

24 July 2017

### The View: Bitcoin: a new liquid market?

Is bitcoin a currency? A commodity? Neither? A proper store of value like the EUR, T-bills, or gold is measured by 3 factors: safety, liquidity, and return. Diversification is a plus. Bitcoin remains very volatile. But it has experienced a surge in liquidity in the last six months, surpassing \$2bn a day. Moreover, bitcoin is uncorrelated to any financial asset, commodity, or currency we study in this note. The flipside of extreme diversification is that there is no way to explain let alone predict returns. Could bitcoin see a virtuous cycle of increased liquidity, lower volatility, attractive returns, and wider acceptance? Possibly, if regulated financial institutions move to allow bitcoin as pledgeable collateral. However, large inherent risks to digital tokens such as fraud, hacking, theft, new protocol adoption, limited acceptance, and that it is not legal tender in many places in the world make it an unlikely development.

— F. Blanch

### G10 FX: Despacito until the fall

More short-term EUR upside, balanced JPY risks, downside for GBP, prepare for higher FX vol this fall, hedge long EM.

— A. Vamvakidis; R. Garg

### Rates: Trading the central bank aftermath

We review yesterday's ECB meeting and its impact on EUR rates. With the tapering discussion implicitly pushed back, the ECB have given the green light to carry trades. With our econ team pushing the first hike to Spring 2019, we stay long Mar19 Euribors.

— S. Salim; R. Hourihane; E. Satko; G. Moec

### EM: The girl with the dovish tattoo

With the Fed moving to a more dovish stance, solid growth in China and lower geopolitical tensions, inflows into EM continue and despite tight valuations. We like receiving rates in the belly in Brazil, long Indonesia and Turkey local debt and TRY/ZAR. We like long EUR/PLN call spread and JPY/KRW as efficient risk off hedges.

— C. Irigoyen

### Commodities: Get ready for a nat gas rally

The recent drop in US nat gas prices hard to justify and the underlying fundamentals are painting a far more positive picture. We expect the inventory surplus to be gone early August and end of October stocks at just 3.5 tcf, the tightest since 2008. We re-iterate our bullish call for 2018 US natural gas prices to average \$3.50/MMBtu, significantly above the current forward.

— S. Schels; F. Blanch

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See Team Page for List of Analysts

# Our medium-term views

## Rationale

G10 FX	USD is likely to continue to face near-term headwinds as central banks move in tandem towards policy normalisation, eroding the US yield advantage. Our expectations for a stronger USD by year-end are being challenged as the GOP has not repealed Obamacare. The path of least resistance remains for a weaker JPY as the BoJ continues to anchor YCC towards 0%. The ECB has taken the direction of going further towards policy normalisation and the risks are building that EUR/USD ends the year closer to \$1.20. GBP is stuck in a range and remains a trade on the Brexit deal. Data continues to play a secondary role but we retain a structurally higher vol bias. Scandinavian FX should benefit from a more constructive ECB and we remain directionally long NOK and long SEK volatility.
G10 Rates	With political risks fading, we expect EUR duration to move more in line with the (improving) economic data and the effective reduction in the amount of duration the ECB absorbs in Bunds through QE (compared to late last year). We see 10y term premium as having the potential to rise by another 10-15bp. Very few "Technical hikes" are priced in the very front-end so we like paying Jan18 Eonia. However, we view the 30bp of hikes priced by 1Q19 to be excessive. With tapering inevitable, fwd guidance on rates, beyond any potential technical move early in 2018, would have to be strengthened. We are bearish Gilts on stretched cross-market valuations and challenging demand & supply dynamics ahead. We like being short 3y Gilts vs. OIS on Brexit risks and paying 1y2y forward yield in Gilts on underpriced rate hike risks and RV anomalies.
EM	While we expect valuations to get more expensive as long as the DXY is weak or stable, we are watchful of crowded positioning that could be vulnerable. Triggers for a correction could be weakness in the crowded [REDACTED] and HY trades in the US, possibly from weaker corporate earnings or concerted ECB/Fed tightening in the autumn. We prefer RV trades or idiosyncratic longs in pockets of remaining value and take out insurance in options format. However, we remain structurally buyers of EM dips, as we believe that growth is likely to continue to outperform relative to DM for a while.
Commodities	With OPEC cuts working at a slower pace than we expected, we are adjusting our inventory projections. With output set to rise and oil demand disappointing, global balances point to deficits of 210 kbd in 2017 and 90 kbd in 2018. We lower our WTI forecasts to average \$47 this year and \$50/bbl next year. We cut Brent to \$50 this year and \$52/bbl in 2018. We now believe oil stays in contango by year-end, but see a WTI forward anchor at \$45-50 and \$5 backwardation by next summer.

## Our key forecasts

	3Q17	4Q17	1Q18	2Q18
3m Libor	1.35	1.60	1.85	2.10
10y T-Note	2.60	2.85	2.85	2.85
10y Bund	0.50	0.55	0.60	0.60
EUR-USD	1.10	1.08	1.10	1.10
USD-JPY	119	117	117	115
USD-CNY	6.95	7.05	7.10	7.15
USD-BRL	3.35	3.40	3.45	3.50
USD-INR	66.50	66.80	66.30	66.00
USD-RUB	60.00	60.00	63.00	63.00
WTI Crude Oil	44.00	47.00	47.00	47.00
Gold	1,275	1,350	1,400	1,350

Source: BofA Merrill Lynch Global Research, BofA Merrill Lynch Global Commodities Research

## What we like right now

FX	<a href="#">Buy 6M ATM EUR/SEK straddles</a> : We see a number of key events for the rest of the year which should see EUR/SEK vol rise including ECB and Riksbank meetings as well as the announcement of a new Riksbank Governor. EUR/SEK vol looks cheap on our metrics.
	<a href="#">Buy EUR/USD put spreads</a> : near-term headwinds for EUR/USD are mounting; the Fed remains hawkish & positioning is a constraint. Risks to the trade are further deterioration in US data and Fed officials turning more dovish.
	<a href="#">Buy 4-month 102/107 USD/JPY put spreads</a> : the upside for USD is likely limited until there is greater clarity on tax reform, positioning is relatively clean and there are signs that Japanese investors have lately been selling USD/JPY.
Rates	In EUR, we like going long Mar19 Euribors on ECB sequencing. We also like peripheral hedges and short breakevens. In the UK, we pay 1y2y Gilt yields.
EM	Long JPY/KRW; long USD/HKD forward; long INR and IDR against SGD; long OTM USD call/IDR put, long USD/KRW 3m NDF points; long EUR/PLN 3m call-spreads, stay cautious RUB, long TRY/ZAR; long ARS; short CLP; neutral BRL, MXN, PEN; long front-end MXN volatility; constructive on India; receive China rates; long 15y IndoGB; receive 1-2-5y MYR NDIRS, receive 1-2-5y INR NDIRS; pay Czech 5y, Poland 2y1y IRS; long forward steepeners in Turkey swaps; receive Jan'19 and Jan'21 in Brazil; pay 1y IBR and 2y inflation breakevens in Colombia; 2y-5y TIE steepeners in Mexico; long end of Soberanos curve.
Commodities	We like buying the crude oil dips. We also see a continued run-up in copper, zinc and nickel prices. Still, gold prices could potentially drop further as the USD strengthens and US rates move higher.

For a complete list of our open trade ideas and our trade ideas closed, please refer to

[page 19](#).

# The View

Francisco Blanch  
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## From metal-backed to fiat to crypto, money keeps evolving

The world economy has used different types of currencies as a means of exchange for millennia. From commodity-backed to precious metal-backed to fiat to crypto, the meaning of currency has changed with varying economic needs, political trends, and technological change. For example, salt was once mined and treasured in the ancient world and used a means of exchange. However, commodity-backed currencies were often neither a practical nor a durable means of exchange. So the global economy moved on. Governments coined currency to create standard economic units of account using either precious metals like gold or industrial metals like copper, a practice that continues to this date.

## Huge deposit discoveries preceded the advent of silver currency

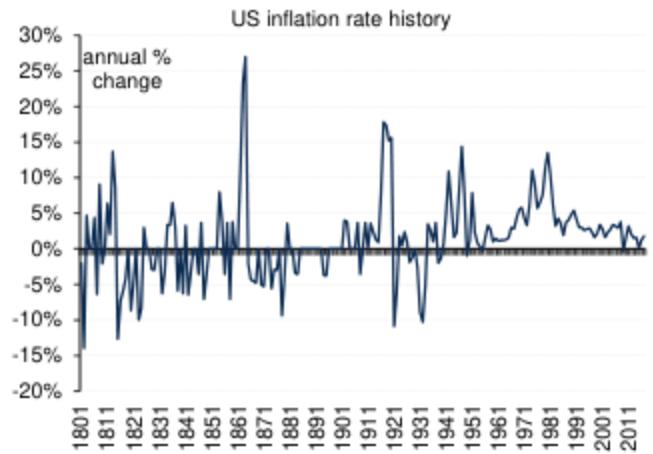
The discovery of large silver deposits in Bolivia by the Spanish in the 16<sup>th</sup> century set the basis for the world's monetary system until late in the 19<sup>th</sup> century (Chart 1). These silver dollars were the international trading currency of choice for nearly 400 years and kept a stable value relative to gold. The Spanish milled dollar was even used as a standard to set up the US dollar by the Federal Government. However, carrying large amounts of silver or gold was not practical. So the world started to move steadily to paper money, particularly in the last 200 years. At first, most governments maintained an asset or precious metal-backed currency system where paper currency could be exchanged for hard metal at a fixed rate. However, the supply of this money was fixed, creating huge inflationary and deflationary waves in the economy as the business cycle fluctuated every few years (see US example in Chart 2).

**Chart 1: Silver dollars were the international trading currency of choice for nearly 400 years and kept a stable value relative to gold**



Source: Kitco, Bloomberg

**Chart 2: However, the supply of this money was fixed, creating huge inflationary and deflationary waves every few years**



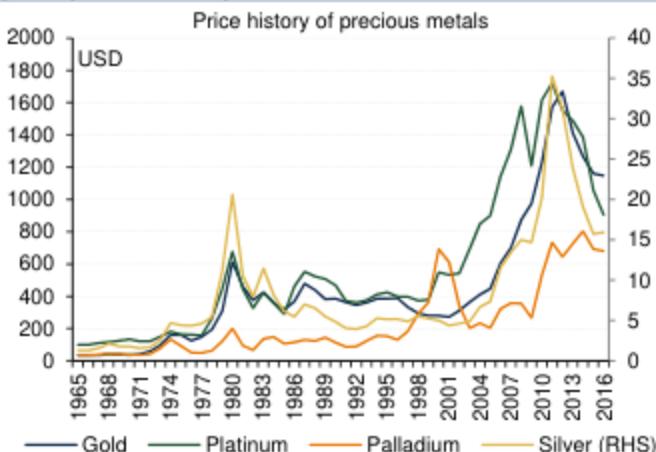
Source: Minneapolis Fed

## Macro financial stability considerations propelled fiat currencies

Following the Great Depression in 1933, the US government moved away from the gold standard domestically and left the economy running solely on silver, in effect a quantitative easing of sorts. Still, international payments were settled in gold. The domestic silver standard was eventually constrained by Kennedy in 1963, as inflation caught up with dollar silver certificates issued by the Treasury. Then Nixon announced in 1971 that the US government would no longer redeem US dollar currency for gold in international markets. A major spike in precious metals prices followed (Chart 3). As of today, most countries have moved to locally minted fiat currencies that have no intrinsic

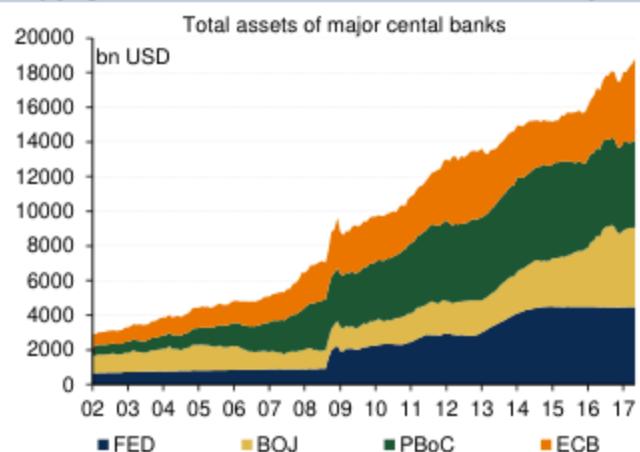
international value other than the full faith of the issuing government. In effect, central banks safeguard the value of the fiat currency mainly by complying with their inflation mandate. However, central banks have the ability to create fiat currency at will as long as the pre-established inflation target has not been met (Chart 4).

**Chart 3: The end of dollar/gold convertibility in 1971 led to a major spike in precious metals prices**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Chart 4: Central banks safeguard the value of a fiat currency by mainly complying with their inflation mandate, but can create currency at will**



Source: FRED - St. Louis Fed, Bloomberg

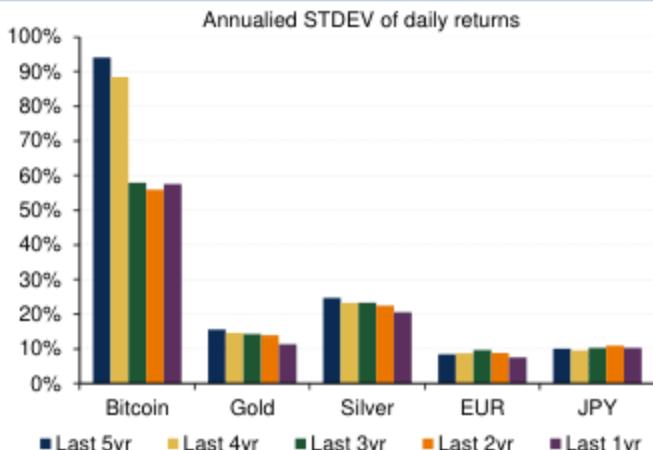
### Technological advancements have enabled cryptocurrencies

Decentralized digital cryptocurrencies first came about at the depth of the Global Financial Crisis in 2009 when a group of developers created Bitcoin. The idea of a virtual means of exchange that is controlled by an algorithm and escapes government control certainly has appeal to many. Ever since, cryptocurrencies have expanded in a dramatic fashion by making transactions cheaper and faster. Indeed, cryptocurrencies have a few advantages over fiat currencies, such as the ability to transfer money instantaneously anywhere in the world at a low cost or to code in specific contractual obligations. Also, while paper money is arguably untraceable and digital money can be hard to trace at times, cryptocurrencies allow for full transaction traceability through a digital ledger, also known as a blockchain. True, users in some jurisdictions may remain anonymous, but that is unlikely to be the case for bitcoin trades happening in exchanges based in the US, Europe, or Japan. Now, what turns a digital token into a proper store of value? We would argue that a reserve currency has to meet three "must have" criteria: safety, liquidity, and return. Also, there are "nice to have" criteria such as diversification benefits. Bitcoin and other cryptocurrencies score well on some, and not so well on others.

### Bitcoin does not score well on the safety parameter

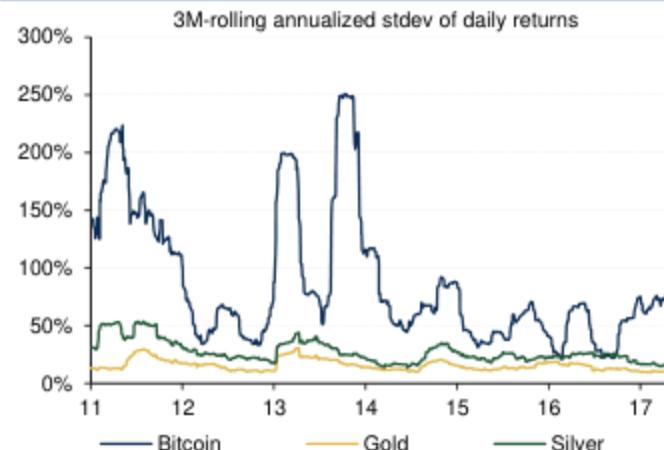
On the first parameter, safety, it is hard to argue that a crypto token meets the criteria of a reserve currency. On the one hand, the system creates enough incentives for miners to guarantee settlement of bitcoin transactions within hours, compared to 2 or 3 days for conventional securities such as equities or bonds. On the other, the lack of a centralized decision-making process or authority creates risks such as a currency split. If participating coders (also referred to as miners) cannot agree on a solution to a specific problem, a digital currency can break into two. This risk is arguably behind the sharp selloff observed across the cryptocurrency world in recent weeks. Also, risks such as hacking, identity theft, or outright scams are a recurring problem. But you could also argue that fiat currency holdings are exposed to them. Most importantly, volatility is the key parameter to understand the concept of safety in a reserve currency, in our view. In that regard, bitcoin's score has improved in recent years as volatility has continued to drop (Chart 5). Still, bitcoin's volatility is very high compared to the euro, the yen or even gold. But it fell twice last year below the volatility of silver (Chart 6), the world's currency for 400 years.

**Chart 5: Volatility is a key parameter for safety in a reserve currency and bitcoin vols have been falling for a while**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Chart 6: True, bitcoin's volatility is very high compared to the euro, the yen or even gold, but it is starting to approach silver**



Source: Bloomberg, BofA Merrill Lynch Global Research

### A wide array of risks obscure the future of cryptocurrencies

When examining the safety of any asset, volatility is not the only source of concern. In the case of bitcoin and other virtual tokens, worries are magnified given that it is not legal tender in many places in the world or regulated by any government bodies. In fact, decentralization is central to bitcoin. As such, risks like fraud, hacking, and outright theft have plagued the cryptocurrency world in recent years. In particular, the surge in initial coin offerings seems hard to justify and creates a risk of fragmentation in the market. Confidence could suffer if many of these offerings turn out to be outright scams to circumvent investor protection regulations. After all, it is hard to "know your client" if a bitcoin transaction happens through an exchange in an obscure jurisdiction. Other issues more specific to the functioning of cryptocurrencies, such as finding an agreement regarding the adoption of certain protocols, are also worth mentioning. For example, should bitcoin split into two digital tokens because miners cannot find common ground, a collapse in confidence and value could follow. Lastly, it is worth noting that cryptocurrency transactions are taxable in many jurisdictions, presenting additional challenges to users that are unfamiliar with the fiscal implications of using bitcoin.

### Yet, EM currency pegs and capital controls encourage bitcoin use

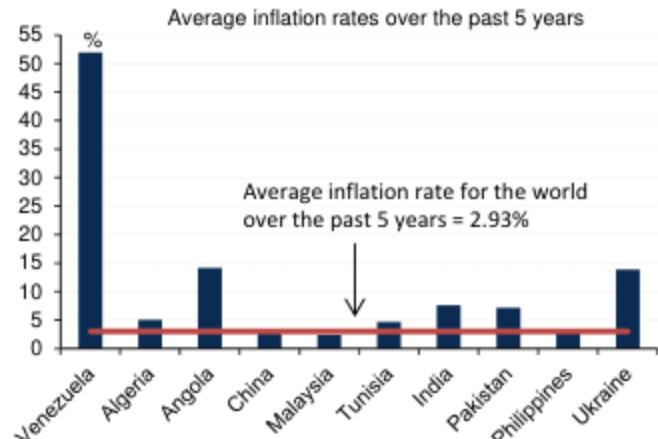
True, bitcoin is still volatile compared to even Emerging Market currencies. But it is also worth noting that EM FX volatility tends to be artificially suppressed by controls. When looking at 16 countries with severe capital controls based on IMF indicators (Algeria, Angola, China, Malaysia, Tunisia, Cote d'Ivoire, India, Morocco, Pakistan, Philippines, Sri Lanka, Swaziland, Tanzania, Togo, Ukraine, and Uzbekistan), we find that bitcoin is more volatile than these currencies (Chart 7). However, it is not uncommon for these EM currencies to suffer from high inflation rates (Chart 8). When pegged or semi-pegged FX regimes face high inflation or sharp FX reserve drawdowns, steep exchange rate adjustments eventually follow. So the more official and black market exchange rates diverge, the more attractive bitcoin may appear to some as a means of payment and store of value. And the more liquidity and scale bitcoin builds to, the lower the volatility over time, in our view.

**Chart 7: We find that bitcoin is more volatile than the currencies with severe capital controls**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Chart 8: However, it is not uncommon for these EM currencies to suffer from high inflation rates**

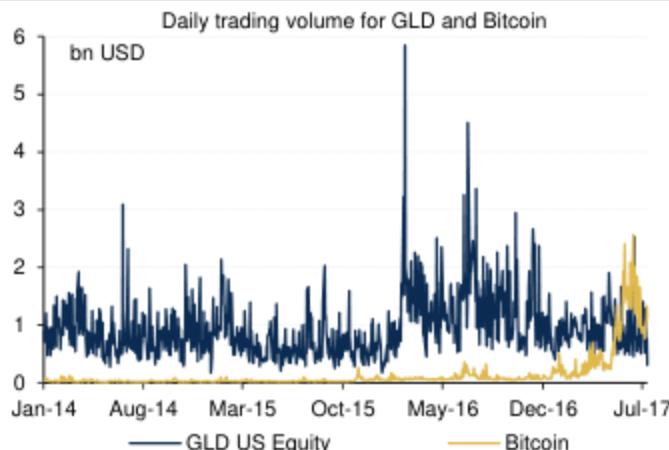


Source: FRED - St. Louis Fed, Bloomberg, BofA Merrill Lynch Global Research

### Liquidity, however, keeps increasing at a very fast rate

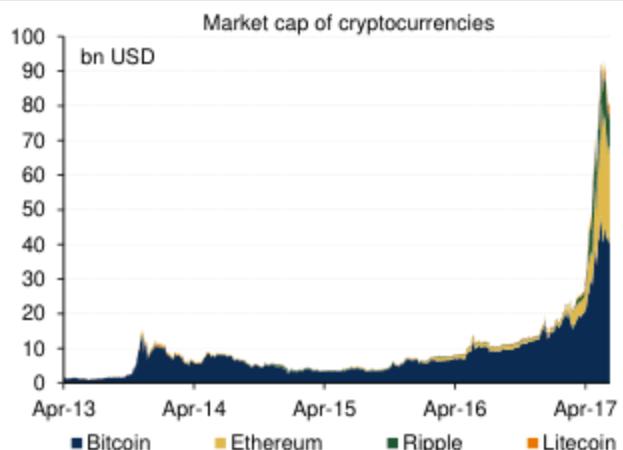
Moving on to our second parameter, liquidity, it is hard to ignore that trading volumes for major digital currencies like bitcoin and ethereum have skyrocketed in recent years. For example, daily trading volumes for bitcoin were \$400mn in 2012 and have now moved up to about \$2bn a day at present (Chart 9). Meanwhile, ethereum had daily trading volumes of \$1.5mn when it first launched in 2015 and it is now experiencing daily trading of about \$1bn. Most importantly, for a digital token to become a currency, it must build to a certain scale, a bit like the silver mine in Bolivia found by the Spanish. In some ways, this is exactly what has been happening in recent quarters, with the total market value of digital tokens growing exponentially from \$1.5bn to around \$87bn at present (Chart 10). Put differently, cryptocurrencies have built scale rapidly and are now accepted as a means of payment by some corporations and individuals.

**Chart 9: Daily trading volumes for bitcoin were \$0.04bn in Jan. 2014 and have now moved up to about \$1bn a day at present**



Source: coinmarketcap.com

**Chart 10: The total market value of bitcoin exploding growing exponentially from \$1.5bn to around \$43bn at present**



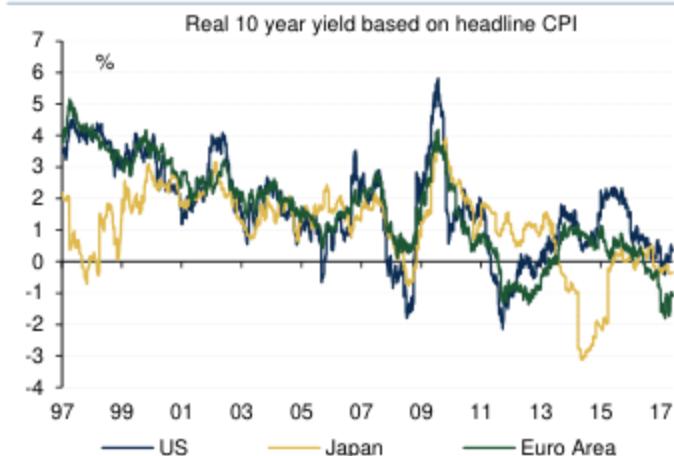
Source: coinmarketcap.com

### Returns of cryptocurrencies depend mostly on price appreciation...

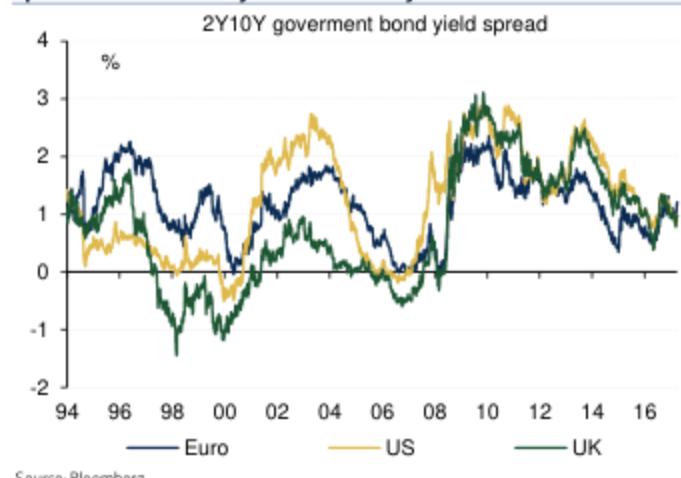
On our third parameter, there are several ways to look at the return produced by a reserve currency. Because a government issues both debt and currency simultaneously, perhaps the most important measure of value for a reserve currency is the real interest rate (Chart 11). Then there is the term premium, as fixed income markets typically make it more expensive to borrow for longer periods of time. In fact, despite quantitative easing, most major currencies like the EUR, the USD, or the GBP maintain a positive

spread between their 2 year and their 10 year interest rate (Chart 12). Yet, there are some widely accepted reserve assets like gold or even the JPY that do not pay a yield.

**Chart 11: The most important measure of value for a reserve currency is the real interest rate**



**Chart 12: The term premium means that currencies maintain a positive spread between their 2 year and their 10 year interest**



#### ...although some exchanges offer a return for borrowing tokens

Bitcoin and other digital currencies do not have an interest rate set by a central bank. And it is hard to calculate a real interest rate, as there is no specific national inflation metric to match it against. However, just like in gold, there is still an interest rate set by the market. After all, bitcoin exchanges need digital currency for short lending purposes. Some of the most popular services offer 1% for 14 days and scales to 5% for 1 year. Even then, returns paid by exchanges are arguably more of a credit spread than a real interest rate. Moreover, with volatility in excess of 50% or higher, a 5% return on a cryptocurrency over the course of 1 year as compensation for lending a bitcoin to an online exchange does not seem like a particularly attractive proposition.

#### A key step for bitcoin would be to become pledgeable collateral

Still, bitcoin and ethereum have delivered impressive returns so far (Chart 13) as fiat currency flowed into these digital tokens. Is it realistic to assume cryptocurrencies will continue to appreciate over time? The dollar price of gold has appreciated over centuries in line with inflation (Chart 14), but some periods have experienced much faster gold price appreciation than others. Moreover, periods of high real interest rates have been particularly damaging for gold returns in the past. In our view, cryptocurrency returns will mostly depend on the faith placed by individuals, corporations, and financial institutions on this emerging technology. As discussed earlier, there are large inherent risks to digital tokens such as fraud, hacking, outright theft, new protocol adoption, limited acceptance, and that it is not legal tender in many places in the world. Moreover, a crucial hurdle remains. Most regulated financial institutions allow their clients to borrow against financial or physical assets, but we are not aware of any major institution that takes cryptocurrency as collateral at the moment. Thus, in our view, a key step for bitcoin would be for it to become pledgeable collateral.

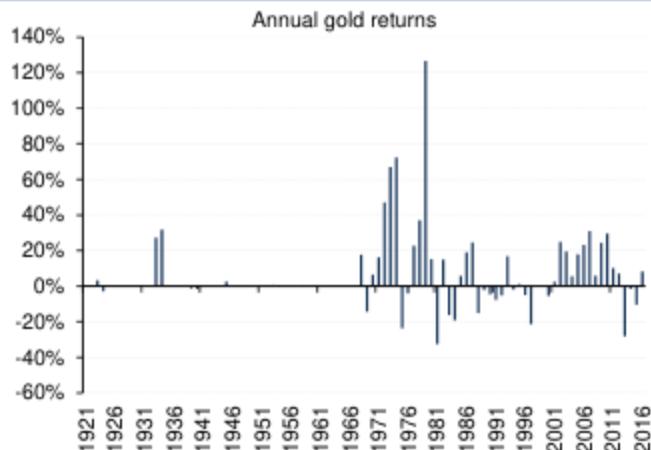
**Chart 13: So far, bitcoin has delivered exceptional returns as fiat currency flowed into these digital tokens**



Source: Bloomberg

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

**Chart 14: The dollar price of gold has appreciated over centuries in line with inflation, but returns have fluctuated over the cycle**



Source: Bloomberg

### Bitcoin correlations to EM and G10 fiat currencies are near zero...

Lastly, a financial instrument tends to be more attractive if it offers diversification benefits. In that regard, bitcoin and other cryptocurrencies score well. For starters, we find near zero correlation in weekly returns between bitcoin and fiat currencies (Table 1). Remarkably, while some currency like DXY and CHF exhibit a correlation of 0.67, bitcoin returns are uncorrelated to any other major EM or G10 currency in our analysis.

**Table 1: EM and G10 currencies - weekly returns correlation**

	Bitcoin	DXY	EUR	JPY	GBP	MXN	CNY	KRW	CAD	CHF
Bitcoin		-0.04	0.04	-0.01	0.05	-0.06	-0.04	0.02	0.01	-0.01
DXY			-0.96	0.45	-0.69	0.33	0.25	0.35	0.53	0.67
EUR				-0.30	0.59	-0.28	-0.20	-0.25	-0.42	-0.62
JPY					-0.19	0.02	0.17	0.11	0.14	0.32
GBP						-0.26	-0.22	-0.34	-0.44	-0.43
MXN							0.19	0.43	0.55	0.19
CNY								0.25	0.26	0.14
KRW									0.49	0.26
CAD										0.26
CHF										

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

### ...and bitcoin is also uncorrelated to volatile, inflation prone EM FX

Arguably, bitcoin is not particularly attractive as a means of exchange in a very large and stable economy like the US that boasts the world's pre-eminent trading currency. But what about emerging markets? After all, bitcoin does not face the same capital controls and banking rules as do some currencies in highly constrained economies. It could potentially deliver low cost, fast, cross border transactions. We look again at the correlations between EM FX and bitcoin and we find that bitcoin lacks correlation to a whole range of EM currencies (Table 2).

**Table 2: Inflation prone EM FX - weekly returns correlation**

	Bitcoin	DZD	AOA	CNY	MYR	TND	XOF	INR	MAD	PKR	PHP	LKR	SZL	TZS	UAH	UZS
Bitcoin		-0.07	-0.03	-0.03	-0.08	0.02	-0.02	-0.01	-0.02	0.03	-0.01	-0.06	0.02	-0.01	-0.06	-0.07
DZD			0.03	0.32	0.31	0.40	0.49	0.17	0.54	0.06	0.13	0.05	0.27	0.01	0.05	-0.15
AOA				0.25	0.12	0.00	0.01	0.02	-0.01	-0.03	-0.01	0.00	0.13	0.16	0.01	-0.07
CNY					0.30	0.16	0.16	0.15	0.17	-0.01	0.20	0.09	0.26	0.03	0.07	0.01
MYR						0.15	0.23	0.43	0.26	0.02	0.56	0.14	0.45	0.03	-0.10	-0.07
TND							0.77	0.17	0.79	0.06	0.10	0.05	0.31	0.03	-0.03	-0.08
XOF								0.22	0.95	0.10	0.16	0.04	0.34	0.03	-0.03	-0.09
INR									0.24	0.07	0.45	0.20	0.39	0.00	-0.01	-0.14
MAD										0.08	0.17	0.05	0.37	0.04	-0.04	-0.07
PKR											0.07	0.09	0.01	-0.05	-0.09	-0.06
PHP												0.15	0.31	0.03	0.01	0.03
LKR													0.05	0.01	0.04	0.03
SZL														0.01	-0.04	-0.05
TZS														0.19	-0.06	
UAH															0.19	
UZS																-0.01

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

**Bitcoin correlations to gold, oil, or copper are also about zero**

The same applies to commodities. While gold and silver maintained a correlation on weekly returns of around 80% since 2011, we do not observe any meaningful correlation between bitcoin and precious, industrial or energy commodities (Table 3).

**Table 3: Commodities - weekly returns correlation**

	Bitcoin	Gold	Silver	Platinum	Palladium	BCOM	Brent	Copper
Bitcoin		0.05	0.04	0.07	0.06	0.06	0.05	0.02
Gold			0.80	0.70	0.35	0.40	0.14	0.26
Silver				0.68	0.46	0.56	0.27	0.44
Platinum					0.60	0.50	0.28	0.43
Palladium						0.44	0.27	0.48
BCOM							0.74	0.57
Brent								0.34
Copper								

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

**When looking at equities, we also observe minimal correlations**

Equity markets, partly because of their interconnectedness, tend to move together with average correlations nearing or exceeding 50%. Once more, bitcoin exhibits near zero correlation with all major equity markets around the world (Table 4).

**Table 4: Equities - weekly returns correlation**

	Bitcoin	S&P 500	MSCI World	HSCEI	HSI	NIFTY	EURO STOXX 50	Nikkei
Bitcoin		0.04	0.05	0.02	0.02	-0.04	0.04	0.08
S&P 500			0.96	0.50	0.54	0.51	0.78	0.53
MSCI World				0.58	0.65	0.57	0.85	0.61
HSCEI					0.93	0.60	0.49	0.50
HSI						0.64	0.55	0.56
NIFTY							0.53	0.49
EURO STOXX 50								0.58
Nikkei								

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

**Bitcoin is also uncorrelated to Treasury securities or the VIX**

Lastly, we test the correlation of bitcoin to other liquid markets such as Treasuries and the VIX and our own BofA Merrill Lynch GFSI™. Once more, the correlation between bitcoin and both near-term and long-term Treasury bonds and breakevens is near zero

(Table 5). Interestingly, the correlation of bitcoin to the VIX and to other risk indicators such as the BofAML GFSI is also very low, near zero, but negative (Table 6).

**Table 5: Correlation between weekly returns of Bitcoin and weekly changes in rates**

	Bitcoin	2YR UST	10YR UST	2YR BE	10YR BE
Bitcoin		0.02	0.03	0.05	0.03
2YR UST			0.74	-0.06	-0.04
10YR UST				0.17	-0.01
2YR BE					0.62
10YR BE					

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

**Table 6: Correlation between weekly returns of Bitcoin and weekly changes in BofAML VIX and GFSI**

	Bitcoin	VIX	BofAML GFSI - Risk	BofAML GFSI - Flow	BofAML GFSI - Skew
Bitcoin		-0.05	-0.08	-0.06	-0.05
VIX			0.55	0.44	0.65
BofAML GFSI - Risk				0.46	0.59
BofAML GFSI - Flow					0.45
BofAML GFSI - Skew					

Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

#### However, bitcoin returns are correlated to other cryptocurrencies

To complete our correlation analysis, we have also looked at the correlation patterns of the 10 major cryptocurrencies by market value. Our work suggests that bitcoin and other digital currencies are correlated for the most part (Table 7), although nowhere nearly as correlated as equity markets are to each other. Moreover, bitcoin and ethereum, the two biggest coins, seem uncorrelated to each other.

**Table 7: Cryptocurrencies - weekly returns correlation**

	Bitcoin	Ethereum	Ripple	Litecoin	Ethereum Classic	Dash	NEM	Monero	Bitshares	Stratis
Bitcoin	0.01	0.21	0.56	0.14	0.19	0.27	0.23	0.31	0.34	
Ethereum		0.04	0.06	0.44	0.34	0.29	0.18	0.35	0.29	
Ripple			0.60	0.08	-0.12	0.22	0.02	0.35	0.19	
Litecoin				0.07	0.09	0.22	0.15	0.40	0.21	
Ethereum Classic					0.18	0.24	-0.07	0.17	0.18	
Dash						0.27	0.20	0.22	0.13	
NEM							0.19	0.33	0.25	
Monero								0.19	0.02	
Bitshares									0.24	
Stratis										

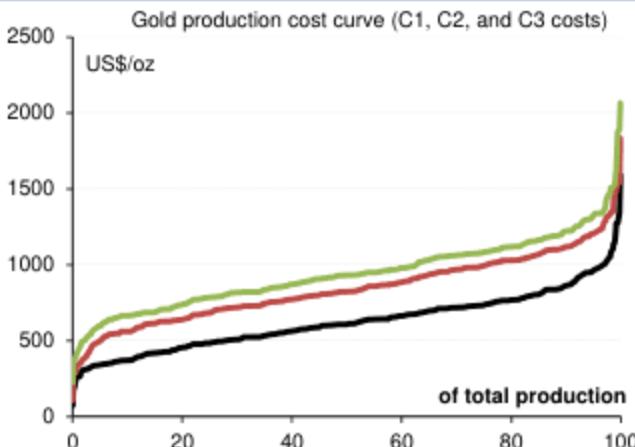
Source: Bloomberg, BofA Merrill Lynch Global Research

Note: Data available from July 2010 to current. There were almost no price fluctuations before 2011.

#### Rising production costs have supported bitcoin prices for now

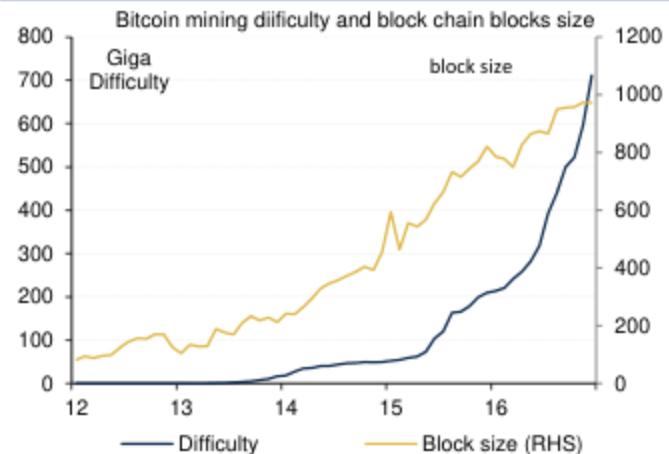
One final consideration in bitcoin and other digital currencies is their cost of production. Unlike gold, which is mined at a high cost (Chart 15), the marginal cost of creating a new digital token is near zero. This is the reason why the number of cryptocurrencies has risen to more than 900 in recent years. However, the marginal cost of "mining" established cryptocurrencies like bitcoin has increased exponentially (Chart 16) while the rewards for mining are designed to experience a logarithmic decline. The operational and electricity costs required to maintain ledgers have increased as tasks have become more complex. This could change with the advent of quantum computers or through agreements among developers to adopt simpler protocols. Thus, while rising marginal costs of production for bitcoin have been arguably a source of support for prices, falling mining costs for incremental units could also force prices to fall.

**Chart 15: Gold is mined at a high cost, with most companies facing breakevens around \$600/oz on average and \$1200+/oz on the margin**



Source: Bloomberg, BofA Merrill Lynch Global Research

**Chart 16: The marginal cost of "mining" established cryptocurrencies like bitcoin has increased exponentially**



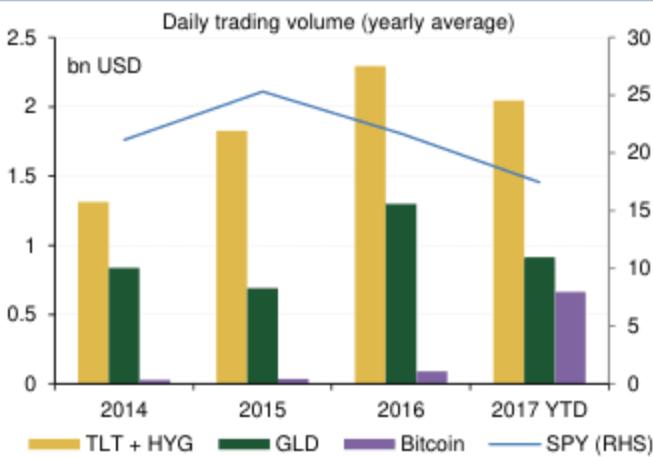
Source: data.bitcoiny.org

Note: The difficulty is a unit of measurement designed to indicate how difficult it is to find a hash below the given target

### Bitcoin faces many hurdles and risks, but liquidity keeps growing

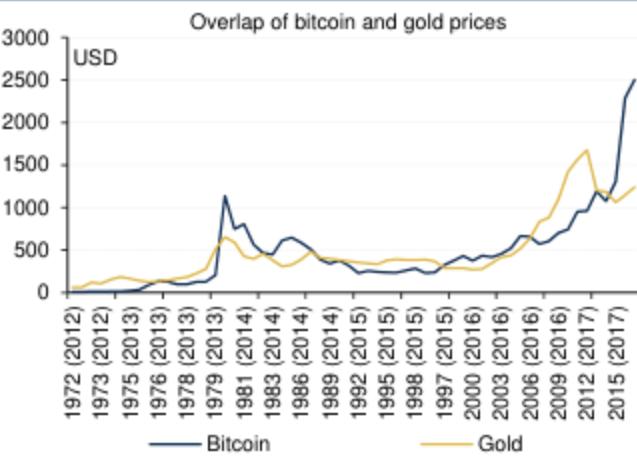
So is bitcoin a new liquid market? Certainly, cryptocurrencies score well in terms of liquidity when compared to other assets. But liquidity in equity, fixed income, or currency markets remains a large multiple of bitcoin (Chart 17). Also, while cryptocurrencies are still very volatile and thus not particularly safe, that could change as both their value rises and liquidity increases. Importantly, cryptocurrencies score well when it comes to diversification, as their correlation to equities, bonds, commodities, FX or selected measures of risk is near zero. A big uncertainty facing bitcoin and other digital tokens we see is their expected real rate of return. So far, early adopters have enjoyed a sharp appreciation in prices. While bitcoin seems to have followed a pattern similar to gold over a much more compressed time period (Chart 17), there is no certainty that that will continue and, most certainly, no way to predict it. Also, there are large inherent risks to digital tokens such as fraud, hacking, outright theft, new protocol adoption, limited acceptance, and it is not legal tender in many places in the world.

**Chart 17: Liquidity in equity, fixed income, or currency markets is still a huge multiple of bitcoin**



Source: Bloomberg

**Chart 18: It is still early days, but bitcoin seems to have followed a pattern similar to gold over a much more compressed time period**



Source: Bloomberg

Note: Years in parentheses correspond to Bitcoin

# G10 FX

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For a detailed view on global FX markets, see: [Global FX Weekly](#)

## Draghi and the EUR

EURUSD has been the best performing G10 FX cross so far this year. Although the market is long EUR, positioning is not stretched. EURUSD has appreciated despite the market already knowing that the ECB will have to announce QE tapering and the Fed already hiking more than markets have been expecting this year. The EURUSD move has been consistent with the data and could continue if relative EZ data keeps improving.

At first glance, the ECB meeting this week should have not affected the Euro much. First, the EUR weakened as the ECB statement kept the option to do more QE if necessary. Then, the EUR strengthened when Draghi avoided talking the EUR down when he was asked about its recent strength. However, the EUR continued strengthening during and after the press conference, as the market was digesting all information.

We believe that on balance the ECB meeting suggests more positive risks for the EUR. The pre-ECB EURUSD level was a key threshold for the market, as this was the level at which the ECB used to intervene verbally in the past to express concerns about the strong currency and its negative implications for inflation. By avoiding such statements, Draghi has effectively removed the acceptable EUR ceiling for the ECB. Further EUR appreciation could become easier, as the ECB seems to have given up trying to "control" the currency. In practice, we do not see what policies the ECB could use to weaken the EUR, as they have removed the option to reduce depo rates further and they have to taper QE soon because of the issue limit and the capital key. These policy constraints may explain why Draghi gave up on the currency this week. But something has been lost in the process and the Euro could now appreciate freely if Eurozone data keeps improving.

## BoJ only dovish major central bank

The BoJ left its policy unchanged this week and Governor Kuroda justified the current policy framework amid sluggish price developments. With little expected from the BoJ prior to the meeting, it was a non-event for the FX markets. We expect the BoJ to keep the current policy framework well into 2018, and just wait for policy normalization by the Fed and other central banks. After a round of sluggish data, failure to pass the healthcare bill, and not-so-hawkish Yellen comments, it may take some time before the USD reclaims its upward trend. At the same time, low volatility, high equity price, and policy divergence keep JPY from appreciating, though politics pose some risk. We think USD/JPY will eventually rise beyond 115 into the autumn, and we would buy the pair's dip, but also remain concerned about downside short-term risks from a risk-off correction in global markets.

## Time to sell GBP

We see bearish GBP risks mounting. The second round of Brexit negotiations this week show no progress. Press reports suggest that the EU is not including the UK rebates in its calculation of UK budget contributions post-Brexit, which we believe would be a non-starter for the UK. In the meantime, the polyphony in the UK government on the Brexit strategy and goals, and high uncertainty about the government's sustainability in its current form continue.

## Time to buy vol

We reiterate our view that market volatility will increase this fall. In this report, we argue that brinksmanship over US tax reform and North Korea could be possible triggers. We add to our long vol trades by recommending buying a 6m EUR/SEK ATM straddle (see below for details).

## The difficulty in justifying EM longs

There is no doubt that the last few weeks have been difficult for investors in deciding which way to lean in EM. On one hand, volatility continues to be depressed, equity markets keep making new highs (or at least are not showing any signs of slowing down) and emerging markets keep receiving inflows. In [Best in 5 years](#), we highlight that EM Asia has received the highest YTD inflows in the last 5 years on an aggregate level.

On the other hand, positioning, stretched valuations, record low levels of volatility, increased geo-political concerns, uncertainty around US –China trade talks, uncertainty around Fed/ECB actions and, last but not the least, adverse August seasonality is making investors think twice or thrice before putting cash to work. This is despite cash levels being quite high within the investor community.

### How to hedge ?

Our two latest risk off trade recommendations are [long 4M USD puts, JPY calls](#) with strikes 107/102 (current 37bps) or [entering long JPY, short KRW](#) (current 10.017, target 10.4). The obvious risk to these trades is that N Korea backs down from further aggression and engages in talks. A more likely risk is that immediate confrontation is postponed and that EM asset inflows continue to accelerate. We are also long EUR/PLN through options as a hedge.

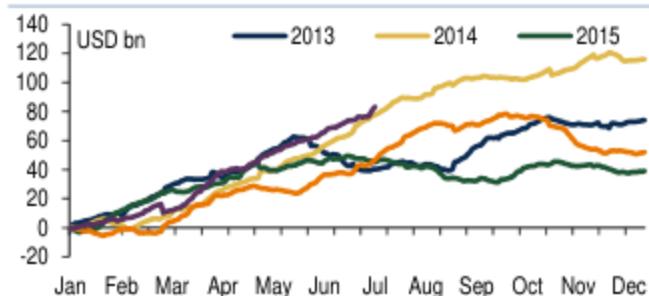
Apart from hedges, we also recommend RV trades or idiosyncratic trades to navigate the current uncertain times. Specifically, we like long INR vs USD via options (current 30bps), long TRY vs ZAR and short CLP vs ARS.

### Otherwise, China data still kicking and we have a long bias in EM Asia

Beyond the above risk factors, China data continues to show strength. 2Q GDP numbers surprised to the upside and the overall economic surprises for China/Asia have so far held up well (Chart 2). This is probably one big reason why, weaker US data has not been able to shake investor sentiment just yet. Consequently, we continue to be long EM Asia through long 6y bonds in India (current 6.66%) and Indonesia (FR73, current 7.40%). We are also [constructive on China bonds](#) and believe they are cheap by at least 20 bps.

In EEMEA FX, we are short EUR/RON. We are also long EGP as a carry trade. In LatAm FX, we have a bearish bias on COP and MXN on valuations.

**Chart 19: Aggregate cumulative inflows into EM Asia debt and equity markets**



Notes: Each line shows for India, Indonesia, Thailand, Korea the aggregate cumulative debt and equity flows, only equity flows for Taiwan and Philippines and only debt flows for Malaysia

Source: BofA Merrill Lynch Global Research, Bloomberg

**Chart 20: Economic Surprises for China have held up well so far**



Source: BofA Merrill Lynch Global Research, Bloomberg

# Rates

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- The ECB opted for a dovish tone, unanimously maintaining the easing bias in QE and pushing back the timing of a taper decision, with full details unlikely before October.
- Draghi's message argues for a slower pace of tightening than what the market is pricing in terms of rate hikes and what investors are expecting in terms of tapering.
- If the light was amber for summer carry trades, the ECB has now set it to Green. We are long ERH9. Given the tightening in peripherals, we reiterate our positive carry hedges. The ECB's focus on QE flexibility reinforces our long EU Supras view.

## ECB economics: Rendez-vous in the fall, whenever that is

The ECB took stock of market movements since the "Sintra speech" and opted for a dovish tone today. We were expecting a more balanced press conference, with in particular the removal of the easing bias on QE. Still, even the dovish tone did not suffice to convince the FX market. This could reflects the fact that the market considers the ECB as inevitably on its way to reduce policy accommodation and does not see the possibility of an upgrade in QE as credible, in spite of Draghi's insistence on the flexibility embedded in the programme. Reasons aside, the stronger Euro will be a major issue for the ECB. In fact, its appreciation relative to the June forecasts could force the central bank to revise its inflation projections down by at least 25/30 bps.

This, in our view, combined with the very cautious message from Draghi, strengthens our call for a very slow pace of tapering from Jan18 onward, in contrast with investors' expectations (discussed [last week](#) and in the [FX and Rates Sentiment survey](#)). We continue to think the ECB will opt for a two-step strategy, starting with a fixed quantum of €40bn/month for the first 6 months of 2018, followed by a gradual decline to zero by year end. However, we now change the call on policy rates.

So far, we had a one-off deposit rate hike in Dec18. We push it to the spring of 2019 (+20 bps). We thought that shortening the delay between the end of QE and the first hike could be a compromise between hawks and doves in exchange for the ECB being in the market late into next year. We now believe that pressure from financial conditions, and the growing awareness at the ECB of the difficulty to bring inflation back to target, will force them to stick to a "fundamentalist" version of forward guidance.

Finally, the ECB today made it clear that they would not pre-commit to a given date for the announcements on the future of QE, simply mentioning "the fall", which, according to Draghi, explicitly includes September. Further, Draghi affirmed that technical committees had not yet been tasked to review the possible options. While we know that the ECB likes to make announcements at the same time as new forecasts become available, we think the central bank will want more visibility and would prefer getting a sense of where market conditions are going throughout September. We think a key input there will be the Fed's decision. A more hesitant Fed, triggering more upward pressure on the euro, would help convince hawks that the slowest possible pace of tapering – scarcity permitting – is the right way to go.

## In rates, clearest takeaways are for front-end & spreads

While the QE easing bias was maintained (unanimously) and the date to discuss tapering was implicitly pushed back, Bunds failed to meaningfully sustain their gains post the policy announcement. Interestingly, Draghi's insistence on the fact that his message in

Sintra was no different from that at the June meeting, and that the ECB's focus is still on the weak inflation outlook, had little impact on yields. We believe this confirms our interpretation that the selloff since then was most likely the result of a wake-up call, with [term premia readjusting to the new reality](#) of (1) already reduced QE purchases in Germany, and (2) diminished flight to quality bid, past Italian election fears.

In that context, we believe that the clearest signals to take away from today's ECB meeting in rates are for peripheral spreads, front-end rates and EU Supras.

### If the light was Amber for summer carry trades, ECB just turned it Green

The easing bias kept for QE and the delay in the tapering decision, with full details unlikely to be announced before October, buys more time for peripheral carry trades. This, coupled with QE purchases in a low liquidity month, may set the stage for a similar spread tightening as in Aug16, with 150bp seen as next key level for 10y BTP-Bunds.

Further, Draghi's reference to spreads having tightened as a reason not to be concerned about recent market price action, and his insistence on the flexibility embedded in QE (currently engineered through deviations from capital keys via Supras purchases) are both opening the possibility for ECB tapering discussions to be less negative than feared for peripheral spreads in the short term.

That said, with the 1<sup>st</sup> principal component of peripheral spreads already back to its tightest levels since Q1 2016, and with risks set to pick-up in autumn, we reiterate our recommendation to consider positive carry hedges, such as [long 10y swap spreads](#), short the belly of the [5y10y30y BTP fly](#) and [30y50y BTP flattener](#). Note that all three positions should be supported by heavy July index extensions in Germany and Italy at the end of next week. The trades are currently priced at 45bp, -30bp and 25bp respectively. The main risk to all is the market turning fundamentally bullish on the periphery.

### Dovish language supports our long (positive carry) position in Mar19 Euribor

The ECB meeting reinforces our high conviction recommendation to be long Mar19 Euribor entered on 18-Jul at 100.035 – see Front end – EU (current: 100.065, target: 100.135). Ultimately, with Draghi insisting on "patience" and "persistence", and our econ team pushing the first rate hike to Spring 2019, we believe the ~30bp of hikes priced by 1Q19 appear excessive. Any delay in the QE decision should allow front-end vol to remain low and Euribors to grind higher over coming months. In this low vol context, the 6.5bp of roll on the trade also appears even more attractive.

Interestingly, the Euro rally seen yesterday may actually support the trade even further. With the ECB running out of tools to combat Euro strength, and technical constraints potentially forcing a premature end to QE, forward guidance on rates may have to be explicitly reinforced to avoid an aggressive tightening of financial conditions.

The risk to the trade is that the ECB, by choice or otherwise, ends QE in H1 and hikes aggressively through 2H18 in order to engineer a rapid exit from negative rates. However, such a scenario appears overly hawkish to us given the 2018 inflation outlook.

### "When we needed flexibility, we were successful in finding it": long EU supras

When asked about the limited availability of Bunds in the context of a QE extension, and the potential need to up other parts of the programme to compensate for that, Draghi went beyond his usual response that QE changes had not been discussed, and instead affirmed that the ECB could find flexibility in its current programme, as it did before. To us, this reinforces the view that technical changes will be implemented, in particular with [an increase in the target for EU Supras](#). Indeed, it is the inclusion of EU Supras as part of the PSPP that allows a first level of flexibility vs capital keys. National central banks using them as substitute purchases when not enough domestic bonds are available. As a result, we remain bullish EU supras vs Bunds ahead of QE extension, and especially so in the long-end, where valuations vs govies are most attractive.

# Emerging Markets

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## The girl with the dovish tattoo

- With the Fed moving to a more dovish stance, solid growth in China and lower geopolitical tensions, inflows into EM continue and despite tight valuations.
- We like receiving rates in the belly in Brazil, long Indonesia and Turkey local debt and TRY/ZAR. We like long EUR/PLN and JPY/KRW as efficient risk off hedges.

## Enjoy the silence

Global interest rates continue driving asset prices in EM, with stronger impact on FX as local rates dynamics have been highly influenced by domestic developments. The change in rhetoric from the Fed, with more focus on the lack of inflationary pressures and less on the dynamics of financial stability (asset pricing bubbles) triggered a bull flattening of the US curve and a weaker USD across the board. Lack of progress in Washington is also helping feed lower rates and the USD. In addition, stronger data in China has helped stabilize commodities, favoring commodities exporters within EM.

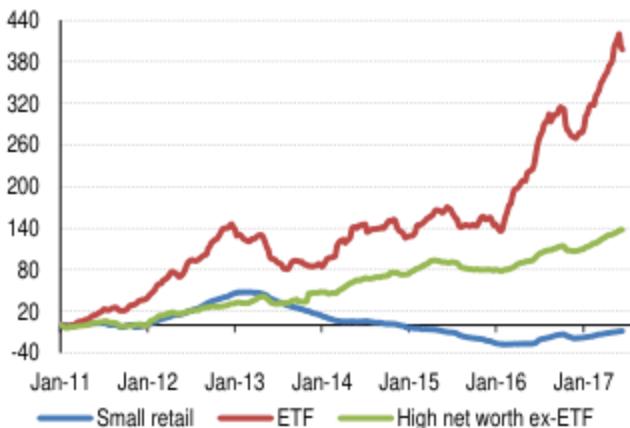
Despite the fact that European rates can still contaminate the dynamics of US rates and through that channel EM asset prices, the global backdrop has become more favorable for EM. In this environment, EM inflows continue but at a lower rate and we have already seen some ETF outflows (Chart 21). Positioning is crowded in some high carry currencies. Valuations are not attractive, which limits the extent of the rally, but cash on the sidelines remains high, suggesting that EM dedicated investors have room to buy the dips.

## Beware of global rates beyond the Fed

Even though the Fed has moved to a more dovish stance last week triggering the bull flattening/weak USD price action, it is fair to say that the change in stance represents more a convergence from the Fed to the market view than a true market repricing of the Fed's policy stance. One more time the Fed capitulated to the market view. The difference is particularly important this time because it implies that the room for a rally in US rates from current levels is certainly more limited.

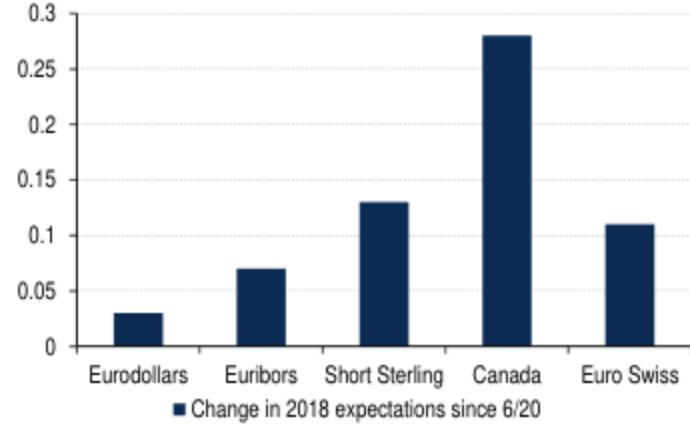
Two additional factors add to that view. First, the repricing to higher global rates was driven to a large extent by European rates (Chart 22). In that particular regard, the ECB tapering next year and how this can impact on the long end of the US curve in addition to the FX channel is a key development to watch.

Chart 21: EXD cumulative flows since Dec 2010



Source: BofA Merrill Lynch Global Research

Chart 22: Change in 2018 rate expectations over the last four weeks



Source: BofA Merrill Lynch Global Research, Bloomberg

Second, there is still considerable uncertainty regarding the impact the Fed's balance sheet runoff will have on the long end of the US curve. We think the market remains too complacent on how disruptive this can be for financial conditions.

An additional consideration could be a new shift from the Fed toward financial stability concerns. Can the Fed be concerned about a strong equity market and by signaling tighter policy induce a correction? As we have elaborated in the past, we think it unlikely, as that is not a credible strategy. If the Fed succeeds, history shows the Fed will backtrack with the idea of delivering the hikes once the stock market retraces. Therefore, the market is right in not believing in that threat.

We have discussed that EM FX is more sensitive to global real rather than nominal rates, with long term rates being the most relevant ones for risk premium. A continuation of the recent bull flattening in US rates is positive for EM despite tight valuations. Our fair value model for EM rates Scope 90 recommends flatteners across the board (Chart 23).

However, we remain cautious and focus on relative value trades driven by domestic developments. Our US team expects the US curve to steepen from current levels and volatility will likely pick up from excessively depressed levels. Therefore also take the opportunity to initiate some efficient hedges for risk off scenarios. As our [Sentiment Survey shows](#), geopolitical risks are still one of the main risks for investors (Chart 24).

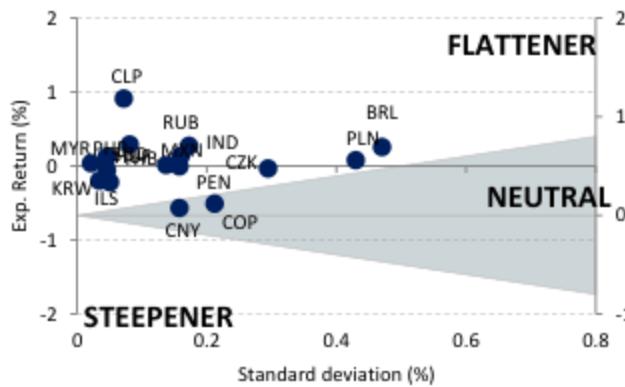
#### What we like in EM

In LatAm, we still like receiving rates in the belly of the Brazilian curve (Jan 21) and we closed Jan 19 receivers. We think there is room for some short term bull flattening in Mexico, and we keep paying 1y IBR in Colombia and receive 2y Camara in Chile. We stay neutral on most LatAm FX as valuations are not attractive. We like to short MXN at current levels. Positioning is crowded and we expect the economy to decelerate in 2H17. NAFTA and presidential elections risks have been completely priced out.

In EEMEA, we stay long beta but take out some cheap 3-month protection against a pickup in vol hurting the crowded carry trade. In EEMEA FX, the best hedge is via long EUR/PLN call spread due to positioning and low vol. We see scope for recovery in Turkey local debt and TRY, and like the short-end of local bonds, TRY/ZAR and 2v5 steepeners. CEE reflation remains a medium-term theme, supporting our bullish Zloty bias. We like paying rates, especially in Czech. We rolled over our long EGP into 3m T-bills.

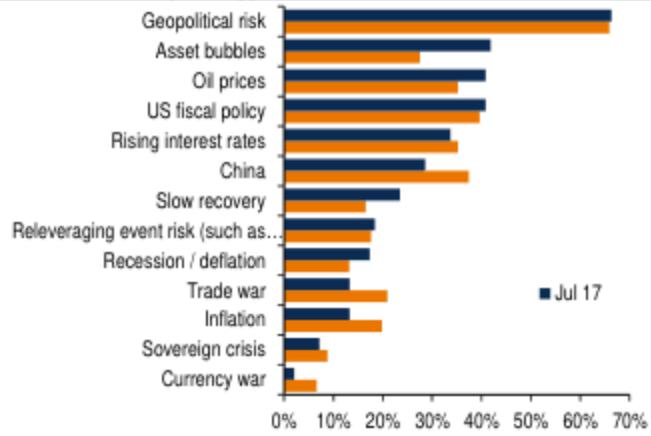
In Asia, the weak USD and diminished tensions with North Korea helped KRW price action, so we closed our long 3M USD/KRW. We like long JPY/KRW as an efficient risk off hedge. We like long Indonesian bonds (15y IndoGB). We are also overlaying an FX hedge by paying 1x6 NDF points. We like 2m 1x2 USD put/INR call spread. We stay long OTM USD call/IDR put, long IDR+INR vs short SGD. We are biased to pay 12M USD/HKD outright. We are receiving 1-2-5y MYR NDIRS and 1-2-5y INR NDIRS.

Chart 23: Scope 90 – 2y10y



Source: BofA Merrill Lynch Global Research

Chart 24: What are your biggest concerns?



Source: BofA Merrill Lynch Global Research

# Commodities

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MLI (UK)

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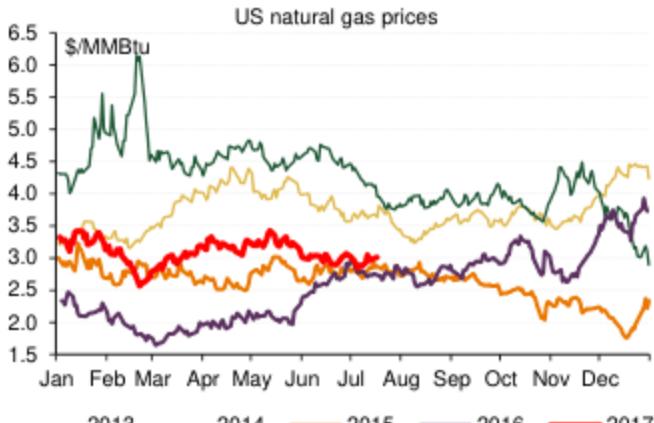
## Get ready for a gas rally

- The recent drop in US nat gas prices hard to justify and the underlying fundamentals are painting a far more positive picture
- We expect the inventory surplus to be gone early August and end of October stocks at just 3.5 tcf, the tightest since 2008
- We re-iterate our bullish call for 2018 US natural gas prices to average \$3.50/MMBtu, significantly above the current forward

## Downward pressure on US nat gas prices hard to justify

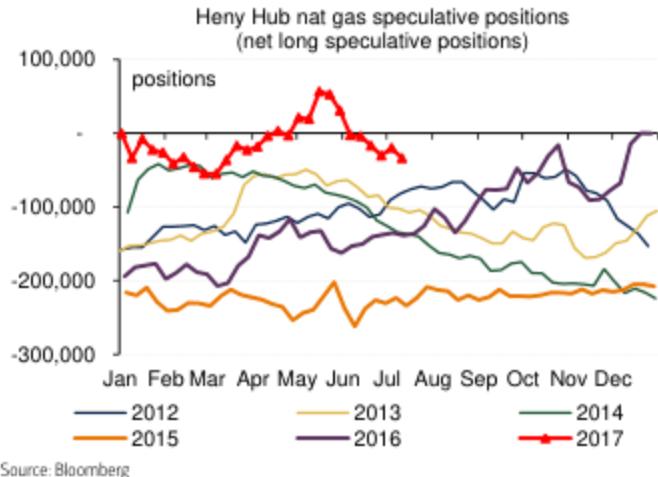
Front-month US Henry Hub prices have been sagging this summer, desperately clinging onto the \$3/MMBtu level (Chart 1). CAL18 at \$3/MMBtu show no gain on year-ago levels at all, while prices on longer-dated contracts remain under constant selling pressure. Stronger-than-expected injections, a production rebound and a large retrenchment in net spec positions put forward prices under pressure (Chart 2). To us, underlying fundamentals are painting a far more positive picture. We expect the seasonal surplus to be eradicated by early August and end of October stocks at just 3.5 tcf, the tightest since 2008. We believe supply rationing will set in later this year and drive prices substantially higher. We reduce our average 2H17 forecasts by 20 cents to \$3.45/MMBtu and keep our average forecast for 2018 at \$3.50/MMBtu, significantly above the current forward.

**Chart 25: US Henry Hub prices have been sagging this summer, on better-than-expected injections, weak cooling demand and output gains**



Source: Bloomberg

**Chart 26: Non-fundamentals factors are also important as the sharp sell-off coincided with a retrenchment in net spec positions**



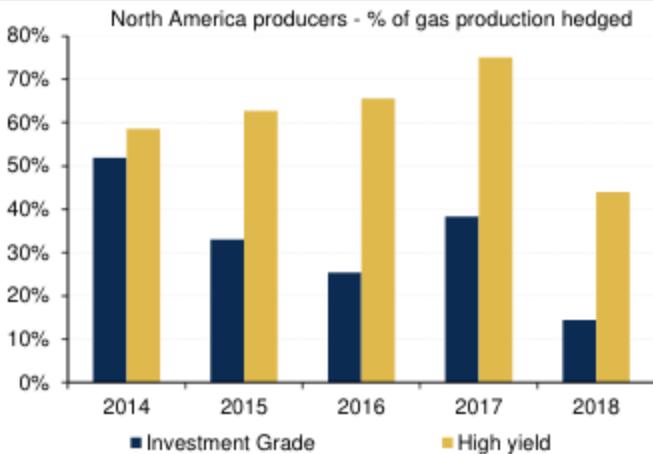
Source: Bloomberg

## Forward prices are below the marginal cost of production

Producers took advantage of the rebound in prices in late 2016, hedged and doubled the gas rig count, which is now fuelling a steady increase in production (Chart 27). This is an important development as after declining in 2015 and 2016, US domestic nat gas output will likely increase again this year and next. However, gas supply in America is highly elastic to 12 month forward prices. The marginal break-even sits in the \$3-3.25/MMBtu range, above the 3-year rolling forward strip of \$2.90 (Chart 28). The Barnett, large parts of the Fayetteville and the Rockies are off limits to producers. IRR's in the Haynesville are just below 10%, the lowest since November. If prices remain this low, rig count gains could stall or reverse. Even if nat gas prices were to increase sharply

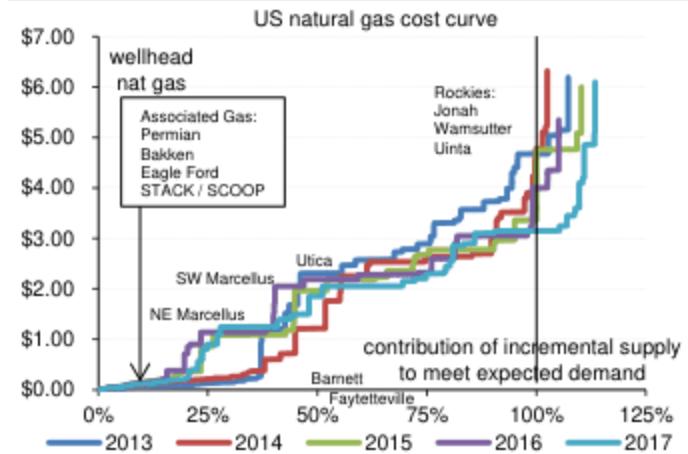
from here, additional supplies would not come in time for the winter given an estimated six month lag from production to prices. With forward oil prices so low, associated gas production growth will likely also slow.

**Chart 27: High yield issuers hedged 75% of their production this year in the case of high yield issuers**



Source: BofA Merrill Lynch Global Research estimates

**Chart 28: We see a marginal break-even in the range of \$3-\$3.25/MMBtu, compared to the 3-year rolling forward of \$2.90**

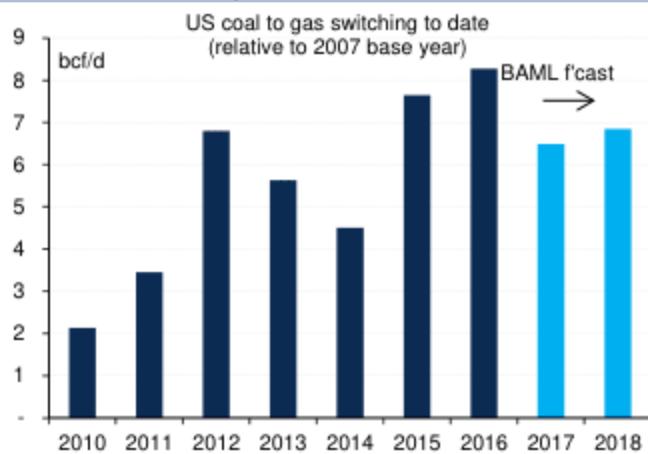


Source: BofA Merrill Lynch Global Research estimates

### Supply will have to be rationed in the power sector

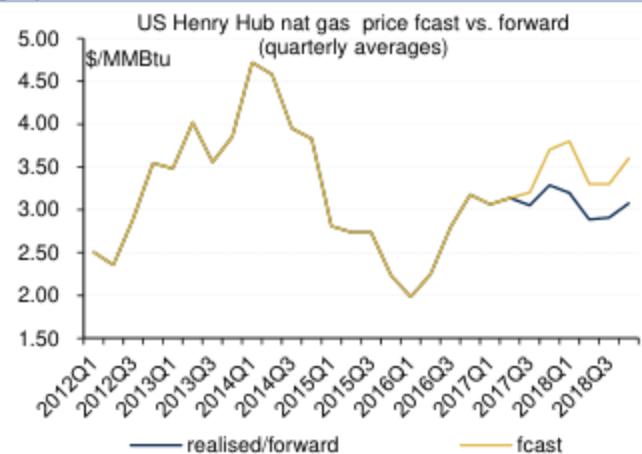
In sum low oil and gas prices, insufficient hedging for 2018 and delays to pipeline capacity in the Northeast mean domestic output growth will likely be lower than expected. Contrasting that, the demand growth from three major sources—industry, LNG exports and pipeline exports—is phenomenal and completely price-inelastic. Prices have to be substantially higher than last year in order to curb demand when demand and exports increase structurally. The market has taken the opposite view and bid down prices to generate a coal-to-gas switch. Instead we believe that supply will have to be rationed in the power sector in order to balance the market although the recent shutdown of coal capacity should make this challenging (Chart 29). All told, we continue to see upside to near-dated US natural gas prices (Chart 30).

**Chart 29: Prices have to be up on last year, and substantially so, in order to curb demand from the power sector**



Source: BofA Merrill Lynch Global Research estimates

**Chart 30: All told, we continue to see upside to near-dated US natural gas prices**



Source: Bloomberg, BofA Merrill Lynch Global Research estimates

# FX forecasts

Table 8: G10 FX Forecasts

	Spot	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
<b>G3</b>							
EUR-USD	1.14	1.10	1.08	1.10	1.10	1.12	1.15
USD-JPY	113	119	117	117	115	112	110
EUR-JPY	129	131	126	129	127	125	127
<b>Dollar Bloc</b>							
USD-CAD	1.29	1.32	1.35	1.34	1.33	1.32	1.30
AUD-USD	0.76	0.71	0.70	0.70	0.71	0.73	0.75
NZD-USD	0.73	0.68	0.67	0.67	0.68	0.70	0.71
<b>Europe</b>							
EUR-GBP	0.88	0.88	0.87	0.87	0.86	0.87	0.87
GBP-USD	1.30	1.25	1.24	1.26	1.28	1.29	1.32
EUR-CHF	1.10	1.11	1.12	1.12	1.13	1.13	1.15
USD-CHF	0.96	1.01	1.04	1.02	1.03	1.01	1.00
EUR-SEK	9.62	9.50	9.40	9.30	9.20	9.10	9.00
USD-SEK	8.46	8.64	8.70	8.45	8.36	8.13	7.83
EUR-NOK	9.52	9.20	9.00	8.90	8.80	8.70	8.60
USD-NOK	8.37	8.36	8.33	8.09	8.00	7.77	7.48

Forecast as of Jul-06-2017. Spot exchange rate as of 06-Jul-17. Source: BofA Merrill Lynch Global Research, Bloomberg

Table 9: EM FX Forecasts

	Spot	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
<b>Latin America</b>							
USD-BRL	3.29	3.35	3.40	3.45	3.50	3.55	3.60
USD-MXN	18.33	18.80	19.50	20.00	20.00	20.00	20.00
USD-CLP	666	675	680	690	710	715	720
USD-COP	3,082	2,950	2,970	3,000	3,050	3,100	3,150
USD-ARS	17.12	16.80	17.50	18.50	19.00	19.50	20.00
USD-PEN	3.26	3.30	3.30	3.35	3.40	3.42	3.45
<b>Emerging Europe</b>							
EUR-PLN	4.25	4.15	4.10	4.10	4.05	4.05	4.00
EUR-HUF	309	305	305	300	295	295	290
EUR-CZK	26.13	26.25	26.00	26.00	26.00	26.00	25.50
USD-RUB	60.09	60.00	60.00	63.00	63.00	63.00	63.00
USD-ZAR	13.48	13.50	13.75	14.00	14.25	14.25	14.50
USD-TRY	3.63	3.50	3.40	3.45	3.50	3.55	3.60
EUR-RON	4.59	4.40	4.40	4.40	4.35	4.35	4.30
USD-ILS	3.53	3.55	3.60	3.65	3.65	3.70	3.70
<b>Asian Bloc</b>							
USD-KRW	1,157	1,140	1,160	1,150	1,140	1,130	1,120
USD-TWD	30.59	30.60	31.00	31.00	30.70	30.60	30.50
USD-SGD	1.38	1.40	1.42	1.43	1.41	1.39	1.38
USD-THB	34.08	34.60	35.50	35.00	34.80	34.50	34.50
USD-HKD	7.81	7.79	7.80	7.80	7.80	7.80	7.80
USD-CNY	6.80	6.95	7.05	7.10	7.15	7.20	7.20
USD-IDR	13,388	13,400	13,500	13,400	13,300	13,200	13,100
USD-PHP	50.67	51.50	52.50	52.00	51.50	51.00	51.00
USD-MYR	4.30	4.44	4.48	4.46	4.44	4.42	4.40
USD-INR	64.78	66.50	66.80	66.30	66.00	65.80	65.50

Forecast as of Jul-05-2017. Spot exchange rate as of 06-Jul-17. Source: BofA Merrill Lynch Global Research, Bloomberg

## G10 rates forecasts

		Latest	3Q17	4Q17	1Q18	2Q18
USA	3m Libor	1.31	1.35	1.60	1.85	2.10
	2y T-Note	1.36	1.50	1.55	1.65	1.80
	5y T-Note	1.82	2.05	2.15	2.25	2.35
	10y T-Note	2.27	2.60	2.85	2.85	2.85
	30y T-Bond	2.84	3.05	3.15	3.25	3.25
	2y Swap	1.59	1.67	1.70	1.78	1.93
	5y Swap	1.89	2.10	2.18	2.28	2.38
	10y Swap	2.22	2.62	2.90	2.93	2.93
Germany	3m Euribor	-0.33	-0.34	-0.33	-0.33	-0.32
	2y BKO	-0.64	-0.50	-0.55	-0.50	-0.45
	5y OBL	-0.13	-0.15	-0.15	-0.10	-0.05
	10y DBR	0.55	0.50	0.55	0.60	0.60
	30y DBR	1.29	1.30	1.35	1.40	1.40
	2y Swap	-0.15	-0.10	-0.10	-0.04	0.05
	5y Swap	0.28	0.27	0.30	0.35	0.43
	10y Swap	0.92	0.94	1.02	1.08	1.09
Japan	3m Libor	-0.01	0.00	0.02	0.03	0.03
	2y JGB	-0.11	-0.20	-0.15	-0.10	-0.05
	5y JGB	-0.05	-0.10	-0.08	-0.05	0.00
	10y JGB	0.08	0.05	0.05	0.08	0.10
	2y Swap	0.04	0.05	0.08	0.13	0.15
	5y Swap	0.11	0.10	0.12	0.15	0.20
	10y Swap	0.26	0.23	0.25	0.28	0.30
	3m Libor	0.29	0.32	0.33	0.35	0.35
U.K.	2y UKT	0.28	0.40	0.40	0.40	0.40
	5y UKT	0.59	0.85	0.90	0.95	1.00
	10y UKT	1.20	1.50	1.60	1.70	1.80
	30y UKT	1.83	2.00	2.10	2.20	2.30
	2y Swap	0.60	0.75	0.75	0.75	0.75
	5y Swap	0.88	1.05	1.05	1.10	1.15
	10y Swap	1.25	1.50	1.55	1.65	1.75
	3m BBSW	1.70	1.90	1.90	2.00	2.00
Australia	2y ACGB	1.91	1.75	1.85	1.95	1.95
	5y ACGB	2.28	2.20	2.35	2.45	2.45
	10y ACGB	2.74	2.80	3.05	3.10	3.10
	3y Swap	2.29	2.05	2.20	2.30	2.30
	10y Swap	2.95	3.00	3.20	3.25	3.25
	2y Govt	1.23	1.10	1.30	1.50	1.50
Canada	5y Govt	1.53	1.40	1.60	1.80	1.80
	10y Govt	1.90	1.70	1.85	2.00	2.00
	2y Swap	1.54	1.41	1.61	1.81	1.81
	5y Swap	1.86	1.70	1.95	2.15	2.15
	10y Swap	2.19	2.02	2.24	2.39	2.39

Source: BofA Merrill Lynch Global Research

## EM rates forecasts

		Spot	3Q 2017	4Q 2017	1Q 2018	2Q 2018
<b>Asia</b>						
China	1y lending	4.35	4.35	4.35	4.35	4.35
	2y	3.48	3.10	3.00	3.00	2.9
	10y	4.07	3.35	3.30	3.30	3.2
India	Repo	6.25	6.00	6.00	6.00	
	2y	6.32	6.10	6.10	6.45	6.50
	10y	6.45	6.30	6.30	6.85	6.90
Indonesia	Policy	4.75	4.75	4.75	4.75	4.75
	2y	6.58	6.95	7.05	7.05	7.05
	10y	6.94	8.10	8.20	8.2	8.2
Korea	Policy	1.25	1.25	1.25	1.50	1.50
	2y	1.61	1.75	1.85	1.90	1.90
	10y	1.93	2.20	2.25	2.30	2.30
Malaysia	Policy	3.00	3.00	3.00	3.00	3.00
	2y	3.57	3.55	3.60	3.6	3.6
	10y	4.00	4.30	4.40	4.4	4.4
Singapore	Policy	-	-	-	-	-
	2y	1.31	1.50	1.60	1.6	1.6
	10y	2.26	2.50	2.60	2.00	3.00
Thailand	Policy	1.50	1.50	1.50	1.50	1.50
	2y	1.59	1.75	1.80	1.8	1.8
	10y	2.37	2.70	2.80	2.8	2.8
<b>EEMEA</b>						
Czech R.	Policy	0.05	0.25	0.50	0.75	1.00
	2y	0.74	0.60	0.80	1.00	1.10
	10y	1.37	1.20	1.40	1.60	1.70
Hungary	Policy	0.90	0.90	0.90	0.90	0.90
	2y	0.42	0.40	0.50	0.70	0.90
	10y	2.35	2.20	2.30	2.50	2.80
Israel	Policy	0.10	0.10	0.10	0.10	0.10
	2y	0.20	0.25	0.30	0.35	0.40
	10y	1.78	2.25	2.25	2.50	2.70
Poland	Policy	1.50	1.50	1.50	1.50	1.50
	2y	1.94	2.00	2.10	2.30	2.50
	10y	2.79	2.80	2.90	3.00	3.20
Russia	Policy	9.00	8.50	8.00	7.75	7.50
	2y	7.79	7.75	7.50	7.20	7.20
	10y	6.60	6.70	6.80	6.90	6.90
South Africa	Policy	6.75	6.75	6.75	6.50	6.25
	2y	6.79	7.00	6.90	6.90	6.90
	10y	7.79	7.95	7.75	7.50	8.00
Turkey	Policy	11.95	11.50	10.50	9.50	9.00
	2y	11.07	10.50	10.50	10.50	10.00
	10y	10.16	10.50	10.50	10.00	10.00
<b>LatAm</b>						
Brazil	Policy	10.25	8.50	7.75	7.75	7.75
	1y	8.35	8.82	8.60	8.40	8.40
	5y	9.90	10.30	10.00	10.00	10.00
Mexico	Policy	7.00	7.00	7.00	7.00	7.00
	2y	7.00	6.80	6.70	6.70	6.50
	10y	7.13	7.10	7.30	7.50	7.50
Chile	Policy	2.50	2.50	2.50	2.50	2.50
	2y	2.70	2.70	2.70	2.70	2.70
	10y	4.18	4.10	4.20	4.20	4.30
Colombia	Policy	5.75	5.00	5.00	5.00	5.00
	2y	4.97	4.80	4.90	4.90	5.00
	10y	6.23	6.20	6.30	6.50	6.70
<b>G10</b>						
US	Policy	1.25	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00
	2y	1.35	1.50	1.55	1.65	1.80
	10y	2.25	2.60	2.85	2.85	2.85
Germany	Policy	0.00	0.00	0.00	0.00	0.00
	2y	-0.64	-0.50	-0.55	-0.50	-0.45
	10y	0.53	0.50	0.55	0.60	0.60

Spot as of July 20 Source: BofA Merrill Lynch Global Research, Bloomberg

## Commodities forecasts

Table 10: BofA Merrill Lynch Crude Oil Price Forecasts (end-of-period forecasts)

	units							Sep-17F	Dec-17F
WTI Crude Oil	(\$/bbl)							48.00	47.00
Brent Crude Oil	(\$/bbl)							51.00	50.00
US natural gas	(\$/MMBtu)							3.40	4.00

Source: BofA Merrill Lynch Global Research estimates

Table 11: BofA Merrill Lynch Commodity Price Forecasts (period averages)

	units	3Q17F	4Q17F	2017F	1Q18F	2Q18F	3Q18F	4Q18F	2018F	2019F
WTI Crude Oil	(\$/bbl)	44.00	47.00	47.00	47.00	47.00	52.00	53.00	50.00	51.00
Brent Crude Oil	(\$/bbl)	47.00	50.00	50.00	50.00	49.00	54.00	55.00	52.00	53.00
US NY Harbor ULSD (HO) Cracks to Brent Crude Oil	(\$/bbl)	12.10	13.60	12.50						
US RBOB Cracks to Brent Crude Oil	(\$/bbl)	12.20	6.60	11.50						
USGC 1% Residual Cracks to Brent Crude Oil	(\$/bbl)	(10.50)	(10.50)	(10.40)						
NWE Low Sulphur Gasoil Cracks to Brent Crude Oil	(\$/bbl)	9.70	11.00	10.00						
NWE Eurobob Cracks to Brent Crude Oil	(\$/bbl)	10.70	6.70	9.00						
NWE 1% Residual Cracks to Brent Crude Oil	(\$/bbl)	(10.50)	(11.00)	(10.25)						
US Natural Gas	(\$/MMBtu)	3.20	3.70	3.30	3.80	3.30	3.30	3.60	3.50	3.50
Thermal coal, Newcastle FOB	(\$/t)	78.00	80.00	80.00	78	70	65	67	70.00	64.00
Aluminium	\$/t	1,700	2,150	1,902	1,950	1,950	1,950	1,950	1,950	2,000
Copper	\$/t	5,500	4,750	5,434	4,750	5,500	5,750	6,042	5,510	6,400
Lead	\$/t	2,150	2,000	2,143	2,129	2,129	2,129	2,129	2,129	2,129
Nickel	\$/t	9,250	9,250	9,494	10,000	10,000	11,000	11,000	10,500	12,500
Zinc	\$/t	2,750	2,750	2,714	2,950	2,950	2,950	2,950	2,950	2,975
Gold	\$/oz	1,275	1,350	1,276	1,400	1,350	1,400	1,450	1,400	1,400
Silver	\$/oz	17.00	20.00	17.93	20.71	20.71	20.71	20.71	20.71	20.00
Platinum	\$/oz	950	925	950	950	950	950	950	950	1,000
Palladium	\$/oz	850	800	809	800	825	850	875	838	900

Source: BofA Merrill Lynch Global Research estimates

## Trade Recommendation

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For our FX trade ideas, see the [Global FX Weekly](#)

For our Rates trade ideas, see the [Global Rates Weekly](#)

For our EM trade ideas, see the [Global EM Weekly](#)

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