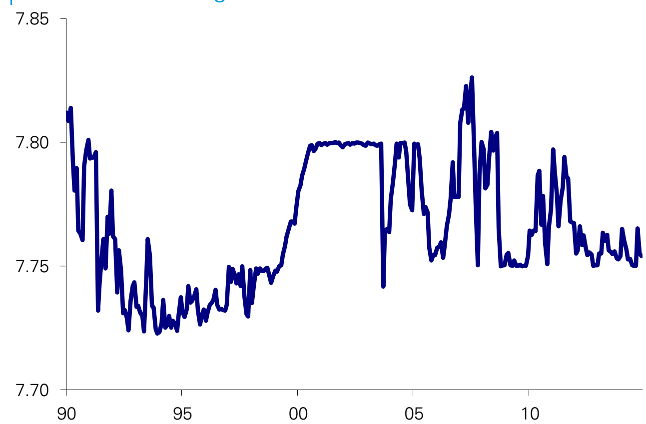
The primary monetary policy objective of the HKMA is to maintain exchange rate stability within the framework of a Currency Board system. The HKMA does not set interest rates, though it may influence inter-bank liquidity through the issuance of short-term money market instruments called Exchange Fund bills. There is no explicit inflation target. The government tends to rely on fiscal tools (subsidies, grants, and administrative curbs on property speculation) to contain inflation risks.

The present Linked Exchange Rate System (LERS) is essentially a currency board with the Hong Kong dollar pegged to USD within a narrow band of 7.75 (strong side) and 7.85 (weak side). The HKMA is obliged to intervene in the inter-bank FX market at these levels to enforce the trading band. The Authority also retains the discretion to intervene between these limits if circumstances are deemed to warrant it, though it rarely does so in practice.

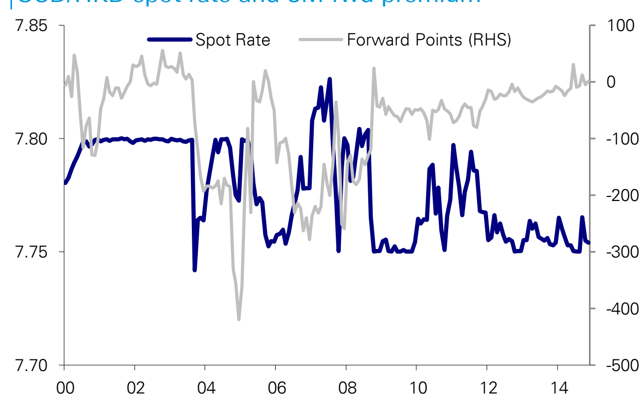
Market speculation and debate over the relevance of the USD peg have grown in recent years, not least because of Hong Kong's growing economic and financial integration with China. HKMA has however dismissed the possibility of a near-term policy shift, citing the convertibility of the Chinese yuan as a necessary precondition for a re-peg to the RMB. The current focus of the HKMA is to develop the offshore yuan market in close collaboration with Mainland authorities.

The Hong Kong dollar is fully convertible and deliverable.

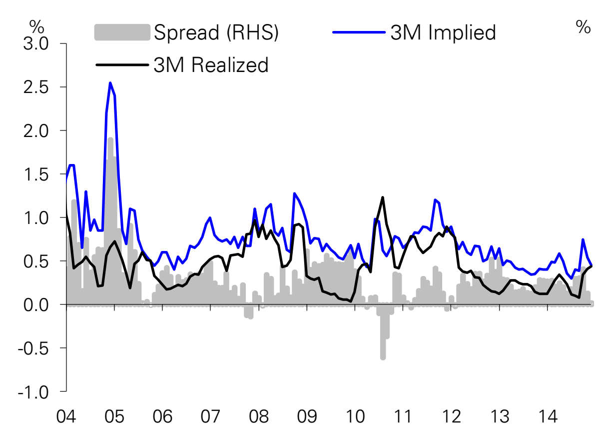
USD/HKD exchange rate



USD/HKD spot rate and 3M fwd premium



USD/HKD 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Hong Kong Monetary Authority (HKMA) regulates monetary policy, exchange rate policy and banking activities (http://www.info.gov.hk/hkma/).
- HKMA currently operates a linked currency exchange rate regime using a currency board mechanism under the direction of the Financial Secretary.
- Formal exit costs from the current system are remarkably low by the standards of most other fixed exchange rate systems or currency boards. The Financial Secretary is free to announce a re-peg or float at any time, with Article 111 of the Basic Law simply stating that the currency must be backed by a 100% reserve fund (without specifying the reserve asset or exchange rate).
- The market is open from 8:30 am until 11:00 am and 2:00 pm to 4:00pm Hong Kong time.
- HKMA's interbank foreign currency operations can be monitored on Reuters page <HKMAOOC>.

HKD products

FX spot

Current account:	No restrictions
Capital account:	No restrictions
Avg. ticket size:	USD 20mn
Bid/ask spread:	0.0002 – 0.0003
Avg. daily vol:	USD 1 - 2bn
Ref. source:	Reuters page <HKD=>

FX forward/swap/long-dated FX forward

Regulatory:	No restrictions
Avg. ticket size:	USD 30-50m for the 1 year tenor, much larger for short-dates
Tenor:	Overnight to 2Y
Bid/ask spread:	Up to 0.0010 for tenors up to 1Y
Avg. daily vol:	T/n: USD 3 – 5bn; 1Y: USD 0.5bn; >1Y: USD 100mn
Ref. source:	DB Reuters page <DBQM>, DB Bloomberg page <DBHK >, Broker Reuters page <PYHKD>

FX options

Regulatory:	No restrictions
Avg. ticket size:	USD 100mn
Bid/ask spread:	0.2 vols
Avg. daily vol:	USD 300mn

Onshore CCS

Regulatory:	No restrictions
Tenor:	1 – 10Y
Bid/ask spread:	2 – 8bp
Avg. daily vol:	USD 50 – 200mn
Ref. source:	Reuters page <PYHKD>
Fixing page:	Reuters page <HIBOR=>, Settlement: T+2, Floating Rate: 3M HIBOR vs. 3M USD LIBOR, Frequency: Quarterly, Day-count: Act/365 vs. Act/360

IRS/HKD SPS (Single Period Swap)

Regulatory:	No restrictions
Avg. ticket size:	1-2y HKD IRS: HKD 500 mio , 3y+ IRS: HKD 200 mio
Tenor:	1 – 10 years
Bid/ask spread:	2 – 10bp
Avg. daily vol:	HKD 5 – 10bn
Ref. source:	DB Reuters page <DBQM1>, DB Bloomberg page <DBHK >, Broker Reuters page <PYHKD>
Fixing page:	Telerate 9898 / Reuters page <HIBOR=>, Settlement: T+2 for HKD SPS, HKD IRS – T+0 for morning time and t+1 for afternoon Floating Rate: 3M HIBOR, Frequency: Quarterly, Day-count: Act/365

Short-term money market instruments (BA/CP/repo/Exchange Fund bills)

Regulatory:	No restrictions
Avg. ticket size:	HKD 200 – 300mn
Bid/ask spread:	2 – 5bps
Avg. daily vol:	HKD 1bn

Government bond market (including Exchange Fund Notes)

Regulatory:	No restrictions
Avg. ticket size:	HKD 50 – 100mn
Bid/ask spread:	3 – 10bp
Avg. daily vol:	HKD 50K DV01
Ref. source:	Reuters page <0#HKTSY=>, Bloomberg page <DABA2>

Clearing and settlement regulation

Foreign investors can choose to settle using Euroclear, Clearstream, or the domestic settlement system provided they have an onshore account. The domestic clearing and custodian system in Hong Kong is operated by HKMA Central Money Markets Unit (CMU). The Real Time Gross Settlement system provides delivery-versus payment settlement (DVP) for Hong Kong dollar- and US dollar-denominated debt.

Taxation

Provided that the investor is not carrying on business in Hong Kong, capital gains are not taxed in Hong Kong. Interest income and gains on disposal or redemption of Hong Kong Government Bonds/HK EFBNs (if applicable) are specifically exempt from Hong Kong profits tax.

India

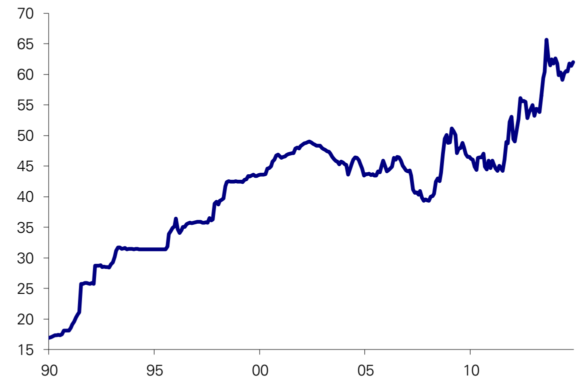
Between 1947 and 1975 the rupee was linked to GBP. Import restrictions and export subsidies were punctuated with periodic devaluations to address balance of payments crises. Its anchor was then switched to a trade-weighted FX basket, but the central bank was forced to devalue the rupee in 1991 and shortly thereafter introduced a two-tier system of foreign exchange. The current regime dates back to March 1993 when the government reintroduced a unified, market-determined managed float. Since a new Foreign Exchange Management Act was introduced in June 2000, regulators' focus has shifted from conserving foreign exchange to developing an orderly market to facilitate trade and investment.

The monetary framework of the Reserve Bank of India was formerly built on multiple indicators. However, following the recommendation of the Urijit Patel Committee Report, RBI has effectively shifted to a consumer price inflation targeting approach in 2014. RBI aims to guide CPI to under 6% by Jan 2016, with a long-term inflation objective of 4% +/-2%. RBI sets its policy primarily via the repo/reverse repo rate corridor, but supplements it with liquidity management tools such as the liquidity adjustment facility, cash reserve ratios, open market operations and term repos.

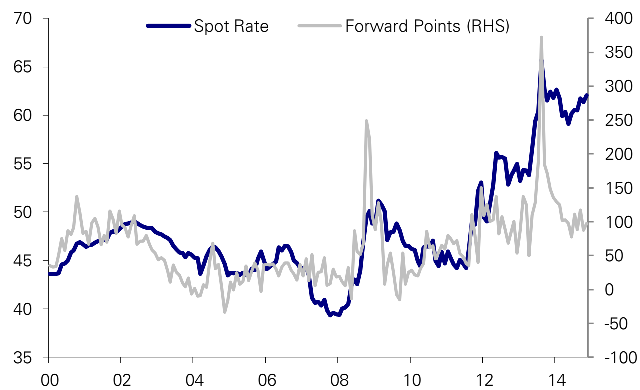
In the early to mid 2000s, FX policy was oriented at ensuring that the rupee maintained its competitiveness in inflation-adjusted terms. After the 2008 financial crisis, the current account deficit steadily deteriorated. Reserves were not aggressively accumulated in 2009-2010 when large inflows led to appreciation. As capital flow volatility began to increase in late 2011 alongside a deepening deficit, the rupee was allowed to depreciate, often sharply. During the extreme stress of mid-2013, a scheme to incentivize non-resident Indian USD deposits inflows was introduced, gold import restrictions were tightened and oil USD demand was managed to curb currency pressure. Over the past year, the current account has dramatically improved, and RBI has aggressively built back reserves, dampening volatility in the currency.

The rupee is convertible for current account transactions, but is more restricted on the capital account. Portfolio investment is permitted via a Foreign Institutional Investor (FII) program, which is more liberal for foreign equity than debt investors. Quotas exist for foreign investment in Indian government and corporate debt; these have been steadily expanded in recent years to a total of $80bn, but government limits are now nearly exhausted. Corporate borrowing in foreign currency is subject to regulation and caps. FDI liberalization has been a growing focal point.

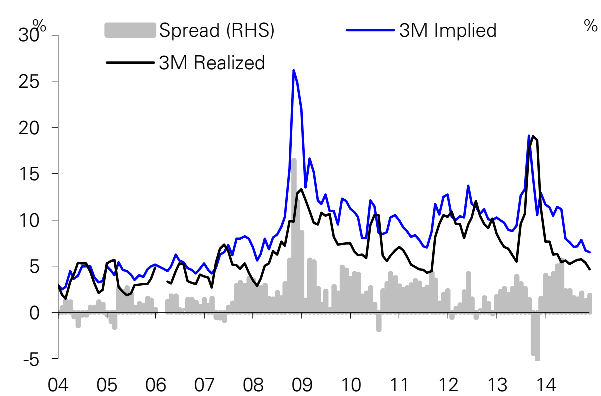
USD/INR exchange rate



USD/INR spot rate and 3M NDF premium



USD/INR 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Reserve Bank of India (RBI) regulates exchange controls, financial transactions and the banking system. (http://www.rbi.org.in).
- Anything not specifically allowed under the Foreign Exchange Management Act (FEMA) is deemed to be disallowed.
- Onshore FX contracts including forwards and derivatives, to the extent permitted, can be entered into by resident entities. Foreign Portfolio Investments (FPI), subject to conditions are also granted access to forward contracts & swaps to hedge currency risk on the market value of their entire investment in equity and/or debt in India. FPI guidelines are available on the Securities Exchange Board of India website (http://www.sebi.gov.in. Foreign Direct Investors (FDI) & Non Resident Indians (NRIs) can also hedge their exposure subject to compliance with specific conditions. Further Non Residents can hedge their imports / exports denominated in Rupees with AD banks in India subject to certain conditions.
- Corporations must show documentary evidence (invoices) for FX and self-certification for INR interest rate swap transactions.
- Regular importers and exporters are allowed to hedge 100% of the average of their past 3 years' imports/exports or their previous year's turnover, whichever is higher, under the Past Performance facility. All contracts booked under this facility over 75% of the limit will be on a fully deliverable basis only.
- Forward contracts booked by FIIs, once cancelled, can be rebooked up to the extent of 10 per cent of the value of the contracts cancelled
- The latest guidelines on External Commercial Borrowing (ECBs) can be reviewed at: http://rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?id=8101
- SEBI and RBI have introduced rupee-dollar futures contracts on local exchanges since August 2008. These are available on three different exchanges – National Stock Exchange (NSE), Multi Commodity Exchange (MCX) and United Stock Exchange (USE). Further, additional contracts for other currencies (GBP/INR, EUR/INR and JPY/INR) have been introduced. Currently, FIIs and NRIs are not allowed to trade these futures. Details of futures contract can be found at respective websites of the exchanges.. SEBI and RBI have allowed USD/INR options to be traded on NSE and USE since October 2010.

Onshore INR products

FX spot

Current account:	No prior approval requirements but participants must have documentary evidence of the underlying transaction for remittances.
Capital account:	All FX transactions on the capital account are subject to general or specific permission from the RBI.
Avg. ticket size:	USD 5mn
Bid/ask spread:	INR 0.0025 – 0.0100
Avg. daily vol:	USD 7bn (range: 4 – 10bn)
Ref. source:	Reuters page <RBIB>
Trading hours:	9:00am – 4:30pm, Mumbai time

FX forward/swap/long-dated FX forward

Regulatory:	Per FX spot
Avg. ticket size:	USD 5mn
Tenor:	Overnight to 10 years (Overnight to 1yr is very liquid)
Bid/ask spread:	INR 0.01 – 0.02 for tenors less than 1yr, INR 0.10 – 0.50 for tenors more than 1yr
Avg. daily vol:	USD 4.0 bn
Ref. Source:	Reuters page <INR1F=>

FX options

Regulatory:	Authorized Dealers (ADs) are allowed to offer foreign currency rupee options. However only plain-vanilla European Calls/Puts, and structures using these options as building blocks are allowed in the FCY/INR (where FCY represents foreign currency) options space. Use of cost reduction structures, i.e., cross currency option cost reduction structures and foreign currency-INR option cost reduction structures have been permitted to hedge exchange rate risk arising out of trade transactions, External Commercial Borrowings (ECBs). Corporate clients are not allowed to be net receivers of premium. Contingent foreign exchange exposure arising out of submission of tender bid in foreign exchange can also be hedged using options. All other documentary requirements as per FX spot are applicable to FX options.
Avg. ticket size:	Ticket-size varies, as this is a non-OTC market
Tenor:	Up to 5 years
Bid/ask spread:	0.5 – 0.75 vols for tenors less than 1Y, 0.6 – 2.0 vol for tenors more than 1Y
Avg. daily vol:	USD 500mn
Ref. source:	DB Reuters page <DBBO>, DB Bloomberg page < DBBY>, fixing time is 11.30am Mumbai time.

Onshore CCS

Regulatory:	Cross currency swaps can be entered into by resident entities having FCY borrowings and non-residents who have extended INR ECBs (External Commercial Borrowing). FCY/INR swaps can be arranged by banks between onshore counterparties having either an INR or FCY exposure. No swap transactions involving upfront payment of INR or its equivalent in any form shall be undertaken.
Avg. ticket size:	INR 500mn
Tenor:	1 – 10 years
Bid/ask spread:	10 – 30 bps
Avg. daily vol:	INR 3-5 bn (sporadically traded)
Ref. source:	Reuters page <MIOCS=>, <MIFOR=>

IRS/FRA

Regulatory:	Self-certification of underlying exposures. Only plain vanilla IRS/FRAs are allowed.
Avg. ticket size:	INR 500mn
Tenor:	1 month – 10 years
Bid/ask spread:	1 – 2 bps for tenors less than 5Y, 10bp for tenors more than 5Y
Avg. daily vol:	INR 70 bn (for OIS),
Ref. source:	Reuters page <MIOIS=>
Fixing page:	Reuters page <INRONDFIX=>

Short-term money market instruments (CP/repo)

Regulatory:	Open to local residents, NRIs and SEBI registered FIIs only
Liquidity:	Good for CP market, Deep Overnight-repo market for govt. securities RBI recently permitted repos for corporate debt, market to evolve for repo of CPs and other corporate debt
Avg. ticket size:	INR 250m for CP,
Bid/ask spread:	5 – 10bp
Avg. daily vol:	INR 3 bn
Ref. source:	CP: Reuters page <INCPRATE>

Government bond

Regulatory:	Only SEBI registered FIIs and certain QFIs are allowed access to local currency bond markets. The FII investment cap currently stands at USD 30bn for government bonds, and USD 51 bn for corporate bonds. The utilization of caps can be viewed at https://www.cdslindia.com/publications/FIIs.html
Avg. ticket size:	INR 100m
Bid/ask spread:	0.5 – 1bp
Avg. daily vol:	INR 300bn.
Ref. source:	Reuters page <0#INTSY=>, Bloomberg page <DABA7>,

Offshore INR products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 20mn
Bid/ask spread:	INR 0.03 – 0.05 for 1M – 3M, INR 0.05 – 0.10
Avg. daily vol:	USD 1.5 – 2.0bn
Ref. source:	Reuters page <NDF=DBQS>, <PNDF>
Fixing page:	Reuters page <RBIB>, spot fixing determined by RBI based on a poll conducted across a number of banks during any 5 minute period between 11:30am-12:30pm Mumbai time, 2 business days before value date
Cross fixing:	EBS at 12:30pm Mumbai time

Non-Deliverable Option (NDO)

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 30mn
Bid/ask spread:	0.8 vols
Avg. daily vol:	USD 150m
Ref. source:	DB autobahn
Fixing page:	Reuters page <RBIB>, spot fixing determined by RBI

Offshore NDS

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 10mn
Tenor:	Up to 10 years
Bid/ask spread:	10-20 bps
Avg. daily vol:	USD 100mn
Ref. source:	Reuters page <INDIRS>
Fixing page:	Reuters page <RBIB>, 12noon Mumbai time, Settlement: T+2, Floating Rate: 6M USD LIBOR, Frequency: Semi-annual, Day-count: Act/360

Clearing and settlement regulation

The Clearance Corporation of India Limited is the central counterparty for all transactions in government securities. Trades are settled on a delivery versus payment (DVP) basis, and the CCIL guarantees all trades using the Settlement Guarantee Fund, which is financed out of margins paid by all market participants.

Taxation

For foreign institutional investors (FIIs), all interest income on G-Secs is currently (up to 31 May 2015) subjected to a withholding tax of 5% (plus applicable surcharge & cess). FIIs are also subjected to 30% (plus applicable surcharge & cess) capital gain tax if the G-Secs are held for less than 36 months, and 10% (plus applicable surcharge & cess) capital gain if they hold them for more than 36 months. However, if the resident country of the FII has completed a tax treaty with India, it may be exempt from some of these taxes, e.g. capital gains tax earned by FIIs in Mauritius or Singapore who have tax treaty with India.

Indonesia

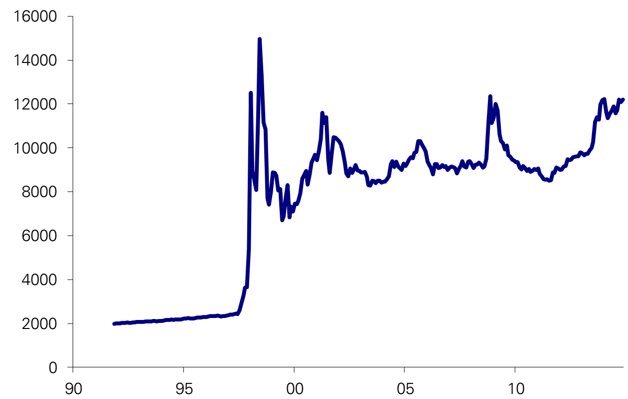
Indonesia adopted a multiple FX structure in the 1970s, with differing rates for general exchange, flexible credit and exports. Under pressure from falling USD reserves, a devaluation and switch to a trade-weighted basket peg was made in 1978. A further devaluation was made in 1983 to boost exports and with it the shift to a heavily managed rate to avoid further large nominal adjustments. During the 1990s, this regime was supplemented by a fixed conversion rate with pre-announced intervention bands (initially +/-0.25%) in what amounted to a framework for creeping depreciation. But being too slow to move the market rate up, Bank Indonesia was forced to widen its intervention bands 6 times between January 1994 and September 1996. Then, as the Asian Financial Crisis took hold, and a further widening in July 1997 failed to stabilize the currency, IDR was allowed to float freely on August 14. The spot market spiked to 17,000, from a year-ago level of 2,500.

After the Asian Crisis – and under the supervision of an IMF program till 2003 – authorities sought to use FX policy -- via higher interest rates, regulations over market access, direct intervention and moral suasion – to dampen market volatility and encourage a stronger rupiah. Today, the BI website notes prominently: "Bank Indonesia has the sole purpose of achieving and maintaining the stability of the rupiah. It contains two aspects of the stability of the rupiah against the goods and services reflected in the rate of inflation, as well as the stability of the rupiah against the currencies of other countries, as reflected in the exchange rate."

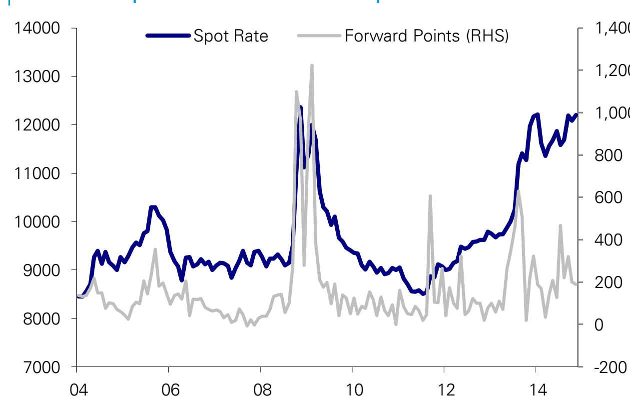
In the early 2000's and after the 2008 crisis, a stable to stronger rupiah contributed to lower inflation and reduced external debt servicing costs, while strong capital inflows and a stable current account allowed BI to fully repay IMF debt and build international reserves. However, things began to change in 2011 as the current account deteriorated and capital financing became more erratic. Illiquidity and a sometimes multi-tiered nature of prices in the FX market were often a concern. Intervention led to significant drawdown in reserves over 2013 during the taper-tantrum. In recent months, reserves have been partly built back, monetary and fiscal policy have tightened, and FX liquidity and consistency have improved. However, spot and forward depth remains low in Indonesia relative to the size of her foreign liabilities, with large offshore holdings of debt, and external debt of corporates a potential concern.

The rupiah is convertible on the current account, and capital account policies while not free have generally been open, aimed at increasing FDI and portfolio investment.

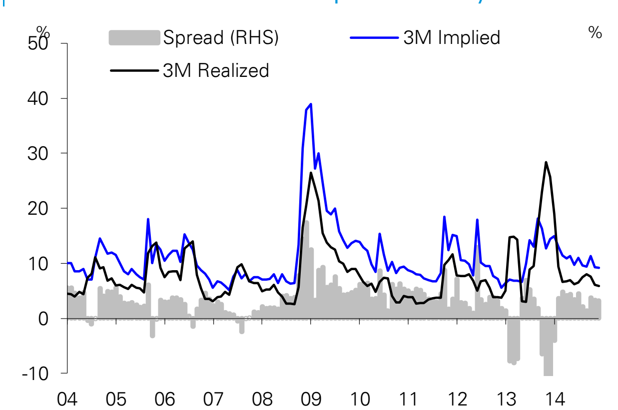
USD/IDR exchange rate



USD/IDR spot rate and 3M NDF premium



USD/IDR 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- Bank Indonesia (BI), the central bank (http://www.bi.go.id), implements monetary policy
- Starting Jan 2014, OJK (http://www.ojk.go.id) the new merger body between Bapepam-LK, the Regulator for Capital Market and Financial Institutions other than banks, and BI will be fully effective.
- In January 2011, BI prohibited onshore banks from giving IDR and FCY Loans to offshore parties (either via money market or FX swaps). Overdraft facility was also prohibited for offshore accounts. These developments spawned the IDR NDF market in February 2001.
- BI issued a regulation on 12 January 2001, which was replaced by BI regulation on 14 June 2005 and amended on 08 August 2012, concerning restrictions on IDR transactions and foreign currency credit offered by banks. This prohibits IDR transfer to offshore entities, unless it is for the purpose of investment activities in Indonesia and transaction must be supported by underlying documents.
- A further BI ruling in mid-2004 requires commercial banks to maintain a maximum net open position (NOP) in foreign exchange at 20% of their equity capital, applicable to both the On-Balance Sheet and Total Balance Sheet of the bank's NOP. This new regulation was made effective 1 Sep 2004 in an attempt to reduce speculation in the local currency market. Changes to regulations in July 2010 now require banks to adhere to the Total NOP limit every 30 minutes instead of at all times of the day previously, and abolished the On Balance Sheet NOP regulation.
- Derivatives are permitted for general hedging purposes. The September 2005 regulations on derivatives (later amended in December 2008) outline reporting/disclosure requirements which must be made by banks to their customers. Banks may only engage in derivative transactions related to FX or interest rate or a combination of both. Such derivatives transactions are allowed as long as they are not structured FX products against IDR. Banks are prohibited to provide credit and overdraft facilities for the purpose of derivative transactions. Derivative transactions with foreign entities are allowed for the hedging of their foreign investments in Indonesia with supporting documents and a minimum tenor of 3 months.
- Starting Nov 2008, BI imposed tighter restrictions on purchase of FX against IDR by onshore participants:
- Purchases of foreign currency against IDR must not be for speculative purposes. These transactions include, but limited to, structured products which can potentially trigger purchases of foreign currency against IDR for speculative purposes.
- Underlying documentation is not required for FX transactions not exceeding USD 100,000 in a month. However, clients are required to declare that they will not purchase more than an equivalent USD 100,000 of foreign currency in Indonesia.
- Underlying documentation is required for foreign currency purchases exceeding USD 100,000 in a month. Clients are required to declare the accuracy of the underlying transaction value and that the amount of foreign currency purchase against IDR will not exceed the nominal amount of the underlying transaction in Indonesia.
- The declaration or authenticated statement can be in the form of: a) written statement on sufficient stamp duty and signed by the authorized signatory b) a written statement via SWIFT message, Tested Telex, Tested Fax, Reuters Monitoring Dealing System.
- As of December 2008, netting payment of FX transactions against the IDR is not allowed, i.e. gross settlements are required for FX transactions.
- Regulation on Structured Products issued in July 1, 2009:
    i. Banks are required to have Principal Approval from Bank Indonesia for doing Structured Product activities, and to get Effective Statement from Bank Indonesia for each product they would like to offer prior selling of the product.
    ii. For structured product with the combination of derivative instrument and derivative instrument, 10% of the notional is required as cash collateral for non-bank clients.
    iii. Client's statement of understanding and Structured Product Agreement has to be in Bahasa and signed by both parties
- In October 2014, Bank Indonesia issued two new regulations on Foreign Exchange transactions between banks and onshore parties (PBI no. 16/16/PBI/2104) and between banks and offshore parties (PBI no. 16/17/PBI/2014). As a result, previous regulations and circulars were either combined and/or revoked. The regulation became effective 10th November 2014. The main changes allowed for: 1) Relaxation in the underlying documents for buying/selling IDR to include both final and estimated/projected documents, and 2) Net settlement of derivative transactions for rollover/early termination/unwind for trades done beyond a certain threshold

Onshore IDR products

FX spot

Regulatory:	Both buying and selling of IDR are permitted. Non-Resident (NR) accounts must not be overdrawn. IDR buying/selling by NR account has to be supported with relevant documents, for example: confirmation of purchase/sale and later proof of purchase/sale for the purchase of shares, credit agreement for the extension/repayment of loans and proof of ownership for the conversion of dividends, and general trade invoices. IDR transfer to an offshore account must be supported by underlying documents. The terms for holding the rupiah prior to use for purchase of the securities is no more than 2 working days.
Bid/ask spread:	IDR 5-15
Avg. daily vol:	USD 0.6 bn between domestic interbanks
Ref. source:	Reuters page <IDR=>, Bloomberg IDR [CRNCY] [GO]
Trading hours:	9:15am - 1:00pm, 2:30pm - 5:00pm, Singapore time

FX forward/swap

Regulatory:	For hedging purposes, NRs can sell IDR with supporting documents for underlying investment activities with a minimum tenor of 1 week and a maximum tenor equivalent to the maturity of investment. FX forwards with value date T+3 – T+6 are NOT allowed if the client is selling IDR (and buying FCY), even if the FX trade is for the settlement of securities/equities related trades. However T+3 – T+6 trades are allowed if the client is buying IDR (and selling FCY) for settlement of securities/equities related trades.
Avg. ticket size:	FX Forward: USD 1-3mn, FX Swap: USD 5-20mn
Tenor:	Overnight to 12 months
Bid/ask spread:	FX Swap: 5 IDR for 1month, 10 IDR for 3 month, 20 IDR for 6 month, 40 IDR for 1 year
Avg. daily vol:	FX Forward: <USD 5mn, FX Swap: USD 0.6bn. These are between domestic interbanks and mostly very short dated below 1 week. Usually Banks cover their FX Forward position by breaking it down to FX Spot and FX Swap.
Ref. Source:	Reuters page <IDRF=>

FX options

Regulatory:	Can only do one-leg vanilla option per trade. Any trade combinations (e.g. vertical spread, etc) will be considered as structured product and thus will be subject to Bank Indonesia's Regulation on Structured Product issued in July 1, 2009. Either way, documents must be provided if related to foreign currency purchase. For NRs, additional regulations also applied as per the FX forward market.
Avg. ticket size:	USD 3-5 mn
Bid/ask spread:	5 vols
Tenor:	Up to 1 year
Avg. daily vol:	Close to zero in recent years between domestic interbanks.

Onshore CCS

Regulatory:	As per FX forward market
Avg. ticket size:	USD 2 - 5mn
Tenor:	1 - 5 years
Bid/ask spread:	25 - 50bp
Avg. daily vol:	Unable to estimate as highly irregular
Ref. source:	Reuters <EXCOJL>, <INJA01>

IRS

Regulatory:	For NR, IRS transactions must be supported by underlying economic activities.
Liquidity:	IDR 100bn
Avg. ticket size:	IDR 20bn – 50bn
Tenor:	1 - 5 years
Bid/ask spread:	25-50bp
Avg. daily vol:	Unable to estimate as highly irregular
Ref. source:	Reuters <EXCOJO>, <INJAJB>
Fixing page:	Reuters page <JIBOR>

Short-term money market instruments (cash market, repo)

Regulatory:	Onshore banks can lend excess IDR to BI through an overnight window called Depo Facility (DF) at a fixed predetermined rate (currently 200 bps below BI rate). BI also carries out open market operation with the following instruments: Term Deposit / Reverse Repo or Repo in the cash market as and when they deem fit. The underlying instrument for Reverse Repo and Repo is the Indonesian Government Bonds or T-Bills. O/N repo is also available to onshore banks only for purposes of BI acting as the lender of last resort (currently 25bps above BI rate).
Avg. ticket size:	IDR 50 - 100bn
Avg. daily vol:	IDR 5 – 10tn
Ref. source:	Reuters <INJAMM>

Government bond

Regulatory:	BI regulates the Certificates of Deposit (SBI) market while BAPEPAM supervises transactions in other securities which include Indonesia's government and recap bonds. Foreigners are allowed to access the onshore government bond market. In June 2010, BI imposed a Minimum Holding Period (MHP) of 28 calendar days for SBIs before they can be sold in the secondary market, and later revised this MHP into 6 months in January 2011. The MHP was revised back to one month w.e.f. September 2013.
Avg. ticket size:	IDR 10 - 50bn
Bid/ask spread:	15 - 50bp
Avg. daily vol:	IDR 5tn (includes both cash and repos)
Ref. source:	Bloomberg INDORB <GOVT> (RECAP BONDS), INDOGB<GOVT> (GOV'T BONDS), Bloomberg page <DABA8>, Bloomberg INDOTB<GOVT> (SBI), Bloomberg IDMA

Offshore IDR products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 5mn
Bid/ask spread:	IDR 10 for 1 month tenor, IDR 30 for 6 months tenor and IDR 50 for 1 year tenor
Avg. daily vol:	USD 500mn
Ref. source:	Reuters page <NDF=DBQS>, <PNDG>
Fixing page.	Reuters page <JISDOR>, 11:00am Singapore time
Cross fixing:	EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 10mn
Bid/ask spread:	2.0 vols
Avg. daily vol:	USD 20mn
Ref. source:	DB autobahn
Fixing page:	Reuters page <JISDOR>, 11:00am Singapore time

Offshore NDS

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 10mn
Tenor:	Up to 10 years
Bid/ask spread:	10-20bps
Avg. daily vol:	USD 50mn
Ref. source:	Reuters page <INDIRS>
Fixing page:	Reuters page <JISDOR>, 11:00am Singapore time

Clearing and settlement regulation

A local custodian is required for transacting onshore government securities. According to the regulations, settlement of all government bonds has to be done through the Scripless Securities Settlement System (BI-SSSS) and is settled T+2 locally and T+3 for foreigners.

PT Kustodian Sentral Efek Indonesia (KSEI) conducts the clearing and settlement of corporate bonds through the Fixed Income Trading System. Settlement in the derivatives market is on a cash basis and settled on a T+2 or T+3 basis. The Indonesian Clearing and Guarantee Corporation (KPEI) acts as the counterparty for settling and liquidating an open position upon contract maturity.

Taxation

The general rate of withholding tax (WHT) is 20% of the gross interest earned by the foreign investor. This WHT rate may be reduced by applicable double tax treaty. There is also a 20% capital gain tax. Some double tax treaties do, however, provide an exemption from capital gain tax on disposal by non-residents of Indonesian government securities.

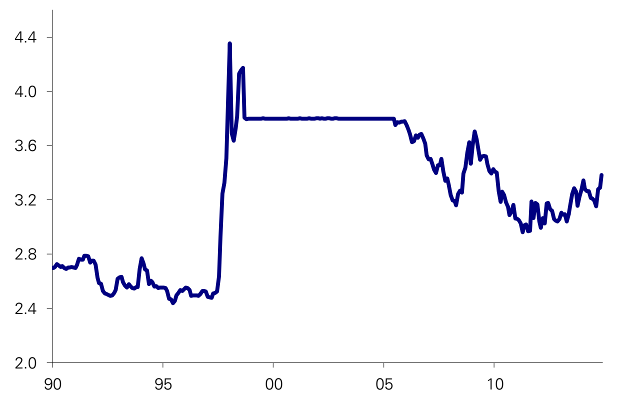
Malaysia

The ringgit, which was formally launched in 1967 as the Malaysian dollar, replaced the 3 year old sterling-linked regional Malaysian/Straits dollars. Like its predecessors, it was initially pegged to GBP, but this was replaced with a controlled float against a trade-weighted basket in 1973 with the US dollar adopted as the country's intervention currency. This regime was tweaked in 1975 by the inclusion of currencies of trade settlement in the basket's weighting criteria. On July 14 1997, during the Asian Financial Crisis, the ringgit was allowed to float. After falling by about 60%, the government on September 2, 1998, announced extensive capital controls and the country's reversion to a fixed exchange rate/ MYR was pegged at 3.80 to the USD. Seven years later, Bank Negara announced the end of Malaysia's peg to the US dollar within 30 minutes of China's de-pegging announcement on July 21, 2005. Governor Zeti said that they were reverting to a managed float, with the aim of maintaining the value of the ringgit against a trade-weighted index of major trading partners.

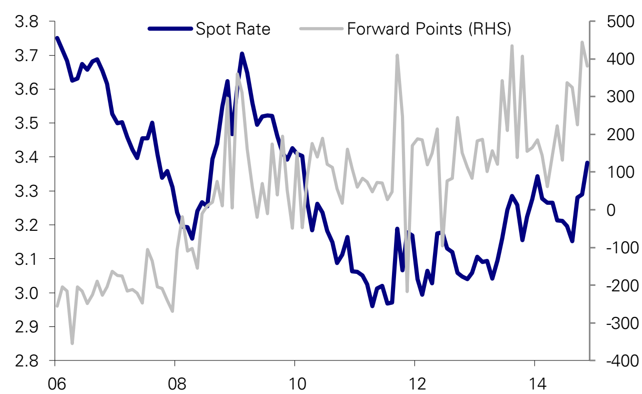
The Bank Negara Malaysia has the dual responsibility of conducting monetary policy and fostering financial stability. The main policy instrument is the Overnight Policy Rate (OPR). In general, the central bank is regarded as relatively more laissez-faire in its approach to currency management; central bank intervention can however be characterized as more asymmetric in recent years – with BNM tending to resist currency gains more actively, but more accommodating of currency weakness.

Most capital account restrictions have been dismantled, in recent years, particularly in the area of outward investment flows and fund raising activity, with the remaining restrictions largely macro prudential in nature. Documentation requirements for cross-border flows have also been relaxed significantly. The government's recent initiatives envisage boosting inward FDI and revitalizing domestic financial and capital markets. In the last few years, BNM has announced several liberalization measures, including scrapping of caps on inter-company loans, caps on FX hedging by residents, rules governing issuance of securities onshore and offshore, and importantly, freeing up its currency for trading offshore for trade settlement. For instance, the MYR is now traded in the inter-bank market in China directly versus RMB.

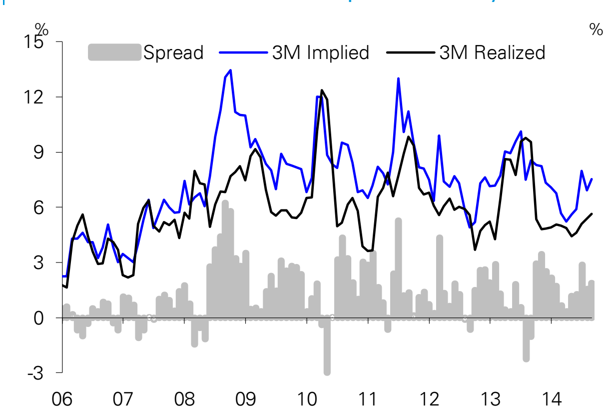
USD/MYR exchange rate



USD/MYR spot rate and 3M fwd premium



USD/MYR 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The central bank, Bank Negara Malaysia ("BNM"), is the primary regulator of the financial sector (http://www.bnm.gov.my). BNM, through the Office of the Controller of Foreign Exchange, also sets and manages FX policy.
- The Labuan Financial Services Authority ("LFSA") regulates the Labuan International Business Financial Centre (Labuan "IBFC": http://www.lfsa.gov.my/).
- The Securities Commission ("SC") regulates the issuance and offering of securities (http://www.sc.com.my).
- Residents can hedge committed or anticipatory current account transactions, committed financial account transactions (except for foreign currency deposits), and foreign currency exposures of permitted investment in foreign currency assets (e.g. equity hedges), other than foreign currency deposits.
- In effort to promote Malaysia as an International Islamic Financial Centre, BNM has with effect 28 October 2008 allowed all International Islamic Banks ("IIB") (Licensed under the Islamic Banking Act 1983) to buy/sell foreign currency against another foreign currency and to borrow/lend in foreign currency with residents and non-residents for any purpose.
- A company with Multimedia Super Corridor ("MSC") status is exempted from foreign exchange administration requirements for transactions undertaken for its own account.
- BNM has been gradually relaxing foreign exchange control rules that it has put in place since the Asian Financial Crisis. Changes to foreign exchange regulation are updated on http://www.bnm.gov.my/microsites/fxadmin/index.htm
- In 2013, BNM announced that domestic banks have to use the reference rate produced by the Association Cambiste Internationale ("ACI"), the country's domestic foreign exchange association, for Ringgit foreign exchange contracts.

Onshore MYR products

FX spot

Regulatory:	Offshore spot trading of MYR is allowed for settlement of goods or services with resident and settlement of ringgit assets with resident or non-resident only , where a non-resident is allowed to receive or make payment in ringgit through its External Account with an appointed overseas branch the banking group of a licensed onshore bank. Since August 2010, trading of MYR against the CNY is allowed on the CFETS platform in China.
Avg. ticket size:	USD 5m
Bid/Ask Spread:	20 pips
Avg. daily vol:	USD 2.5bn
Ref. source:	DB Reuters page <DBAX1>, Reuters page <MYR=>
Trading hours:	8:00am to 5.00pm, Singapore time

FX forward / swap/ long-dated FX forward

Regulatory:	Non-residents are allowed to enter into hedging arrangements with licensed onshore banks for any inflow or outflow of funds for firm committed transactions. Offshore forward trading of MYR is allowed for settlement of goods or services with residents and settlement of ringgit assets with resident or non-residents only, where a non-resident is allowed to receive or make payment in ringgit through its External Account with an appointed overseas branch of the banking group a licensed onshore bank.
Avg. ticket size:	USD 50mn for below 1week, USD10m for term swaps
Tenor:	Up to 12 months
Bid/ask spread:	10-40 pips
Avg. daily vol:	USD 1.5bn, approximately 80% of which is for below 1 week tenors
Ref. source:	DB Reuters page <DBAX1>, Reuters page <MYRF=>,

FX options

Regulatory:	As per FX forward market
Avg. ticket size:	USD 10mn
Bid/ask spread:	2 vols
Avg. daily vol:	USD 20mn
Ref. source:	DB Reuters page <DBAX>, DB Bloomberg page <DBKL4>, Reuters page <DBAX1>
Fixing page:	No fixing page for onshore

Onshore CCS

Regulatory:	As per FX forward market
Avg. ticket size:	USD 10mn
Tenor:	1 – 10 years
Bid/ask spread:	10 – 20bps
Avg. daily vol:	USD 20mn
Ref. source:	DB Reuters page <DBAX1>

IRS / FRA

Regulatory:	As per FX forward market
Liquidity:	Fair
Avg. ticket size:	MYR 20 – 50mn
Bid/ask spread:	5bp for 1 – 3Y, 10bp 4 – 5Y, 15bp for > 5Y
Avg. daily vol:	USD 50mn
Ref. source:	Reuters page <DBAX1>
Fixing page:	Reuters page <KLIBOR>, 11.00am Singapore time

Short-term money market instruments (BA/CP/repo)

Regulatory:	Clients – Repos/Placements: Overnight and above
Liquidity:	BNM is the key participant in the repo market. BNM uses the repo as a money market tool to manage liquidity.
Avg. ticket size:	CP: MYR 5mn; BA: MYR 0.5mn; Repo: MYR 50mn
Bid/ask spread:	2 – 5bp
Avg. daily vol:	USD 200mn

Government bond

Regulatory:	With effect from 11 September 2004, the non-residents are exempted from the 15% withholding tax in respect of interest income earned from investment in ringgit and foreign currency-denominated bonds (other than convertible loan stock) approved by the Securities Commission. Foreign investors must transact through a local custodian.
Liquidity:	Good
Avg. ticket size:	MYR 10mn
Bid/ask spread:	1 – 4bp
Avg. daily vol:	MYR 1bn
Ref. source:	Reuters page <DBAX1>

Offshore MYR products

Non-Deliverable Forward (NDF)

Regulatory:	Restricted to offshore only
Avg. ticket size:	USD 10mn
Bid/Ask Spread:	1M: MYR 0.003, 3M: MYR 0.0035, 6M-1Y: 0.005.
Avg. daily vol:	USD 1bn
Ref. source:	Reuters page <NDF=DBQS>
Fixing page:	Reuters page <ABSIRFIX01>, spot fixing determined from contributions by market-making banks, 11:00 am Singapore time, 2 business days before value date
Cross fixing:	EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory:	Potential restrictions for onshore entities. Offshore entities have no restrictions. ISDA documentation applies..
Avg. ticket size:	USD 20mn
Bid/ask spread:	0.8 vols
Avg. daily vol:	USD 100mn
Ref. source:	DB autobahn
Fixing page:	Reuters page <MYRFIX2>, 11:00 am Singapore time

Offshore NDS

Regulatory:	Restricted to offshore only
Avg. ticket size:	USD 10mn
Tenor:	Up to 5 years
Bid/ask spread:	20 – 30bps
Avg. daily vol:	USD 25mn
Ref. source:	Reuters page <TRADMYR>
Fixing page:	Reuters page <MYRFIX2>, 11:00am Singapore time

Clearing and settlement regulation

Foreign investors can settle Malaysia government securities either through Euroclear or Clearstream. Given these securities have to be settled onshore, foreign investors must open a securities account with an appointed Primary Dealer. In terms of clearing and settlement, all contracts executed under Malaysia's two exchanges (securities and derivatives) have to be done via the Fixed Delivery and Settlement System.

Taxation

There is no withholding tax on interest income derived from investments by non-residents in all ringgit-denominated bonds and Islamic securities. In addition, there is also no capital gains tax or any stamp duty related to issuance or transfer of Malaysian government or private debt securities.

Philippines

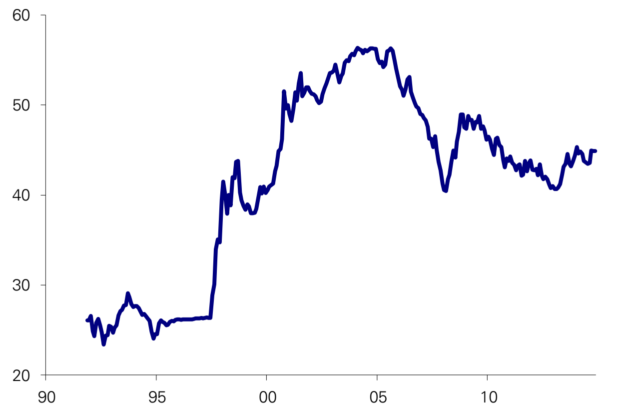
Having been fixed at a rate of 2 peso per USD from 1903 through the end of World War 2, the peso was floated at the time of the country's Independence in 1946. It fell steadily under balance of payments pressure until President Marcos declared martial law in 1972 implementing an export-led industrialization strategy. This called for a multiple FX rate structure based on a daily "guided rate," with different prices applying to transactions for exports, imports and external debt. That regime began to crumble after the financial crisis of 1983, and over the next year the country gradually moved to a single, "floating" rate regime. When Marcos was driven out of power in 1986, one USD bought about 19 pesos. The FX market continued to be guided by official intervention aimed at steadying its downtrend through the mid-1990s until the Asian Crisis hit. USD/PHP traded up from a pre-Crisis level of around 26 to stabilize in the 40-45 range.

The Bangko Sentral ng Pilipinas (BSP) conducts monetary and exchange rate policy with controlling inflation as its main objective. The BSP describes itself as an inflation targeting central bank, and has adopted a fixed medium-term inflation target of 3-5% for 2012-14 and 2-4% for 2015-16.

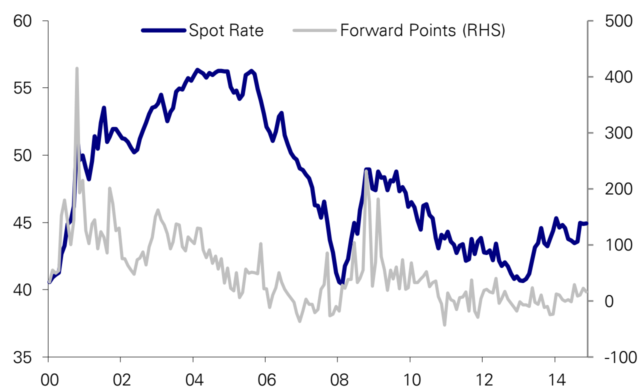
Philippines benefits from a relatively strong current account position. Despite a trade deficit, a surplus is supported by remittances from Overseas Foreign Workers (OFWs). These display a pronounced seasonal pattern, with largest inflows in December and April. The current account has found added support from the Business Process Outsourcing (BPO) sector's revenues.

The Philippines was a highly dollarized economy less than a decade ago and thus the exchange rate is a key barometer through which the public perceives macroeconomic stability. It also has implications for domestic consumption given the importance of OCW workers' repatriated income. Credit re-rating and high growth boosted portfolio and other investment inflows in the post-2008 period, driving significant PHP appreciation. Intervention to limit excessive appreciation led to a significant build up in reserves between 2009-12. High sterilization costs forced an emphasis on macro prudential measures to control FX strength. BSP liberalized in the FX regime with a focus on easing resident and corporate access to foreign currency and increasing outward investment flows. To limit hot money inflows, non-residents were barred from accessing onshore SDA accounts, whose rates have also been cut sharply. Domestic speculative activity was targeted by reducing onshore bank activity in the NDF market. In recent quarters however, inflows have slowed sharply, and reserves accumulation has flat-lined.

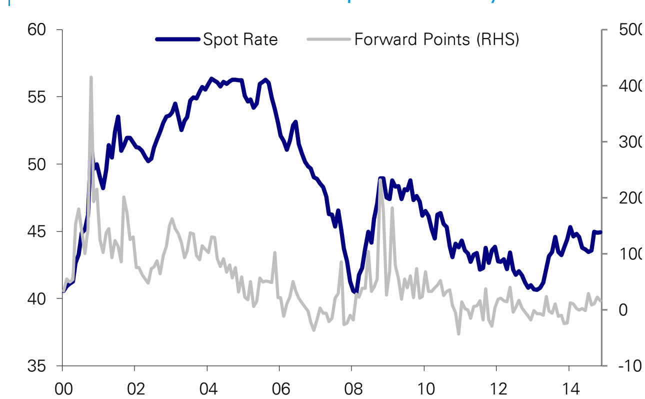
USD/PHP exchange rate



USD/PHP spot rate and 3M fwd premium



USD/PHP 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Bangko Sentral ng Pilipinas (BSP) has supervisory authority over all banking activities, including FX and interest rate trading (http://www.bsp.gov.ph).
- While PHP is not freely convertible, foreign currency (FCY) may be freely bought and sold against PHP outside the banking system. Hence, there is no prohibition against exporters selling USD directly to importers or private investors. FX regulations focus primarily on bank transactions, with rules and restrictions specifically addressing the nature of the transaction and the counterparties.
- An onshore bank with a derivatives license may deal in FX swaps and FX forwards, as well as other types of derivatives, for their own account or on behalf of customers, provided that the specific type of derivative traded is covered by their license. In addition, the role the bank plays in the transaction (i.e. as dealer, as broker, as end-user, etc.) must be provided for in the same license. A bank that does not have a derivatives license can deal in currency swaps and forwards with tenors of three years and less, subject to pre-qualification requirements and provided that the derivatives are recognized by the BSP as an organized market. A bank which is entering into derivatives transactions purely as an end user, need not apply for a license with the BSP for such activities but is still subject to pre-qualification requirements.
- The purchase of foreign exchange by residents for outward investments is allowed up to a maximum of USD 60m without prior BSP approval. Proof of investment outside of the Philippines must be presented to an Authorized Agent Banks (AAB). Foreign exchange received by residents as dividends/earnings or divestment proceeds from outward investments and investment in bonds/notes issued by residents offshore that were funded with foreign exchange purchased from AABs need not be inwardly remitted and sold for pesos.(http://www.bsp.gov.ph/regulations/regulations.asp?type=1&id=3112)
- Investors who bring in foreign currencies and convert them into local currency via the banking system may have their investment registered, provided that they show proof of FX conversion (via a Certificate of Inward Remittance or CIR) as well as proof that the Pesos were used to fund an eligible investment (typically, listed equities, local currency bonds or Peso deposits). The registration is evidenced by a Bangko Sentral Registration Document (BSRD) and this document is important if the investor intends to reconvert the local currency into foreign currencies in the future. Without the registration, such a transaction/repatriation cannot be serviced by AABs. For investments in Peso deposits, a minimum tenor of 3 months is required before registration can take place. For investments in listed equities or Peso-denominated bonds, there is no minimum holding period although sufficient processing time must be given before the BSRD can be issued. (http://www.bsp.gov.ph/downloads/Regulations/attachments/2013/c794_1.pdf)

Onshore PHP products

FX spot

Regulatory: Onshore banks may buy FCY/PHP from both onshore and offshore counter-parties without prior BSP approval or documentation.

Onshore banks may sell FCY/PHP to onshore or offshore counterparties provided there is an underlying business rationale supported by documentation. For onshore customers, typical justification would include trade, payment of foreign currency loans, repatriation of dividends and outward investments. The limit on outward investments by Residents is USD 60mn per investor per year (http://www.bsp.gov.ph/regulations/regulations.asp?type=1&id=3112). Offshore counter-parties must submit a Bangko Sentral Registration Document (BSRD), which proves that the foreign investor had sold FCY/PHP and had thereafter invested the PHP funds in an eligible asset/investment. This BSRD is normally kept by the investor’s custodian bank. Manual of Regulations for Foreign Exchange Transactions (MORFXT) cover the specific documentation requirements for each type of trade/non-trade transaction. For both onshore and offshore counterparties selling FCY/PHP, bank KYC (Know Your Customer) and BSP anti-money laundering guidelines apply.

Avg. ticket size: USD 2mn

Bid/ask spread: PHP 0.02

Avg. daily vol: USD 650 mio

Ref. source: Reuters page <PDSPESO>

Trading hours: 9:00am – 12:00pm, 2:00pm – 4:00pm

FX forward/FX swap/long-dated FX forward

Regulatory: For deliverable outright FCY/PHP forwards, spot trading rules apply. For forwards, Authorized Agent Banks (AABs) may only enter into derivative contracts with their customers for hedging eligible actual FX obligations or existing FX exposures. The minimum documentary requirements shall be presented on or before the deal date. No double hedging covering the same underlying FX obligation/exposure is allowed. In case of prepayments of foreign currency loans covered by swaps, banks shall ensure that such prepayments are allowed under the covering loan agreement. Also, for swaps, the rules vary depending on the type of counterparty and the side of the trade. An onshore bank can only sell/buy FCY/PHP if the spot leg is supported by the same documents required of outright spot trades.

Avg. ticket size: USD 5 - 10mn

Tenor: Overnight to 1 year

Bid/ask spread: PHP 0.01 for 1 week – 1 month tenors, PHP 0.025 for 2 – 3 months tenors, PHP 0.1 for 6 months tenor, PHP 0.20 for 1 year tenor

Avg. daily vol: USD 500mn

Ref. source: Bloomberg PFRFF

FX options

Regulatory: As per FX forwards.

Avg. ticket size: USD 1mn

Tenor: 1 week to 1 year

Bid/ask spread: 1.5 vols

Avg. daily vol: Unable to estimate as highly irregular

Ref. source: Reuters page <PHVOL>

Onshore CCS

Regulatory: In general, the rules for USDPHP CCS follow the same rules as USDPHP FX Forwards. However, unlike FX forwards, no formal interbank market for CCS exists. Access by non-residents to the onshore USD/PHP CCS market is highly restricted. Depending on the side, the non-resident client may be required to either: (a) obtain prior BSP approval or (b) provide the same supporting documents and underlying business reason that would be needed for an outright purchase of FCY versus PHP. In addition, proof that the customer is transacting for legitimate hedging purposes is necessary.

Avg. ticket size: USD 15-20mn (indicative only as no interbank market exists)

Bid/ask spread: 50 – 120bp (indicative only as no interbank market exists)

Avg. daily vol: Unable to estimate as highly irregular and there is no actively quoted interbank market

IRS market

Regulatory: As per onshore CCS market

Avg. ticket size: PHP 50 – 100mn

Tenor: 1 – 5 years

Bid/ask spread: 25bp

Avg. daily vol: PHP 300mn

Ref. source: Reuters page <PHIRS>, Bloomberg broker page <ICPH1>

Fixing page: Floating leg fixes against the 3mth FX forward implied, as seen on Bloomberg page <PHRFF>, 11:30am Manila time

Short-term money market instruments

Regulatory: Non-Residents are not allowed to access the onshore market.

Liquidity: Good for overnight, poor for term

Avg. ticket size: PHP 200mn for overnight, PHP 100mn for term

Bid/ask spread: 12.5 – 25bp

Avg. daily vol: Irregular

Ref. source: Bloomberg page PPCALL <Index>, PICRV<Index>

Government bond

Regulatory: Shorting PHP securities is prohibited. No facility yet exists for genuine securities borrowing or lending. Coupon income and trading gains on government securities are subject to 20% WHT. Taxation on coupon income is subject to tax treaty, but the process for tax refunds is tedious. Non-residents can freely buy PHP securities. Non-residents can buy back the foreign currency from the local banking system as long as the FX inward remittance and PHP investment have been registered with the BSP and duly covered in BSRD documents.

Avg. ticket size: PHP 100mn

Bid/ask spread: 2.5 – 20 bps

Avg. daily vol: PHP 20bn

Ref. source: Bloomberg page < PDEX1>, Bloomberg broker page < ICPH3, AMSP5, TPPH10, TRPH3>

Offshore PHP products

Non-Deliverable Forward (NDF)

Regulatory: ISDA documentation applies. NDF transactions with onshore counterparties are subject to certain regulations. All NDF contracts with residents shall be settled in pesos.

Fixing: The PHP fix is the weighted average spot rate of trades in the onshore spot market done from 9:00am until 11:30am Manila time, one day before settlement date. The fixing rate is announced at 11.30am (Manila time).

Avg. ticket size: USD 10mn

Bid/ask spread: 0.04 – 0.06 for 1 – 3 months tenors, 0.08 – 0.10 for 6 months – 1 year tenor

Avg. daily vol: USD 600mn

Ref. source: Reuters page <NDF=DBQS>, <PNDF>

Fixing page: Reuters page <PDSPESO>

Cross fixing: EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory: ISDA documentation applies.

Avg. ticket size: USD 10 – 15mn

Bid/ask spread: 1.0 vol

Avg. daily vol: USD 20mn

Ref. source: DB autobahn

Fixing page: Reuters page <PDSPESO>, spot fixing based on an weighted-average rate during morning trading hours (9:00 – 11:30am), 11:30am Manila time, 1 business day

Offshore NDS

Regulatory:	ISDA documentation applies.
Avg. ticket size:	USD 10mn
Tenor:	Up to 10 years
Bid/ask spread:	20-30 bps
Avg. daily vol:	USD 25mn
Ref. source:	Reuters page <INDIRS>
Fixing page:	Reuters page <PDSPESO>, 11:30am Manila time

Clearing and settlement regulation

Philippine government securities transactions are cleared through the Registry of Scripless Securities (RoSS), administered by the Bureau of the Treasury. The standard settlement for government securities is T+1. Although deviation from the standard settlement time is possible, both parties have to agree upon it.

With regards to settlement of transactions, foreign investors can settle Philippine bonds onshore as well as offshore. For onshore settlement, a domestic custodian must be appointed. For offshore settlement, fixed rated treasury bonds are Euroclearable (since June 2012), and can be delivered against $ (or other deliverable currencies).

Taxation

There are no restrictions on foreign participation in the local bond market, but to be entitled to capital repatriation and interest remittance, all foreign investments need to be registered with the BSP through the Central Bank Document Registration (CBDR) system.

For domestic investors, interest income in the Philippines is subject to a withholding tax of 20%. For foreign investors, taxes on interest are officially set at 30%, but this is often reduced to 10-20% depending on tax treaties (e.g. 15% under the RP-Singapore Tax Treaty)..

Singapore

The Singapore dollar was launched in 1967 and initially pegged to GBP, then USD. As a highly trade-driven economy, authorities' focus shifted in the 1970s to managing FX policy against a basket of Singapore's trading partners. The current, nominal effective basket framework dates back to 1981. SGD NEER forms the primary instrument of monetary policy, since conventional interest rate or money supply targeting is deemed to be less effective in a small open economy.

Dealing with inflation through the exchange rate, functions primarily by dampening tradeable goods prices, and reducing imported inflation. For much of the past two decades, this policy led to an enviable inflation and growth record. In the post-2008 years, inflation became more a function of non-tradable price increases such as accommodation, transportation and labour costs. However, authorities have repeatedly stressed commitment to the current FX-based monetary policy framework over interest rate targeting. They have instead been supplementing policy with macroprudential measures, i.e. in the property market.

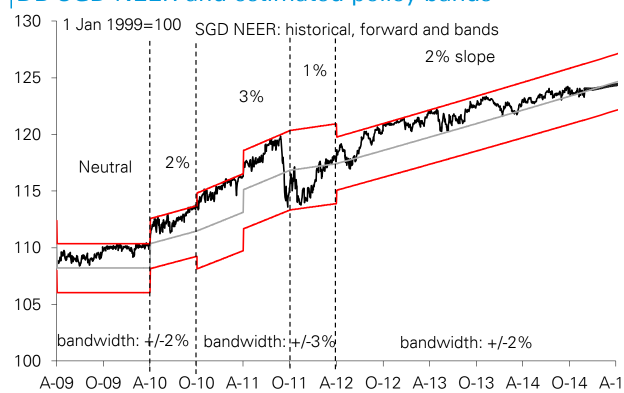
SGD policy formation has become more transparent since the Asian Financial Crisis. The MAS relies on econometric modelling of the economy under various exchange rate scenarios, with critical input variables including foreign growth, inflation, and commodity prices. The direction of FX policy is announced in a semi-annual review statement (currently, April and October) and, in extreme circumstances (e.g., post-9/11), via intra-meeting statements.

The MAS allows the trade-weighted SGD NEER to fluctuate within a policy band, with an undisclosed slope (an appreciation/neutral bias), band width, and midpoint. These variables can be changed at each policy review. The Authority intervenes in USD/SGD to keep the SGD NEER within its predetermined range. In so far as the policy framework is credible, even token purchases or sales of USD create a strong signalling effect.

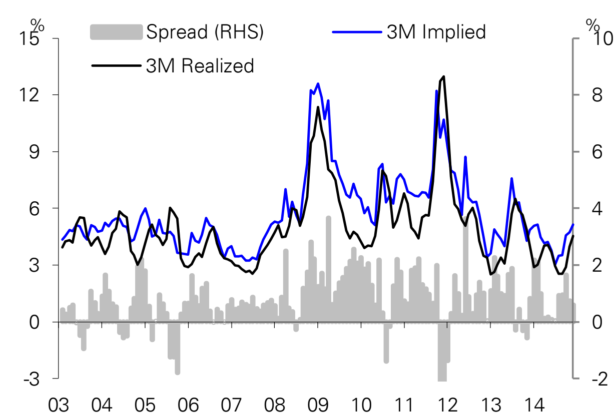
Even though the MAS does not disclose the composition of its basket, its target bands or the exact magnitude of any tightening or easing bias, it does provide information on its SGD NEER series. MAS now releases average weekly values of its SGD NEER series, on a monthly basis, going back to 1999. This transparency for market participants has allowed for the creation of basket proxies on the street which can be actively monitored. The DB SGD NEER model assumes that MAS is currently operating with a +2% p.a. appreciation bias to the SGD NEER, with a +/-2% width around the mid-band. The Singapore dollar is fully convertible and deliverable.

USD/SGD exchange rate

DB SGD NEER and estimated policy bands



USD/SGD 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- Monetary policy is set by the Monetary Authority of Singapore (MAS) (http://www.mas.gov.sg).
- Regulation and supervision of the financial sector is also conducted by MAS.
- The use of derivatives for legitimate commercial reasons is permitted.
- Regulations on SGD products require an understanding of the definition of Singapore Residents. This includes:
- (a) Companies which are at least 50% owned by Singapore citizens
- (b) Financial institutions in Singapore that are governed under MAS Notice 757 or equivalent.
- All other entities not captured above are considered Non-Residents.

SGD products

FX spot

Current account:	None
Capital account:	None
Avg. ticket size:	USD 5 - 10m
Bid/ask spread:	SGD 0.0002
Avg. daily vol:	USD 3bn-4bn
Ref. source:	Reuters page <SGD=>
Fixing page:	<ABSIRFIX01> (only at 11:00 Singapore time)

FX forward/swap/long-dated FX forward

Regulatory:	Banks may lend SGD to Non-Resident financial entities for any purpose, whether in Singapore or overseas, as long as aggregate facilities do not exceed SGD 5m per entity. Where amounts exceed SGD 5m per entity, banks should not extend SGD credit facilities to Non-Resident financial entities. Banks may not lend SGD if there is reason to believe that the SGD proceeds may be used for SGD currency speculation. Banks are required to report monthly to the MAS their aggregate outstanding SGD lending to Non-Residents. It is worth noting Singapore's definition of legal entity is as followed. Example 1: Given Citibank N.A. New York Branch and Citibank N.A. London Branch are the same legal entity, all the N.A. Branches are subjected to a single limit of SGD5m. Example 2: Barclays Securities Inc and Barclays LLC, London Branch are two separate legal entities and each will have to observe the SGD 5m limit.
Avg. ticket size:	USD 50 – 100mn
Tenor:	Overnight up to 10 years
Bid/ask spread:	0.00002 for 1M tenor, 0.0001 for 6M tenor, 0.0005 for 12M tenor
Avg. daily vol:	USD 1 bn – 1.5 bn
Ref. Source:	Reuters page <SGDF=>
Fixing page:	Reuters page <ABSFIX1>, when USD LIBOR is released

FX options

Regulatory:	No restrictions. ISDA documentation applies.
Avg. ticket size:	USD 30m for
Bid/ask spread:	0.5 vols
Avg. daily vol:	USD 200m

Ref. Source:	Reuters page <SGD=D2>
Fixing page:	Reuters page <ABSFIX01>, 11:00a.m. Singapore time

Onshore CCS

Regulatory:	No restrictions
Avg. ticket size:	SGD 50m for tenor shorter than 2Y
	SGD 20m for tenor longer than 2Y
Tenor:	Out to 30yr. Liquid tenors are 1 - 10 years
Bid/ask spread:	3-5bp for tenor 2Y-10Y, 2 bps for tenor shorter than 2y, 10bp for tenor longer than 10Y
Avg. daily vol:	USD 50m. Actual daily trade volumes tend to be volatile as CCS is infrequently traded.
Ref. Source:	Reuters page <PYSGD>, <ISGDIRS>
Fixing page:	Reuters page <ABSFIX1>, when USD LIBOR is released

IRS/OIS

Regulatory:	No restrictions
Avg. ticket size:	SGD 50m for OIS, but has become very illiquid since 2010
	SGD 100m for IRS shorter than 2Y
	SGD 10m - 20m for IRS longer than 2Y
Tenor:	IRS: out to 30 years, with liquid tenors of 1 – 10 years. OIS is illiquid for all tenors.
Bid/ask spread:	5bp for OIS, 2-3bp for IRS
Avg. Daily Vol:	OIS is very illiquid, and trades only a few times a year
	SGD 500m for IRS shorter than 2Y
	SGD 500m for IRS longer than 2Y
Ref. Source:	DB Reuters page < ABSFIXDBAS>, DB Bloomberg page <DBSZ9>, Broker Reuters page <PYSGD>, <TRADSGD1>
Fixing page:	Singapore Swap Offer Rate (SOR), Reuters page <ABSIRFIX01>

Short-term money market instruments (t-bills/repo/SIBOR/SOR)

Regulatory:	As per FX forwards/swaps
Liquidity:	Mostly concentrated on O/N and 1W for cash and repo market
Avg. ticket size:	Various
Bid/ask spread:	12bp for cash market, 10bp for repo
Avg. daily vol:	SGD 700mn-1bn for cash market, SGD 50 m – 100 m for repo
Ref. Source:	Reuters page <PYSGD> <ISGD01>

Government bond

Regulatory:	No restrictions on foreign participation.
Avg. ticket size:	SGD 5m
Bid/ask spread:	SGD 0.05 for tenors below 2 years: SGD 0.10 for tenors below 7 years, SGD 0.30 for tenors below 15 years, SGD 0.40 for tenors above 15 years
Avg. daily vol:	SGD 1500m
Ref. Source:	Reuters page <0#SGBMK=>, DB Bloomberg page <DABA9>, Bloomberg page <DABA1>

Clearing and settlement regulation

For foreign investors, SGS can be cleared using international bodies such as Euroclear and Clearstream as well as MAS electronic book entry clearing system as long as the investor has an account onshore.

Taxation

Foreigners are not taxed on capital gains or interest income proceeds from Singapore government securities. In addition, there is also no restriction on the acquisition of securities by foreign investors or limitations on the repatriation of income, capital gains, and capital.

South Korea

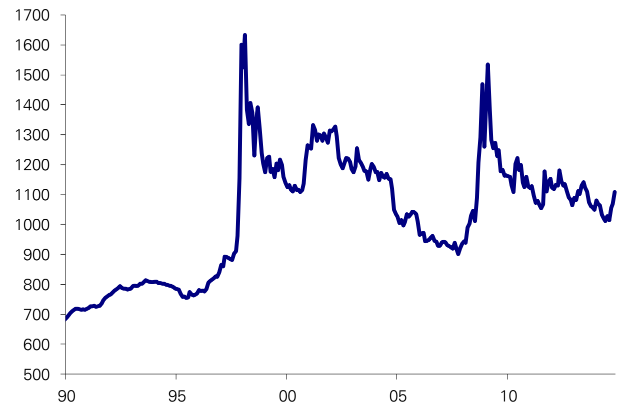
From 1964 through 1970, the won was pegged to the USD at 130. Over the next ten years, the official rate depreciated to 580 in several large steps. In 1980, the fixed regime was replaced with a heavily managed basket rate which included the SDR and major trading partners' currencies. Starting in 1989, KRW was allowed to fluctuate in a range against its basic basket rate, and in 1990, the effective rate was replaced by a (previous day's) market average rate (MAR). The MAR provided an anchor for intervention bands, which were widened from +/-0.25% to 2.25% over the period 1990-1995. This band was expanded to 10% in November 1997 during the Asian Crisis, then abandoned a month later and the won was allowed to float.

The Bank of Korea sets monetary policy primarily through the 7-day repo rate. The central bank has a medium-term inflation target of 3%, though this includes a tolerance range which is currently +/0.5%. The central bank is also sensitive to asset price inflation, particularly in housing and equity markets, and potential impact on the exchange rate when setting its monetary policy.

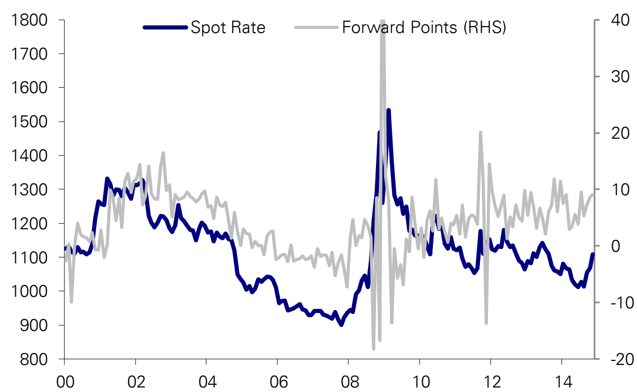
Both the Ministry of Strategy and Finance (MoSF) and BoK are able to intervene in the FX market. In the past two years, BoK's intervention has shifted towards slowing down KRW appreciation and defending key levels particularly against the Yen as the JPY/KRW cross has dropped lower past the psychologically key 10 level. The BoK is also active in the FX swap market, which it uses as a sterilization instrument. Given the large size of its forward book, its FX swap activity can alter the level of USD funding rates in local markets and thereby exert an indirect impact on spot USD/KRW.

Korea's capital account regime is one of the most liberal in Asia. However the currency is not completely convertible and forward hedging can be subject to an underlying economic transaction. Portfolio investment is not highly restricted, though in 2011 the government reintroduced a withholding tax on foreign bond investors. Macro prudential measures have been taken that reduce appreciation pressure and lessen the vulnerability of the domestic system to external stress. Key measures include a steady reduction in short-term external debt limits and curbs on local foreign currency derivative positions. Offshore borrowing by Korean corporates is subject to changing regulation, and the government tends to encourage ODI as a way of creating a balance in international payments account. A unique aspect of Korea's FX market is that local banks are allowed to freely arbitrage the offshore NDFs, resulting in the spread between onshore and offshore forward curves being virtually zero.

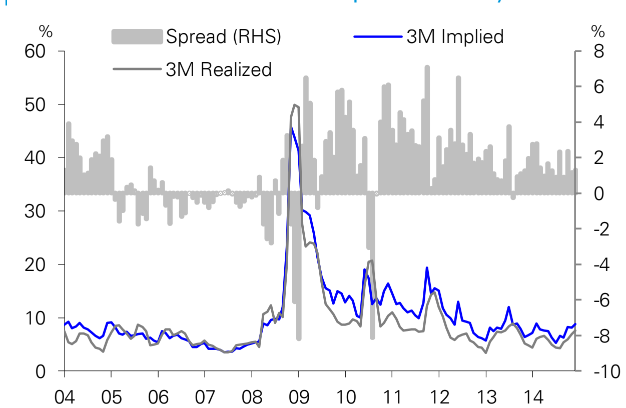
USD/KRW exchange rate



USD/KRW spot rate and 3M fwd premium



USD/KRW 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Ministry of Strategy and Finance (MOSF) is the financial policy maker. (http://english.mosf.go.kr/).
- The Bank of Korea (BoK) is the central bank. It is independent of MOSF and is primarily responsible for inflation targeting formulation and the implementation of monetary policy. It enforces foreign exchange laws and monitors market activity. (http://www.bok.or.kr).
- Foreign exchange policy is principally determined by MOSF, while BOK, oversees foreign exchange movements
- Key pieces of legislation govern ring FX are the Foreign Exchange Transaction Act (FETA) and Foreign Exchange Transaction Regulations (FETR).
- Supervisory functions are consolidated under the Financial Supervisory Commission (FSC), which was established in 1998 (http://www.fsc.go.kr/eng), and its executive enforcement arm, the Financial Supervisory Service (FSS), which was established in 1999 (http://english.fss.or.kr).
- While derivatives are mostly used for hedging purposes, particularly for general investors pursuant to Financial Investment Services and Capital Market Acts, some investment activities are allowed for 'professional investors' only. In addition, authorities can from time to time make changes to FX regulations so as to deter speculators or minimize the impact of speculation on the volatility of the exchange rate.
- Documentation requirements for doing business in Korea can be found at (http://www.investkorea.org).

Onshore KRW products

- Korean financial institutions which meet qualifying conditions and are registered with the MOSF as an FX handling institution may enter into general interest rate or currency derivative transactions with Non-Residents without MOSF approval. All credit-linked derivative transactions are to be reported to the BoK.
- KRW may not be provided to Non-Residents in excess of certain limits except in connection with their investments in Korea and other legitimate transactions.
- Korean securities companies which obtain a licence for OTC derivatives may deal in derivative transactions relating to securities, interest rates or indices.

FX spot

Regulatory:	Supporting documentation (including a declaration or approval of proper regulatory authority for a capital transaction, i.e., a loan, guarantee or investment) should be submitted to a foreign exchange bank (FX Bank) prior to trading if there is to be physical delivery. The documentation handling process usually takes 1 to 2 days.
Avg. ticket size:	USD 5mn
Bid/ask spread:	KRW 0.1
Avg. daily vol:	USD 9bn
Ref. source:	Reuters page <KFTC01>,< KFTC11> for Interbank only
Trading hours:	9:00am – 3:00pm, Seoul time (No lunch time)

FX forward/swap/long-dated FX forward

Regulatory:	As per spot. Hedging is permitted for underlying transactions with onshore banks. However, w.e.f. January 2010, exporters are not allowed to hedge more than 100% of their receivables. For local banks, forward positions are capped at 30% of the previous month-end equity capital (down from 50% before) while foreign bank branches have their forward positions capped at 150% of the previous month-end equity capital (down from 200% before).
Avg. ticket size:	USD100mn up to SN, USD50m from 1M to 3M, USD30m for 6M to 1Y
Tenor:	Overnight to 1 years
Bid/ask spread:	KRW 0.01 for 1 day tenor, KRW 0.05 for 1 to 3 month tenor, KRW 0.1 for 6 months tenor, KRW 0.2 for 9 months – 1 year tenors

Daily vol: USD 10bn

Ref. Source: Reuters page <KRWF=>, <KFTC23>

Fixing page: Reuters page <KFTC18>

FX options

Regulatory: If the upfront premium is over 20% of the notional, the trade needs prior approval from the BOK. Following the change in regulation (i.e. the need for approval from BoK), domestic participation in the onshore FX option market is low. For Non-Residents, if there is to be physical delivery at maturity, underlying trade documentation (e.g., invoice) must be submitted.

Avg. ticket size: USD 40mn

Bid/ask spread: 0.6 vols

Avg. daily vol: USD 200 – 500mn

Ref. source: Reuters page <NITTAN10>, <GFIOPT>

Fixing page: MAR, Reuters page <KFTC18> 15:30pm Seoul time

Onshore CCS

Regulatory: Non-Residents are not allowed to access the onshore deliverable market unless they have a valid underlying transaction.

Avg. ticket size: USD 10-30mn

Tenor: 1 – 15 years

Bid/ask spread: 5 – 7bp

Avg. daily vol: USD 100-300m

Ref. source: Reuters page <PYKRW>

Fixing page: Reuters page <KFTC18>

IRS

Regulatory: Non-residents are allowed to do IRS with onshore banks provided that they have proper underlying documents, i.e. hedging evidence, etc. However, non residents cannot do IRS with non banks in Korea without prior approval from BOK.

Avg. ticket size: USD20-50mn

Tenor: 1 – 10 years

Bid/ask spread: 2 bps

Avg. daily vol: USD 2-4bn

Ref. source: Reuters page <IKRWIRS>

Fixing page: 91-day Korean Local Banks CD rate at Reuters “KBOND02” or at Bloomberg “KSDA4

FRA/Single Period Swap (SPS)

Tenor: 1mx4m, 2x5, 3x6, 6x9, 9x12

Avg. ticket size: KRW 400bn

Bid/ask spread: 5 - 10bp

Fixing page: 91-day Korean Local Banks CD rate on Reuters page <KBOND02>

Ref. source: Reuters page <IKRWIRS>

Short-term money market instruments (CD/CP/repo/other short term products)

Regulatory:	Non-Residents are allowed to access the onshore deliverable market with onshore banks with relevant licenses in place to handle such products particularly Repo. To transact with non bank counterpart onshore, it requires a case by case review for each product for potential regulatory restrictions such as BOK prior approval depending on who the offshore resident is versus who the onshore counterpart is.
Avg. ticket size:	USD50mn
Bid/ask spread:	2-8bp
Avg. daily vol:	USD 40bn
Ref. source:	CD/CP – Reuters page <KSDA1>

Government bond

Regulatory:	Non-residents are allowed to access the onshore government bond market if registered with the FSS.
Avg. ticket size:	USD 10mn
Bid/ask spread:	1 bp
Avg. daily vol:	USD10bn
Ref. source:	Reuters page <KSDA1>

Offshore KRW products

Non-Deliverable Forward (NDF)

Regulatory:	No prior reports or approvals are required for offshore NDFs denominated in KRW and net settled in foreign currency.
Fixing:	The KRW NDF fix is published at 3.30pm Seoul time two business day prior to settlement and is posted on Reuters screen KFTC18. The fix is derived by using a weighted average of the onshore spot market over the entire day's trading range prior to the fix (known as the market average rate, MAR).
Avg. ticket size:	USD 20mn
Bid/ask spread:	KRW 0.3 – 0.5
Avg. daily vol:	USD 2.0-2.5 bn
Ref. source:	Reuters page <NDF=DBQS>, <PNDF>
Fixing page:	Reuters page <KFTC18>
Cross fixing:	EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory:	No restrictions
Avg. ticket size:	USD 50 mn
Bid/ask spread:	0.6 vols
Avg. daily vol:	USD 300mn
Ref. source:	DB autobahn
Fixing page:	Reuters page <KFTC18>, spot fixing based on the weighted-average rate of the entire day's trading range, 3:30pm Seoul time, 2 business days before value date.

Offshore NDS

Regulatory:	No restrictions
Avg. ticket size:	USD 10 – 30mn
Tenor:	1 – 10 years
Bid/ask spread:	10 – 20bps
Avg. daily vol:	USD 100mn, depending on market conditions
Ref. source:	Reuters page <PNDS>
Fixing page:	Reuters page <KFTC18>, 3:30pm Seoul time

Clearing and settlement regulation

The Korea Securities Depository (KSD), the country's sole central securities depository, conducts the clearing and settlement of securities. KSD is under the supervision of the Ministry of Strategy and Finance, the Financial Supervisory Commission (FSC), and the Financial Supervisory Service (FSS). Foreign investors need to register with the FSS and obtain an Investment Registration Number/Certificate (IRC) prior to opening accounts. In addition, prior to placing an order, foreign investors must also appoint (1) a standing proxy who will file for the IRC and open a trading account with a local securities company, (2) a custodian bank who will facilitate domestic settlement, and (3) a foreign exchange bank. However, for a resident foreign individual or corporation, standing proxy is not needed.

Securities purchases or sales by non-resident investors have to be settled physically at the KSD or at a custodian bank. The original order is placed with a local broker or standing proxy. Both exchange and OTC transactions typically settle T+1. However, when foreign investments are involved, T+3 settlement is common.

Taxation

Effective January 2011, a withholding tax (WHT) of 14% on interest income plus 1.4% local tax (bringing total withholding tax to 15.4%) on non-resident investments in KTBs and MSBs was re-introduced. This WHT rate may be reduced by applicable double tax treaty. A 27.5% net capital gains tax, or 11% on gross sale proceeds, whichever is lower, was also introduced. Some double tax treaties do provide an exemption from capital gain tax on disposal of KTBs and MSBs by non-residents.

Sri Lanka

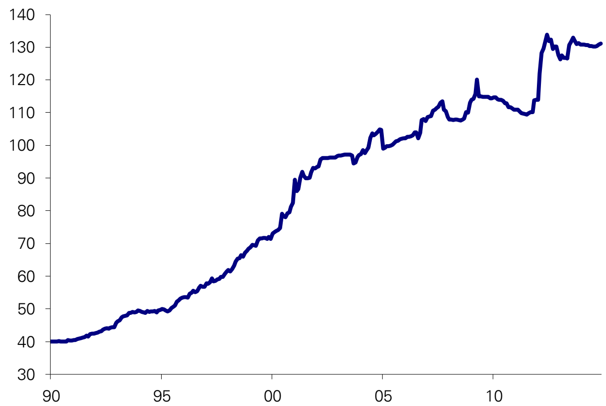
After independence in 1948, the Sri Lankan Rupee (LKR) was pegged to the GBP till 1977. In 1977, Sri Lanka opted for market-oriented reforms, and instituted a managed FX float against a basket of currencies. This kicked off with a devaluation of 46% against the USD. The 1990s saw a worsening balance of payments position, putting large pressure on the LKR. In response, the exchange rate band was widened in 2000. A continuous fall in FX reserves in 2001 prompted the central bank to adopt a floating FX regime.

The Central Bank of Sri Lanka (CBSL) is responsible for conducting monetary policy, with price stability as its main objective. Its inflation management record has however been poor with a bias towards supporting growth. The central bank also helps manage the exchange rate. For much of past two decades, CBSL has preferred a stable or gently depreciating exchange rate to help foster investor confidence and diminish the foreign debt service burden for the government. Since early 2012, they have been forced to shift this stance.

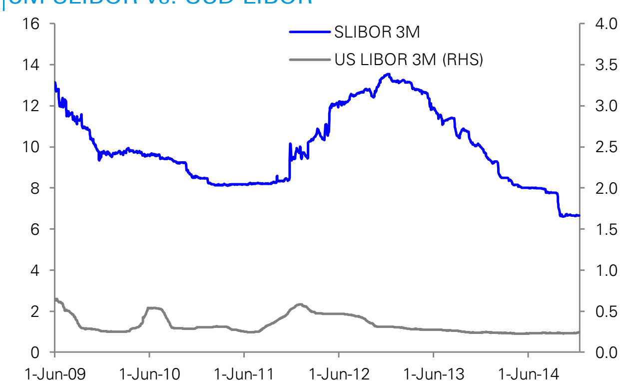
In 2011, a widening current account deficit on the back of strong economic growth began to exert pressure on the rupee. The trade deficit deteriorated sharply on rising oil imports bill and soaring credit growth. CBSL initially sought to limit the pressure on the rupee through FX intervention, drawing down reserves. In November 2011, they were compelled to devalue the rupee by 3%, but continued to intervene in the market. In February 2012, the central bank finally stepped away allowing the LKR to float freely, whereupon the rupee depreciated a further 17% to new lows. With the trade deficit stabilizing, as CBSL hiked rates, curbed credit growth and imposed import tariffs – LKR actually appreciated before tapering related volatility in 2013 led to pressure once again. Post the taper-tantrum period, the LKR has stabilized and traded in a broad range of 130-132 through end 2014.

Sri Lanka is dependent on inflow sources like tourism receipts and remittances. The end of civil war in 2009 also helped attract capital flows. FDI into hotels and tourism have increased. The capital account is restricted in many ways, but in 2010 the CBSL announced several key liberalization measures, including allowing foreign investors to buy LKR denominated corporate bonds, allowing local corporates to borrow in foreign currencies and allowing foreigners to maintain foreign currency accounts in Sri Lanka. Sri Lanka's external outlook remains comfortable at this stage, with gross official reserves having risen to USD8.8bn by end-October 2014, sufficient to cover 5.3 months' of imports.

USD/LKR exchange rate



3M SLIBOR vs. USD LIBOR



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Ministry of Finance (MOF) is responsible for fiscal policy (http://www.treasury.gov.lk), while the Central Bank of Sri Lanka (CBSL) undertakes monetary policy (http://www.cbsl.gov.lk).
- The Exchange Control department formulates FX regulations, while the Public Debt department is in charge of the Government borrowing programme.
- The Board of Investment (BOI) website gives information on setting up a business, investment incentives, guidelines etc. (http://www.boi.lk).
- Key pieces of legislation are the Monetary Act, Banking Act no 30 of 1988 (as Amended), Exchange Control Act, Securities and Exchange Commission of Sri Lanka Act.
- Foreign Nationals are allowed to invest in LKR denominated Govt Securities, local share market and corporate debt market through the Securities Investment Account (SIA). 12.5% of outstanding local currency Govt securities are allocated for foreign investors. Inward remittance routed through the SIA accounts for the above categories can be repatriated freely.
- Foreign Nationals are allowed to place onshore foreign currency and local currency time and savings deposits with local commercial banks under Special Foreign Investment Deposit Accounts (SFIDA). Minimum account balance of USD 10,000 or equivalent.

Onshore LKR products

FX spot

Regulatory:	There are no restrictions on local trade/service-related and stock market transactions. Capital account transactions require prior approval from Exchange Control department. Profits from FDI with flagship status can be repatriated under special clauses agreed with the Board of Investment (BOI).
Avg. ticket size:	USD 1mn
Bid/ask spread:	LKR 0.10
Avg. daily vol:	USD 25 – 30mn
Ref. source:	Reuters Page <LKR=>
Trading hours:	9:00am – 4:00pm Sri Lanka time

FX forward/swap/long-dated FX forward

Regulatory:	Forward delivery purchases by clients must be backed by a trade transaction with documentary evidence of LC/PO/invoice etc. Hedging FX exposure through derivative products is permitted.
Avg. ticket size:	USD 1mn
Tenor:	Up to 6 months since longer dated tenors are not available due to the lack of market liquidity
Bid/ask spread:	LKR 0.20
Avg. daily vol:	USD 15 - 25m
Ref. Source:	Reuters Page <LKRF=>

Short-term money market instruments (CD/CP/repo)

Regulatory:	Foreigners are allowed to participate in s/t money market instruments. More guidelines are available on the MOF and CBSL websites.
Avg. ticket size:	USD 1mn
Bid/ask spread:	25bp
Avg. daily vol:	USD 10mn

Government T-bills and bonds

Regulatory:	Foreigners are permitted to own up to 12.5% of outstanding stock of government securities
Liquidity:	Poor
Avg. ticket size:	USD 1mn
Bid/ask spread:	25bp
Avg. daily vol:	USD 10mn

Offshore LKR products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation applies.
Avg. ticket size:	On request
Bid/ask spread:	On request
Avg. daily vol:	Unable to estimate as highly illiquid
Ref. source:	Do not publish

Clearing and settlement regulation

The central bank acts as the depository and clearing house for government securities and T-bills through its Central Depository System (CDS) system, where banks and institutions hold bond ledgers and current accounts with it. Transactions are cleared on a delivery versus payment (DVP) basis and are settled electronically. The settlement date convention of successful bids is T+2 days from the day of auction.

Investors are required to maintain accounts with commercial banks or primary dealers for the cash settlement of their transactions. In the secondary market, primary dealers and commercial banks quote their bid daily and offer prices for government securities. Investors can select from the best deals.

Taxation

For Treasury bills and Treasury bonds, a 10% withholding tax on interest income is collected at the primary issue. However, no stamp duty is payable. For rupee loans, a 10% withholding tax on interest income will be deducted from coupon payments. For Sri Lanka Development Bonds, income tax paid in Sri Lanka will be reimbursed.

Taiwan

The "new" Taiwan dollar, or NTD, was first issued in 1949. It was initially pegged to the US dollar at 40.0 with the aim of ending the hyperinflation which plagued Republic of China government during its final years on the Mainland. This rate remained in place until the US dollar began to slide after the Bretton Woods system broke down in the early 1970s. TWD was re-pegged at 38.0 in 1973, and the USD link subsequently abandoned with a further revaluation to 36.0 in 1978. In its place, a managed basket float was implemented, with volatility being constrained within a +/-2.5% band around the previous day's fix against a range of major currencies. Nonetheless, with the country running persistent current account surpluses, upward pressure on the Taiwan dollar persisted and USD/TWD stood at 28.0 when it was finally allowed to float in 1989.

The Central Bank of China is responsible for conducting both monetary and exchange rate policies. There is no formal inflation target, but the CBC has a medium-term objective of keeping M2 growth in a range. The central bank's main policy instrument is the discount rate, though in practice it uses several tools such as OMOs and the FX rate to influence monetary conditions.

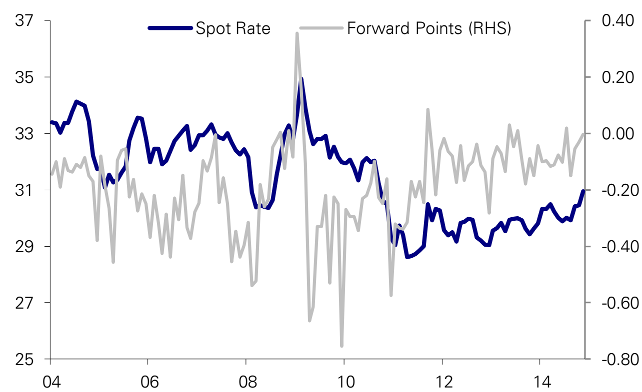
Over the past two decades, the TWD market has remained characterized by heavy two-way intervention from the central bank. The objective is to smooth day-to-day volatility in the spot market and ensure that currency moves reflect fundamentals and real economic transactions rather than speculative activity. Preventing excessive appreciation of the TWD is also desirable to maintain export competitiveness. Such active management had led CBC to become one of the largest holders of foreign reserves. CBC has historically tended to enjoy positive carry on its reserves sterilization given low domestic rates.

Taiwan continues to enjoy large current account surpluses, and is consequently a significant net investor to the world with large overseas portfolio investment by local asset managers. Associated hedging activities have a meaningful – generally depressive – impact on the NDF curve, resulting in negative carry to the TWD. This has led it to regularly be seen as a regional funder carry trades.

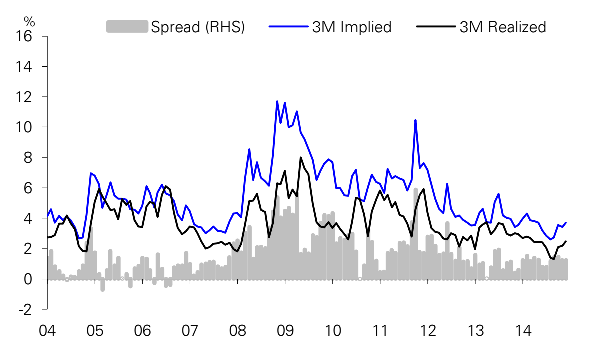
A recent improvement in ties with the Mainland, have led to several initiatives to facilitate cross-border investment and direct conversion of RMB into TWD at licensed institutions. In 2013, direct clearing and offshore trading of RMB begun Taiwan with the launch of yuan-denominated operations such as deposits, loans and remittances. The NT dollar is convertible for current account transactions, but more restricted on the capital account.

USD/TWD exchange rate

USD/TWD spot rate and 3M NDF premium



USD/TWD 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Central Bank of China (CBC) regulates Taiwan's foreign exchange market (http://www.cbc.gov.tw/EngHome/). The regulator of banking activities is the Banking Bureau which comes under the Financial Supervisory Commission (http://www.fscey.gov.tw/mp.asp?mp=5).
- FX or derivative transactions must be approved by the relevant regulatory authority. Regulated entities such as banks or insurance companies are not permitted to engage in new products without explicit approval. Combinations of approved products may be deemed by regulators to be new products requiring fresh approval.
- The Qualified Foreign Institutional Investor (QFII) system was abolished in October 2003 after having served its purpose for more than ten years. The current regulation on foreign portfolio investment in Taiwan is now classified into four categories, namely, onshore and offshore foreign institutional investors (FINI) and onshore and offshore overseas Chinese and foreign individual investors (FIDI). For more details, please see (http://www.tse.com.tw/en/investor/foreign_invest/OCFID_01.php).

Onshore TWD products

FX spot

Current account:	Documentation must be submitted to banks. Each company has an annual quota of USD 50m to buy and sell USD/TWD without supporting documentation (buy and sell quotas are kept separately).
Capital account:	Prior approval from CBC must be obtained. For FINI, there are no restrictions once investors are registered with the Taiwan Stock Exchange Corporation. For FIDI, there is a limit of USD 5m for investors.
Avg. ticket size:	USD 10mn
Bid/ask spread:	TWD 0.010 – 0.025
Avg. daily vol:	USD 800mn
Ref. source:	Reuters page <TAIFX1>
Trading hours:	9:00am – 12:00nn, 2:00pm – 4:00pm

FX forward/swap/long-dated FX forward

Regulatory:	As per FX spot
Avg. ticket size:	USD 10mn
Tenor:	Overnight to 5 years
Bid/ask spread:	TWD 0.005 – 0.040
Avg. daily vol:	USD 1bn
Ref. source:	Reuters page <TAIFX2>

FX options

Regulatory:	Only plain vanilla type options are allowed for onshore corporates. Documentation must be submitted to banks upon physical delivery.
Avg. ticket size:	USD 10mn
Tenor:	1 – 3 months
Bid/ask spread:	0.5 vol
Avg. daily vol:	USD 100m
Ref. Source:	Reuters page <TTDS>, < TAIFX1>, <PNDF>
Fixing page:	Reuters page <TAIFX1>, 11:00a.m. Taipei time

Onshore CCS

Regulatory: Entities with a legal onshore status are allowed to access the onshore deliverable market.

Approved categories:

- Securities investment.
- Domestic securities company raising funds locally or overseas for investment in the local or overseas equity market.
- Inward equity investment for registered financial institutional investor.
- Resident company's medium or long-term foreign currency debt borrowing from either the local or overseas market.
- Overseas institutions issuing convertible or non-convertible bonds in Taiwan.
- Local institution issuing overseas convertible or non-convertible bonds which have been approved for conversion into TWD.

Avg. ticket size: USD 10mn

Tenor: Up to 10 years

Bid/ask spread: 10 – 20bp

Avg. daily vol: USD 10 – 20mn

Ref. source: Reuters page <ITWDIRS>, <BGCTWD>

IRS/FRA

Regulatory: Entities with a legal onshore status are allowed to access the onshore market.

Liquidity: Good

Avg. ticket size: TWD 300-500mn

Tenor: 1 – 10 years

Bid/ask spread: 2 - 3bp

Avg. daily vol: TWD 3 – 5bn

Ref. source: Reuters page <ITWDIRS> <TRADTWD1>

Fixing page: TAIBOR or TAIBIR02

Short-term money market instruments (BA/CP, repo)

Regulatory: Entities with a legal onshore status are allowed to access the onshore market.

Avg. ticket size: TWD 10mn – 1bn for BA/CP, TWD 50mn – 1bn for repo

Bid/ask spread: 5 – 10bp

Avg. daily vol: USD 750mn

Ref. source: Telerate 6165 for BA/CP, Reuters page <0#TWBMK=> for repo

Government bond

Regulatory: Entities with a legal onshore status are allowed to access the onshore market. Effective November 11, 2010, FINI's (foreign institutional investors') investment in government bonds should not exceed 30% of net remitted-in funds.

Avg. ticket size: TWD 50mn

Bid/ask spread: 1bp (for benchmark 10-year), 10bps for off-the-run bond

Avg. daily vol: TWD 5-50bn (more than 80% of the trading volume is from the 10-year benchmark, but recently volume decreased to 20-50bn)

Ref. source: Bloomberg page <TGB GOVT>

Offshore TWD products

Non-Deliverable Forward (NDF)

Regulatory:	Onshore banks can only trade NDFs with locally registered banks and their offshore sister branches. NDF positions of banks are well regulated into FX NOP report which is 1/5 of total limit. Onshore banks are not allowed to book NDFs with corporations.
Avg. ticket size:	USD 10mn
Bid/ask spread:	TWD 0.01 – 0.03
Avg. daily vol:	USD 1.2bn (for tenors less than 1Y)
Ref. source:	Reuters page <NDF=DBQS> and <PNDF>
Fixing page:	Reuters page <TAIFX1>, spot fixing determined by the first contribution that CBC receives at 11:00am Taipei time, 2 business days before value date
Cross Fixing:	EBS at time of fix

Non-Deliverable Option (NDO)

Regulatory:	Potential restrictions for onshore entities. Offshore entities have no restrictions. ISDA documentation applies.
Avg. ticket size:	USD 30 mn
Bid/ask spread:	0.5 vols
Avg. daily vol:	USD 100mn
Ref. source:	DB autobahn
Fixing page:	Reuters page <TAIFX1>, spot fixing determined by the first contribution that CBC receives at 11:00am Taipei time, 2 business days before value date.

Offshore NDS market

Regulatory:	Potential restrictions for onshore entities. Offshore entities have no restrictions. ISDA documentation applies.
Avg. ticket size:	USD 10mn
Tenor:	2 – 5 years
Bid/ask spread:	20-30 bps
Avg. daily vol:	USD 10mn
Ref. source:	Reuters page <PNDS>
Fixing page:	Reuters page <TAIFX1>, Settlement: T+2, Floating Rate: 6M USD LIBOR, Frequency: Semi-annual, Day-count: Act/360

Clearing and settlement regulation

The Taiwan Securities Central Depository (TSCD) is the only central clearing and depository system in Taiwan. It is a quasi government entity owned by the Taipei Securities Dealers Association, and Fuh Hwa Securities Company

Its main objectives are:

- providing book-entry of securities transactions;
- clearing and settlement of securities traded on the TSEC and GTSM exchanges;
- clearing and settling both cash and securities;
- computer process handling for the clearing of futures market;
- registering securities issued in dematerialized form;

- Providing computer process of book-entry for participants;
- Auditing of shareholders affairs for issuing companies.

Government bonds are traded through the Electronic Bond Trading System (EBTS) and settled T+2 on a delivery against payment basis. On the other hand, repo and reverse repo trades are settled on the trading day itself.

Taxation

Foreign investors are subjected to tax at 15% on interest income from bonds (i.e. short-term bills, asset backed securities, government bonds, corporate bonds, and financial debentures. However, there is no tax on capital gains. A tax guarantor, usually the local sub-custodian, must be appointed to ensure appropriate taxes have been paid before foreign investors can remit their proceeds.

Thailand

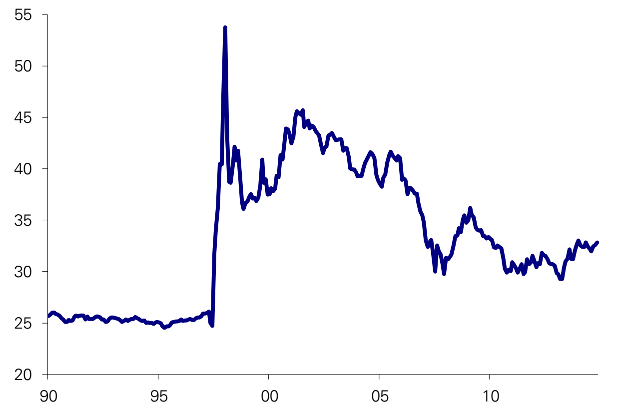
After being a fixed USD peg during post-war reconstruction, the baht was moved onto a managed float in 1955. This was a transitory measure to prepare for absorption into the par-value gold standard, which took place at a rate of 20.8 per USD in 1963. That rate was successfully maintained until 1972. Thereafter, with the USD falling heavily, Thailand introduced a 4.5% fluctuation range and pushed up the official rate to 20.00. Mirroring broader regional developments, the baht's anchor was switched to a trade-weighted basket of currencies in 1978, with fluctuations allowed within a broad trading band. This system remained in place through the mid-1990s, with only periodic broadening of the basket's composition and relatively minor devaluations. When the Asian financial crisis hit, Thailand was forced to float the baht on July 2 1997, resulting in its fall from around 27 to the USD to 55. Thailand now operates a managed-float FX regime.

The Bank of Thailand (BoT) has been conducting monetary policy under a flexible inflation targeting framework since 2000, wherein the central bank pays attention not only to inflation but also to economic growth and financial stability. The central bank targets core inflation rate with a medium-term aim of keeping it between 0.5% and 3%, although there is discussion of a shift to a headline inflation target in 2015.

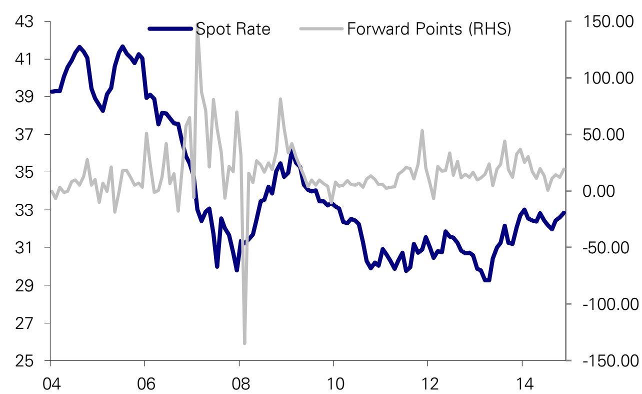
The central bank intervenes in the FX market to smooth volatility. BoT has often referenced guiding USD/THB to move in line with key trade partner currencies. However, a tumultuous experience with massive capital flow volatility and failed FX intervention during the 1997 Crisis has made the central bank resort to capital controls to influence the exchange rate in recent years.

The THB NDF market never took off due to the presence of a parallel offshore (deliverable) market. In late 2006 however, the central bank imposed a 30% Unremunerated Reserve Requirement (URR) on all new inflows, raising the cost for foreigners to acquire THB from onshore; consequently offshore THB traded at a premium (in extremely thin volumes) to the onshore market. BoT eventually scrapped the URR in February 2008, and since then, the onshore and offshore FX rates have converged. In 2010, the government imposed a 15% withholding tax on foreign bond investors to try to reduce capital inflows and upward appreciation pressure on the currency. In 2012, BoT pushed forth with its "Capital Account Liberalization Master Plan" relaxing regulations on outward direct and portfolio investment by Thai companies and individuals, to encourage more balanced capital flows and reduce pressure on the baht.

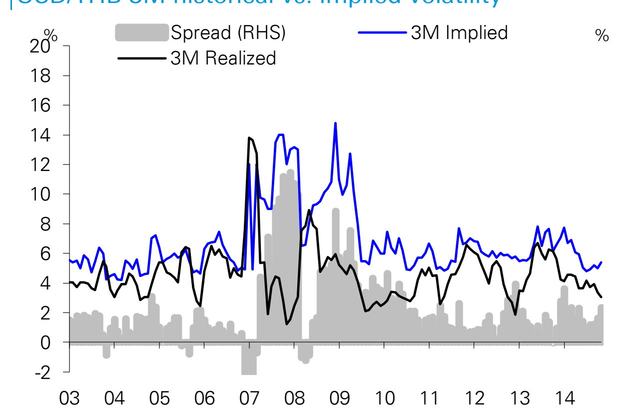
USD/THB exchange rate



USD/THB spot rate and 3M fwd premium



USD/THB 3M historical vs. implied volatility



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The Bank of Thailand (BoT) is responsible for monetary policy. The BOT also regulates all banking activities and exchange controls. (http://www.bot.or.th).
- The Ministry of Finance (MOF) oversees fiscal policy. (http://www.mof.go.th/index_e.html).
- FX or derivative transactions should be for hedging of or transactions in, an underlying trade or asset investment flow. Banks are authorised to ensure that there are no speculative transactions with non-bank entities. Since June 2001, BoT has been more sensitive to the nature of transactions in the THB market.
- BoT introduced measures in late 2003 to curb speculation pressure on THB, which included but was not limited to: (1) a ban on THB direct lending to non-residents by financial institutions (2) a restriction on investment in non-resident THB instruments by financial institutions (3) a ban on repo, reverse repo, securities sell & buyback with non residents by financial institutions, (4) a restriction on funding THB through the FX market (e.g. converting FCY to THB with value same-day or tomorrow) or absorbing THB liquidity in the FX market (e.g. converting THB in NRBA or NRBS to FCY with value same-day or tomorrow) by non-residents with financial institutions. These restrictions only apply for transactions that are not supported by valid underlying trades or investments in Thailand.
- In September 2010, in an effort to slow inflows into the local bond market, MOF announced an increase in withholding tax on foreign investments in bonds issued by Thai government agencies (including BOT and state enterprises) from zero to 15%, to be charged on interest income and capital gains.
- In October 2012, however, BoT started to relax some of the FX regulations:
  - Thai residents can hedge their overseas investments freely
  - Measures to limit THB speculation by non-residents were relaxed. For example, domestic financial institutions can provide more to or borrow more from non residents from transactions undertaken without underlying trade and investment to THB500m per group of non residents per financial institutions.

Onshore THB products

FX spot

Regulatory:	There is no restriction on entering into spot transactions with non-resident counterparties to fund their investments or trade in Thailand; underlying documents need to be provided. Similarly, to repatriate THB funds offshore, there are no spot restrictions if the THB funds are from valid investment or trades in Thailand. Non-residents may open Thai Baht accounts with authorized banks in Thailand as follows: (1) Non-resident Baht Account for Securities (NRBS): The account may be debited or credited for the purpose of investment in securities and other financial instruments such as equity instruments, debt instruments, unit trusts, financial derivatives transactions traded on the Thailand Futures Exchange and Agricultural Futures Exchange of Thailand. (2) Non-resident Baht Account (NRBA): The account may be debited or credited for general purposes except funds related to investment in securities such as trade, services, foreign direct investment, investment in immovable assets, and loans. The total daily outstanding balances for each type of account shall not exceed THB300 million per non-resident. Transfers between different types of accounts are not allowed. http://www.bot.or.th/English/ForeignExchangeRegulations/FXRegulation/Pages/ExchangeControlLaw.aspx
Avg. ticket size:	USD 3-5 m
Bid/ask spread:	THB 0.005-0.01
Avg. daily vol:	USD 0.8 – 1.0 bn
Ref. source:	Reuters page <THB=>

FX forward/swap/long-dated FX forward

Regulatory:	For hedging purposes only. In cases of hedging without underlying exposure, transactions must be executed within the regulatory limits as described in the regulatory framework section above. Offshore counterparties with underlying exposures can hedge with onshore banks. Non-residents have to provide the underlying documents before trade execution. Underlying transactions must be verified every 2 weeks.
Avg. ticket size:	USD 20 mn
Tenor:	less than or equal to 1 year
Bid/ask spread:	THB 0.01-2.00 (depends on the tenor)
Avg. daily vol:	USD 0.6 - 1.5 bn
Ref. Source:	Reuters page <THBF=TH>

FX options

Regulatory:	Onshore options are allowed for hedging of real underlying exposures. In cases of hedging without underlying exposures, transactions must be executed within the regulatory limit as described in the regulatory framework section above. FIs must verify the evidence for the customer's underlying exposure. A bi-weekly review is required to ensure that the value of the underlying is not less than that of the option contract. There is currently no onshore interbank options market in Thailand.
Avg. ticket size:	USD 5m -20 m
Bid/ask spread:	1 - 3 Vol
Avg. daily vol:	USD 20m
Ref. Source:	Nil.
Fixing page:	Reuters page <THBFIX=TH>, 11:00a.m local time

Onshore CCS

Regulatory:	Non-Residents are not allowed to access the onshore deliverable market unless substantiated by an underlying economic transaction. Transactions must be between banks and clients with supporting underlying economic transactions. In cases of hedging without underlying exposures, transactions must be executed within the regulatory limits as described in the regulatory framework section above. Offshore can trade CCS (deliverable market) with offshore counterparties but the prices are different from onshore, and the market is not liquid.
Avg. ticket size:	USD 5-30 mn
Tenor:	1-10 year
Bid/ask spread:	20 bp
Avg. daily vol:	USD 50m
Ref. Source:	Reuters page <APTH06>

IRS/FRA

Regulatory:	Fixing rates (6 month) are based on fxswap implied rate with USD from SIBOR but fixing on OIS is based on o/n cash rate. Non-Residents are allowed to undertake IRS/FRA with the following conditions: 1) transactions shall not result in banks receiving negative interest payments and 2) banks shall under such transactions pay non-residents in foreign currencies.
Avg. ticket size:	USD 15-65 mn
Tenor:	1m-10 year
Bid/ask spread:	2-6 bps
Avg. daily vol:	USD 0.5-2bn
Ref. Source:	Reuters page <APTH06>
Fixing page:	Reuters page <THBFIX> for IRS/FRA, Reuters page <BOT03> for OIS

Short-term money market instruments (Bill of exchange/t-bills/CP/repo/Promissory Note, P/N)

Regulatory:	Commercial banks are generally not allowed to issue THB paper to raise fund from non-residents or purchased THB papers issued by non-residents in the primary markets. In secondary markets, commercial banks are not allowed to hold commercial paper (including other exposures) worth more than 25% (per name of issuer) of the bank's capital (single lending limit). This is only applicable for banks which operate in Thailand and for credit facilities granted in THB only. Foreign banks operating in Thailand face this ruling for all their onshore branches. If a foreign bank wishes to purchase THB exchange bills, the amount must be consolidated with all granted credit and compared with 25% of onshore capital. For interbank transactions, the maximum allowance is 60% of the capital.
Avg. ticket size:	OTC – as per request
Bid/ask spread:	Varies, based on LIBOR plus a spread to the implied swap curve
Avg. daily vol:	Unable to estimate as highly irregular
Ref. Source:	Reuters page <THBF=>

Government bond

Regulatory:	Non-residents can buy onshore paper but repo funding, including sell and buyback with onshore commercial banks, is not allowed. A 15% withholding tax applies to capital gains and interest income, depending on type of debt instruments (double taxation agreements however allows for exemption of WHT on capital gains but not on interest income)
Avg. ticket size:	THB 20m
Bid/ask spread:	1 - 5bp
Avg. daily vol:	THB 5bn
Ref. Source:	Reuters page <0#THTSY=>, Bloomberg page <DABA13>

Offshore THB products

Offshore Forwards

Regulatory:	Lending restriction to onshore applies. No borrowing from onshore is permitted.
Avg. ticket size:	USD 3m
Bid/ask spread:	THB 0.02 – 0.03
Avg. daily vol:	USD 600m
Ref. Source:	Reuters page <IRFWD>
Fixing page:	Reuters page <ABSIRFIX01>, 11:00am Singapore time, 2 business days before value date
Cross Fixing:	EBS at time of fix

Deliverable FX options

Regulatory:	ISDA documentation applies
Avg. ticket size:	USD 10 mn
Bid/ask spread:	3 Vols
Avg. daily vol:	USD 0-5 mn
Ref. Source:	Nil.
Fixing page:	Reuters page <ABSFIX01>, 11:00am Singapore time

Offshore CCS market

Regulatory:	ISDA documentation applies
Avg. ticket size:	USD 5mn
Tenor:	1 – 5 years
Bid/ask spread:	50-70 bps
Avg. daily vol:	USD 10-20m
Ref. Source:	Reuters page <EXOT>
Fixing page:	Reuters page <ABSIRFIX01>, 11:00a.m local time

Clearing and settlement regulation

Foreign investors can choose to settle through Euro clear offshore, or onshore using a local custodian. Local settlement typically uses physical delivery, however, there are plans for these to eventually be done on a 'Delivery versus Payment' (DvP) basis. This is to reduce settlement risks.

Settlement at the TSD is T+2 through a net clearing and book-entry basis. The process is governed by the DvP mechanism to guarantee principal risk protection.

Taxation

Since October 2010, foreign investors in Thai government bonds are subject to a tax on capital gains. The tax rate is 15%, but many of Thailand's tax treaties can reduce the rate to 10%. Interest income from bonds is exempt for non-residents.

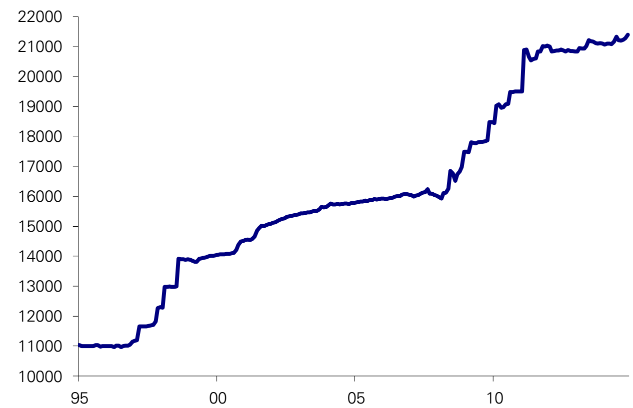
Vietnam

Prior to the Vietnam War, North and South Vietnam followed their principal sponsors, with separate currencies linked to the US dollar and Russian rouble. Following political unification, a uniform currency, the Vietnam Dong (VND) was introduced in May 1978. Against a background of high inflation, devaluations were frequent. In 1991 special foreign exchange centres were set up in Hanoi and Ho Chi Minh, at which USD/VND was auctioned. The daily closing traded rate was made applicable to all transactions. Commercial banks were required to buy at this rate and sell within a 0.5% range, later widened to 1%. An interbank FX market began operation in 1994, permitting spot and forward transactions in 6 currencies within guideline ranges stipulated by the State Bank of Vietnam (SBV).

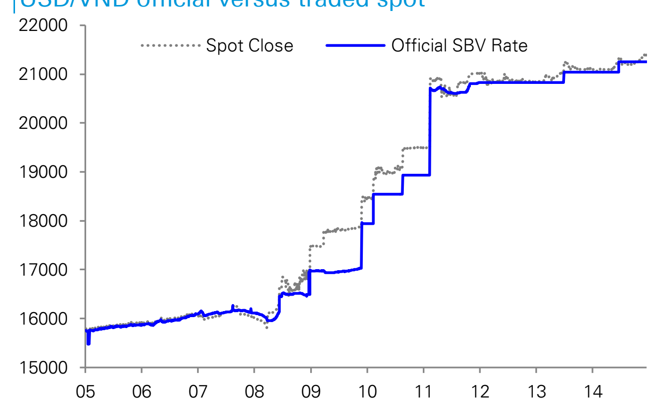
During the Asian financial crisis, the official rate was devalued by close to 20%. Finally, a new official fixing mechanism was set up in 1999 based on the daily weighted average transaction rate in the interbank foreign currency market of VND/USD. Commercial banks could set their own rate within a band of 0.1%, which was increased to 0.25% in 2002, doubled to 0.5% in early 2007, and upped again to 0.75% at year-end. In March 2009 the band was widened to +/-5%, but re-narrowed to +/- 3% by the end of the year. The official VND rate was devalued 5 times during 2009-10. The unofficial "black" market USD/VND rate traded well above the official rate, given the chain of devaluation expectations, which falling FX reserves and a large trade deficit served to exacerbate. In Feb 2011, the VND was devalued once more by a significant 8.5% against the USD to control the rising trade deficit, and the trading band was narrowed to +/- 1%. In 2012, a significant improvement in Vietnam's external position and a fall in headline inflation reduced pressure on the VND and enabled a rebuilding in FX reserves. In June 2013, against a backdrop of tapering pressures, the VND was weakened by 1%, and again in June 2014.

The State Bank of Vietnam has the responsibility for conducting monetary policy. The main policy tool is the base rate, but in practice the central bank relies on a mix of moral suasion, administrative controls, caps on bank lending rates and other regulations. The central bank sets a daily fixing for the "official" exchange rate and all transactions must be done within a +/-1% band around the fixing. In practice, a kerb market still operates locally where the exchange rate can be different from the official fixing, reflecting demand/supply factors. Dollarization persists in Vietnam, but to discourage people from holding dollar deposits at banks SBV has ruled on reducing dollar deposit rates. The dong is highly restricted for capital account transactions.

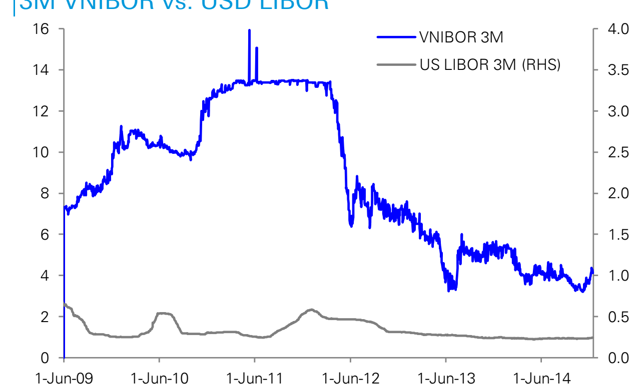
USD/VND exchange rate



USD/VND official versus traded spot



3M VNIBOR vs. USD LIBOR



Source: DB Global Markets Research, Bloomberg Finance LP

Regulatory framework and approach

- The main regulator and financial policy maker is the State bank of Vietnam (SBV). Website http://www.sbv.gov.vn/
- A Foreign Exchange Ordinance provides the legal framework for all foreign exchange activities.
- Major details about foreign exchange activities and products are currently stipulated in Decree No. 160/2006/ND-CP dated 28/12/2006 Providing in Details for The Implementation of the Ordinance on Foreign Exchange ("Decree No. 160"), Circular No. 03/TT-NHNN dated 11/04/2008 Providing Guidance on Foreign Exchange Service Supply by Credit Institutions ("Circular No. 03") and Decision 1452/QD-NHNN dated 10/11/2004 on Foreign Exchange Transactions of Credit Institutions that Are Permitted to Engage in Foreign Exchange Activities ("Decision 1452") and Decision No. 62/2006/QD-NHNN dated 29/12/2006 on the issuance of the Regulation on the Implementation of Interest Rate Swap Transaction ("Decision No. 62")
- The SBV fixes the reference rate for the VND with respect to the USD and specifies a trading band within which the currency can vary. Currently the trading band is around +/-1% of where the daily fixing is. This was reduced from 3% in February 2011.

Onshore VND products

FX spot market

Regulatory:	Supporting documentation is required when corporate clients want to buy any foreign currency against VND from the authorised FX banks (the "Authorised Banks") for permitted purposes. Relevant supporting documents are subject to requirements of the Authorised Banks based on each purpose. State Bank of Vietnam (SBV), the central bank, controls USD/VND within a trading band. Ceiling and floor rates are used to cap spot for USD/VND at band +/-1% since 11Feb 2011. No cap on non-USD against VND.
Avg. ticket size:	USD 1mn
Bid/ask spread:	VND 30-80
Avg. daily vol:	USD 300-500mn
Ref. source:	Reuters page" VND=" for indicative only (not tradable) as it is posted once a day at 11 am only. Real market price should be referred to local trading desk contacts. For other ccy onshore like EURVND, can refer to "EURVND=" Reuters page which is not real time rate but it's the only source to have a reference with real market rate onshore. The EURVND page may be different from actual rate around VND100-VND200 dong per EUR. BBG page: <VNMF>
Trading hours:	8:00am – 4:00pm Vietnam time

FX forward/swap/long-dated FX forward

Regulatory:	For FCY/VND (where FCY represents Foreign Currency), if a client buys FCY forwards, they are required to provide supporting documents on the underlying transactions, as per spot transactions. The USD/VND forward rates are also subject to forward ceiling rates. Restrictions for FX swaps are similar to FX forwards, except that no documents are required. There are no local rules governing FCY/FCY forward and swap transactions. Offshore investors are not allowed access to local FX forward and FX swap market.
Liquidity:	Swaps are mostly used for funding, and not trading. Good liquidity for short tenor up to 3M, but very poor from 6M or longer due to limits and available of ISDA.
Avg. ticket size:	USD 1mn for FX forward and USD10m for FX swaps
Tenor:	Allowed max tenor is 365 days for VND related transactions, exceptions are subject to SBV's approval
Bid/ask spread:	50-100bps for FX swap

Avg. daily vol: USD 5 – 50mn for forwards, USD200-500m for FX swaps

Ref. source : Reuters page : <VNDF=> BBG page : <VNMF>

FX options

Regulatory: Banks are allowed to trade FCY/FCY options. USD/VND options are, however, not permitted at this point.

Liquidity: Very poor

Onshore CCS

Regulatory: Non credit-institutions in foreign countries are not allowed to do USDVND CCS. Banks and non-bank entities who wish to do USDVND CCS for their own hedging purposes with authorised banks operating in Vietnam have to present their underlying transactions. These underlying transactions are performed in accordance with provisions of applicable laws of Vietnam, they can be deposit, issuance of or investment in valuable papers, funds borrowing, finance leasing, goods purchase in form of deferred payment.

Term of a swap contract shall be agreed upon by the parties but not be in excess of the remaining terms of the underlying transactions.

Liquidity: Illiquid, but improving

Ref source: Reuters page <VUSCS>, BBG page: <OTC>

IRS

Regulatory: The terms of interest rate swap contracts shall be as agreed by the parties. Underlying docs are required for trade with corporate clients. The nominal exposure to each corporate client shall not exceed 30% of the bank's equity.

Liquidity: Very poor

Ref source: Reuters page <VNDIRS>, BBG page: <OTC>

Short-term money market instruments (CD/CP/repo/deposit/loan)

Regulatory: Few CD/CP transactions.

Repo is a new market, but legal documents like Global Master Repurchase Agreement (GMRA) are not widely accepted by local entities. Bond titles are transferred through buy/sell orders at the stock exchange, and are therefore expensive (0.025%-0.1% of transacted value).

Reference rate for VND interest rate is either VNIBOR1 or EURVNDFIX=. Sometimes, VNIBOR1 is non-tradable on the interbank market due to cap on VND ceiling interest rate.

Liquidity: Very poor

Avg. ticket size: USD 3 – 50mn

Government bond

Regulatory: No restrictions for onshore investors. For offshore investors, there is a withholding tax of 10% of coupon received, and 0.1% on sales proceeds.

The government started to issue local VND bonds in 2000, with government bonds accounting for more than 80% of total bonds outstanding. Commercial banks are the dominant government bond market investors in Vietnam, with a majority of bond purchases being held to maturity. The most liquid tenor is 2y-5y.

Avg. ticket size: USD 3 – 5mn

Bid/ask spread:	30 – 50 bps
Avg. daily vol:	USD 20 – 40mn
Ref. Source:	Reuters page <VN/DEBT>. Bloomberg page <VNBF>

Offshore VND products

Non-Deliverable Forward (NDF)

Regulatory:	Onshore banks are restricted. For offshore/offshore counterparties, ISDA documentation applies.
Fixing:	The VND NDF fixes at 11am Singapore time, with the fixing rate provided by the Association of Banks in Singapore (ABS). Spot date is T+2, fixing is 2 days prior to settlement
Avg. ticket size:	On request
Bid/ask spread:	On request
Avg. daily vol:	Unable to estimate as highly irregular
Ref. Source:	Do not publish

Clearing and settlement regulation

To participate on the Ho Chi Minh Stock Exchange (HOSE) and Hanoi Securities Trading Centre (HASTC), investors are required to get a securities transaction code, which can be obtained via opening a securities transaction account with a member securities company. On the other hand, repatriation of capital gains or profits requires a foreign currency account and VND account with a foreign custodian bank.

Clearing and settlement is centralized through the Vietnam Securities Depository (VSD). Cash clearing can only be done via the Bank for Investment and Development of Vietnam while securities are settled/ and held in custody by the VSD. The settlement date convention is T+1.

Taxation

Foreign individual and institutional investors are subject to 5% withholding tax on interest income earned from investment in bonds and 0.1% withholding tax on gross sale proceeds on the sale of bonds. Onshore brokers or custodian banks are responsible for withholding and paying the tax to authorities on behalf of foreigners. Sovereign bonds issues in the international market, however, are exempted from tax payment as of 1 November 2014.

Czech Republic

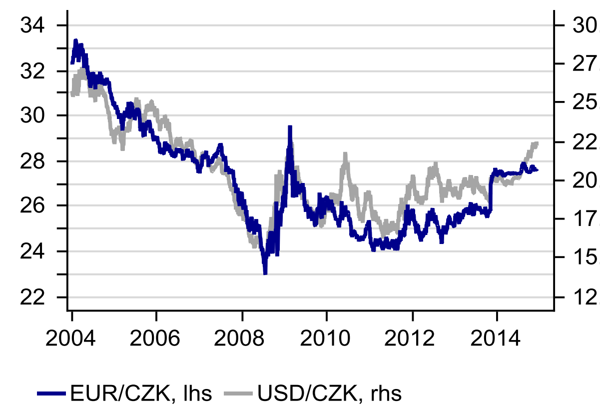
The Czech koruna (crown) replaced the Czechoslovak koruna at par on 8th February 1993. The koruna has been free floating since Jan 1997, when the managed float regime was abolished. Prior to January 1997, the koruna was managed against a basket of USD and DEM with intervention bands of +/-7.5% around central parity. The foreign exchange regime was fully liberalized in 1999.

Czech Republic joined the EU in 2004 and therefore has a commitment to join the Euro at an unspecified future date. In order to enter the Eurozone, all five Maastricht criteria must be met including the commitment to enter ERM-II and maintain EUR/CZK +/-15% around a selected "parity" rate for at least 2 years.

The primary objective of the Ceska Narodni Banka (CNB) is to maintain price stability, as defined by a target of 2% +/-1%. Policy decisions are made by the seven-member Board which meets eight times per year.

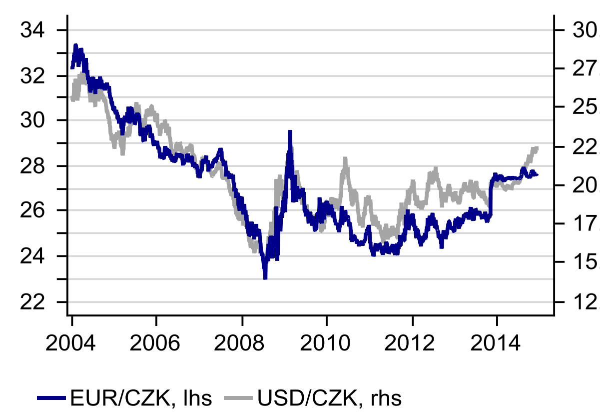
The koruna is fully deliverable and convertible. Spot is liquid in both USD/CZK and EUR/CZK but EUR/CZK is the dominant cross with around 85% of transaction volume. EUR/CZK has also taken-over from USD/CZK as the most important cross in the FX forward and options markets.

USD/CZK and EUR/CZK exchange rates



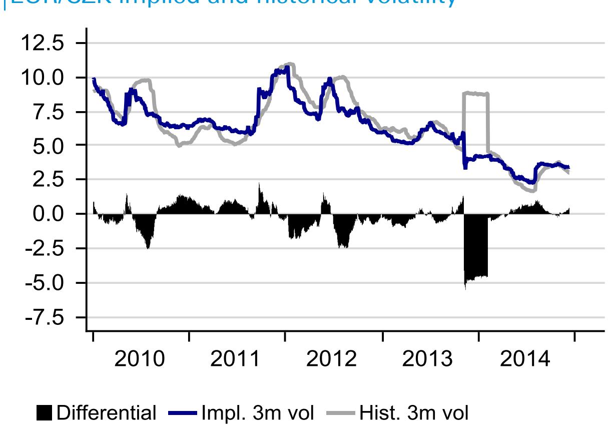
Source: Deutsche Bank, Bloomberg Finance LP

USD/CZK and 3M implied yields



Source: Deutsche Bank

EUR/CZK implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- Czech National Bank regulates exchange rate policy and is responsible for implementing monetary policy (http://www.cnb.cz)
- The koruna is fully deliverable and convertible
- The major monetary policy tool of the CNB is the 2W liquidity-absorbing open-market operation conducted each week on Monday, Wednesday and Friday. The repo is competitive and the CNB accepts bids up to the level of the policy rate and to the level of the expected liquidity surplus. Since October 2008 the CNB have also held liquidity-providing operations with 2W and 3M tenors
- To regulate any volatility in money market rates the CNB also has overnight deposit and overnight lending facilities at the Discount rate (policy rate minus 100bp) and the Lombard rate (policy rate plus 100bp), respectively. Banks are subject to a 2% minimum reserve requirement

CZK products

FX spot

Avg. ticket size:	USD 5mn
Bid/ask spread:	CZK 0.01
Avg. daily volume:	USD 1-2bn
Ref. source:	ECB fixing <ECB37>
Trading hours:	8:30-17:00 London

FX forward/swap

Avg. ticket size:	USD 10mn (FX forwards); USD 100mn (FX swaps up to 3M), USD 30mn (swaps up to 1Y)
Liquid Tenors:	<1Y
Avg. daily volume:	USD 4.2bn (FX forwards + FX swaps)
Bid/ask spread:	CZK 0.01-0.07

FX options

Avg. ticket size:	EUR 10mn
Liquid tenors:	<1Y
Avg. daily volume:	USD 100mn
Bid/ask spread:	1.0 vol

IRS + FRA

Avg. ticket size:	USD 6.6k-15k DV01
Liquid tenors:	IRS 1Y-10Y and FRAs out to 9X12
Avg. daily volume:	USD 150mn -200mn IRS, USD 130mn – 365mn FRAs
Bid/ask spread:	3-5bps
Fixing:	3M PRIBOR for 1Y IRS; 6M PRIBOR for IRS 2Y+
Ref source:	Reuters Page <PRIBOR=>

Government T-bills and bonds

Regulatory:	Bonds are bearer securities and are held in the Prague Securities Centre; investors need to arrange access through their custodian. There are no restrictions on non-resident investors. Interest is taxed at 15% but this can be reduced or eliminated with double-taxation treaties.
Liquidity:	3Y-10Y
Avg. ticket size:	USD 1-3mn
Bid/ask spread:	5bp
Avg. daily volume:	USD 10-50mn

Egypt

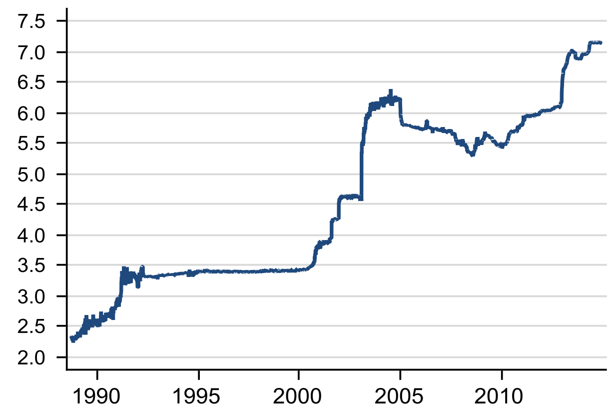
The Egyptian pound was introduced in 1836, although it was officially pegged at parity to sterling through to 1949. The peg to the USD was broken in 2000 and the EGP was formally "floated" on the 29th January 2003, abolishing the central trading rate for USD/EGP. Nevertheless, EGP is officially a managed float and the Central Bank of Egypt (CBE) currently intervenes heavily in the market. High inflation, a weak dollar and the high cost of sterilisation have meant that CBE have allowed significantly more exchange rate volatility since mid-07.

Price stability is the primary objective of CBE monetary policy. The CBE do not have an explicit inflation target. However, the CBE intends to adopt a fully-fledged inflation targeting regime in the future. The Monetary Policy Committee (MPC) of CBE will normally convene on the first Thursday of each month for the purpose of deciding on its policy rates and will issue a communiqué immediately following its meetings. Should a Thursday fall on a public holiday, the MPC will meet on the following business day.

On June 2, 2005 the CBE introduced an interest rate corridor through two standing facilities - the overnight lending and the overnight deposit facility. The interest rates on the two standing facilities define the ceiling and floor of the corridor, respectively. By setting the rates on the standing facilities, the MPC determines the corridor within which the overnight rate can fluctuate. Effectively, steering the overnight interbank rate within this corridor is the operational target of the CBE.

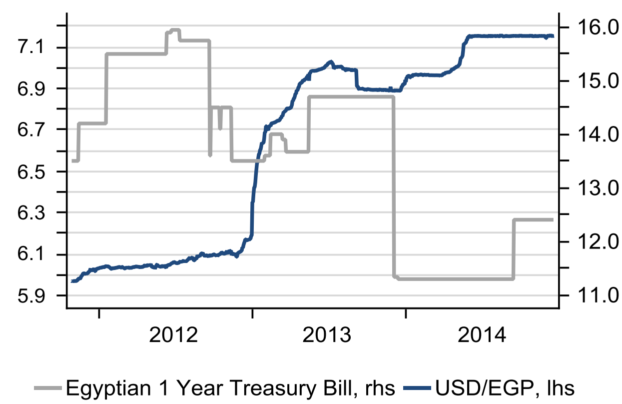
Full convertibility was introduced in 2003, but dealing in FX can still only be conducted by banks authorized by the CBE. An interbank FX market was launched on December 23rd 2004 after a three-month trial period.

USD/EGP exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/EGP and EGP 1Y T-bill yield



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- Exchange rate policy and supervision is conducted by the Central Bank of Egypt (http://www.cbe.org.eg),which is also responsible for implementing monetary policy
- The main policy instruments of the CBE are the overnight deposit and lending rates; these define thebounds of the overnight inter-bank rate. The CBE interacts with the market through regular depositauctions.
- The Egyptian pound is convertible only for permitted underlying transactions, though has suffered from a lack of USD liquidity for much of the last 2 years. It is heavily managed by the CBE.
- A withholding tax of 20% applies to government T-bills; this can be reduced using double taxation treaties
- At the onset of the political turmoil in January 2011, trading on the Egyptian stock market was suspended. The stock market reopened in March 2011, just in time to avoid a suspension from the MSCI (which would have ensued had the closure persisted for forty days).

EGP products

FX spot

Avg. ticket size:	USD 100k-200k
Bid/ask spread:	EGP 0.01
Avg. daily volume:	USD 20-30mn
	CBE conducts 3 x USD40m auctions per week for essential imports, ad hoc auctions of up to USD800m
Ref. source:	NDF fixing reference Reuters <FEMF> 12:30pm
Trading hours:	08:00-12:00 London

Non deliverable FX forward

Avg. ticket size:	USD 3-5mn
Liquid tenors:	<1Y
Bid/ask spread:	EGP 0.05-0.08

Government T-bills and bonds

Regulatory:	transactions are now recorded electronically on a system which links the primary dealers, CBE and Cairo and Alexandria Stock Exchange (CASE) with the Misr Settlement, Clearing and Central Depository (MCSD). Most trading is OTC with only a few bonds quoted on CASE. A 15%-20% withholding tax (depending on home country tax rate) on T-bills was introduced in May 2008. This only applies to government T-bills issued from May 2008 onwards and does not affect payments on government bonds. Foreign investors face no restrictions on holding T-bills or bonds but often use TRS or CLN for convenience. The market trades Sunday-Thursday.
Avg. ticket size:	USD 2-5mn
Daily turnover:	USD 150-300mio
Bid/ask spread:	T-bills: 30-50bp, T-bonds: 50-100bps

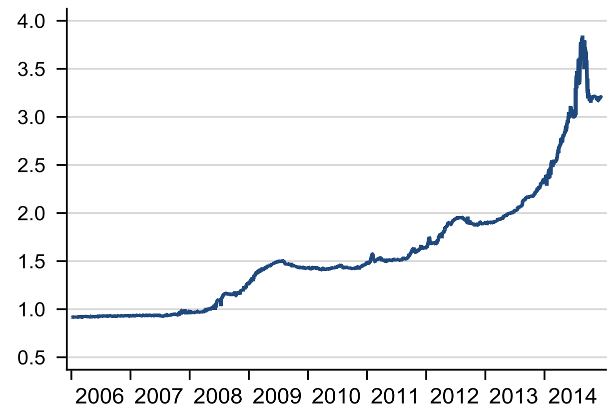
Ghana

The cedi was introduced in 1965, replacing the sterling as the official currency. It was initially pegged first to sterling and then to the dollar. After a series of devaluations in the 1970s, the cedi was finally pegged at a rate of 2.8 to the dollar in 1980. As a result of high inflation, a parallel black market rate developed in the 1980s, with the government only fully liberalizing the exchange rate in 1990. Since then the cedi has freely floated. On 1st July 2007, the currency was redenominated with 1 new cedi (GHS) worth 10,000 cedi (GHC).

The Bank of Ghana's (BOG) primary policy objective is to ensure price stability – i.e. low inflation and secondarily to support the Government's economic objectives (higher growth and employment). BOG formally launched its inflation targeting regime in 2007 and has full policy independence. Monetary policy is determined by the Monetary Policy Committee (MPC), which consists of seven members – five from the Bank of Ghana and two external members. The MPC has a medium term objective of keeping inflation below 10%. Inflation targets are announced annually and the MPC meets six times per year. The MPC uses the prime rate as the key policy rate to set the stance of monetary policy. Both BOG and Government of Ghana (GOG) issue short term debt securities weekly.

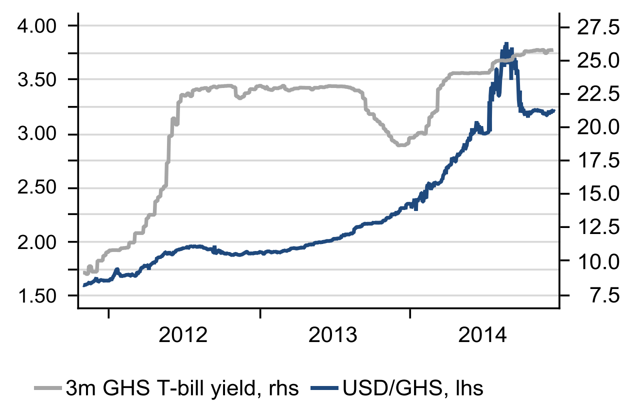
The cedi is fully deliverable and convertible. Deliverable FX forwards are traded offshore.

USD/GHS exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/GHS and GHS 3M T-bill yield



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The Bank of Ghana (BOG) is responsible for both exchange rate and monetary policy (http://www.bog.gov.gh)
- The cedi is fully deliverable and convertible
- International investors are prohibited from buying government instruments with maturities less than 3 years at issuance.

GHS products

FX spot

Avg. ticket size:	USD 0.5-1.5mn
Bid/ask spread:	GHS 0.05
Avg. daily volume:	USD 2-5mn
Trading hours:	10:00-14:00 London

Deliverable FX forward

Avg. ticket size:	USD 2-5mn
Liquid tenors:	<6M
Bid/ask spread:	GHS 0.005-0.010

Government T-bills and bonds

Regulatory:	Non-residents cannot buy T-bills or government bonds with original maturity below 3 years
Avg. ticket size:	USD 2mn
Bid/ask spread:	T-bonds: 50-100bp

Offshore GHS products

Non-Deliverable Forward (NDF)

Avg. ticket size:	USD 2-4mn
Bid/ask spread:	0.0500 - 0.1000 GHS
Ref. source:	EMTA approved dealer poll conducted by REUTERS (GHSFIX=TR)

Hungary

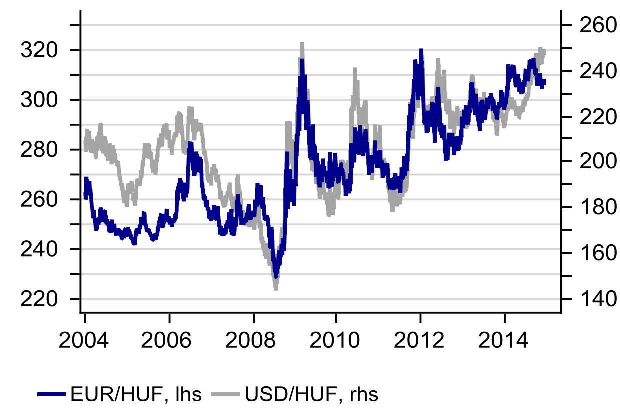
The forint was introduced in 1946, after the 1945-46 hyperinflation of the pengo. The forint replaced the pengo at the rate of 1 forint = 4×1029 pengo. A crawling band exchange rate regime was introduced in 1995 after high inflation in the mid-1990s. In May 2001 the crawling band was scrapped and replaced by a +/-15% band against the Euro with a fixed central parity. The band was scrapped in February 2008 and the forint is now freely floating. The last remaining capital controls were eliminated in June 2001.

Hungary joined the EU in 2004 and, therefore, has a commitment to join the Euro at an unspecified future date. In order to enter the Eurozone, all five Maastricht criteria must be met including the commitment to enter ERM-II and maintain EUR/HUF +/-15% around a selected parity rate for at least 2 years.

The primary objective of the National Bank of Hungary (NBH) is to achieve and maintain price stability. NBH is also responsible for issuing the forint, controlling cash circulation, setting the Central Bank base rate, publishing official exchange rates and managing the national reserves of foreign currency and gold to influence exchange rates. The NBH has an explicit medium term inflation target of 3%+/-1%. The Monetary Council meets on a monthly basis to set the policy rate.

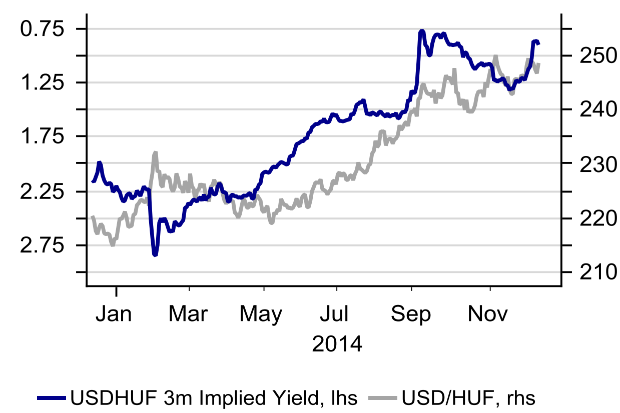
The forint is both fully deliverable and convertible. Spot is liquid in both USD/HUF and EUR/HUF but due to the strong economic ties between Hungary and the Euro-area, EUR/HUF is viewed as the economically correct way to take a view on the forint. In the spot market, 80% of all trading is in EUR/HUF. EUR/HUF is also the predominant cross in the FX forward and options markets.

USD/HUF and EUR/HUF exchange rates



Source: Deutsche Bank, Bloomberg Finance LP

EUR/HUF and HUF 3M implied yields



Source: Deutsche Bank

EUR/HUF implied and historical volatility

Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The National Bank of Hungary regulates exchange rate policy, and is also responsible for implementing monetary policy (http://www.mnb.hu).
- The principal policy rate is the rate on the two-week NBH deposit, which is set by the NBH at policy meetings. The NBH deposit is available once a week through a fixed rate tender for the counterparties, with the rate set as the policy rate. All bids are accepted. The NBH also has overnight standing facilities at the policy rate +/-1% to regulate any short-term volatility in the forint money markets. Reserve requirements are set at 2%.
- The Hungarian forint is a fully deliverable and convertible currency.

HUF products

FX spot

Avg. ticket size:	USD 5mn
Bid/ask spread: H	UF 0.2
Avg. daily volume:	USD 1-2bn
Ref. source:	ECB fixing <ECB37>

FX forward/swap

Avg. ticket size:	USD 20mn (FX forwards); USD 75mn (FX swaps)
Liquid tenors:	<1Y
Bid/ask spread:	HUF 0.4-1.4
Avg. daily volume:	USD 100-200mn (FX forwards), USD 2-3bn (FX swaps)

FX options

Avg. ticket size:	EUR 20mn
Liquid tenors:	<1Y
Bid/ask spread:	0.5 vols

IRS + FRA

Avg. ticket size:	USD 5-10k DV01
Liquid tenors:	IRS 1Y-10Y and FRAs out to 9X12
Bid/ask spread:	4-6bp
Daily volume:	FRA $50k dv01, IRS $75k dv01
Fixing:	3M BUBOR for 1Y IRS; 6M BUBOR for IRS 2Y+
Ref. source:	Reuters page <BUBOR=>

Government T-bills and bonds

Regulatory:	T-bills and Bonds trade OTC and on Budapest Stock Exchange (BSE). Bonds are dematerialised bearer securities. Clearing and settlement of trades occur on the Central Clearing House and Depository (KELER). There is no withholding tax on interest paid on Hungarian securities owned by a legal entity. Individuals are charged withholding tax at 20% but this can be reduced or eliminated through double taxation treaties. There are no restrictions on non-resident ownership of Hungarian government bonds and T-bills.
Liquid tenors:	3Y-15Y
Avg. ticket size:	USD 3mn
Bid/ask spread:	4bps

Israel

The New Israeli shekel (or sheqel), ILS (or NIS), replaced the old Israeli shekel in 1985 at a rate of 1,000 Israeli shekels per 1 New Israeli shekel. In the 1990s the Bank of Israel (BoI) maintained the shekel in a gradually widening crawling band. In 2005 the band was abolished and the shekel is now freely floating. Foreign exchange controls were gradually reduced through the 1990's until they were completely abolished at the beginning of 2003, when the currency became fully convertible.

After a period of rapid shekel appreciation in early 2008, BoI intervened directly in the FX market between March 2008 and August 2009 with programmed daily purchases of between USD 25mn – 100mn. These regular FX purchases were cancelled in August 2009 and were replaced with ad-hoc, discretionary intervention. . In January 2011, BoI announced new regulatory measures for FX derivative transactions. It published a draft order which imposes a reporting obligation on non-residents and Israeli residents who perform transactions in FX swaps and forwards of more than $10m in one day and on nonresidents who perform transactions in T-Bills and short term government bonds of more than NIS10mn in one day. This was followed by an announcement that the commercial banks will have to meet a 10% reserve requirement for FX swaps and forwards by non-residents, while the reporting obligation was enlarged in early February by another order requiring that local and foreign banks report their balance of foreign exchange derivatives and the details of contract redemption on a monthly basis March 31st.

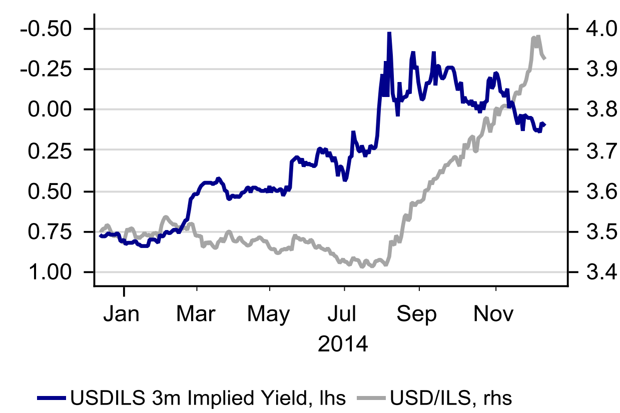
In March 2010, the House of Representatives (Knesset) passed a new BoI Law, which became effective on June 1, 2010. The new Law defines and ranks the Bank's objectives as follows: maintaining price stability (an inflation target range of 1-3% over a 12 month horizon), supporting broader goals of the government's economic policy (growth, employment and the reduction of social gaps), and supporting the stability of the financial system. The Bank is led by a Governor, who is also in charge of the Monetary Policy Committee.

The shekel is both fully deliverable and convertible. Most activity in the spot and forward markets takes place in USD/ILS, but EUR/ILS also trades.

EUR/ILS & USD/ILS exchange rate

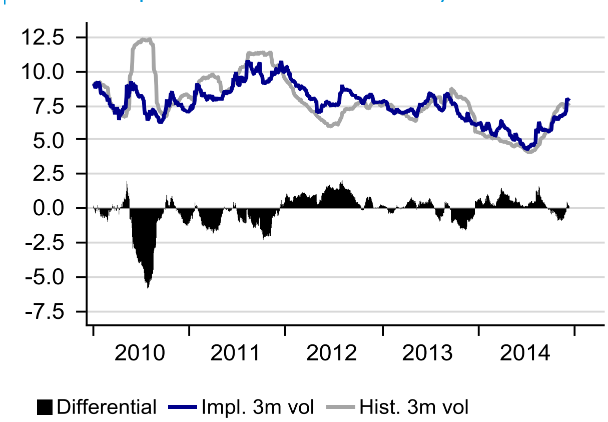
Source: Deutsche Bank, Bloomberg Finance LP

USD/ILS and 3M ILS implied yields



Source: Deutsche Bank

USD/ILS implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The Bank of Israel regulates exchange rate policy, and is also responsible for implementing monetary policy; see http://www.bankisrael.gov.il
- The BoI performs several monetary operations. These include the issuance of Makam (T-bills) with maturities up to 1Y and 1W reverse repo operations where the BoI receives Makam and lends cash to the local banks. As well as these operations the BoI also conducts ad-hoc liquidity providing and reducing operations through daily and weekly loan and deposit auctions. The policy rate is set as the lower bound of interest rates at the loan auctions and the upper bound on interest rates at the deposit auctions. The BoI maintain standing facilities at +/-0.5% around the policy rate.
- The Israeli shekel is a fully deliverable and convertible currency.
- ILS transactions can be settled in CLS.

ILS products

FX spot

Avg. ticket size:	USD 15mn
Bid/ask spread:	ILS 0.0015
Avg. daily volume:	USD 1.6 -1.9bn
Ref. source:	Bank of Israel <BOIT12>
Trading hours:	06:00-16:00 London

FX forward/swap

Avg. ticket size:	USD 50mn (FX swaps)
Liquid tenors:	<1Y
Bid/ask spread:	1m-3m 0.0005 ILS, 6m 0.0010 ILS, 9m-1y 0.0015
Avg. daily volume:	$500m (for maturities up to 1Y)

FX options

Avg. ticket size:	USD 20mn
Liquid tenors:	up to 1Y
Bid/ask spread:	0.5 vol

IRS + FRA

Avg. ticket size:	USD 10k DV01
Bid/ask spread:	2-3bp
Fixing:	3M TELBOR
Ref. source:	Reuters page <TELBOR=>

Government T-bills and bonds

Regulatory:	Nominal bonds (ticker ILGOV, SHAHAR) and CPI-linkers (ticker ILCPI, GALIL). Government T-bills (ILTBIL) central bank T-bills (MAKAM) also trade. Non-residents pay no withholding tax on nominal and CPI bonds, which were originally issued for a period longer than 1 year, but pay 15% withholding tax on Makam and Tbills, which can be reduced using double tax treaties. Bonds are traded Sunday-Thursday on Tel Aviv Stock Exchange (TASE) and can be traded on the primary dealer's trading system and any other authorized platform. Bond prices are quoted

with accrued interest (dirty). CPI-linked bond prices are quoted both dirty and nominal (after the inflation adjustment). Bonds are Euroclearable; the Tel Aviv Clearing House handles both on- and off-exchange clearing and settlement for bonds.

Liquid tenors: 1Y-10Y

Avg. ticket size: USD 5-10mn

Bid/ask spread: 1bp

Ref. source: Reuters Page <0#ILSAHR=TA>

Kazakhstan

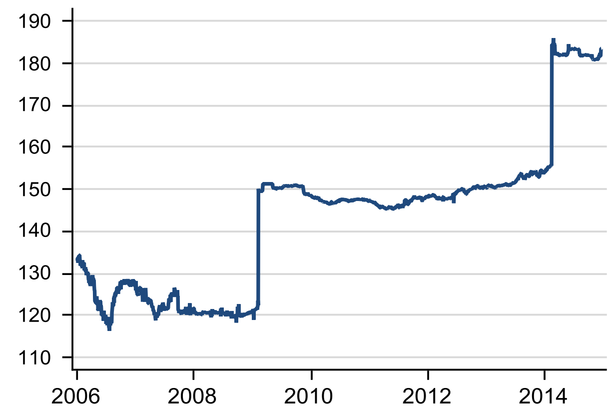
The tenge is the monetary unit of Kazakhstan, introduced in November 1993 to replace the ruble at a rate of 1 tenge = 500 rubles. A floating exchange rate regime was introduced in April 1999. However, the tenge remains a managed float and there has been limited flexibility against the dollar or ruble in recent years. In February 2009 the National Bank of Kazakhstan (NBK) allowed the tenge to devalue by 15% against the dollar to a parity rate of 150 within a +/-3% trading band (145 --155). In February 2010, however, NBK widened the trading band to +15/-22.5 within parity (127.5 – 165). In January 2011, NBK declared that it would abandon the exchange rate band and promote a transition to a managed float of the tenge.

The NBK is accountable to the Kazakh President, but within the limits of authority granted by the legislation, is independent in its activity. Its primary objective is to ensure price stability, i.e. keeping inflation within the Bank's defined range of 6-8%. This is done through setting the official refinancing rate which depends on the state of the money market, demand and supply for loans, level of inflation and inflation expectation.

There are no requirements for foreign investors to obtain authorization to invest, but a tax registration number is required for anyone opening a cash account in Kazakhstan. Income and capital can be freely repatriated from Kazakhstan.

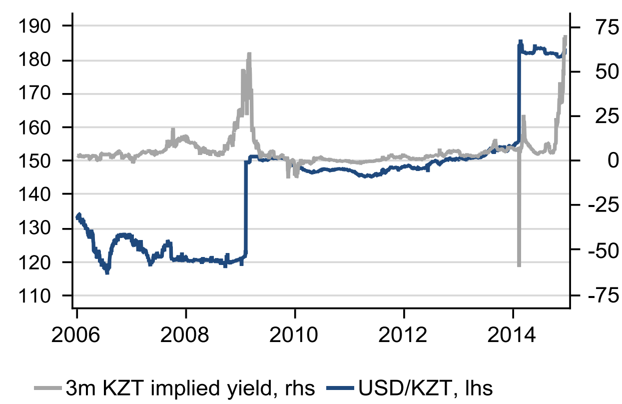
The tenge is convertible and there are few restrictions placed on the import and export of foreign currency and payment instruments to and from Kazakhstan. Both residents and non-residents may open foreign currency and tenge accounts at Kazakhstan banks, which can be used for personal and business needs. Most international bank payments and transfers between residents and non-residents are executed without restriction.

USD/KZT exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/KZT and 3M KZT implied yield



Source: Deutsche Bank

Regulatory framework and approach

- The National Bank of Kazakhstan regulates exchange rate policy and is responsible for implementing monetary policy (http://www.nationalbank.kz).
- The official USD/KZT rate is determined on the basis of foreign exchange auctions (for USD, EUR and RUB) that are held daily. KZT trades both OTC and on the stock exchange (KASE).
- The NBK sets a 1W refinancing, or repo, rate and a 1W deposit rate. The deposit rate is set at half the level of the repo rate. The main policy operation is a 1W repo into which the banks can tender government and agency securities as collateral. In August 2007 the NBK introduced 7-day refinancing loans secured against the balance of bank correspondent accounts at the NBK. The NBK also uses currency swaps to provide FX liquidity to local banks and has issued its own NBK notes to manage liquidity.
- There are no requirements for foreign investors to obtain authorization to invest but a tax registration number is required for anyone opening a cash account in Kazakhstan. Income and capital can be freely repatriated from Kazakhstan. The tenge is convertible and there are few restrictions placed on the import and export of foreign currency and payment instruments to and from Kazakhstan. Both residents and non-residents may open foreign currency and tenge accounts at Kazakhstan banks, which can be used for personal and business needs. Most international bank payments and transfers between residents and non-residents are executed without restriction. A non-deliverable market also exists in USD/KZT, though liquidity is more limited.

Onshore KZT products

FX spot

Avg. ticket size:	USD 5mn
Bid/ask spread:	KZT 0.15
Avg. daily volume:	USD 200-300mn
Ref. source:	Reuters Page <AFINEX02>
Trading hours:	10:15-18:00 London

Deliverable Forward (NDF)

Avg. ticket size:	USD 2mn
Bid/ask spread:	KZT 0.5 – 1.5
Avg. daily volume:	USD 20mn

Offshore KZT products

Non-Deliverable Forward (NDF)

Avg. ticket size:	USD 2mn
Bid/ask spread:	KZT 0.5 – 1.5
Tenor:	<1Y (low liquidity up to 5Y)
Avg. daily volume:	USD 10mn

Kuwait

The Kuwaiti dinar was introduced in 1961 under the Kuwait Currency Board which had the authority to issue notes and coins. The Central Bank of Kuwait (CBK) was established in 1969 with a wider role in setting monetary policy. From March 1975 – January 2003 Kuwait fixed its exchange rate to an undisclosed currency basket which was estimated to be heavily weighted in USD. Kuwait changed its exchange rate regime to a +/-3.5% band around a central USD parity (0.29963/USD) in January 2003 as other Gulf Cooperation Council (GCC) countries moved their SDR pegs to official USD pegs in the run up to the proposed GCC common currency in 2010. In May 2007, the country reverted back to a peg against an undisclosed currency basket against a backdrop of broad-based USD weakness and rising inflation. Our estimate for basket composition is 75% USD, 16% EUR, 5% JPY, 4% GBP.

Despite having a different exchange rate regime from the rest of the GCC Kuwait remains committed to the proposed GCC common currency.

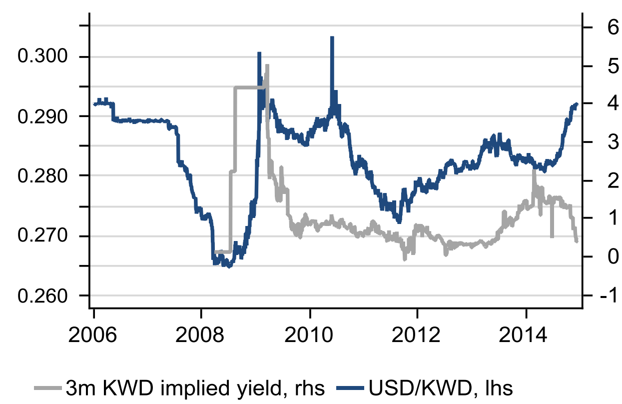
CBK's principle activity is to issue the Kuwaiti Dinar on behalf of the State of Kuwait. It is also mandated with assisting the growth of the national income and controlling the banking system in the country.

The dinar is fully deliverable and convertible.

USD/KWD spot

Source: Deutsche Bank, Bloomberg Finance LP

USD/KWD and KWD 3M implied yield



Source: Deutsche Bank

Regulatory framework and approach

- The Central Bank of Kuwait regulates exchange rate policy and is responsible for implementing monetary policy (http://www.cbk.gov.kw).
- The Kuwaiti Dinar is a fully deliverable, fully convertible currency

KWD products

FX spot

Avg. ticket size:	USD 5-10mn
Bid/ask spread:	KWD 0.0001-0.0002
Avg. daily volume:	USD 100-300m
Ref. source:	Central Bank of Kuwait <CBKK>
Trading hours:	07:30-15:00 London

FX forward/swap

Avg. ticket size:	USD 25mn (FX forwards); USD 25mn (FX swaps)
Liquid tenors:	<1Y
Bid/ask spread:	KWD 0.00025 (1Y)
Avg. daily volume:	USD 100-300m
Ref. source:	<DBMEFWD>

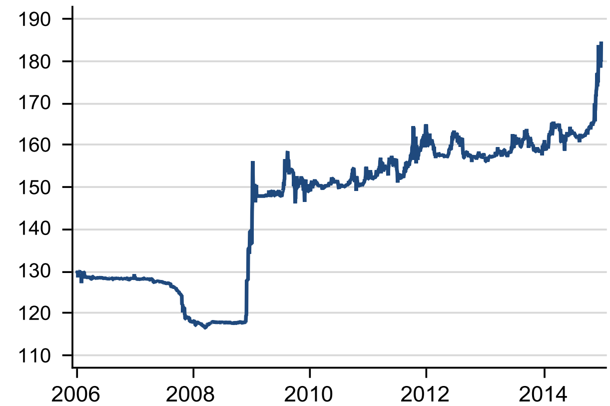
Nigeria

The Nigerian naira was introduced in 1973, replacing the pound at a fixed rate of 2 naira to the pound. Although the naira has gone through multiple regime changes over the years it is at present classified as a managed float.

Nigeria suffers from the unique situation that the government is the main recipient, and therefore supplier, of foreign exchange in the economy, through oil-related taxes and revenues of the NNPC. Meanwhile, the bulk of the private sector has a continuous shortage of FX for imports and other foreign exchange payments. To correct this imbalance the central bank sells FX to the market. Changes implemented in 2006, including the introduction of a Wholesale Dutch Auction System (WDAS), have enhanced the CBN's control over liquidity and inflation, and resulted in the effective unification of the 4 different exchange rate markets (the retail market for non-financial traders and investors, the interbank market, the bureau de change market BdC and the curb market).

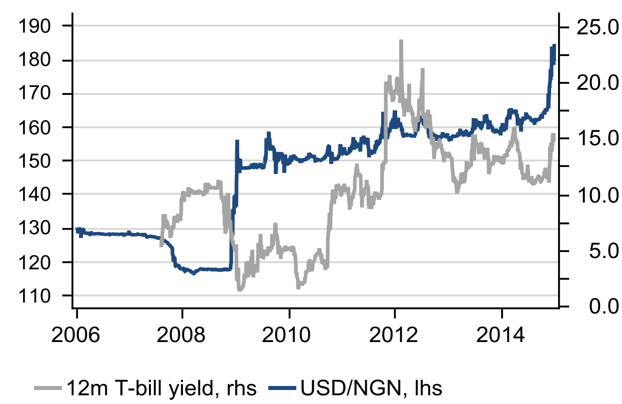
The amount of foreign currency is regulated through twice-weekly auctions, and effectively the CBN continue to set the exchange rate by varying the amounts of FX it sells to the banks and exchange bureaus and by periodically intervening in the inter-bank market. The current FX regime is a managed float around a fixed mid point, currently 168 +/- 5%. The CBN intervenes directly by selling USD to local banks when it deems the market to be disorderly, however, interbank FX traded outside of this band for lengthy periods towards the end of 2014.Only authorized dealers are allowed to buy and sell FX with the CBN. An interbank market for FX (IBEM) sets the market rate for the naira.

USD/NGN exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

NGN & 12m T-bill yield



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The government is the main recipient, and, therefore, supplier of foreign exchange in the economy, through oil related taxes and revenues of the Nigerian National Petroleum Corporation.
- A Certificate of Currency Importation (CCI) is required for foreign investors to buy FX. These are issued when FX is imported into Nigeria.
- The central bank uses a monetary targeting regime. Under this regime, it uses policy instruments to influence its targets, the reserve and broad money aggregates; the ultimate goal of its interventions is to keep inflation in single digits. A central component of policy is the interest rate corridor around the monetary policy rate (MPR). The central bank intervenes in the money market through the interest rate corridor, where the rate on a standing lending facility constitutes the ceiling and the rate on the standing deposit facility is the floor. The MPR is the midpoint between these rates. By adjusting this corridor, the central bank seeks to influence interest rates in the interbank market and thus the willingness of banks to hold naira.
- Open market operations and reserve requirements are also used to help manage liquidity. Each week the central bank auctions treasury bills and, less frequently, federal government bonds. A repurchase (repo) market complements open market operations. The central bank also modifies bank reserve requirements to influence liquidity.
- FX regime is a managed float around a fixed mid point, currently 168 +/- 5%. The CBN intervenes directly by selling USD to local banks when it deems the market to be disorderly, however, interbank FX traded outside of this band for lengthy periods towards the end of 2014.
- A Retail Dutch Auction System (RDAS) provides USD for eligible transactions to buy USD - broadly speaking these are real economy / importer needs. Securities trading USD demand is met through the interbank market which historically trades at a 3-8 naira premium to the RDAS cut-off rate.
- Current details can be found at http://www.cenbank.org/default.asp

Onshore NGN products

FX spot

Avg. ticket size:	USD 3-5mn
Bid/ask spread:	NGN 0.30-0.50
Avg. daily volume:	USD 500mn
Ref. source:	Reuters page <NGNFIX=>
Trading hours:	08:00-13:00 GMT

Government T-bills and bonds

Avg. daily volume USD 200mn (1-year lock up for T-bills was removed in July 2011, there are no lock ups currently in place)

Avg. ticket size:	USD 3-5mn
Bid/ask spread: 3	50-70bp (Tbills), 20-45bp (bonds)

Offshore NGN products

Non-Deliverable Forward (NDF)

Avg. ticket size:	USD 3-5mn
Bid/ask spread:	NGN 2.00 – 5.00
Ref. source:	Reuters page <NIFEX01>, BBG page: NGN FMDA <CRNCY>

Poland

The new Polish zloty was introduced on 1st January 1995. Initially, the zloty was managed under a crawling band exchange regime, linked to a basket of five currencies. During the 1990s the width of the zloty trading band was progressively widened from 2% to 15%. From 1st January 1999, the zloty switched to a basket of EUR 55% and USD 45%. On 12th April 2000 the band was abandoned and the zloty freely floated. The last remaining capital controls were removed in October 2002.

Poland joined the EU in 2004 and therefore has a commitment to join the Euro at an unspecified future date. In order to enter the Eurozone, all five Maastricht criteria must be met including the commitment to enter ERM-II and maintain EUR/PLN +/-15% around a selected "parity" rate for at least 2 years.

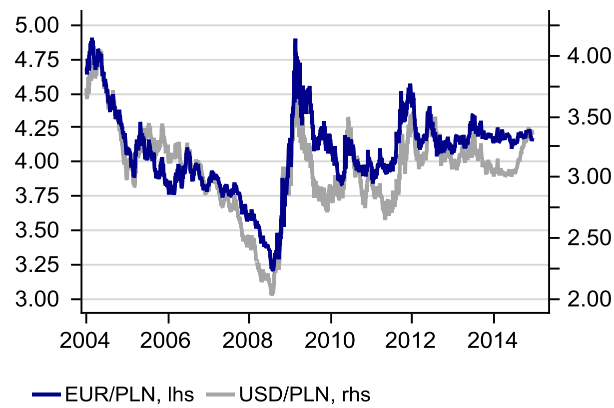
Although NBP operates its monetary policy under a floating exchange rate regime, it reserves the right to intervene directly in the FX market should this prove necessary to achieve the inflation target.

The basic objective of NBP monetary policy is maintaining price stability. Since 1999, NBP has followed an inflation targeting strategy and in 2004 adopted a continuous target of 2.5% with a permissible fluctuation band of +/-1%.

The Bank is led by a President and eight other management board members. The Monetary Policy Council (MPC), a directing body of the NBP, is responsible for setting interest rates in Poland. It is led by the President of the NBP and has nine other council members.

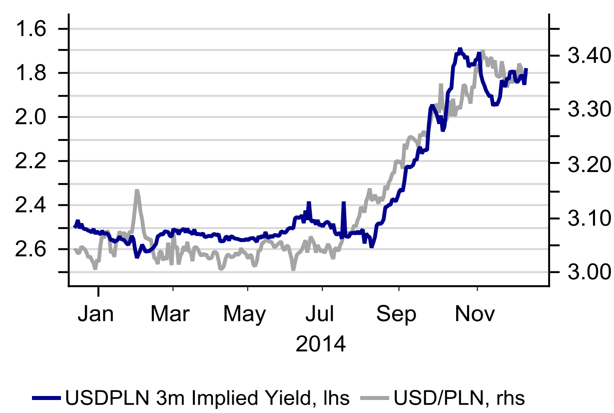
The zloty is now both fully deliverable and convertible. EUR/PLN has taken over from USD/PLN as the dominant pair, and it now accounts for 90% of transactions in the FX market.

USD/PLN and EUR/PLN exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

EUR/PLN and 3M PLN implied yields



Sources for charts: Deutsche Bank, Bloomberg Finance LP

EUR/PLN implied and historical volatility

Sources for charts: Deutsche Bank, Bloomberg Finance LP

Regulatory Framework and Approach

- The National Bank of Poland regulates exchange rate policy and is also responsible for implementing monetary policy (http://www.nbp.pl).
- The key policy rate of the NBP is the 7-day reference rate. The MPC also sets the Lombard rate (150bp above the reference rate), the rediscount rate (25bp above) and the NBP deposit rate (150bp below the reference rate). The NBP uses a combination of open market operations, reserve requirements and credit deposit operations to influence short-term market rates. The NBP conducts open market operations through the issuance of 7-day T-bills on Fridays; the minimum yield is set at the reference rate. The Lombard and deposit rates are respectively the maximum cost of securing funds from the NBP and the interest rate on deposits at the NBP; they, therefore, set the ceiling and floor for overnight market rates. Reserve requirements have been set at 3.5% since 2003 and are remunerated.
- The Polish zloty is a fully accessible, fully convertible currency.

PLN products

FX spot

Avg. ticket size:	USD 5mn
Bid/ask spread:	PLN 0.001
Avg. daily volume:	USD 3bn
Ref. source:	ECB fixing <ECB37>

FX forward/swap

Avg. ticket size:	USD 20mn (FX forwards); USD 50mn (FX swap up to 3M), USD 30mn (up to 1Y)
Liquid tenors:	<1Y
Bid/ask spread:	PLN 0.002 - 0.008
Avg. daily volume:	USD 0.2bn (FX forwards), USD 3.5bn (FX swaps)

FX options

Avg. ticket size:	EUR 20mn
Liquid tenors:	<1Y
Bid/ask spread:	0.4 vol

IRS + FRA

Avg. ticket size:	USD 10k DV01
Liquid tenors:	1 - 10Y
Bid/ask spread:	2 - 3bps
Fixing:	3M WIBOR for FRA and 1Y; 6M WIBOR for IRS 2Y+
Ref. source:	<WIBOR=>

Government T-bills and bonds

Regulatory:	There are no limits on foreign investment in Polish government t-bills and bonds. Custody and settlement of bonds and T-bills are managed locally through the National Depository for Securities (KDPW). There is a withholding tax of 10% on interest payments. This can be reduced or eliminated through double-taxation treaties.
Liquid tenors:	1 - 10Y
Avg. ticket size:	USD 5 - 10mn
Bid/ask spread:	2 - 3bps

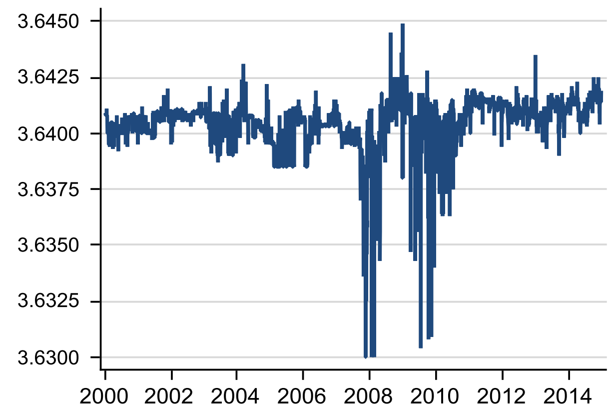
Qatar

The Qatari riyal was introduced in 1966, replacing the Indian rupee. The currency was initially used by both Qatar and Dubai until Dubai entered UAE in 1973. In 1975, the riyal was pegged to the IMF's Special Drawing Rights (SDRs), but effectively the currency has been fixed to the dollar at 3.64 since 1980. The peg to the dollar was formalised in 2001. Qatar is a member of the Gulf Cooperation Council (GCC) and remains committed to a common currency.

The Qatar Central Bank (QCB) conducts exchange rate policy with the aim of retaining the stability and the free convertibility of the QAR. Monetary policy is determined by the Monetary Policy Committee and is implemented with a view to supporting the dollar peg. The QCB is led by a board of five directors.

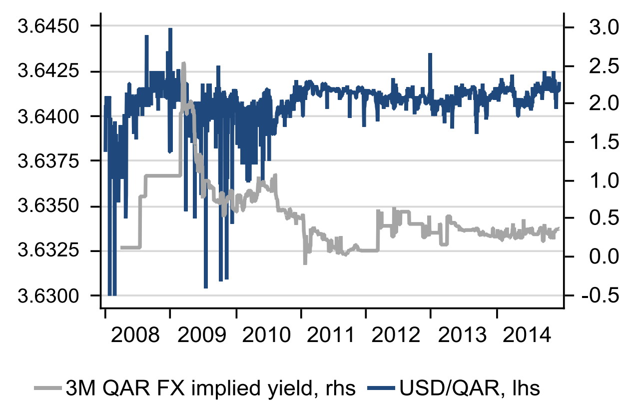
The riyal is fully deliverable and convertible.

USD/QAR exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/QAR and 3M QAR FX-implied yields



Source: Deutsche Bank

Regulatory Framework and Approach

- The Qatar Central Bank regulates exchange rate policy and is responsible for implementing monetary policy (http://www.qcb.gov.qa).
- The Qatari Riyal is a fully deliverable, fully convertible currency.

QAR products

FX spot

Avg. ticket size:	USD 25 -50 mn
Bid/ask spread:	QAR 0.0003 – 0.0005
Avg. daily volume:	USD 500mn
Ref. source:	QAR=DBBL
Trading hours:	07:30-15:00 London

FX forward/swap

Avg. ticket size:	USD 50mn (FX forwards); USD 50mn (FX swaps)
Liquid tenors:	<3Y
Bid/ask spread:	QAR 0.0010 - 0.0015
Avg. daily volume:	USD 500mn
Ref. source:	<DBMEFWD>

Romania

The leu was introduced in 1867. Romania left the gold standard in 1914 and the leu's value fell. A revaluation took place on August 15, 1947, replacing the old leu at a rate of 20,000 old lei = 1 new leu. At the time of its introduction, 150 new lei equalled 1 USD. On January 28, 1952, another new leu was introduced. Unlike the previous revaluation, different rates were employed for different kinds of exchange (cash, bank deposits, debts etc.) and different amounts. These rates ranged from 20 to 400 "old lei" for 1 "new" leu. From 1994 to 1997 the leu was freely-floating before becoming a managed float against USD and baskets of EUR and USD. At the end of October 2004, the National Bank of Romania (NBR) abandoned the basket and moved to a more flexible exchange rate. On 1st July 2005 the leu was redenominated, with the old ROL being converted to RON at a rate of 1 RON = 10,000 ROL. On 1st September 2006, the NBR eliminated the remaining capital controls and completed the liberalisation of the capital account.

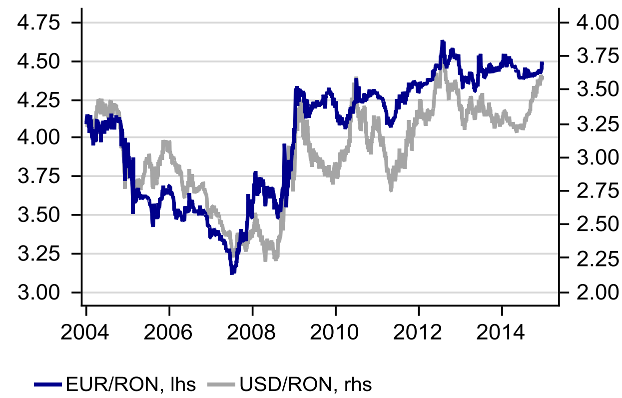
Romania joined the EU in 2007 and therefore has a commitment to join the Euro at an unspecified future date. In order to enter the Eurozone, all five Maastricht criteria must be met including the commitment to enter ERM-II and maintain EUR/RON +/-15% around a selected "parity" rate for at least 2 years.

The NBR is run by the Board of Directors, which consists of nine members and is led by a Governor. The NBR moved to direct inflation targeting in 2005. Annual inflation targets are set in discussion with the government. The inflation target is 2.5% with a +/- 1% variation band.

The exchange rate regime of the leu currently in place is that of a managed float, in line with using inflation targets as a nominal anchor for monetary policy.

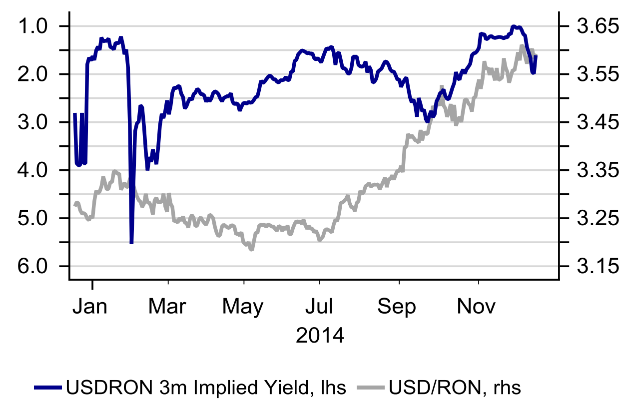
The leu is both fully deliverable and convertible. Spot is liquid in both USD/RON and EUR/RON but EUR/RON is viewed as the economically correct way to take a view on the leu.

EUR/RON and USD/RON exchange rates



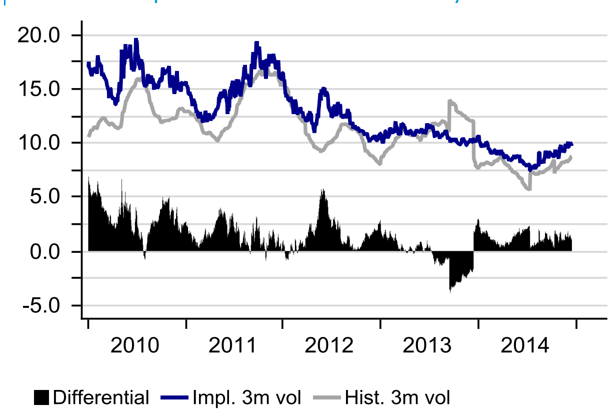
Source: Deutsche Bank, Bloomberg Finance LP We use ROL/10000 up to Jul-05

EUR/RON and RON 3M implied yield



Source: Deutsche Bank

EUR/RON implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The National Bank of Romania regulates exchange rate policy and is responsible for implementing monetary policy (http://www.nbr.ro)
- The official policy rate is the rate on one-week NBR open market operations. One-week deposit or repo auctions take place at this rate on an ad-hoc basis when the NBR determine that the money market is over- or under-liquid. The NBR also has standing deposit and lending facilities at the policy rate +/-4%. In the past, the NBR has auctioned 3M certificates of deposit to reduce RON liquidity
- The Romanian leu is a fully accessible, fully convertible currency, though a non-deliverable market also exists. Liquidity was shifting from the NDF to the deliverable market even before full liberalisation of the country's capital account. We estimate that 80% of the daily turnover in RON today is concentrated in the onshore, deliverable market

Onshore RON products

FX spot

Avg. ticket size:	USD 5mn
Bid/ask spread:	RON 0.005
Avg. daily volume:	USD 400m
Ref. source:	ECB fixing <ECB37>
Trading hours:	8:00-14:00 London

FX forward/swap

Avg. ticket size:	USD 5mn (FX forwards); USD 10mn (FX swaps up to 1M), USD 5mn (FX swaps up to 3M)
Liquid tenors:	<6M (but quoted up to 1Y)
Bid/ask spread:	RON 0.005-0.02
Avg. daily volume:	USD 500mn

Cross Currency Swaps

Avg. ticket size:	2-5k DV01
Liquid tenors:	1-5Y
Bid/ask spread:	5-10bps
Fixing page:	3M EURIBOR

Government T-bills and bonds

Regulatory:	The NBR is responsible for the issuance, registration, transfer and settlement of government securities. Government securities are held in custody accounts at the NBR. The government licenses primary and secondary market dealers to issue to and trade with investors OTC. A withholding tax of 16% is levied on interest payments; this can be reduced or eliminated through double-taxation treaties.
Avg. ticket size:	USD 2-3mn
Bid/ask spread:	10bp

Russia

Russia no longer formally operates a managed floating exchange rate regime. Previously the Central Bank of Russia (CBR) imposed a ceiling on the allowable amount of ruble REER appreciation, limiting the flexibility of the nominal ruble exchange rate. However, on Nov 10th 2014 the CBR announced it had now abandoned the RUB's trading corridor, with the caveat that it would intervene in the FX market if it saw a threat to financial stability. The Bank is now formally targeting Consumer Price Inflation (CPI), with the aim of lowering inflation to 4% over time.

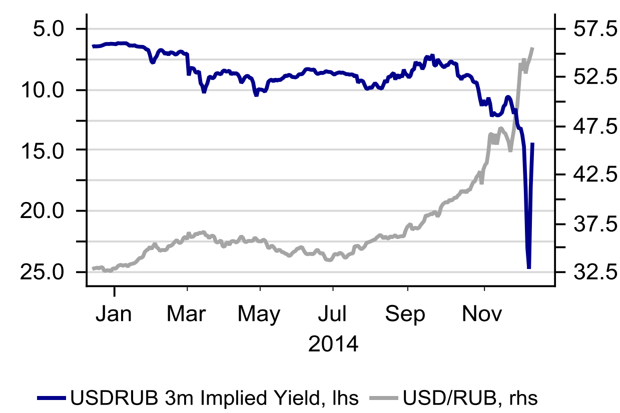
Monetary policy decisions are taken by the CBR board of directors, consisting of eleven directors and a Chairman. The members of the board meet at least once a month; however, their decisions are supervised by the National Banking Council which comprises eleven members and a Chairman. The CBR targets both inflation and exchange rate and sets several market interest rates.

The ruble is fully deliverable and convertible. Prior to the 1998 crisis, NDFs were actively traded both onshore and offshore but the NDF market is now mostly offshore. NDFs are usually quoted outright and in USD/RUB. An EMTA fixing rate is used as a reference to cash-settle contracts. Interest-bearing deposit accounts may also be opened, as was the case before the liberalisation of the capital account (July 2006), effectively allowing for the participation of non-residents in the deliverable FX market. RUB basket forwards and options are also available but the market is less liquid than USD/RUB.

USD/RUB & EUR/RUB exchange rates

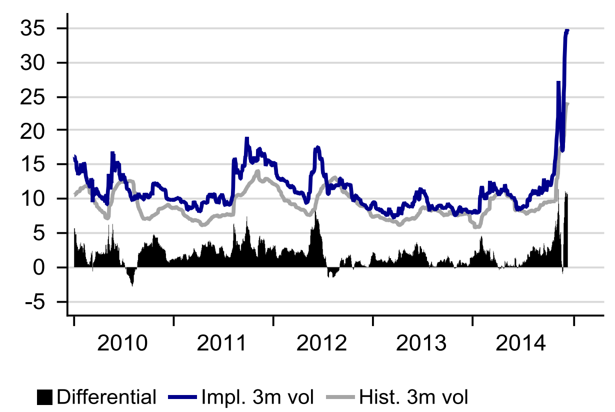
Source: Deutsche Bank, Bloomberg Finance LP

USD/RUB and RUB 3M implied yield



Source: Deutsche Bank

USD/RUB implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The Central Bank of Russia regulates exchange rate policy, and is also responsible for implementing monetary policy (http://www.cbr.ru).
- The most important is the overnight repo rate but the CBR also set tom-next and 1W deposit rates and the overnight refinancing rate. Changes in reserve requirements are also used to tighten or loosen monetary policy. When liquidity conditions are tight, the CBR conducts daily overnight repo auctions with the minimum rate set as the repo rate. The CBR can conduct two or three overnight repo operations per day with the minimum rate increasing 25bp each time. The CBR also issues short-tenor (3M-6M) Bank of Russia bonds. Since April 2008 the Ministry of Finance has also auctioned surplus budget funds to the banks and the CBR now also provide uncollateralized ruble loans to a select pool of local banks
- The Russian ruble is a fully accessible, fully convertible currency. Both deliverable and non-deliverable FX markets exist, but liquidity is concentrated in the latter due to a rather conservative credit risk policy set by local banks pertaining to settlement and delivery risks in RUB. The deliverable trading has grown significantly due to increased interest coming from, inter alia, the banking sector and large European corporations. (M&A activity etc)

Onshore RUB products

FX spot

Avg. ticket size:	USD 5-15mn
Bid/ask spread:	RUB 0.05 - 0.15
Avg. daily volume:	USD 7-10bn
Ref. source:	EMTA fixing for NDF <RUBMCMEEMTA=>; backup fixing is EMTA RUB Indicative Survey Rate; www.emta.org
Trading hours:	7:00-15:00 London

FX forward/swap

Avg. ticket size:	USD 10-50mn
Liquid tenors:	<12M
Bid/ask spread:	RUB 0.01-0.20
Ref. source:	Reuters Page <DBMP>

Cross-currency swaps

Avg. ticket size:	USD 1-2k DV01
Liquid tenors:	1Y - 5Y
Bid/ask spread:	10-20bp
Fixing:	USD 3M LIBOR
Ref. source:	Reuters Page <DBMP>

IRS

Avg ticket size:	USD 1k DV01
Liquid tenors:	1Y - 5Y
Bid/ask spread:	20-30bp
Fixing:	3M MOSPRIME
Ref. source:	Reuters Pages <DBMP>, <MOSPRIME=>

Government bond

Regulatory:	Government bonds, including OFZs, are fully euroclearable, so one can trade both on MICEX and OTC with e/c settlement. Foreigners don't pay any taxes, only locals.
Avg. ticket size:	USD 1 – 3 mn
Bid/ask spread:	20 – 30 bp
Ref. source:	Micex Reuters <0#RUTSY=MM>

Offshore RUB products

Non-Deliverable Forward (NDF)

Avg. ticket size:	USD 10mn
Liquid tenors:	<1Y
Bid/ask spread:	RUB 0.10-0.30
Avg. daily volume:	USD 300mn
Ref. source:	Reuters page <DBMP>

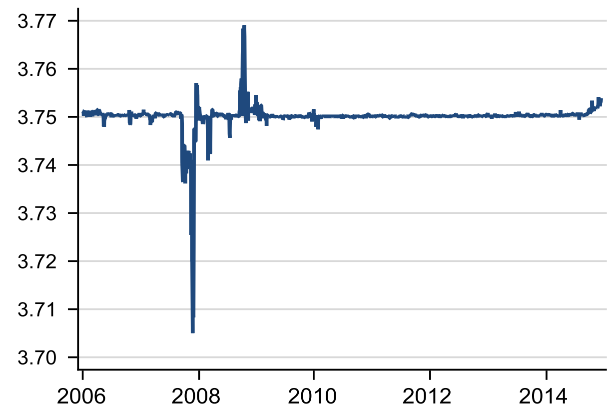
Saudi Arabia

The Saudi Arabian riyal (SAR) was introduced in 1961, replacing Saudi silver coins and foreign currencies. Until 1986 the currency displayed some flexibility with the SAR initially appreciating after the first oil price spike in the mid-1970s. The currency weakened steadily through the early 1980s until being pegged to the IMF's Special Drawing Rights (SDRs) in 1986. In practice, the SAR has been a de-facto peg to the USD at a rate of 3.75/USD. The peg to the USD was formalised in early 2003 to make official the GCC pegs to the USD in the run-up to the proposed GCC common currency. Only very recently has the riyal been allowed to deviate from the strict 3.75/USD rate, although the official peg remains unchanged.

The Saudi Arabia Monetary Agency's (SAMA) primary objective is to maintain stability in price levels through monitoring of exchange rates. SAMA's second objective is to maintain stability in the broader financial sector.

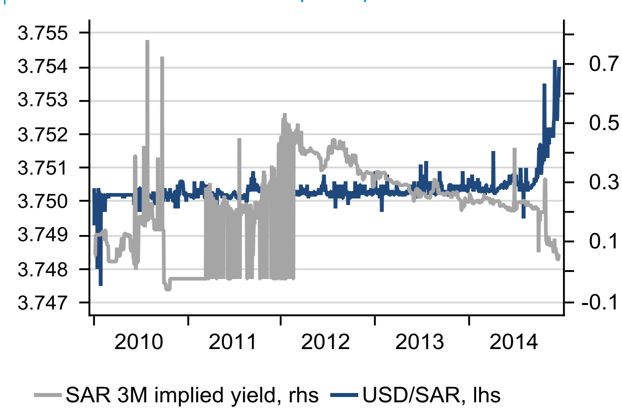
The riyal is fully deliverable and convertible. It is backed by gold and other foreign currencies. The predominant cross is USD/SAR, but EUR and GBP crosses also trade regularly. Options are quoted on USD/SAR.

USD/SAR exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/SAR and SAR 3M implied yields



Source: Deutsche Bank

Regulatory framework and approach

- The Saudi Arabian Monetary Agency regulates exchange rate policy, and is also responsible for implementing monetary policy (http://www.sama.gov.sa).
- SAMA has two policy rates, the official repo rate and the reverse repo rates. Banks can tender government T-bills to the repo in exchange for SAR funding. SAMA also uses changes in reserve requirements to tighten or loosen credit conditions.
- The Saudi Riyal is a fully deliverable and convertible currency.

Onshore SAR products

FX spot market

Avg. ticket size:	USD 25 - 100mn
Bid/ask spread:	SAR 0.0002
Avg. daily volume:	USD 1-3bn
Ref. source:	Reuters Page <SAMA01>
Trading hours:	7:30-15:00 London

FX forwards/swaps

Avg. ticket size:	USD 50mn (FX forwards); USD 50mn (FX swaps)
Liquid tenors:	<5Y
Bid/ask spread:	0.0002 – 0.0005 (1y forwards)
Avg. daily volume:	USD 1.5-3.0bn
Ref. source:	Reuters Page <DBMEFWD>

FX options

Avg. ticket size:	USD 100mn
Liquid tenors:	<2Y
Bid/ask spread:	0.3 vol

IRS market

Avg ticket size:	USD 10-15k DV01
Bid/ask spread:	5-6bps 5Y
Fixing:	3M SAIBOR
Ref source:	<SAIBOR=>

South Africa

The rand was first introduced in 1961, coinciding with the establishment of the Republic of South Africa. It replaced the South African pound as the legal tender. Since 1995, after the abolition of the financial rand and capital controls for non-residents, the rand has been freely floating. The South African Reserve Bank (SARB) has, in the past, intervened in the market to accumulate foreign exchange reserves, but these have rarely had an immediate effect on the level of the currency.

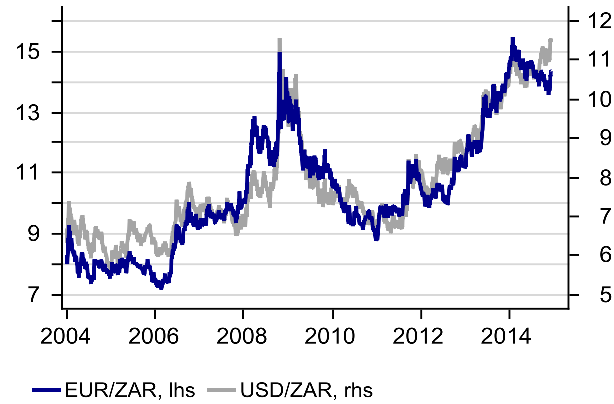
South Africa has followed a strategy of progressively easing exchange controls on capital transactions since 1994. With the abolition of the financial rand in 1995, all exchange controls on non-residents were eliminated. However, only fully registered dealers are allowed to conduct foreign exchange transactions. Non-residents are free to purchase shares, bonds and other assets without restriction and to repatriate dividends, interest receipts, and current and capital profits, as well as the original investment capital. There are residual controls on the actions of residents, but these mostly refer to the lending of rand.

The SARB regards its primary goal in the economic system as "the achievement and maintenance of price stability". The Bank has an inflation target of between 3% - 6%. The Bank transmits its interest-rate policy to the market by providing refinancing to banks at its repurchase rate, which is determined by its Monetary Policy Committee (MPC). The MPC comprises of six members, including the Governor.

In August 2010 the Bank changed its monetary policy implementation framework. Two main changes were announced. Firstly, the Bank introduced measures aimed at streamlining the monetary policy operations by announcing the daily average of the estimated weekly liquidity requirement. In addition, the Bank's refinancing operation only accepts Government and SARB denominated debt as eligible collateral.

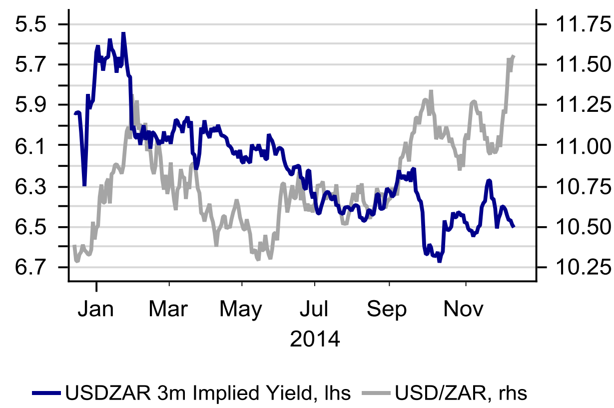
The rand is a fully deliverable and convertible currency.

USD/ZAR & EUR/ZAR exchange rates



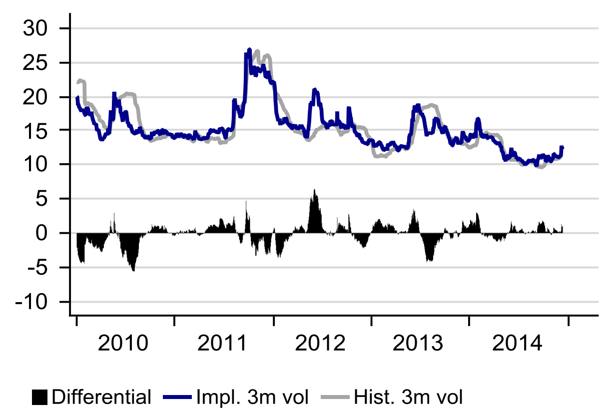
Source: Deutsche Bank, Bloomberg Finance LP

USD/ZAR and ZAR 3M implied yield historical



Source: Deutsche Bank

USD/ZAR implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The South African Reserve Bank regulates exchange rate policy and is responsible for implementing monetary policy (http://www.reservebank.co.za).
- The official policy rate is the 7-day repo rate. To ensure that the repo rate is effective, the SARB drains liquidity from the market in order to compel the banks to borrow from the SARB at the repo rate. The SARB drain liquidity using the issuance of SARB debentures, long-term reverse repos and FX swaps. Repo and SARB debenture auctions are conducted on a Wednesday. Long-term-reverse repo operations are conducted on Mondays. The SARB also holds supplementary 1-day (reverse-) repo tenders at the repo rate and has a standing facility at the repo rate +/-50bp. The statutory reserve requirement is set at 2.5%.
- The South African rand is a fully accessible, fully convertible currency for non-resident investors. There are residual controls on the actions of residents, but these mostly refer to the lending of rand.
- ZAR transactions can be settled in CLS.

Onshore ZAR products

FX spot

Avg. ticket size:	USD 10mn
Bid/ask spread:	ZAR 25 pips
Avg. daily volume:	USD 6bn
Ref. source:	Reuters Page <ZAR=>

FX forward/swap

Avg. ticket size:	USD 50mn (FX forwards); USD 100mn (FX swaps up to 1Y)
Liquid tenors:	<1Y
Bid/ask spread:	ZAR 0.03 - 0.05
Avg. daily volume:	USD 1bn (FX forwards); USD 9bn (FX swaps)

FX options

Avg. ticket size:	USD 30mn
Liquid tenors:	<1Y
Bid/ask spread:	0.5 vols

IRS + FRA

Avg. ticket size:	USD 8k DV01
Liquid tenors:	1 - 30Y IRS; to 21X24 FRA
Bid/ask spread:	3 - 4 bps
Fixing:	3M JIBAR
Ref. source:	Reuters Page <DBMM>

Government T-bills and bonds

Regulatory:	Spot bonds are exchange-traded. In 1996, control of the market passed from the JSE to the Bond Exchange of South Africa (BESA). Currently more than 375 government and corporate bonds are listed on BESA. Bond settlement and custody are managed locally at the Central Securities Depository. There are no restrictions on non-resident ownership of South African government bonds or T-bills.
Liquid tenors:	2Y - 30Y
Avg. ticket size:	USD 5 - 10mn
Bid/ask spread:	2 - 3bps

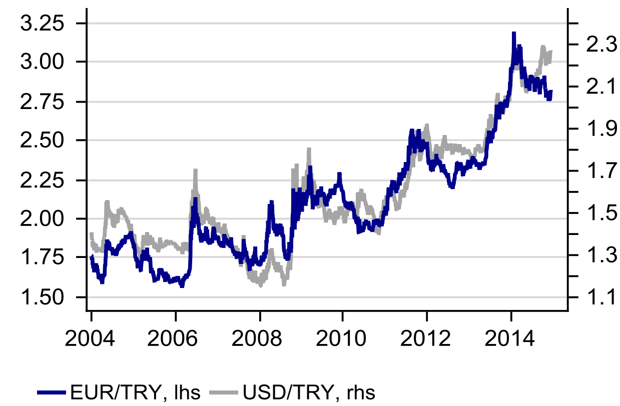
Turkey

The Turkish lira (TRL) was first introduced in 1927 and replaced the Ottoman lira which had been in circulation since 1844. After persistently high inflation from the 1970s to the 1990s, the lira was replaced by 'the New Turkish Lira' (TRY) on 1st January 2005 at a rate of 1 TRY = 1,000,000 TRL. Following a four-year transition period, the 'new' marking was removed and its official name has again become 'the Turkish lira'. A three-year disinflation program was launched in 2000 which envisaged two different FX regimes. The first was a fixed exchange rate regime that incorporated daily announcement of a currency basket (formed of USD and EUR) until June 2001. The second regime, implemented between July 2001 and December 2003, entailed introduction of a crawling peg regime against the same basket. However, the program had to be abandoned during the 2001 crisis and the lira is now a fully floating currency with no target levels.

The primary objective of the Central Bank of the Republic of Turkey (CBRT) is to achieve and maintain price stability, while the Bank also considers financial stability as a vital component for achieving its objective. Furthermore, as long as not in conflict with the primary objective of price stability, the CBRT also supports the growth and employment policies of the government. The CBRT adopted inflation targeting first implicitly between 2002 and 2005, and then formally since 2006. The target for 2015 and 2016 is 5.0% (+/- 2%). The CBRT is organized as follows: the Bank is led by a board, which consists of a Governor and six members. The Board oversees the Monetary Policy Committee (MPC), which consists of seven members, and is led by the Governor of the Central Bank.

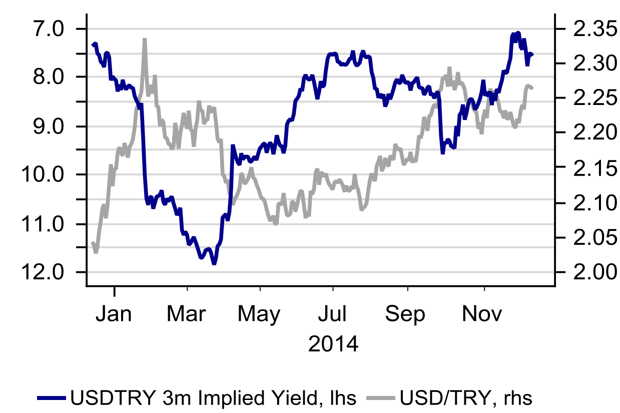
The CBRT intervenes directly or through flexible auctions in the market, in case of unhealthy price formation. The Bank purchased FX through daily auctions until July 2011, with the aim of building up reserves. Since August 2011, the CBRT sold FX at daily auctions with the aim of supporting the lira. At times of severe market stress the CBRT directly intervene by selling USD to the market. The lira is fully convertible and deliverable. Spot is generally quoted in USD/TRY, but EUR/TRY is regularly traded and other crosses such as TRY/ZAR and TRY/ILS are also quoted and traded.

USD/TRY & EUR/TRY exchange rates



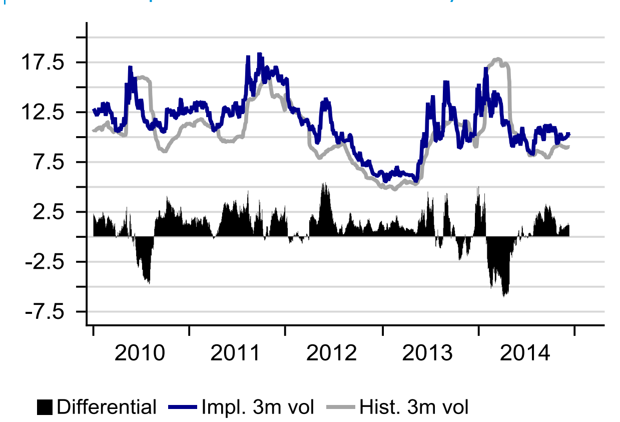
Source: Deutsche Bank, Bloomberg Finance LP

USD/TRY and TRY 3M implied yields



Source: Deutsche Bank

USD/TRY implied and historical volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The Central Bank of Turkey regulates exchange rate policy and is responsible for implementing monetary policy (http://www.tcmb.gov.tr).
- The official policy rate is the overnight borrowing rate. The CBRT also sets an overnight lending rate which is 250bp over the borrowing rate. The CBRT manages lira liquidity using repo and reverse repo operations. The CBRT set reserve requirements for banks in both local and foreign currency.
- The Turkish lira is a fully deliverable and convertible currency.

TRY products

FX spot

Avg. ticket size:	USD10mn
Bid/ask spread:	TRY 0.005
Avg. daily volume:	USD 6 - 7bn
Ref. source:	Reuters Page <CBTA>

FX forward/swap

Avg. ticket size:	USD 25mn (FX forwards); USD 100mn (FX swaps up to 1M), USD 10mn (swaps up to 2Y)
Liquid tenors:	<2Y
Bid/ask spread:	2-7bps
Avg. daily volume:	USD 3.0bn
Ref. source:	Reuters Page <DBTRBNK>

FX options

Avg. ticket size:	USD 30mn
Liquid tenors:	<2Y
Bid/ask spread:	0.4 vol

Cross-currency swaps

Avg. ticket size:	USD 10k DV01
Bid/ask spread:	5-6bp
Fixing page:	USD 3M LIBOR

IRS market

Avg. ticket size:	USD 10k DV01
Bid/ask spread:	20bp
Fixing:	3M TRYIBOR
Ref source:	Reuters Page <TRYIBOR>

Government T-bills and bonds

Regulatory:	Settlement and clearing are provided by Takasbank. All custodian banks have accounts at Takasbank. T-bills and bonds are traded both OTC and on the ISE. Settlement conventions depend on the time of trade execution; trades before midday are settled T+0 and trades after midday are settled T+1. Bonds are quoted by clean price and CPI-linkers are quoted clean and real. T-bills are quoted on a simple yield basis. Any withholding taxes only apply to securities issued before 2006. There are no restrictions on foreign ownership of Turkish government debt.

Liquid tenors:	1Y, 2Y, 5Y, 10Y
Avg. ticket size:	USD 10mn
Bid/ask spread:	2-5bp (T-bills); 5-8bp (T-bonds)
Ref. source:	Reuters Page <DBTRBNK>, Bloomberg page <DBTR>

Ukraine

The hryvnia was re-established as the currency of Ukraine in 1996. Following a succession of exchange rate bands, starting in 1999 the exchange rate was allowed to be determined by the interbank FX market. In February 2000, NBU announced its intention to let the currency float freely, but due to regular intervention limiting the movement in the currency, the exchange rate was reclassified in 2001 (by the IMF) and through March-08 the official USD/UAH exchange rate stood at 5.05 (within a 4.95-5.20 band).

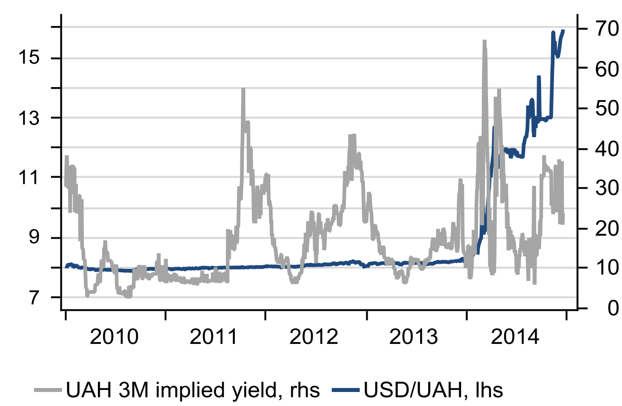
Increasing flexibility was introduced in the spring of 2008 to allow the currency to appreciate—initially to allow for some appreciation but subsequently to allow the currency to depreciate. Under its stand-by arrangement with the IMF Ukraine has agreed to follow a flexible currency regime without pre-announced targets, but currently the exchange rate arrangement is a managed float.

Ultimately the monetary policy objective of the NBU is to ensure a gradual decline in inflation and to achieve the mid-term inflation target by 2018. In approaching the mid-term target, consumer prices are expected to demonstrate the following growth year-on-year: 9% by the end of 2015, 7% by the end of 2016 and 5% by the end of 2017. In H1 2015 the monetary base will be considered as the operational monetary policy benchmark. The size of the monetary base will be changed through influencing the amount of liquid funds available to banks. Other targets of monetary policy will include monetary performance criteria and recommended targets under IMF Stand-By Arrangements for net international reserves, net domestic assets and monetary base.

USD/UAH exchange rate

Source: Deutsche Bank, Bloomberg Finance LP

USD/UAH & the 3M implied yield



Source: Deutsche Bank

Regulatory framework and approach

- According to the constitution of Ukraine, the main function of the NBU is to ensure the stability of the hryvnia, fostering stability in the banking system and, within its competence, price stability. For more details, see http://www.bank.gov.ua/ENGL/default.htm
- Ukraine has significant restrictions on capital account flows, summarized in great detail in the IMF's report on Exchange Arrangements and Exchange Restrictions. Exporters are required to repatriate all proceeds through domestic commercial banks within 90 days and the NBU has the authority to impose surrender requirements. The Pension Fund Duty levied on the purchase of foreign exchange was lowered in January 2008 from 1% to 0.5%. A non-resident bank without a legal presence in the country may only open an investment, deposit, or correspondent account with a local bank. A hryvnia investment account is required for investment in domestic instruments. For foreign entities, a non-resident bank may not engage in onshore forwards transactions in Ukraine.
- The NBU uses a range of instruments to control UAH liquidity and monetary policy. These are termed refinancing operations (to provide liquidity) and mobilization operations (to absorb liquidity). This includes setting the discount rate and the overnight secured and unsecured lending rates. The NBU absorb liquidity from banks through the issuance of deposit certificates for which the NBU sets the maximum permitted interest rate at auction. In November 2011, the NBU announced introduction of a new instrument called "own certificate of deposit "for individuals. The NBU plans to issue certificates of deposit for individuals in exchange for cash funds. The aim is to raise temporarily free household cash funds, thereby reducing the volume of cash outside banks, which is intended to reduce pressure on the hryvnia exchange rate, inflation developments and promote monetary stability.

Onshore UAH products

FX spot

Avg. ticket size:	USD 2-3mn
Bid/ask spread:	UAH 0.1
Avg. daily volume:	USD 30-50m
Ref. source:	GFI broker fixing <GFIU>
Trading hours:	10:00-15:00 Kiev time

Offshore UAH products

Non-Deliverable Forward (NDF)

Avg. ticket size:	USD 2-5mn
Tenors:	<3Y
Bid/ask spread:	UAH 0.05-0.1
Avg. daily volume:	USD 25-50mn

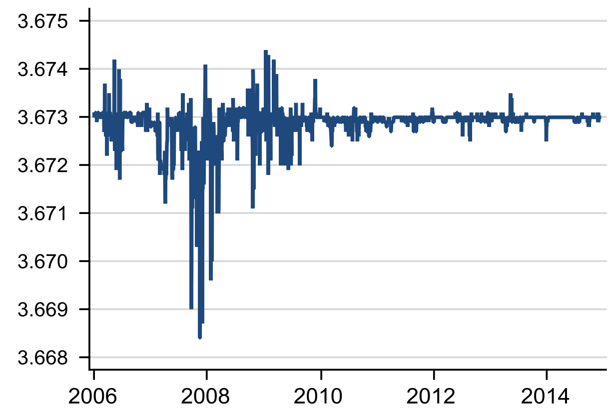
United Arab Emirates

The UAE dirham, which was introduced in 1973, was initially set under a currency board agreement against the USD at a rate of 3.97473/USD +/-1%. It widened to a range of +/- 2.5% in 1974 and remained in place until early 1978 when the peg was changed to the SDR at a rate of 4.7619/SDR +/-2.25%, with the USD remaining as the intervention currency. However, in line with several other GCC countries, the UAE formalised the USD peg in 2003 at a rate of 3.6725.

The Central Bank of UAE (CBUAE) has a mandate to support the national economy and stability of the dirham. The Bank is led by a Chairman and seven members who are responsible for the functioning and oversight of CBUAE's seven departments.

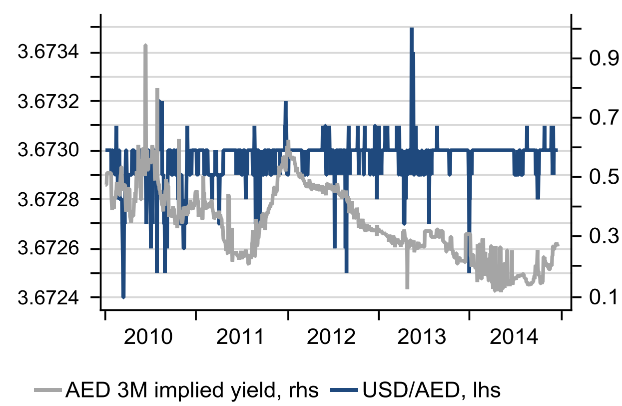
The dirham is a fully deliverable and convertible currency.

USD/AED exchange rate



Source: Deutsche Bank, Bloomberg Finance LP

USD/AED and AED 3M implied yield



Source: Deutsche Bank

Regulatory framework and approach

- The Central Bank of the UAE regulates exchange rate policy and is responsible for implementing monetary policy (http://www.centralbank.ae).
- Monetary policy is conducted using a series of instruments: minimum reserve requirements, swap operations,advances & overdraft facility for banks, prudential regulation and the issuance of Certificates of Deposits (CDs).
- The UAE dirham is a fully accessible, fully convertible currency.

AED products

FX spot

Avg. ticket size:	USD 25-100mn
Bid/ask spread:	AED 0.0002
Avg. daily volume:	USD 1-3bn
Ref. source:	Central Bank of UAE <CBEM>
Trading hours:	7:30-15:00 London

FX forward/swap

Avg. ticket size:	USD 50mn (FX forwards); USD 50mn (FX swaps)
Liquid tenors:	<5Y
Bid/ask spread:	AED 0.0005 in 1y forwards
Avg. daily volume:	USD 1-2bn
Ref. source:	Reuters Page <DBMEFWD>

FX options

Avg. ticket size:	USD 50mn
Liquid tenors:	<2Y
Bid/ask spread:	0.4 vol

IRS

Avg ticket size:	USD 5-15k DV01
Bid/ask spread:	5-8bp
Fixing:	3M EIBOR
Ref. source:	Reuters page <AEIBOR=>

Argentina

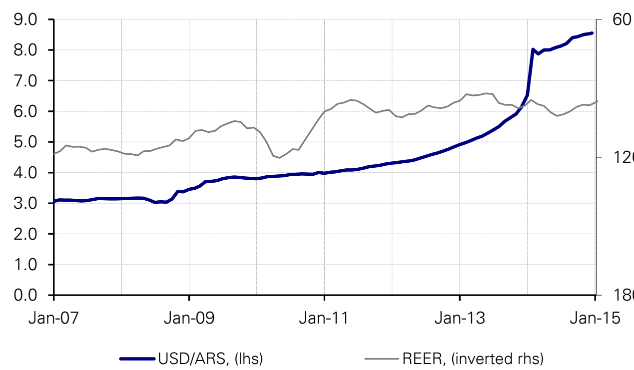
Argentine FX arrangements were plagued by monetary mismanagement and inflation throughout most of the twentieth century, resulting in periodic massive currency devaluations. The Peso Ley replaced the Peso Moneda Nacional in 1970 at a rate of 100 to 1, which was itself replaced by the Peso Argentino at a rate of 10,000 to 1 in 1983. In 1985, this was again replaced by the Austral at a rate of 1,000 to 1, though this soon collapsed via hyper-inflation. Beginning April 1st 1991, Argentina operated a currency board system with the Peso (converted from the Austral at 10,000 to 1) pegged to the dollar at the rate of one to one, every peso in principle backed by hard currency reserves. The "Convertibility Plan," was conceived to solve Argentina's chronic inflation problems, and throughout the first half of the 1990s the system underpinned an economic boom, with inflation declining to single digits. However, as the decade wore on, the real appreciation of the dollar placed the system under strain as REER became increasingly overvalued. The combination of persistent budget imbalances, negative terms of trade shocks, and inflexible monetary policy eroded credibility and culminated with the abandonment of the currency peg on January 6th, 2002.

Floating the currency led to a 70% devaluation of the Peso, taking it from one of the most overvalued to one of the most undervalued currencies in the world. Since then, the exchange rate has been tightly managed and capital flows strictly controlled. As the economy recovered from the 2002 crisis, inflation increased once again (albeit under-reported by the government since early 2007), undermining the competitiveness of the exchange rate. During the global crisis of 2008, the authorities faced the challenge of allowing the currency to depreciate but without triggering a sharp currency substitution. The Central Bank of Argentina (BCRA) embarked on a managed depreciation path, which by the middle of 2009 was successfully completed.

Since the beginning of 2010, the Central Bank has followed a new, more gradual, depreciation trend significantly below inflation. But in mid-2013 a faster pace of depreciation was introduced in an attempt to compensate accumulated real appreciation of more than 30% since 2010. This was followed by a 15% depreciation in the last week of January 2014. Nonetheless, peso devaluation was not accompanied by the necessary tightening of fiscal and monetary policies, leading to inflation accelerating to 40% YoY (from 25% before). By November 2014 the peso had lost all the competitive gains won in the previous months. Going forward, we anticipate the government moderating peso depreciation in order to contain inflation. To this end, the government and the Central Bank are expected to continue rationing hard currency for imports and capital outflows. Thus, a new real appreciation trend is likely to continue until December 2015 when a new government is expected to bring some policy normalization, including a freer exchange rate regime.

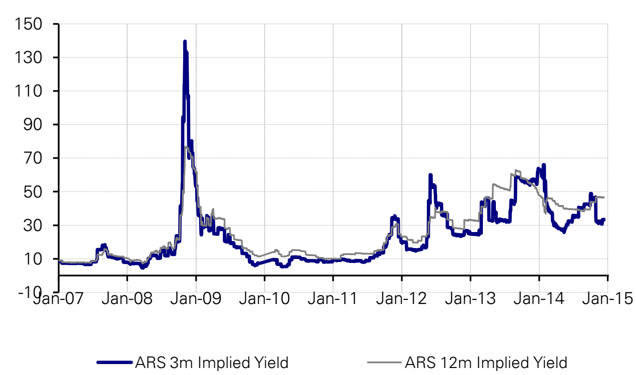
The currency is not convertible, and most USD inflows are subject to a mandatory, unremunerated one-year deposit at the Central Bank. In November 2011, the government stepped up the restrictions to trade in the local currency market and forced some repatriation of funds (see below). In addition all types of USD hoarding were prohibited and severe restrictions were imposed on capital outflows. Regulations will likely remain restrictive, negatively affecting liquidity in NDF and options markets.

USD/ARS spot and REER



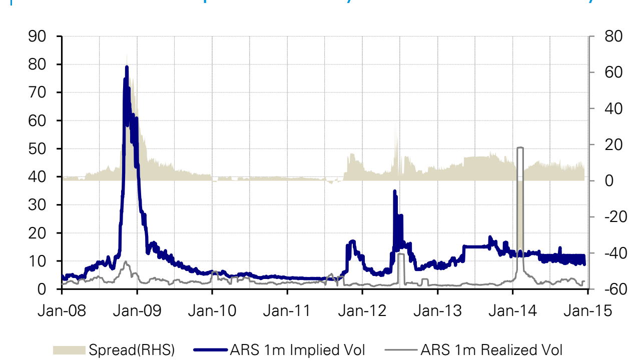
Source: Deutsche Bank

3M and 12M USD/ARS (offshore) NDF implied yield



Source: DB Global Markets Research, Bloomberg Finance LP, BIS

1M USD/ARS implied volatility and realized volatility



Source: Deutsche Bank

Regulatory framework and approach

- The BCRA (website http://www.bcra.gov.ar/) is the main regulator for the banking industry. The *Comisión Nacional de Valores* (CNV, website http://www.cnv.gov.ar) is the local financial market regulator, overseeing in particular all public offerings.
- Foreign exchange transactions in the *Mercado Unico y Libre de Cambios* are governed by the Foreign Exchange Penalty Law, the Decree 616/2005 and Exchange Regulations created by BCRA. Until 2009, a summary of the FX-regulations in force was published monthly by the Central Bank (see *Comunicado P49561* published on 15th September 2009).
- The most relevant taxes are income tax, financial transactions tax (0.6%) on all debit and credit transactions in current accounts, value added tax and withholding tax in certain cases.
- In November 2008, the structure of the local market changed significantly with the nationalization of the pension fund system.
- After controls were tightened in November 2011 the FX market became very much an exchange with the Central Bank

Onshore ARS products

FX spot

Trade-related transactions:

- Exporters have the obligation to sell USD receipts within time limits depending on product, up to three months. Some agriculture products, in particular those affecting basic consumption goods, like wheat and corn, still need export authorization.
- Importers are allowed to tap the spot market with no formal restriction provided linked to an import. Imports however are severely controlled. Importers need to wait for Central Bank final authorization and that is not longer immediate nor automatic.
- Foreign debt financing must be sold in the FX market. Corporates can buy USD to pay for interest and capital amortization upon Central Bank authorization (but issuance might be susceptible to deposit requirements, depending on objective of financing).
- Banks are responsible for compliance with the regulations, with penalties for non-compliance.

Non trade-related transactions:

- USD inflows are subject to a one year 30% mandatory unremunerated deposit at the Central Bank with a few exceptions (e.g., initial issuance of public stock, Treasury debt, Provincial debt and Corporate debt, and FDI).
- Argentine residents are allowed to sell USD 2m per month to purchase local assets without having to make the 30% deposit described above.
- In November 2011, the government introduced a series of measures with the purpose of increasing both the supply of USD and the control in the local FX market. First, it demanded the full repatriation of export receipts from mining/extracting activities. Then, it eliminated the right of insurance companies to hold investments abroad. Afterward, it set the obligation for foreign companies investing in the country to liquidate their hard currency holdings through the local market in order to be able to eventually take their investment abroad and introduced tighter restrictions on USD purchases in excess of USD250k a year despite maintaining the legal limit at USD 2mn a month for individuals and corporations. Additionally, it established that any USD purchase requires prior authorization by the national tax authority (AFIP), based on income declarations and stated purpose. Finally, the BCRA demanded that banks inform any foreign transaction 10 business days ahead of time.
- In November 2011 the authorities prohibited any buying of USD for hoarding, and introduced the need for authorization from the Central Bank and the tax authority for any other transaction in hard currency but without defining a clear rule. Some buying for tourism related spending is still allowed but requires approval by the tax authority, also following a not well-defined rationing criterion. Debt services are usually authorized while profit and remittances are only very gradually and discretionarily approved. The buying of dollars for hoarding was reintroduced in March 2014 for individuals only, but a maximum of USD2,000 a month per tax contributor was set.

Liquidity:	Moderate (in SIOPEL – see below - and broker markets)
Avg. ticket size:	USD 1mn
Bid/ask spread:	ARS 0.002
Avg. daily volume:	USD 250m
Ref. source:	Reuters page <ARS=>, <ARS/1>
Trading hours:	10:00 am- 3:00 pm Buenos Aires time.

Local NDF/Futures Market

Regulatory:	Participants can trade freely in local NDFs and trades are settled in ARS. The BCRA maintains a fixing (Tipo de Cambio de Referencia) which is only used for onshore contracts (Bloomberg ticker: ARORREX Index, Reuters: ARS=BCRA). The Methodology is described in Comunicación A3500, March 1st 2002. The BCRA solicits bid/ask quotes via the SIOPEL system of the MAE (Mercado Abierto Electronico), in three rounds of 15 minutes between 10am-11am, 12pm-1pm and 2pm-3pm. The fixing is obtained as the arithmetic average of the fixings in each of the individual periods. The fixing for each individual period is calculated by ordering all the bid/ask quotes and taking the simple average of the bid and ask of the inside market (i.e. after removing all pairs of overlapping bid-ask quotes), and rounded to 4 decimal places. To limit dislocations between the onshore and the offshore markets, in 2008, the BCRA started offering onshore contracts at the EMTA fixing (the BCRA undertakes forward intervention as part of its FX policy), but the A3500 fixing remains the onshore market standard.
Avg. size ticket:	USD 1mn
Tenor:	Liquidity up to 12 months with some trades up to 18 months.
Bid/ask spread:	ARS 0.004 for first 3 months, wider for longer tenors
Avg. daily volume:	USD 150 - 200mn normally
Fixing:	Bloomberg ticker: ARORREX Index, Reuters: ARS=BCRA

Offshore ARS products

Non-Deliverable Forwards and Options

The EMTA ARS Industry Survey has been discontinued and, as of June 2014, EMTA recommends using the volume-weighted average rate published by the Mercado Abierto Electronico (MAE) as the settlement rate for NDFs and NDOs. This rate represents the volume-weighted average of all trades captured in an electronic trading system in Buenos Aires, and is published at approximately 3pm local time. (see http://www.mae.com.ar/Anuncios/ARS%20EMTA.pdf)

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation. Standard docs available at EMTA (www.emta.org)
Liquidity:	Poor
Avg. ticket size:	USD 5mn
Bid/ask spread:	2 figures (in 1m tenor); low liquidity beyond the 3 month tenor
Avg. daily vol:	USD30mn
Ref. source:	LATAMNDF=DBNY, Bloomberg: DBLM1<GO>
Fixing:	www.emta.org/aservices/, Reuters:ARSPPN=, Bloomberg:ARS MAEM Curncy

Non-Deliverable Option (NDO)

Liquidity:	Very Poor
Avg. daily vol:	< USD10mn

Cross-currency Swaps

	USDARS	USDCER
Liquidity:	Very Poor	Very poor
Avg. ticket size:	USD 2mn	USD 2mn
Bid/ask spread:	300bp	500bp
Avg. daily volume:	USD 2mn	USD 2mn
Fixing:	www.emta.org/aservices/ Reuters: ARSMCMEEMTA= Bloomberg: EMTAARS Index	CER fixing Bloomberg CER Index or ARCECOES Index. Reuters: .CER

Source: Deutsche Bank

Government bond market

Treasury bonds

Regulatory: Banks have limits on the amounts they can hold. There are no such restrictions for onshore or offshore investors. The majority of ARS denominated bonds are still CER-adjusted (inflation linked), although in 2007 a nominal 5Y bond was issued (BONAR ARS V) in the amount of USD500mn. Recent ARS-denominated issues from the Treasury have been floating rate notes linked to BADLAR (average deposit rate) following a gradual trend of retiring CER exposures. The Treasury has also issued USD denominated bonds, some of which are under local law and some under NY or UK law.

Liquidity: Moderate

Avg. ticket size: USD 5mn notional

Bid-ask spread: USD 0.25 in price

Avg. daily vol.: USD 300-400mn

Central Bank Paper

Regulatory: There are two types of paper: LEBACs, which are zero-coupon bills with maturity up to 2 years, and NOBACs, which are floaters, linked to the local BADLAR rate (mostly, although there are a few fixed rate bullet bond NOBACs), with quarterly coupons and a maturity of up to 3 years. The bonds have been issued in connection with the BCRA's liquidity management and sterilization of foreign exchange intervention. In August 2007, the Central Bank changed the regulations for NOBACs and LEBACs so that foreign investors can no longer hold the new issues of this paper. The new issues are only clearable in the local clearing system CRYL (although in principle the government could still issue Euroclearable paper if it desired, so far new issues since the new regulations have all been CRYL-clearable paper). Foreign investors can still participate in the secondary market for existing issues with no changes in regulations, and there are no limits on the amounts of such paper that can be held.

Deposit

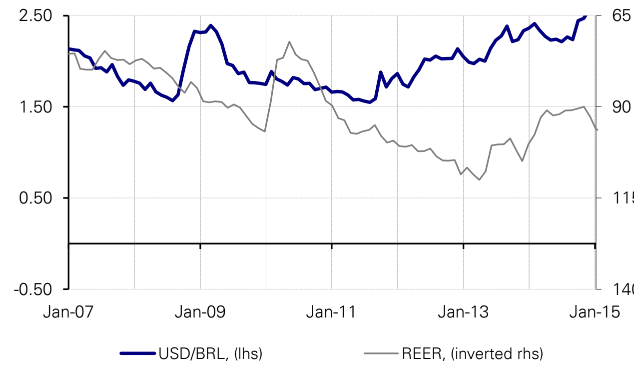
Regulatory: No restrictions, but banks have limitations on the usage of USD deposits and must comply with liquidity requirements.

Brazil

The Brazilian Real (BRL) was created in 1994 after multiple devaluations and decades of severe depreciation under the chronically high inflation of the late 1980's and early 1990's. It initially followed a narrow target zone regime as an anchor for inflation. However, given the widening current account gap of 1994-98, this dollar peg became another casualty of the Russian crisis and in January of 1999 the BRL began to float. Unfavorable commodity prices and internal political complications kept the currency under pressure for years with a peak reached in late 2002, when the leftwing party PT won the Presidential elections and the USD/BRL overshot to around 4.0. The risk factors started to align in favor of BRL appreciation since 2003. Prudent macroeconomic and market-friendly policies (including a fiscal responsibility law and a credible inflation target regime) re-established confidence, while recovering commodity prices engineered a massive trade balance improvement. The country's external debt was dramatically reduced to a net surplus and Brazil earned investment grade status. Brazil's large reserves and relatively low leverage protected it against the 2008 crisis and the economy recovered fast over the next couple of years. However, the substantial deterioration in policy-making that followed brought the country to the brink of recession. The policy mix is finally improving, although it remains to be seen for how long. We expect tighter fiscal and monetary policies with more currency flexibility in 2015.

The BRL is not convertible but except for the stress period during the 2008 financial crisis, the convertibility premium has remained near zero. Both local registration and custodians are required to transact in local markets. Bureaucracy has been reduced (though not eliminated) and the onshore short-dated futures contracts and NDFs are very liquid. Liquidity drops drastically for tenors longer than 1Y, given the competition from the widely traded local swaps curve. Options are traded onshore (at the BM&F) and offshore with liquidity concentrated in tenors up to 1Y. The weighted average (ex-outliers) of spot transactions (PTAX) is the fixing for USD-linked bonds, and all derivatives instruments. The cross-currency swaps market (USD onshore x CDI rates) is dominated by the Central Bank via intervention and registered at CETIP (a non-profit clearing house). Otherwise, instruments are traded OTC. Given the recent changes in the financial landscape the IOF tax, originally applicable to a variety of foreign investments, has been reduced to zero (from 6%) to mitigate the selling pressures on the BRL. Central Bank intervention was intense in 2014 and the stock of reverse FX swaps peaked to about USD100bn. Monetary authorities have suggested decreased intervention in the years ahead and pointed to gradual reduction of this stock.

USD/BRL spot and REER

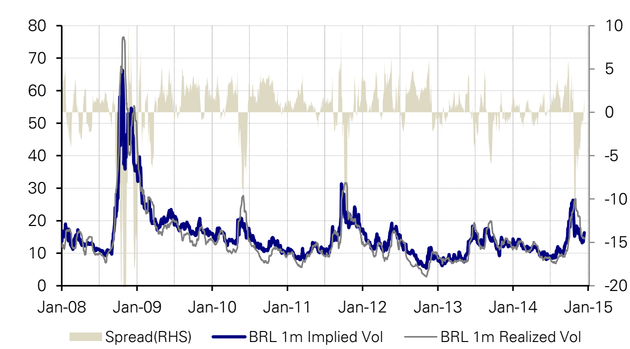


Source: DB Global Markets Research, Bloomberg Finance LP, BIS

3M and 12M USD/BRL (offshore) NDF implied yield

Source: DB Global Markets Research, Bloomberg Finance LP

1M USD/BRL implied volatility and realized volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The National Monetary Counsel (CMN) is the main regulator of the Brazilian financial system. It has the responsibility of formulating monetary, exchange rate and credit policies with the objective of promoting macroeconomic stability and development. The CMN is currently composed of the Minister of Finance, the Minister of Planning and the President of the Central Bank (http://www.fazenda.gov.br/portugues/orgaos/cmn/cmn.asp).
- The Central Bank (CB) is the main executive office of the CMN and is responsible for implementing the policies broadly defined by the Counsel, supervising day-to-day banking activities and enforcing the rules that ensure the stability of the financial sector. (http://www.bcb.gov.br).
- Resolution 2689 regulates non-resident activity. Spot transactions and physical inflows/outflows must be registered at the CB under a specific label (exports/import, portfolio flows, direct investments, etc) and are subject to CB scrutiny under the appropriate FX legislation. The rules have been rapidly evolving over the last 5 years towards simplification and bringing the currency closer to full convertibility.
- The IOF tax on foreign flows related to certain transactions has been eliminated.

Onshore BRL products

FX spot/forwards/swaps

Regulatory:	Onshore forwards trade via BM&F USD-futures contracts. Both contracts settle according to the PTAX (Bloomberg: BRLPTAX Index, Reuters: BRLPTAX= and page BRFR, EMTA ID: BRL09). The fixing is calculated as an average of quotes provided by local banks in four surveys, conducted hourly between 10am and 1pm. It is published daily at approximately 1:20pm Sao Paulo time on the Central Bank's SISBACEN Data System under transaction code PTAX-800. The fix is calculated only on the basis of the offer side of the market only, for transactions with T+2 settlement. OTC contracts are allowed, but the vast majority of business is done instead through futures (BM&F).
Liquidity:	Very good
Avg. ticket size:	USD 1mn in spot, USD 5mn in the first future
Bid/ask spread:	5bp in both spot and the first future
Avg. daily volume:	USD 1bn in spot and USD 14bn in the futures
Ref. Source:	Reuters Page <BRL=>

IRS – DI Futures

Regulatory:	For DI futures, offshore investors must open special non-resident accounts.
Liquidity:	Very Good
Avg. ticket size:	BRL 50K/DV01
Tenor:	1M – 7Y (the most liquid contracts are for January expiry up tp 5Y).
Bid/ask spread:	2bp
Ref Source:	Bloomberg ODA <Comdty.> CT
Fixing:	Floating rate is o/n CDI rate (Bloomberg BZDIOVRA Index. In index form: IDIX3 Index (rebased version of IDIX Index)

Short-term money market instruments (BA/CP/repo)

Government bond

Regulatory:	For LTNs, NTN-Fs, etc offshore investors must open special non-resident accounts.
Liquidity:	Good
Avg. ticket size:	BRL 25mn
Bid/ask spread:	10bp normally. Depending on bond spread can range from 3-5bps to 30bps.

Deposit

Regulatory:	For bank time deposits (CDB), offshore investors must open special non-resident accounts.
Liquidity:	Good
Avg. daily volume	BRL 2bn

Offshore BRL products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation applies. Standard docs available at EMTA (www.emta.org) For offshore contracts, in the event of the unavailability of the PTAX fixing for whatever reason, two daily EMTA surveys are available as back-up fixings (EMTA BRL Industry Survey Rate – BRL12; and EMTA BRL Indicative Survey Rate – BRL13) available at www.emta.org
Liquidity:	Good
Avg. ticket size:	USD 10mn
Bid/ask spread:	10bp (in first future)
Avg. daily vol:	USD 14 bio (onshore and offshore on BM&F)
Ref. Source:	LATAMNDF=DBNY, Bloomberg: DBLM1<GO>
Fixing:	PTAX (Bloomberg: BZFXPTAX Index, Reuters: BRLPTAX= and page BRFR)

Non-Deliverable Option (NDO)

Regulatory:	ISDA documentation applies. Standard docs available at EMTA (www.emta.org)
Liquidity:	Good
Avg. ticket size:	USD 30/60mn
Bid/ask spread:	0.6 vols
Avg. daily vol:	USD 2.5 bn

Non-deliverable Swap (NDS)

Regulatory:	ISDA documentation applies.
Liquidity:	Very Good
Avg. ticket size:	BRL 50mn
Tenor:	1m – 7Y
Bid/ask spread:	3–5bp up to 2Y
Fixing page:	Bloomberg ODA <comdty.> CT

Chile

With the economy essentially closed to capital and trade flows, the exchange rate was fixed in the 1960s. Regulated prices and multiple official rates with quotas were pervasive. This resulted in macroeconomic imbalances, budget deficits and high inflation. Although reforms began in the 1970s, the 1982 crisis exposed weaknesses and moral hazard in the banking sector. There followed a turnaround in monetary policy, with banking and bankruptcy reforms and the granting of full autonomy to the Central Bank of Chile (BCCh) in 1989.

In 1991, monetary policy moved to inflation-targeting in the context of a managed exchange rate (bands). This was accompanied by other reforms such as tariff cuts, free trade agreements, anti-trust rules, banking regulation and privatization. FX bands were abolished in 1999, when the peso started to float freely – albeit with some continued intervention.

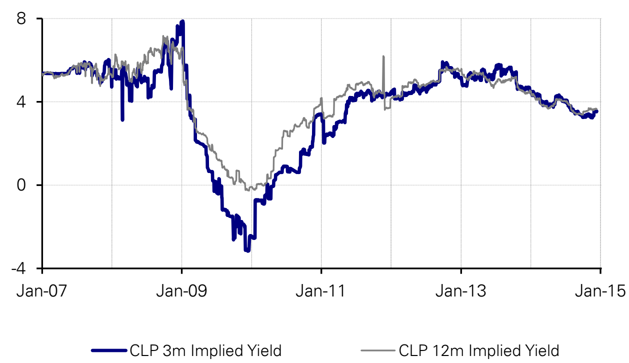
The inflation target is 3% +/- 1%, with a two-year horizon. The BCCh carries out its monetary policy by influencing the daily (overnight) interbank interest rate known as camara (see more below) via the liquidity credit line and the liquidity deposit. Regarding the former, commercial banks obtain funds from the BCCh at the TPM (policy rate) plus 25bp, an operation that requires collateral (repo). The latter involves holding commercial bank deposits at the BCCh for one business day, at the TPM minus 25bp. These stabilize interbank rates at TPM +/- 25bp. The BCCh has intervened to stabilize the market in special situations, but such intervention is rather the exception than the rule, and always follows some rule-based approach

The spot FX market ranks third in Latin America in terms of liquidity and size, with trading in spot averaging approximately USD1.5bn daily. The NDF market is also deep, posting a daily trading average of around USD500mn, but liquidity is concentrated in the 1m-12m sector. The FX market is not taxed and currently there are no capital controls. The forwards settle T+2 and fix at the *observado* – the average of the previous day (BCCHILG on Reuters, at noon). FX options are also non-deliverable and liquidity is concentrated in vanilla. The re-investment of copper-related trade flows is an important driver of the CLP, although speculative flows have increased in past years due to big swings in the policy rate.

USD/CLP spot and REER

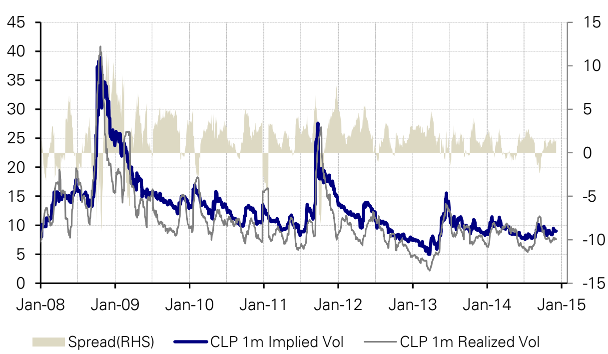
Source: DB Global Markets Research, Bloomberg Finance LP, BIS

3M and 12M USD/CLP NDF implied yield



Source: DB Global Markets Research, Bloomberg Finance LP

1M USD/CLP implied volatility and realized volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- The BCCh regulates the FX market (www.bcentral.cl).
- The regulator of banking activities is the Superintendency of Banks and Financial Institutions (www.sbif.cl).
- Local banks can only trade interest and FX options that are previously approved by Superintendency of Banks and Financial Institutions. Any uncovered leveraged position entails some capital cost to the bank.
- The regulatory framework in Chile keeps the local financial system relatively resilient to international jitters and also protects the corporate sector from FX fluctuations. In particular, i) Securitization of credit risk is restricted—credit risk is kept within the balance sheet; ii) Banks can hold positions only on some derivatives products—credit derivatives are not allowed and any FX and/or interest rate derivative contract is required to pass an exhaustive process of authorization by the Superintendence of Banks and Financial Institutions; iii) the capital cost of an un-hedged FX position is high.
- Foreign investors can invest in local Central Bank and Government bonds by opening a custody account. The custodian bank has the responsibility of withholding and paying the 4% withholding tax on coupons, informing all transactions to the SII (local IRS) and the BCCh, maintaining the custody (ie. coupon payments), and opening accounts in USD and CLP.

Onshore CLP products

FX spot

Regulatory:	None besides notification for transactions over USD 10,000 (see above).
Liquidity:	Good
Avg. Ticket size:	USD 5mn
Bid/ask spread:	CLP 0.3
Avg. daily volume:	USD 1.5bn (USD1.3bn in the electronic system and USD 0.2bn in the OTC)
Ref. source:	Reuters page <CHILJ> and Bloomberg <DBLM1>
Daily Hours:	8:30am - 14:00pm; aftermarket liquidity low, 14:00pm - 17:00pm

FX forward

Regulatory:	Same as for onshore spot market. Only local counterparties can participate, so offshore participants need local legal status. The forwards settle T+2 and fix at the *dolar observado* – the average of the previous day (BCCHILG on Reuters, at noon).
Liquidity:	Good up to tenors of 1Y. Longer-dated forwards are significantly less liquid.
Avg. Ticket size:	USD 10-20mn
Tenor:	Up to 1Y
Bid/ask spread:	Varies with the tenor: 1M CLP0.1, 3M CLP 0.20 and 1Y CLP 0.50
Avg. daily volume:	USD 1,000mn normally
Fixing:	Bloomberg ticker: PCRCDOOB Index, Reuters ticker: CLPOB=

FX options

Regulatory:	No active local market yet, but the central bank has already granted approval to operations with derivatives.

IRS

	CLP/UF (real rates)	CLP/CAM (nominal rates)
Regulatory:	No regulations for offshore trades.	
Liquidity:	Good	Good
Avg. ticket size:	5k DV01	5k DV01
Tenor:	6M – 20Y	6M – 10Y
Bid/ask spread:	5-7bp	4-6bp
Fixing page:	The overnight inter-bank rate (ICP) is determined by the *Asociación de Bancos e Financieras de Chile* (http://www.abif.cl/menu-lateral/indicadores-ba promedio/icp_mes.htm).	
Ref source	Bloomberg <DBCH>	

Source: Deutsche Bank

Short-term money market instruments (BA/CP/repo)

Regulatory:	Entities with legal onshore status are allowed to access the onshore market (withholding taxes apply as specified above).
Liquidity:	Good
Avg. daily volume:	USD 800-1,000 mio

Sovereign bonds

	UF (real rates)	CLP (nominal rates)
Regulatory:	Entities with a legal onshore status are allowed to access the onshore market (withholding applies as specified above)	
Liquidity:	Good	Good
Avg. ticket size:	USD 15mn	USD 7.5mn
Bid/ask spread:	4 –7bp for 5, 7 & 10Y, 5-8bp for 20Y	5-7bp 5 & 10Y
Avg. daily volume	USD 300-500mn	USD 90-110MN
Ref. Source	Bloomberg <DBCH> and http://www.bolsadesantiago.com/	

Source: Deutsche Bank

Loan

Regulatory:	Entities with legal onshore status are allowed to access the onshore market (withholding taxes apply as above).
Liquidity:	Poor for foreigners, but reforms are under discussion to improve the situation. Currently, if a foreign entity issues debt onshore, pension funds must treat these bonds as external assets, and regulatory limits on external holdings are already binding.
Spread	Typically 90 – 140bp over govt bonds from 5 to 20Y (real rates) for a local AA / A

Deposit

Regulatory:	Entities with legal onshore status are allowed to access the onshore market (withholding taxes apply as above).
Liquidity:	Good

Offshore CLP products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation. Standard docs available at EMTA (www.emta.org) Settlement is based on the *dolar observado*, (Bloomberg ticker: PCRCDOOB Index, Reuters ticker: CLPOB=, EMTA ID: CLP10). It is published daily by the Central Bank at 9:30am Santiago time, based on an average of the previous day's trading, but used for settling transactions in the current business day. In the event of unavailability of the fixing, for offshore contracts, EMTA (www.emta.org) maintains the back-up EMTA CLP Indicative Survey Rate (CLP11) which it is standard to specify as an alternative fixing source.
Liquidity:	Good
Avg. ticket size:	USD10mn
Bid/ask spread:	CLP0.5
Avg. daily vol:	USD 500-600mn
Ref. Source:	LATAMNDF=DBNY, Bloomberg: DBLM1<GO>
Fixing page:	Bloomberg ticker: PCRCDOOB Index, Reuters ticker: CLPOB=

Non-Deliverable Option (NDO)

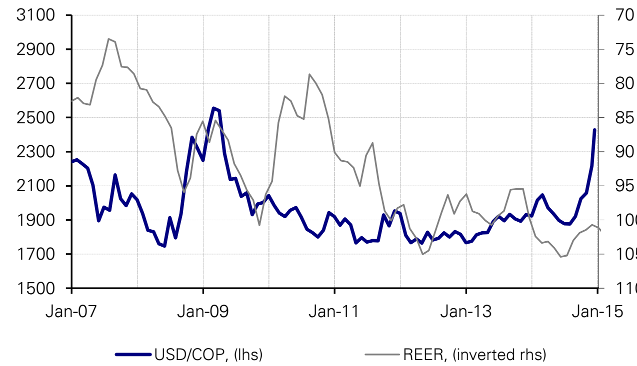
Regulatory:	ISDA documentation. Standard docs available at EMTA (www.emta.org)
Liquidity:	Poor
Avg. ticket size:	USD10mn
Bid/ask spread:	1 vol
Avg. daily vol:	USD50mn
Ref. source:	LATAMNDF=DBNY and Bloomberg <DBCH>
Fixing page:	Bloomberg ticker: PCRCDOOB Index, Reuters ticker: CLPOB=

Colombia

According to the Constitution, Banco de la Republica (Banrep) has administrative, financial and technical autonomy, and its main goal is to maintain low and stable inflation along with a growth rate close to the long term potential. This institution is responsible for monetary and exchange rate policies, regulating credit conditions, and managing international reserves, and it is the lender of last resort for the financial sector. Monetary policy operates under an inflation targeting regime with a two-year horizon, and the target is currently between 2% and 4%. The Central Bank has also been keen on reducing FX volatility and it has often times resorted to capital controls in a "countercyclical" fashion, attempting to curb these flows during boom years in financial markets, and reversing such controls when international liquidity dries up. In the last two years, the Central Bank has intervened in the spot market, announcing a quarterly limit of foreign exchange reserves purchases. We don't expect the reserve accumulation program to be extended into next year, however. The spot market ranks fourth in Latin America in terms of liquidity and size. Since the peso is not fully convertible, the NDF market is the option for foreigners, posting a daily trading average of around USD 1bn. While contracts exist for tenors between 1m and 12m, liquidity is concentrated in 1m (90% of the transactions) with bid/ask spread of around COP5 for a USD20mn ticket. The forwards settle T+2 and fix at the TRM—fixed by the government every day based on the weighted average exchange rate in the previous day. FX options market is very illiquid, even for vanilla options.

Local financial institutions are the main participants in the spot and forward markets, but private pension funds, the Treasury, and the CB are important players as well. It is important to note that limits on the foreign currency exposure of financial sector institutions apply. For banks, their overall net foreign currency exposure cannot exceed 20% of their "tier 1 capital" if positive (long USD) (patrimonio tecnico-net worth) and 5% of their "tier 1 capital" if negative (short USD). The sum of all transactions involving foreign currency derivatives cannot exceed 500% of their "tier 1 capital".

USD/COP spot and REER

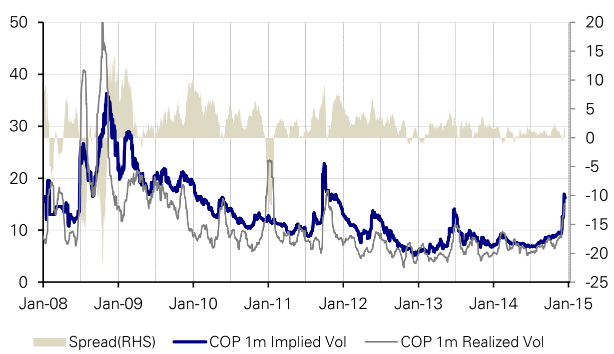


Source: Deutsche Bank, Bloomberg Finance LP,

3M and 12M USD/COP NDF implied yield

Source: Deutsche Bank, Bloomberg Finance LP

1M USD/COP implied volatility and realized volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- Banrep (http://www.banrep.gov.co/) conducts monetary and exchange rate policy.
- Investors are subject to an income tax on interest income and capital gains currently at 14% with the exception of investors domiciled in jurisdictions classified by the government as tax havens.[2] There is no tax treaty with US.
- There is also a 0.4% financial transaction tax that applies on all debit transactions (except those directly related to TES purchase). There are plans to gradually eliminate the financial transactions tax from 2018.

Onshore COP products

FX spot/forwards

Regulatory: NDF contracts trade onshore and offshore. Both settle based on the TRM (*Tasa Representativa del Mercado* - Bloomberg ticker: TRM Index, Reuters ticker: COTCRM=RR on reference page CO/COL03, EMTA ID: COP02). It is calculated and published daily by the *Superintendencia Financiera de Colombia*, a department of the Treasury. The methodology of the TRM is described in the Circular *Reglamentaria Externa* – DODM – 146, 21st September 2004, and the calculation is governed by article 80 of the *Resolución Externa* No. 8, 2002 (see www.banrep.gov.co/series-estadisticas/see_ts_cam.htm for details). The TRM is calculated as a weighted average of bid and ask T+0 transactions carried out by commercial banks, financial corporations, agents of the stock exchange, commercial financing companies (the latter two were added to the methodology on December 1st 2004), the FEN (*Financiera Energética Nacional*) and BANCOLDEX. The calculation must include transactions in Bogotá, Barranquilla, Cali and Medellín. The TRM for a given day is based on the FX transactions of the previous day and in the event of a holiday in either Colombia or the United States, a new TRM is not calculated and the previous day's TRM remains in effect. In the event of unavailability of the fixing, for offshore contracts, EMTA (www.emta.org) maintains the back-up EMTA COP Indicative Survey Rate (EMTA ID: COP04) which it is standard to specify as an alternative fixing source. Local FX forwards recently started trading on the *Bolsa de Valores de Colombia* (BVC) as standardized contracts.

Liquidity: Good

Avg. Ticket size: USD20mn

Bid/ask spread: COP2-4

Avg. daily volume: USD1.2bn

Ref. source: Reuters Page <COP=>

Short-term money market instruments (zero coupon, short-term TES)

Liquidity: Good

Avg. ticket size: USD3mn

Avg. daily volume USD60mn

Government bond (Local TES)

Liquidity: Excellent

Avg. ticket size: USD 5mn

Bid/ask spread: 2bp on benchmark, 5bp on non-benchmark issues

Avg. daily volume: USD6.0-7.0bn

[2] Decree 2193 of 2013 lists the countries and territories classified as tax-havens.

Note: As an alternative to FX-hedging fixed income positions, investors can also implement synthetic locally funded positions via structures which also remove convertibility risk associated with offshore funding.

Offshore COP products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation per EMTA (www.emta.org).
	See text above for fixing conventions.
Liquidity:	Good
Avg. ticket size:	USD10mn
Bid/ask spread:	COP3
Avg. daily vol:	USD800mn
Fixing page:	Reuters: COTCRM=RR on page CO/COL03. Bloomberg ticker: TRM Index.
Ref. Source:	LATAMNDF=DBNY, Bloomberg: DBLM1<GO>

Local TES NDF

Liquidity:	Good
Avg. ticket size:	5K DV01
Bid/ask spread:	2bp
Avg. daily vol:	USD600mn
Fixing page:	www.infoval.com
Ref. Source:	Bloomberg DBCO <GO>

IRS (COP/IBR)

Liquidity:	Moderate
Avg. ticket size:	3K DV01
Bid/ask spread:	5bps <2y 7bps beyond
Avg. daily vol:	USD70mn
Fixing page:	Reuters COIBR=RR, Bloomberg COOVIBR Index.
Ref. Source:	Bloomberg DBCO <GO>

Cross-currency swaps (USD/COP)

Regulatory:	ISDA documentation per EMTA (www.emta.org).
Standard Contract:	6m USD Libor vs COP fixed with final exchange; net settled offshore.
Liquidity:	Poor
Avg. ticket size:	USD10mn
Bid/ask spread:	10bp normally
Avg. daily vol:	USD30mn
Fixing page:	Reuters COTCRM=RR on page CO/COL03. Bloomberg ticker: TRM Index.
Ref. Source:	LATAMNDF=DBNY

Cross-currency swap (USD/UVR) – Inflation linked

Regulatory:	ISDA documentation per EMTA (www.emta.org).
Standard Contract:	6m USD Libor vs UVR fixed with final exchange; net settled offshore.
Liquidity:	Poor

Avg. ticket size:	USD5mn
Bid/ask spread:	15bp normally
Avg. daily vol:	USD10mn
Inflation Source:	Bloomberg UVR Index. Reuters: COU=

Non-Deliverable Option (NDO)

Liquidity:	Poor
Avg. ticket size:	USD 20mm
Bid/ask spread:	1.5 vols
Avg. daily vol:	USD 30-50mm
Fixing page:	Reuters COTCRM=RR on page CO/COL03. Bloomberg ticker: TRM Index.
Ref. source:	LATAMNDF=DBNY

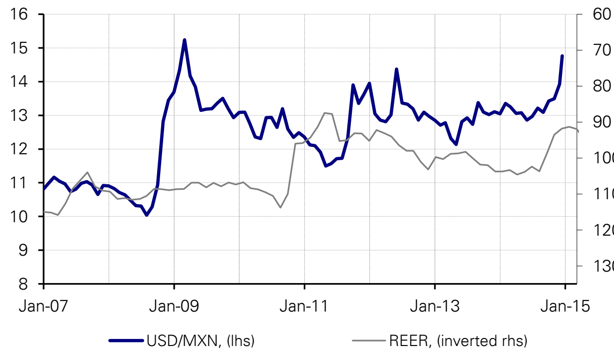
Mexico

The FX regime changed from highly managed to essentially a free float after the December 1994 devaluation, although augmented with various rule-based intervention schemes to manage volatility and reserve accumulation. Between August 1996 and June 2001, the Central Bank bought and sold USD via options and between February 1997 and June 2001 the Exchange Commission (comprised of representatives of the Finance Ministry and the Central Bank) established a mechanism to sell USD to moderate FX volatility by injecting liquidity during stressful periods. While in place, the system was used only 14 times, mainly between August 1998 and January 1999. The total amount of USD sold via this scheme was USD1.95bn.

From May 2003, the Exchange Commission used a USD auction scheme to tame the rate of FX reserve accumulation while still targeting an adequate liquidity buffer for the financial system. This was put in place to deal with higher and more volatile oil prices and the potential adverse consequences for the peso. Nevertheless, despite the mechanism, reserves were accumulated to a peak of USD87bn. On July 21st 2008 this mechanism was suspended indefinitely after a strong appreciation of the peso against the dollar during the first half of 2008 which eventually took the USD/MXN to a low of 9.85 in early August 2008.

However, soon after attempting to stem appreciation, the currency suffered strong depreciating pressure as a result of the global financial crisis in 2008. This prompted the surfacing of significant FX derivatives losses at Mexican corporates, creating strong USD demand to hedge these positions. The Mexican authorities announced a range of interventions. A rule-based USD-auction scheme was put in place, as used in the late 1990s, whereby USD400mn would be offered to the market daily in the event that the depreciation at any point during the day versus the previous day exceeded 2%. However, the volatility was so extreme that the auctions were also supplemented with a daily non-contingent USD 100mn auction (discontinued as of October 2009) and various *ad hoc* auctions on the most volatile days. The auctions were discontinued and re-instated several times. Most recently, Banxico reinstated the auctions in December 2014 following several weeks of high volatility, announcing that it would offer USD200mn daily at a minimum rate given by the previous day's official USD/MXN closing rate plus 1.5%.

USD/MXN spot and REER

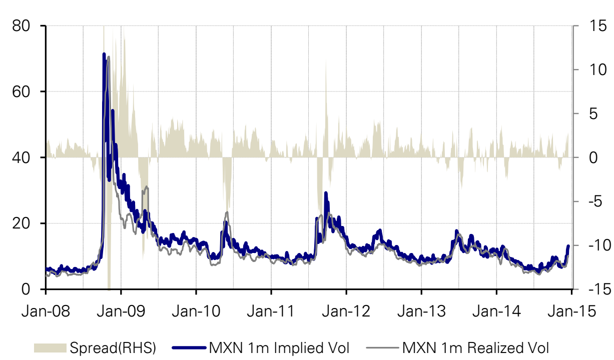


Source: Deutsche Bank, Bloomberg Finance LP,

3M and 12M USD/MXN FX Forward implied yield

Source: Deutsche Bank, Bloomberg Finance LP

1M USD/MXN implied volatility and realized volatility



Source: Deutsche Bank, Bloomberg Finance LP

Regulatory framework and approach

- According to Article 21 of the Bank of Mexico Law, FX policy is designed by the Exchange Commission, which is composed of officials from the central bank (including the Governor) and the ministry of finance. Policy implementation relies on the central bank (www.banxico.org.mx). The Bank of Mexico also designs and implements monetary policy to ensure price stability.
- Foreign investors are exempt from withholding tax in government securities (Article 196 of the Income Tax Law). However, interest income generated from investing in any other instrument placed among investors is subject to 4.9% tax (Article 195 of the Income Tax Law).
- Regarding investors from countries with which Mexico has a double taxation treaty, there is no withholding tax on TIIE swaps or derivative transactions involving sovereign debt instruments in markets recognized by Mexder (Mexico's derivative exchange). A 4.9% withholding tax must be paid by foreign banks and foreign investors obtaining interest income from credit instruments. There is no withholding tax for foreigners when dealing in derivatives linked to FX.
- Regarding investors from countries with which Mexico does not have a double taxation treaty, there is a 10% withholding tax for financing entities, pension/retirement funds and foreign investment funds registered with the Ministry of Finance. This rate is also applied to foreign individuals and corporations. Additionally, the tax rate for credit investments is 10% instead of 4.9%.
- Regarding tax havens, the withholding tax for registered foreign pension/investment funds changes to a minimum of 10%, while that for individuals and companies rises to 40%. Also, there is no withholding tax on TIIE swaps or derivative transactions involving sovereign debt instruments in markets recognized by Mexder.
- MXN transactions can be settled in CLS.

MXN products

FX spot

Regulatory:	No restrictions. The Mexican peso trades in the forward market as a deliverable contract and hence no fixing is required for settlement. Nevertheless, for various purposes the Central Bank of Mexico does publish a daily fixing known as the FIX (Bloomberg ticker: MXFT Index, Reuters USDMXNFIX2=. Also available in Reuters are T+0 and T+1 fixings USDMXNFIX=, USDMXNFIX1=). The FIX is based on a market-participant survey of the prevailing T+2 settlement USD/MXN rates. The FIX is published daily every Mexican business day, at 12pm. The FIX is used, for example, as the metric to trigger rule-based FX market interventions undertaken by Banxico, and has also been used as a reference rate for various onshore contracts, but has no relevance for settling FX market transactions themselves.
Liquidity:	Very Good
Avg. Ticket size:	USD 20-25mn normally, with tickets for as large as USD 150mn
Bid/ask spread:	MXN 0.005 - 0.01
Avg. daily volume:	USD 11bn [around 30% onshore]
Ref. source:	Reuters Page <MXN=>
Daily hours:	Major activity between 8:00am to 15:30pm NY, although the market is open 24 hours

FX forward/swap market/long-dated FX forward

Regulatory:	No restrictions; uniquely in LatAm FX forwards are deliverable
Liquidity:	Good up to 2Y normally, with a curve out to 5Y
Avg. ticket size:	USD 20mn
Avg. daily volume:	USD 2bn recently
Bid/ask spread:	5bp in USD (offshore market)
Ref. source:	MXNFWD=DBNY, Bloomberg: DBLM1<GO>

IRS market

Regulatory:	ISDA documentation
Liquidity:	Good out to 10Y normally, poor beyond
Avg. ticket size:	MXN120mn in 10Y; MXN300mn in 2Y, MXN250mn in 5Y
Tenor:	Up to 30Y. More liquid contracts: 2Y, 5Y and 10Y. Floating rate is 28d TIIE.
Bid/ask spread:	2bp
Fixing page:	Float fixing. Bank of Mexico (www.banxico.org.mx). Bloomberg: MXIBTIIE Index.

Short-term money market instruments

Regulatory:	The interbank funding market is for local banks or brokerage houses. There is legislation permitting Repo and securities lending, but these markets have not yet taken off.

Government bond market (Cetes – short-term T-bills)

Regulatory:	No restrictions. Foreigners can participate in primary auctions.
Liquidity:	Average (medium)
Avg. ticket size:	MXN100mn
Avg. daily vol:	MXN 5bn normally
Bid/ask spread:	2bp normally
Reuters page:	MXCT=DEBK (DB Contribution)

Government bond market (fixed rate nominal bonds)

Regulatory:	No restrictions. Foreigners can participate in primary auctions.
Liquidity:	Excellent in benchmark tenor Dec 24, good in Dec 18, May 31, Nov42 and Jun18 & average (mid to low) in other tenors.
Avg. ticket size:	MXN50mn
Avg. daily vol:	MXN 9 to 10bn
Bid/ask spread:	2bp for liquid tenors, 3-4 bp for illiquid tenors
Reuters page:	MXBN=DEBK (DB Contribution)

Government bond market (inflation-linked bonds)

Regulatory:	No restrictions. Foreigners can participate in primary auctions.
Liquidity:	Fair in 30Y; low in the rest
Avg. ticket size:	MXN20mn
Avg. daily vol:	MXN 2000mn
Bid/ask spread:	3bp normally
Reuters page:	MXUD=DEBK (DB Contribution)

FX Option

Liquidity:	Moderate
Avg. ticket size:	USD 30/50 mn
Bid/ask spread:	0.55 vols
Avg. daily vol:	USD 1.5bn
Fixing page:	Deliverable

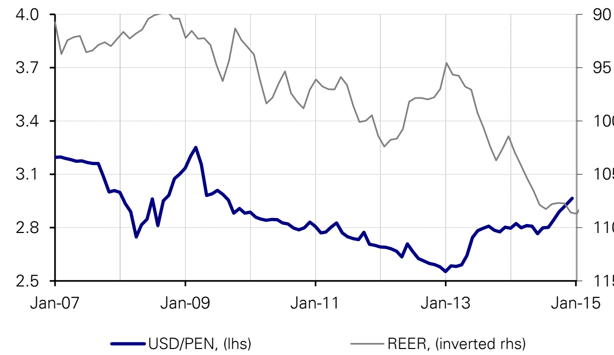
Peru

The Central Bank of Peru (BCRP) is responsible for managing monetary and exchange rate policies. Monetary policy is carried out under an inflation-targeting regime. The inflation target is 2% +/- 1% and applies to inflation (Lima CPI) throughout the year—not only for year-end inflation. The main instrument of monetary policy is the BCRP's overnight reference interest rate. In addition, the bank also targets interest rates on overnight repo loans and interest rates paid on overnight deposits made by financial sector institutions in the BCRP.

The exchange rate operates in a floating regime with active BCRP intervention. Exchange rate policy is aimed at limiting extreme volatility and maintaining a high level of international reserves, without defending any specific FX level. As in many other countries, limiting volatility and maintaining international reserves are important to moderate the impact from external shocks, but they are critical in Peru because of the still-high level of financial dollarization in the banking sector. FX intervention is done directly in the spot market, by auctioning USD-linked CD's (BCRP sells USD via CDRs or buys USD via CDLs), or in the forward market by auctioning FX Swaps (BCRP sells USD in the spot at the fixing rate, then receives OIS PEN rate and pays a fixed USD rate). Although there are no capital controls, the monetary authority often manages the reserve requirements on local deposits of nonresidents in order to limit foreign portfolio investment in local markets.

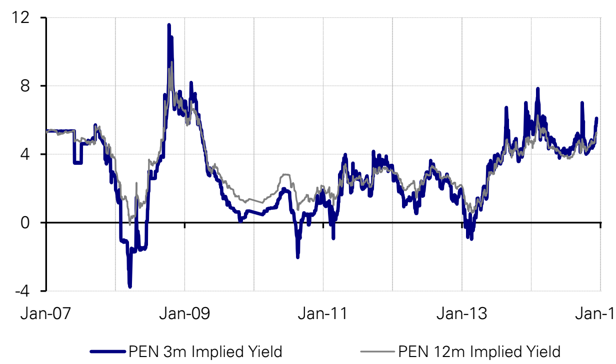
The daily market turnover is approximately USD1bn, with an average ticket size of USD10=20mn and a bid/ask spread of around 20bp. Onshore forward market is settled in PEN and it is mainly concentrated in 1m instruments. The offshore NDF market posts a daily trading average of USD300mn. While contracts exist for tenors between 1m and 12m, liquidity is concentrated in 1m (with bid/ask spread of 30bp in yield for a USD20mn ticket). The offshore forwards settle T+2 and the fixing rate is the "promedio intercambiario" published around 13:30 local time. FX options market is yet to be developed.

USD/PEN spot and REER



Source: Deutsche Bank, Bloomberg Finance LP,

3M and 12M USD/PEN NDF implied yield



Source: Deutsche Bank, Bloomberg Finance LP

1M USD/PEN implied volatility and realized volatility

Source: Deutsche Bank, Bloomberg Finance LP

Regulatory Framework

- *Banco Central de la Reserva del Peru* is responsible for the country's monetary and exchange rate policies (www.bcrp.gob.pe/). The banking, insurance and pension sectors are regulated by the *Superintendencia de Banca, Seguros y AFP* (www.bcrp.gob.pe/).
- Since January 1st, 2010, foreign investors are subject to a 5% capital gain tax if the transaction takes place at local exchange and 30% if the transaction is OTC. Central Bank and Government bonds are exempt.
- There is a tax (ITF) on the cash amount of all financial transactions (in domestic or foreign currency), but it is gradually being reduced.

Onshore PEN products

FX spot/forwards

Regulatory:	NDF contracts trade onshore and off, and are settled against the PEN Interbank Average (Source: www.sbs.gob.pe, Bloomberg Ticker: PSSADATA Index, EMTA ID: PEN05). Various fixes are calculated daily by the *Superintendencia de Banca y Seguros*.
Liquidity:	Good
Avg. Ticket size:	USD10-20mn
Bid/ask spread:	20bp
Avg. daily volume:	USD 1bn
Ref. source:	Reuters Page <PEN=>
Daily hours:	9:00am to 13:30pm local time

Government bond

Regulatory:	No restrictions. Beginning Jan 1st 2015, all trades involving domestic sovereign bonds must be registered in an approved negotiation mechanism (for now the only one is DATATEC). Investors will then have to become members of Datatec, or designate a participant who will report trades on their behalf. Domestic bonds must settle domestically as DVP in the local clearing house CAVALI. FOP with USD offshore payment will no longer be an option to settle domestic bonds. There are also global depository notes (GDNs) available which are euroclearble.
Liquidity:	Fair, most active participants are the local pension funds
Avg. daily volume:	USD40mn
Avg. ticket size:	PEN5mn
Bid/ask spread:	5-10bp in yield

Offshore PEN products

Non-Deliverable Forward (NDF)

Regulatory:	ISDA documentation. The NDF fixing is the DATATEC fixing, also known as *tipo de cambio profesional de dólar norteamerica.* The fixing is based on the transactions executed in the local DATATEC system between 9:00am (recently modified from 9:30am) and 13:30pm, taking a weighted average by size of transaction, rounding to 4 decimals. Participants in this wholesale market comprise banks, financial companies, *Banco de la Nación* and the Central Bank (BCRP), for transactions in excess of USD0.5m. If the DATATEC fixing cannot be calculated the fixing is calculated as the simple average of the interbank exchange rate reported on Reuters page PDSC again between 9:00am and 13:30pm. In the event of unavailability of the fixing, EMTA maintains the back-up EMTA PEN Indicative Survey Rate (EMTA ID: PEN04) which it is standard to specify as an alternative fixing source in the NDF documentation, available at www.emta.org.

Liquidity: Moderate

Avg. ticket size: USD10mn

Bid/ask spread: 30bps

Avg. daily vol: USD300mn

Ref. Source: LATAMNDF2=DBNY, Bloomberg: DBLM1<GO>

Fixing page: www.sbs.gob.pe

Cross currency swap:

Regulatory: ISDA documentation. Standard docs available at EMTA (www.emta.org)

Standard Contract: 6M Libor vs. PEN nominal fixed; net settled at maturity; with final exchange; settled offshore in USD

Liquidity: Moderate

Avg. ticket size: USD10mn

Bid/ask spread: 10bp

Avg. daily vol: USD20mn

Non-Deliverable Option (NDO)

Liquidity: Very Poor

Avg. daily vol: < USD10mn

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Appendix 1

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