



Emerging Markets

Quantitative Market Monitor

MarketQuant Research

Quarterly - 2019 Q2

A unique combination of quantitative models and in-depth analytics applied to asset valuation in Emerging Markets.

Document completed on April 4, 2019 with data up to March 29, 2019.

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Macro scenario for EM

- Emerging Markets continue to face a progressive economic slowdown because of several unfavorable external factors: tightening of US monetary policy until December 2018, lingering trade tensions, structural rebalancing and financial challenges in China. Negative effects of more restrictive stance in EM monetary policies, cyclical downturn in investment and confidence, partly related to electoral/policies uncertainties (India, Indonesia, South Africa, etc.) are also weighing on EM short-term domestic performances.
- This negative dynamic should extend gradually until early-2020, as simultaneous economic adjustments in mature economies (US, Euro Area) and in China will have spillover effects through traditional trade and financial channels. Mid-size countries highly exposed to international trade are likely to suffer most, while the largest EM able to stimulate their large domestic demand would be more resilient.
- This is further supported by the assumption about a switch towards Fed monetary easing towards 2019-end: while this should prove beneficial for all EM, the end of upward pressure from US interest rates and a positive reversal in international USD liquidity will positively affect more the largest / financially developed EM, mostly concentrated on the 10 Key EM, with more room for accommodative domestic monetary policies and lower pressures from capital outflows.
- This rather benign scenario for risk materialization for 2019H2 is supported by the improvement in our 2-year-leading Economic & Financial Risk Ratings during 2017, after a deterioration that very correctly announced the difficulties registered in 2018. However, we note a recent “synchronized” uptick in Risk ratings (across all regions and groups of countries), suggesting a moderate rise in risk materialization during the second half of 2020.
- The major risks to our central scenario are related to political and economic policies potentially detrimental to businesses and households’ confidence and investments. In particular, increasing difficulties for Chinese authorities to manage further the cyclical slowdown could rapidly trigger “disorderly” adjustments to banks and financial markets, as well as to the heavily-indebted corporate sector. In addition, persistent global strategic tensions (trade protectionism, Brexit, general elections) could reinforce the short-term negative EM growth perspectives or at least delay their economic recovery.

Markets' performances and outlook

Markets' performances

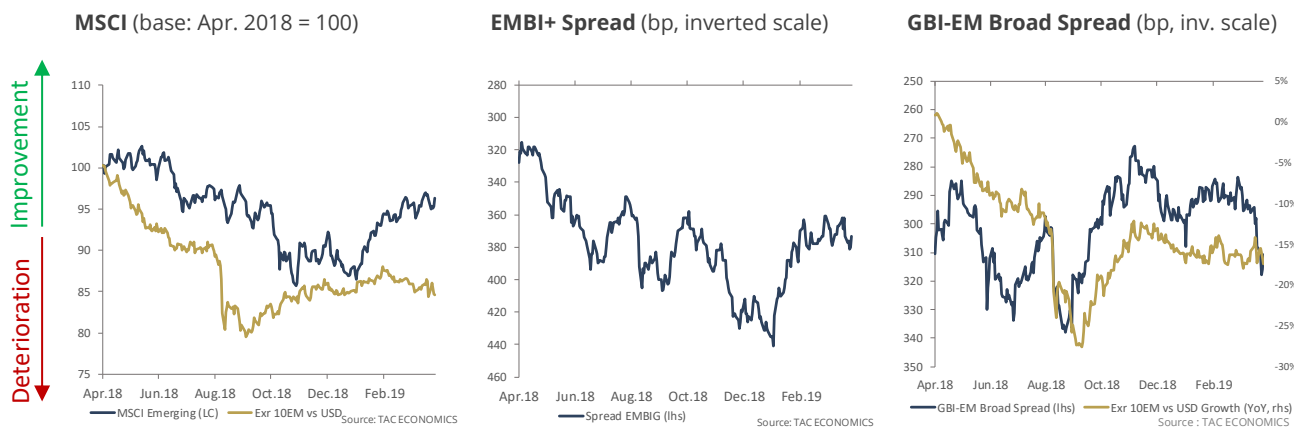
The rally in EM assets over 2019Q1 is explained by attractive valuations at the end of 2018, less pressures on interest rates and currencies, and lower short-term concerns about China.

2019Q1 was characterized by a rally in EM asset classes (both stock market and fixed income), illustrated by a particularly strong rebound in MSCI EM (+9.5% year-to-date) and narrowing of JPMorgan's EMBI spreads (-60bp year-to-date).

The reasoning behind the improvement of sentiment towards EM is structured around three main factors:

1. Attractive valuations: EM assets underperformed in 2018, both in stock markets (-16.6% in dollar terms last year) as well as in bond markets because of crises in several countries (Turkey, Argentina). These adjustments are perceived by investors as leading valuation more in line with risks. Besides, announced economic reforms and policy stimulus are expected to support EM assets in the near-term.
2. Fed's volte-face: the sudden "pivot" in US monetary policy, from the neutral / hawkish stance to a clear dovish tone, announcing a pause in rates and more flexibility for balance sheet management, will provide a substantial positive support to EM with lower interest rates pressure and a positive reversal in international USD liquidity. This will remove a permanent / underlying pressure on monetary policies (especially in a context of low inflationary pressures) and EM's currencies (supported by the assumption of a weak USD).
3. Contained concerns about China (at least in the very short-run): trade tensions between US and China appeared to recede and reflation policies put in place since mid-2018 in China are expected to create a temporary "plateau" for China's GDP growth in the short-term. Moreover, MSCI announced in March that the weighing for China in EM MSCI index would rise from 0.7% currently to 3.3% by November, creating large enthusiasm among investors despite expected slowdown in Chinese economy.

The uncertainties are expected to persist in Emerging Markets (global economic slowdown, bouts of volatility on currencies...) but the risks on EM assets are now assimilated and considered by asset managers as priced in.



Country Risk measures

Overall country-risk spreads have improved year-on-year, indicating stronger resilience in 2019 and 2020 for largest EM, except for Russia which is located in the highest risk area, in line with our scenario of decline in global oil prices.

TAC ECONOMICS' broadest measure of country risk is a global Country Risk Premium (or Risk-Related Extra Cost of Capital, expressed in basis points) that incorporates currency, cyclical, payments and political risk ratings and signals.

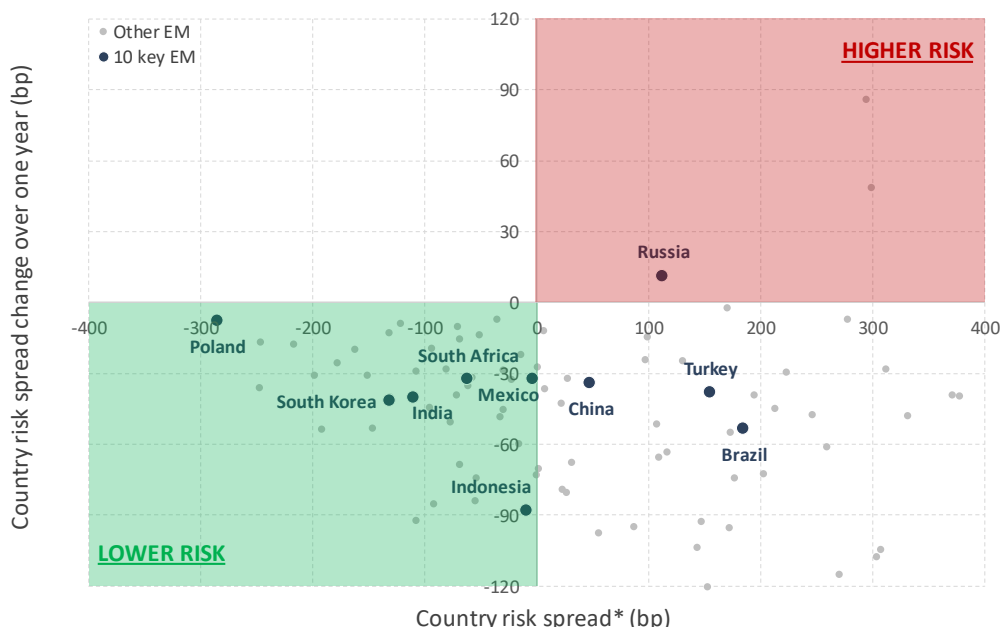
On the chart below, we plot the positions of our 10 key EM regarding the difference or spread between our Global Country Risk Premium and JP Morgan EMBI+ global spread (i.e. a relative measure of country risk against markets' average valuation, on the horizontal axis), and the one-year dynamics for the same relative risk measure. Countries most at risk are located within the upper right corner, and those with lower risk at the bottom left.

Only Russia is located in the highest risk position, combining both a deterioration in the country risk spread on a year-on-year basis and high absolute level of risk. Russia's unfavorable position is endorsed by our gloomy oil price scenario (decline to 50\$/bl by 2019-end followed by a modest rebound towards 60\$/bl over 2020).

No other country out of the 10 key EM shows a deterioration of its country risk spread, with improvements ranging from low (Poland) to very substantial (about -90bp for Indonesia). Although improving over the last one year, China, Brazil and Turkey still exhibit above-average absolute country risk levels, especially for the short-term horizon, reinforced by WatchList Indications on Activity (China, Turkey) and on their exchange rate (all of the three countries) meaning a persistent vulnerability of their respective currencies to domestic or global and economic or political developments.

Poland, India, South Korea, South Africa, Mexico and Indonesia are located in the lowest risk area, meaning that they register low or moderate country risk spreads that have improved since one year.

Country Risk: level vs dynamics



* difference between TAC ECONOMICS RRECC and 12-month average EMBI spread

Source: TAC ECONOMICS

This improvement in overall macro-risk for large EM is in line with our scenario for a progressive economic slowdown in Emerging Markets, but largest EM would be able to stimulate their large domestic demand and should prove more resilient.

Aggregate Valuation & Risk Metrics

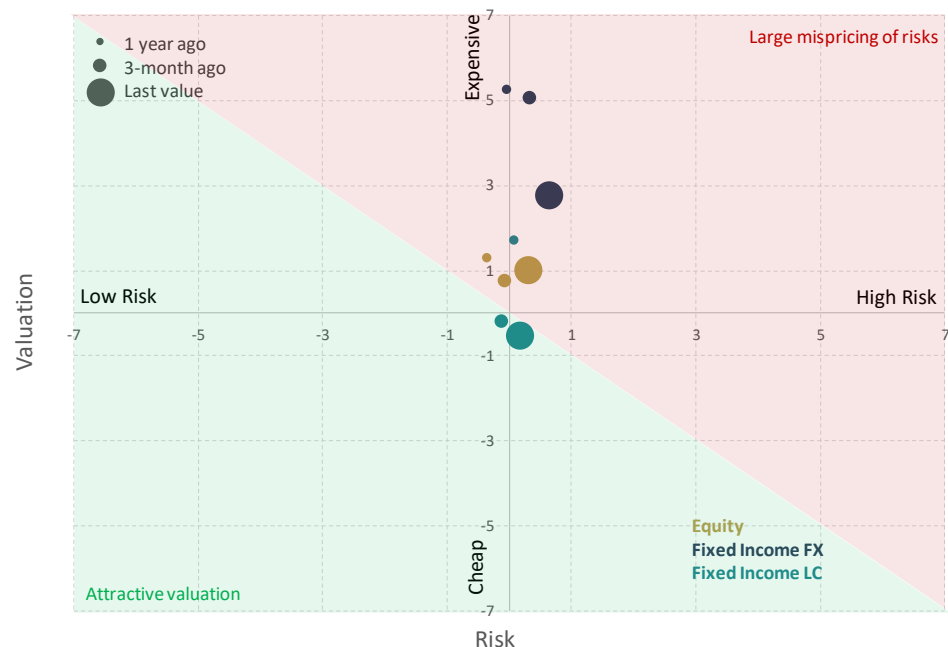
Fixed Income LC remain more attractive, in the *attractive valuation* area; Equity not too far from a neutral position and Fixed Income FX still overvalued.

Valuation and Risk comparison is the core of the Quantitative Market Monitor. It is based on composite indexes, for both Valuation and Risk, that are consistently normalized and scaled from -12 (cheapest valuation, lowest risk) to +12 (most expensive, highest risk).

Using these Valuation and Risk indexes for the aggregate 10 key EM, we highlight the following:

- All three asset classes have shown a limited though visible deterioration in Risk metrics over the past three months. In the case of Fixed Income Foreign Currency (FX) and Equity markets, this recent deterioration has reinforcing a negative trend in Risk for over a year, while aggregate Fixed Income Local Currency (LC) market is now back to the level observed one year ago.
- In parallel, Valuation metrics have improved, much more substantially for Fixed Income markets since last one year. The relatively favorable performance for Equity markets over 2019Q1 has slightly deteriorated the Valuation, even though the asset class remains more attractive that it was one year ago.
- The improvement in Valuation metrics suggests (much) more attractive Valuation for EM assets. However, the current positions of the three asset classes show that only Fixed Income LC has entered the *attractive valuation* area on our overall balance of Risk and Valuation, whereas Equity markets remain close from a neutral position. Conversely, despite the highest improvement among EM assets (over three months and one year), Fixed Income FX still exhibit a much higher Valuation, which is clearly not yet associated with favorable Risks metrics.

Aggregate Valuation and Risk Metrics



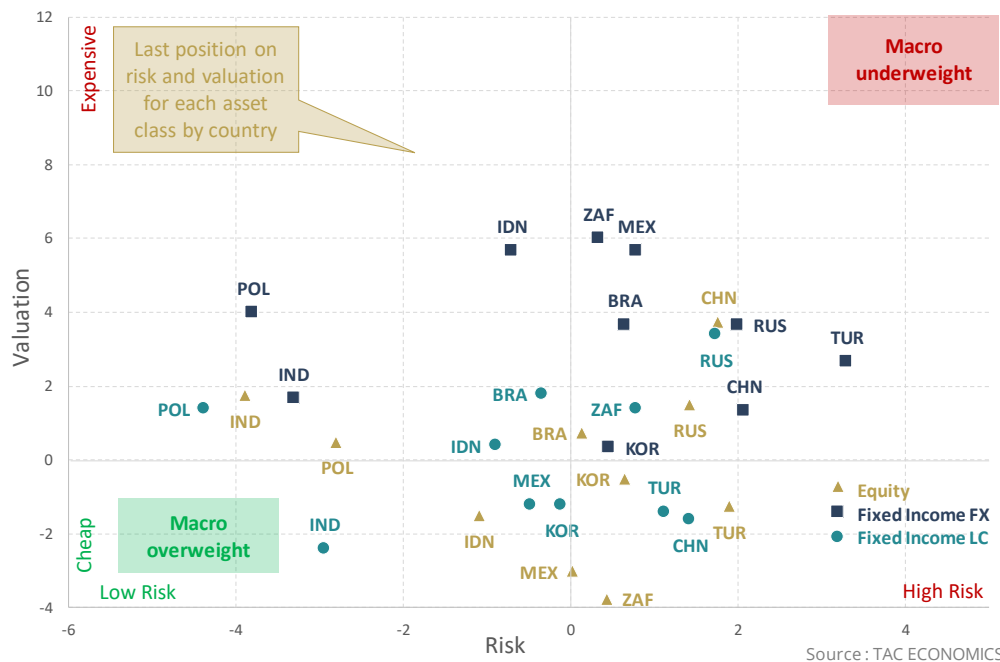
Key messages at market and country levels

Equities in Indonesia as well as Fixed Income LC in India, Mexico and South Korea are showing the most attractive macro-risk / valuation combination.

We detail here the positions of countries and markets in the same Risk-Valuation approach to the 30 markets (three markets for each of the 10 Key EM).

- Dispersion is now almost similar for Risk and Valuation Indexes, though it is centered around neutrality for Risk and still skewed towards expensive levels for Valuation. The chart reveals three broad strata of asset classes / countries: (1) Fixed Income FX have generally higher Valuation metrics than other asset classes; (2) Fixed Income LC show lower level of Valuation but with substantial dispersion for both Risk and Valuation; and (3) Equity markets show a broadly similar level of Valuation than Fixed Income LC, but with more concentrated levels of risk.
- None of the countries shows neutral or attractive valuations for Fixed Income FX markets, only South Korea is near the *Macro overweight* area. Poland and India still exhibit very low levels of Risk, while South Africa, Mexico, Russia and Turkey combine unattractive Valuations with unfavorable Risk metrics.
- Most Fixed Income LC are now close to the neutral Valuation, with lowest Risk reading for Poland, and more attractive combinations for India, South Korea and Mexico; conversely, Russia and South Africa are the only Fixed Income LC located in the *Macro underweight* area.
- Regarding Equity markets, only Indonesia exhibits the most attractive combination of macro Risk and Valuation, with India, Poland, Mexico and South Africa are relatively close from the *Macro overweight* position. On the opposite, Brazil, Russia and China combine both mediocre to high Risks and rather expensive Valuations.

Full markets' Valuation and Risk map



Key changes in Valuation and Risk metrics

We highlight here the largest changes noted over 1 and 3 months in Valuation and Risk metrics for all 30 asset markets monitored in the QMM (Equity, Fixed Income LC & FX for the 10 Key EM: Brazil, Russia, India, China, South Africa, Turkey, Poland, Indonesia, South Korea and Mexico).

Note on methodological change: the tables always incorporate updates as well as improvement in the quantitative tool assessing Risk and Valuation factors. Historical Risk and Valuation figures have been adjusted, and changes computed here are fully time-consistent.

Most significant changes – 1M	Category	Change	Current value	Previous month
Deteriorations				
			-12 cheap / low risk to +12 expensive / high risk	
South Africa - Fixed Income LC	Risk	1.5	0.8	-0.7
Turkey - Fixed Income LC	Risk	1.4	1.1	-0.3
Turkey - Equity	Risk	1.4	1.9	0.5
South Africa - Equity	Risk	1.3	0.4	-0.9
Brazil - Fixed Income LC	Risk	1.0	-0.3	-1.3
Improvements				
Mexico - Fixed Income FX	Valuation	-1.3	5.7	7.0
India - Fixed Income FX	Valuation	-1.3	1.7	3.0
India - Fixed Income LC	Valuation	-1.2	-2.4	-1.2
Indonesia - Fixed Income FX	Valuation	-1.0	5.7	6.7
India - Equity	Risk	-0.9	-3.9	-3.0
Most significant changes over last 3M	Category	Change	Current value	3 months ago
Deteriorations				
South Africa - Equity	Risk	2.9	0.4	-2.4
South Africa - Fixed Income LC	Risk	2.7	0.8	-1.9
South Africa - Fixed Income FX	Risk	1.5	0.3	-1.1
China - Equity	Valuation	1.2	3.8	2.5
South Korea - Equity	Risk	1.1	0.7	-0.4
Improvements				
Mexico - Equity	Valuation	-4.1	0.0	4.1
Mexico - Fixed Income FX	Valuation	-4.0	5.7	9.7
India - Fixed Income FX	Valuation	-4.0	1.7	5.7
Mexico - Fixed Income LC	Risk	-3.7	-0.5	3.3
Turkey - Fixed Income FX	Valuation	-2.7	2.7	5.3

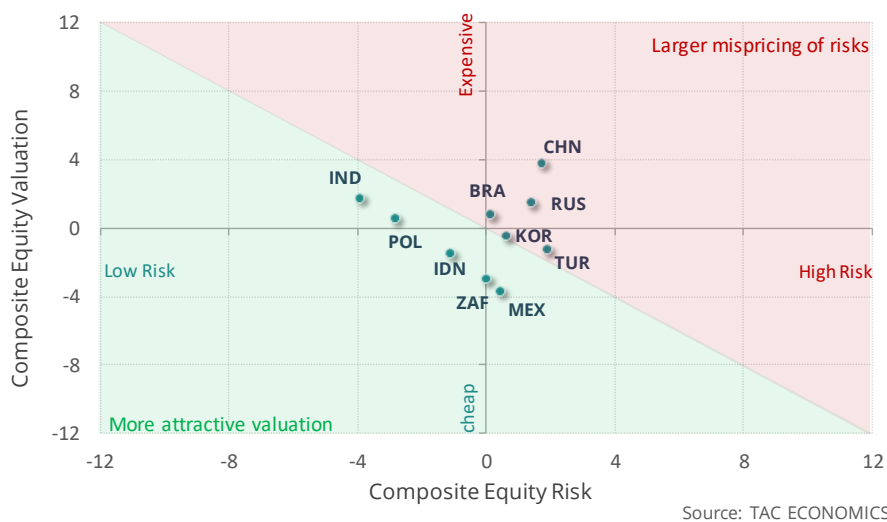
Overall Performance and Risk Metrics

Equities - Valuation & Risk Metrics for 10 Key EM

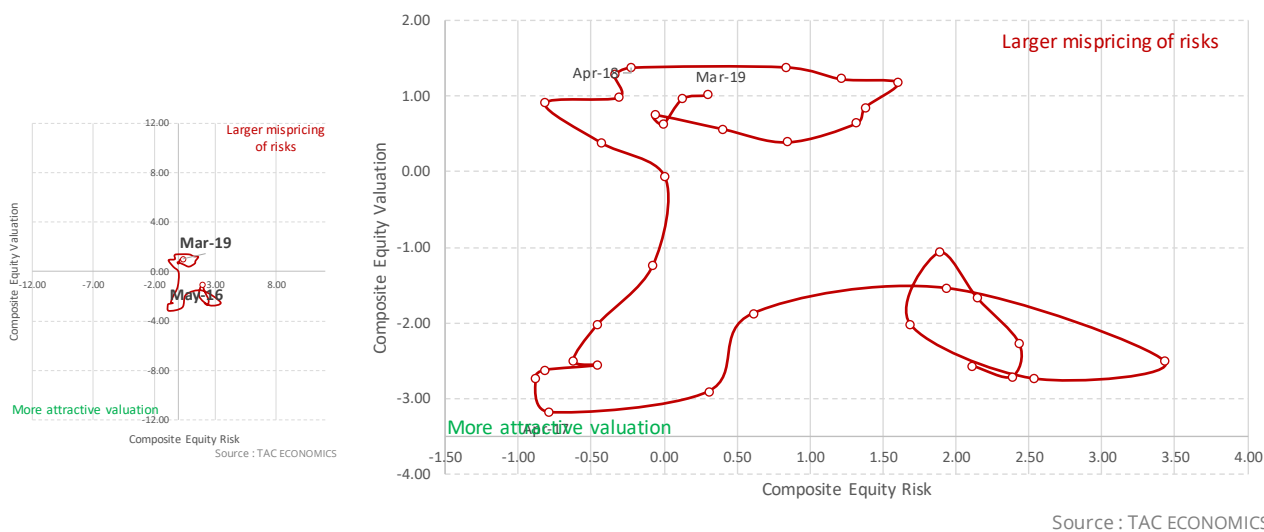
Quantitative table	-12 cheap to +12 expensive		-12 low risk to +12 high risk		
	Composite Equity Valuation	Composite Equity Risk	Cyclical Risk	Currency Risk	Liquidity Risk
Brazil	0.8	0.1	-1.3	-2.4	-4.5
China	3.8	1.8	2.8	0.4	0.6
India	1.8	-3.9	-5.0	-3.6	1.3
Indonesia	-1.5	-1.1	-1.5	-1.8	-0.1
Mexico	-3.0	0.0	2.7	-2.6	-0.6
Poland	0.5	-2.8	5.5	-2.3	-5.0
Russia	1.5	1.4	-1.7	0.2	0.4
South Africa	-3.8	0.4	1.2	1.5	3.5
South Korea	-0.5	0.7	6.2	0.3	1.1
Turkey	-1.3	1.9	5.8	-2.8	0.7

Source: TAC ECONOMICS

Equity Composite Valuation and Risk - latest

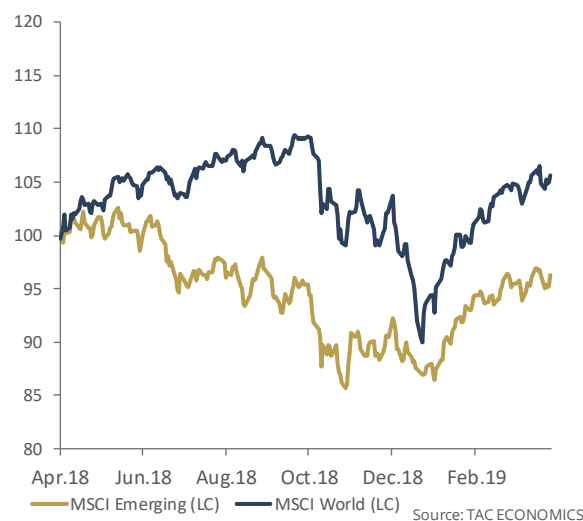
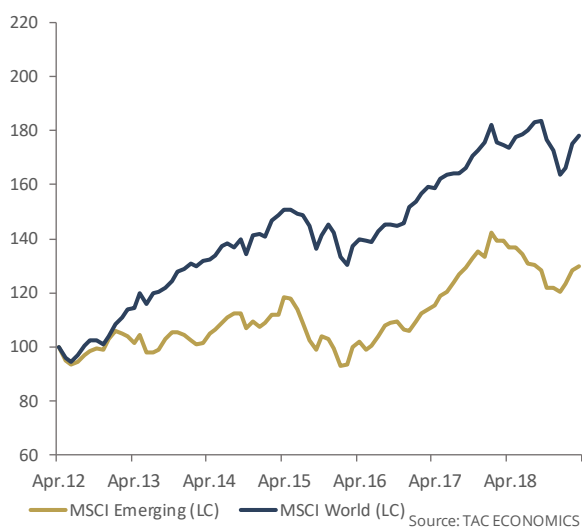


Equity Composite Valuation and Risk – overall dynamics 10 Key EM

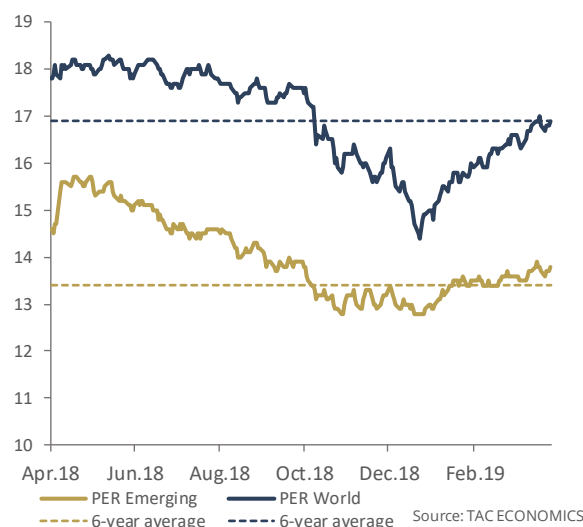
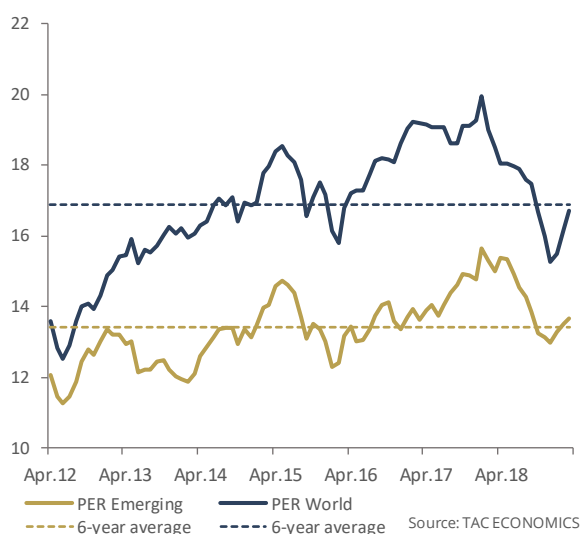


Equities - Overall EM performances

MSCI Emerging Market and World in LC (Index Rebased)



Price Earning Ratio for MSCI Emerging and World



Quantitative table	Last month	Average	Average	Average
	(avg Mar. 2019)	3 months	12 months	3 years
MSCI EM Index	58,091	56,896	57,901	54,199
PER EM	13.7	13.5	14.1	14.0
Differential PER EM-WLD	-3.0	-2.6	-3.0	-4.0
MSCI EM Volatility	0.7%	0.6%	0.8%	0.6%
Differential Volatility EM-WLD	0.0%	-0.2%	0.1%	0.1%
10 Key EM exch. rate var (YoY, "-" = depreciation)	-11.7%	-11.6%	-8.2%	-3.6%
	Change Over	3 months	1 year	3 years
MSCI EM Index	1.0%	7.9%	-6.9%	30.1%
10 Key EM exch. rate ("-" = depreciation)	-0.9%	1.0%	-11.7%	-8.3%

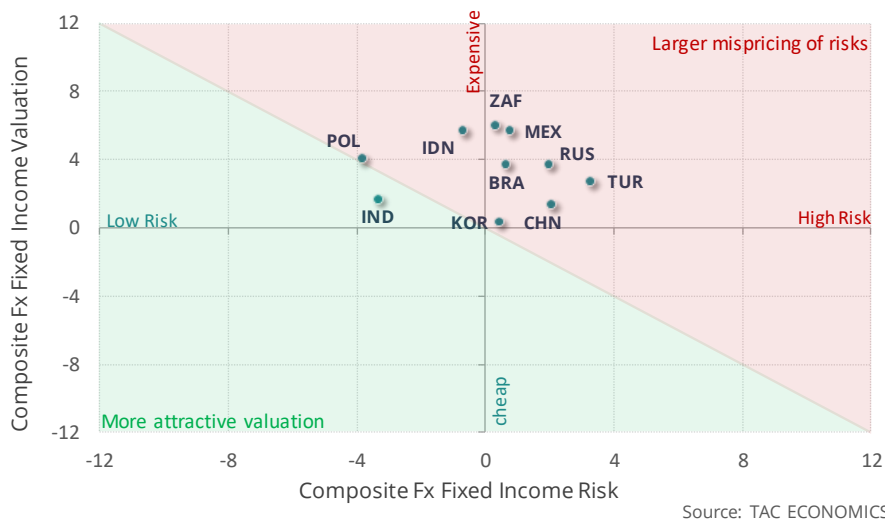
Source: TAC ECONOMICS

Fixed Income Fx - Valuation & Risk Metrics for 10 Key EM

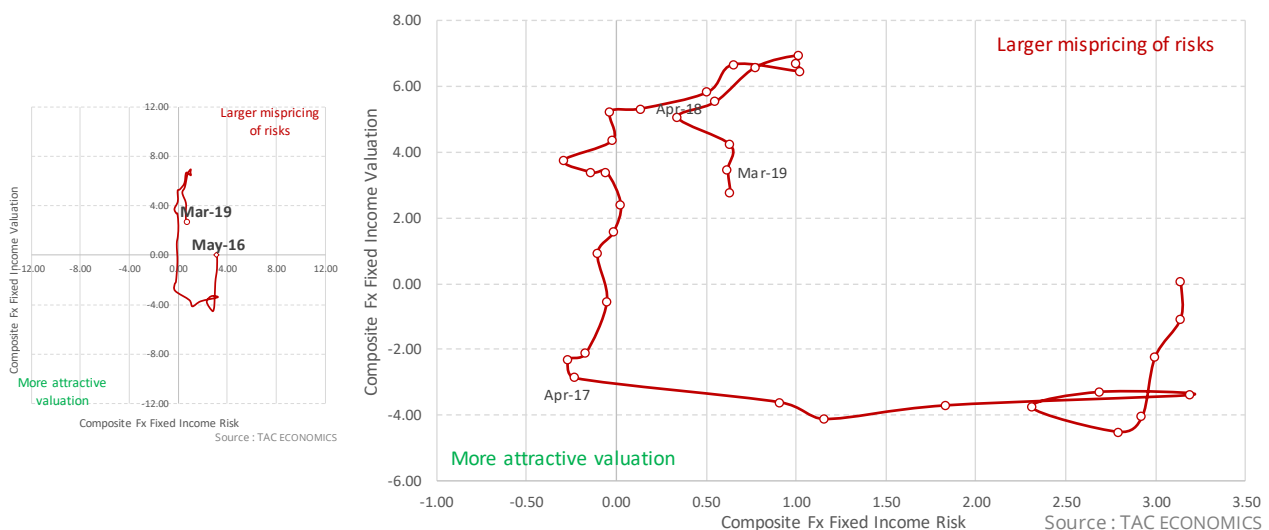
Quantitative table	-12 cheap to +12 expensive		-12 low risk to +12 high risk		
	Composite Fixed Income FX Valuation	Composite Fixed Income FX Risk	Cyclical Risk	Currency Risk	Liquidity Risk
Brazil	3.7	0.7	-1.3	-2.4	-4.5
China	1.3	2.1	2.8	0.4	0.6
India	1.7	-3.3	-5.0	-3.6	1.3
Indonesia	5.7	-0.7	-1.5	-1.8	-0.1
Mexico	5.7	0.8	2.7	-2.6	-0.6
Poland	4.0	-3.8	5.5	-2.3	-5.0
Russia	3.7	2.0	-1.7	0.2	0.4
South Africa	6.0	0.3	1.2	1.5	3.5
South Korea	0.3	0.5	6.2	0.3	1.1
Turkey	2.7	3.3	5.8	-2.8	0.7

Source: TAC ECONOMICS

Fixed Income FX Composite Valuation and Risk - latest

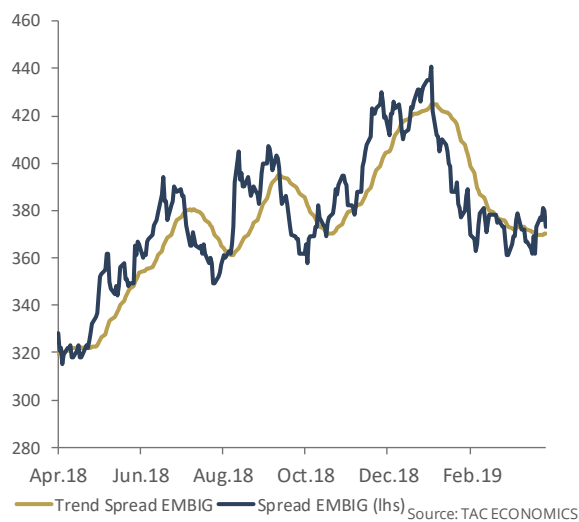
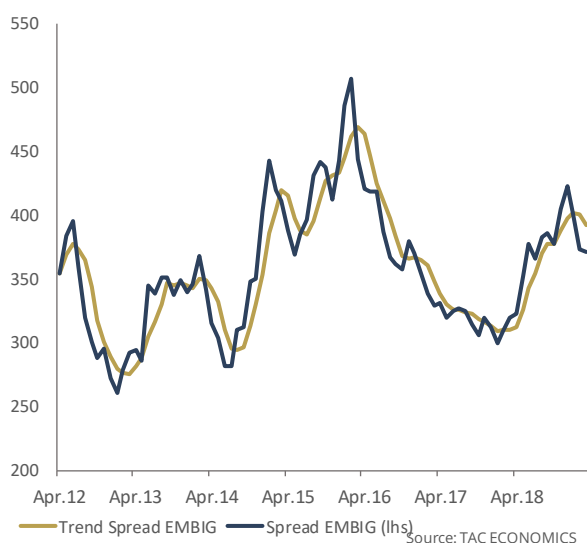


Fixed Income FX Composite Valuation and Risk - overall dynamics 10 Key EM



Fixed Income FX - Overall EM performances

EMBI Global Spread (in Basis Points)



EMBI Global Spread and US High Yield Spread (in Basis Points)



Quantitative table

	Last month (avg Mar. 2019)	Average 3 months	Average 12 months	Average 3 years	
EMBI Global Spread (bp)	371	382	373	359	
Spread EMBI Global - US IG (bp)	276	280	283	279	
Spread EMBI Global - GBI-EM Broad (bp)	72	88	72	11	
Differential EMBI-US High Yield (bp)	-547	-550	-415	-573	
EMBI Global spread volatility	6	10	10	8	
Differential vol EMBI Global-US 10y Treas.	-0.03	0.04	0.03	0.02	
Differential vol EMBI Global-US High Yield	-0.02	-0.24	-0.15	-0.15	
	Change Over	1 month	3 months	1 year	3 years
EMBI Global Spread (bp)	-2	-52	52	-72	

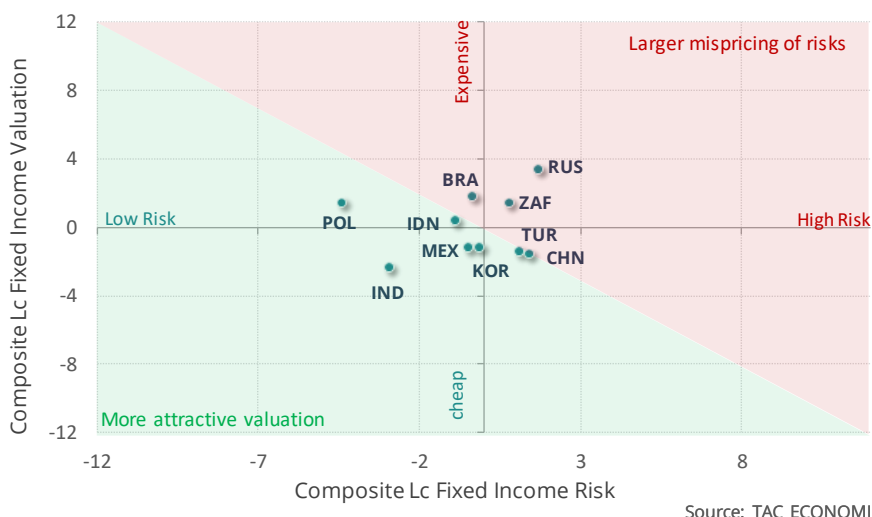
Source: TAC ECONOMICS

Fixed Income LC - Valuation & Risk Metrics for 10 Key EM

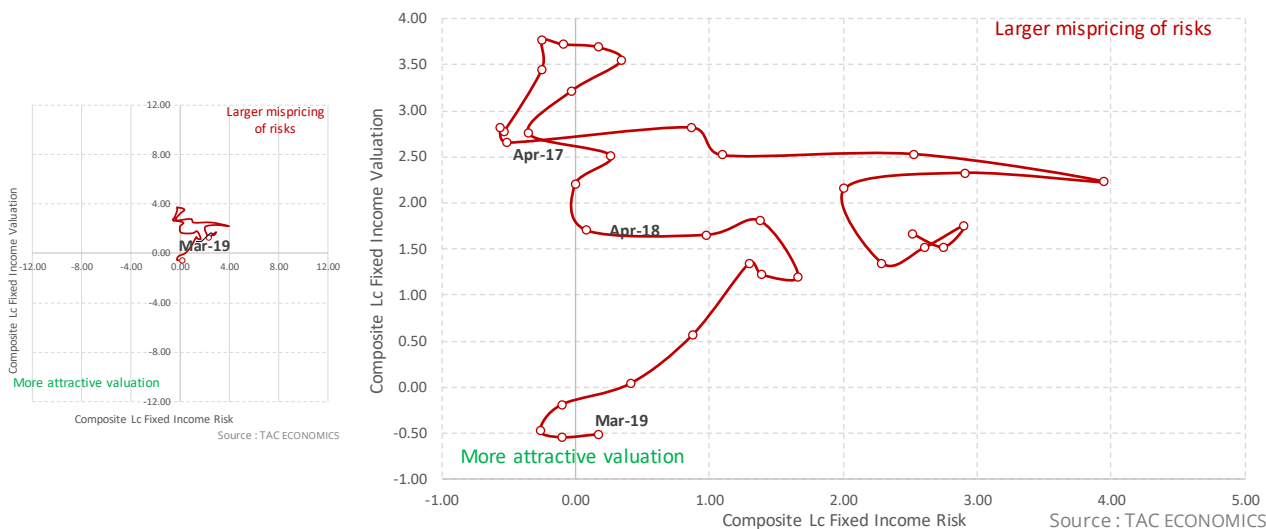
Quantitative table	-12 cheap to +12 expensive		-12 low risk to +12 high risk		
	Composite Fixed Income LC Valuation	Composite Fixed Income LC Risk	Cyclical Risk	Currency Risk	Liquidity Risk
Brazil	1.8	-0.3	-1.3	-2.4	-4.5
China	-1.6	1.4	2.8	0.4	0.6
India	-2.4	-2.9	-5.0	-3.6	1.3
Indonesia	0.4	-0.9	-1.5	-1.8	-0.1
Mexico	-1.2	-0.5	2.7	-2.6	-0.6
Poland	1.4	-4.4	5.5	-2.3	-5.0
Russia	3.4	1.7	-1.7	0.2	0.4
South Africa	1.4	0.8	1.2	1.5	3.5
South Korea	-1.2	-0.1	6.2	0.3	1.1
Turkey	-1.4	1.1	5.8	-2.8	0.7

Source: TAC ECONOMICS

Fixed Income LC Composite Valuation and Risk - latest

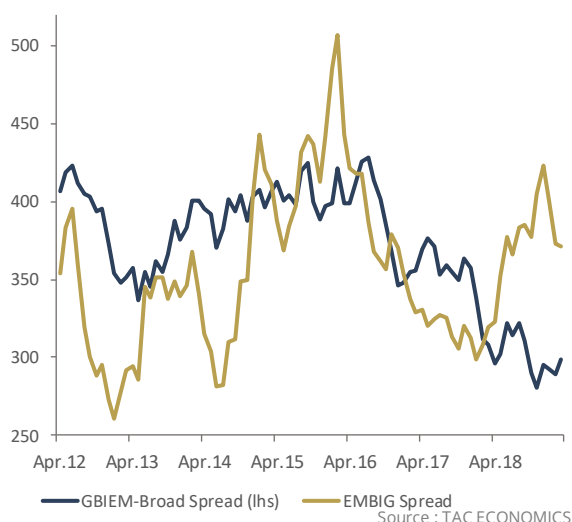


Fixed Income LC Composite Valuation and Risk – overall dynamics 10 Key EM

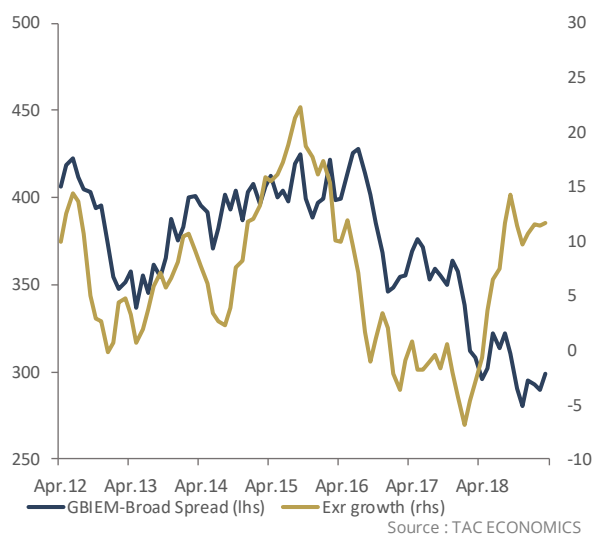


Fixed Income LC - Overall EM performances

GBI-EM Broad Spread vs EMBI Global Spread in LC (in Basis Points)



Exchange rate growth (YoY) vs differential GBIEM – EMBIG (in Basis Points)



Quantitative table

	Last month (avg Mar. 2019)	Average 3 months	Average 12 months	Average 3 years
GBI-EM Broad spread (bp)*	299	294	302	348
Spread GBI-EM Broad - EMBI Global (bp)*	-72	-88	-72	-11
spread GBI-EM Broad - US High Yield (bp)*	-619	-639	-487	-585
GBI-EM Broad spread volatility	10	4	6	6
10 Key EM exch. rate var (YoY, "-" = depreciation)	-11.7%	-11.6%	-8.2%	-3.6%
	Change Over	1 month	3 months	1 year
GBI-EM Broad spread (bp)	9	4	-10	-100
10 Key EM exch. rate ("-" = depreciation)	-0.9%	1.0%	-11.7%	-8.3%

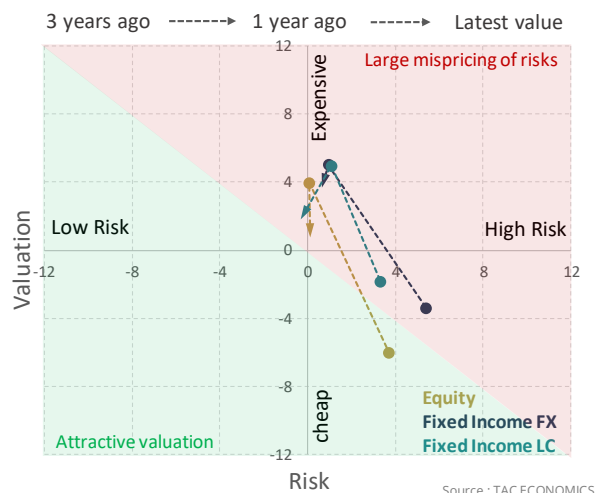
Source: TAC ECONOMICS

*: the average spread on LC bonds include China, a unique case where LC yields are lower than FX yields (suggesting a medium-term expectation or CNY appreciation. Excluding China, the Dec.2018 value would be respectively 531 (instead of 299), 160 (inst. of -72) and -387 (inst. of -619).

Individual Country Performance and Risks

Brazil

Valuation and Risk



Source : TAC ECONOMICS

Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	0.8	4.0	0.2
Fixed Income FX	3.7	5.0	-0.5
Fixed Income LC	1.8	5.0	1.5

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	0.1	0.1	1.3
Fixed Income FX	0.7	1.0	2.6
Fixed Income LC	-0.3	1.1	1.9

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	-1.3	-6.0	-3.0
Currency	-2.4	-1.0	-0.6
Credit Risk	-4.5	0.8	0.5

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	31,292	31,699	28,737	28,598	24,283
Change %		-1.3%	8.9%	9.4%	28.9%
PER	12.1	13.0	11.9	19.8	15.6
PB	2.69	2.81	2.53	3.00	2.91
1M Vol.	1.2%	1.3%	1.2%	1.0%	1.3%

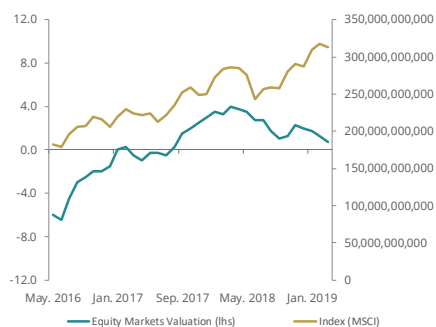
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	241.5	235.8	266.4	233.7	289.7
Change (bp)		6	-25	8	-48
1M Vol.	4.91	5.77	6.30	6.52	10.06

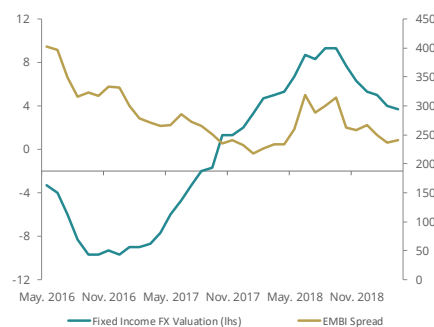
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	553	515	554	548	747
Change (bp)		38	-1	5	-194
1M Vol.	11.91	4.78	10.76	6.09	8.22

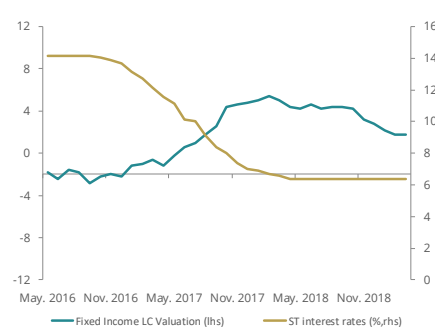
Equity markets Valuation and MSCI



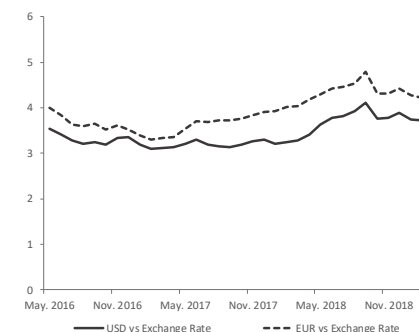
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs BRL

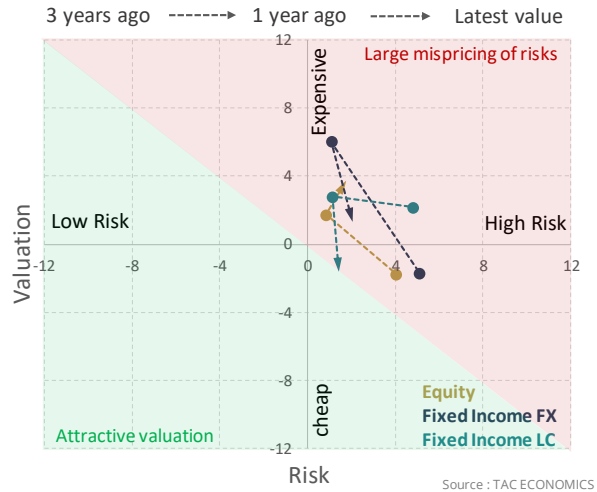


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

China

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	3.8	1.8	-0.1
Fixed Income FX	1.3	6.0	1.3
Fixed Income LC	-1.6	2.8	2.7

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	1.8	0.8	1.9
Fixed Income FX	2.1	1.1	2.6
Fixed Income LC	1.4	1.1	2.6

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	2.8	-1.7	-1.1
Currency	0.4	0.4	1.1
Credit Risk	0.6	0.3	1.5

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	83	80	73	94	74
Change %		3.3%	14.2%	-12.1%	11.7%
PER	12.7	12.2	11.0	8.7	8.9
PB	1.61	1.56	1.40	1.78	1.48
1M Vol.	1.1%	1.0%	1.4%	1.5%	1.1%

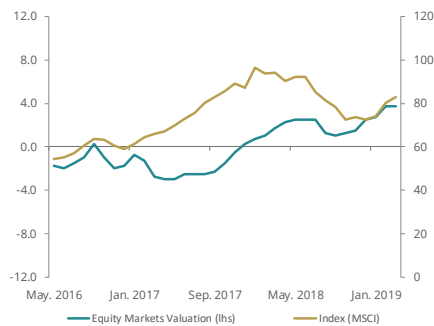
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	177.6	182.4	190.5	167.0	163.9
Change (bp)		-5	-13	11	14
1M Vol.	2.07	2.19	2.37	3.26	2.95

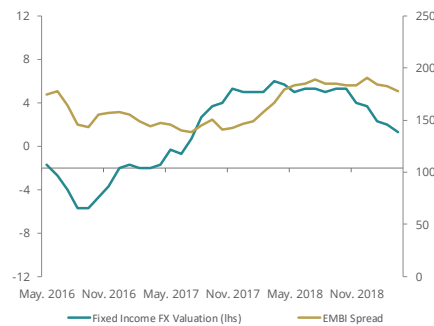
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	58	39	42	102	95
Change (bp)		18	16	-44	-37
1M Vol.	2.57	1.70	2.15	1.70	2.25

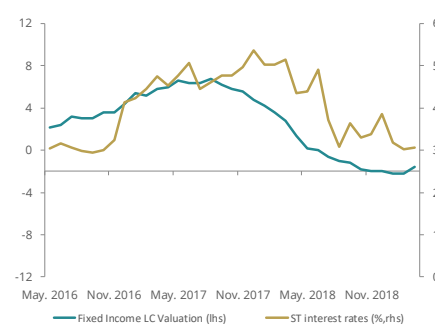
Equity markets Valuation and MSCI



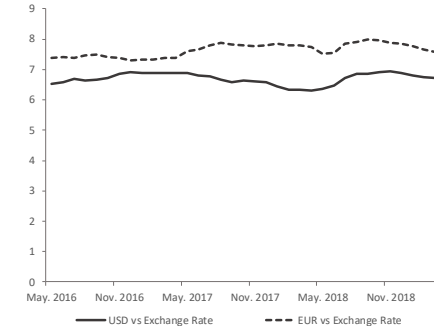
Fixed Income FX valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs CNY

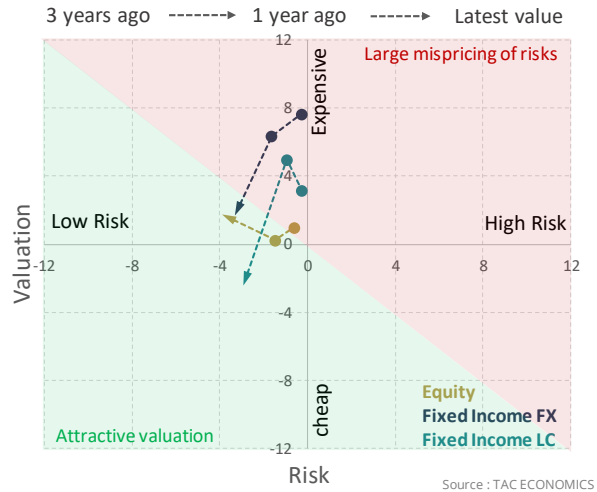


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

India

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	1.8	0.3	-0.6
Fixed Income FX	1.7	6.3	3.2
Fixed Income LC	-2.4	5.0	3.6

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	-3.9	-1.5	-1.5
Fixed Income FX	-3.3	-1.6	-1.9
Fixed Income LC	-2.9	-1.0	-1.2

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	-5.0	-1.3	-1.8
Currency	-3.6	0.0	0.2
Credit Risk	1.3	2.1	0.1

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	1,308	1,260	1,252	1,213	1,155
Change %		3.8%	4.5%	7.9%	13.3%
PER	22.4	21.4	21.4	22.7	22.1
PB	2.97	2.85	2.91	2.86	2.72
1M Vol.	0.6%	0.8%	0.9%	0.8%	0.7%

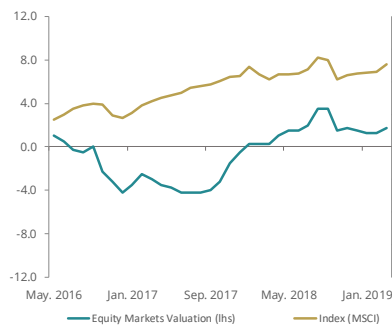
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	152.6	162.5	180.9	130.5	142.2
Change (bp)		-10	-28	22	10
1M Vol.	4.10	5.95	4.98	8.57	4.21

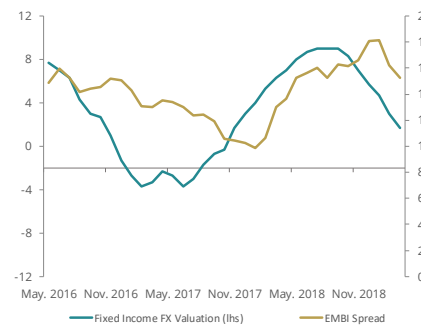
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	489	485	466	492	505
Change (bp)		4	23	-3	-16
1M Vol.	2.56	2.71	2.70	3.02	2.93

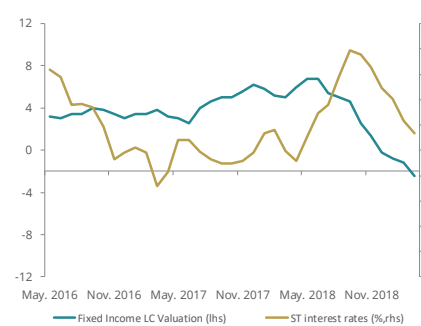
Equity markets Valuation and MSCI



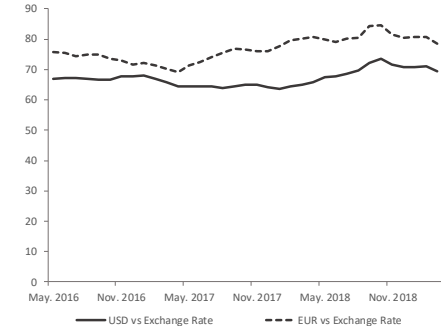
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs INR

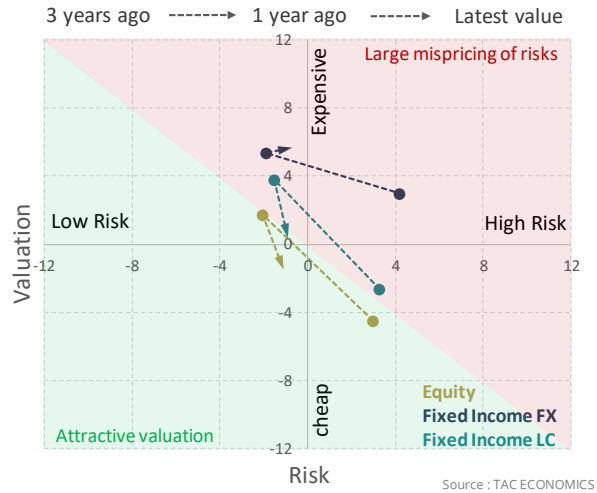


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Indonesia

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	-1.5	1.8	-1.6
Fixed Income FX	5.7	5.3	2.2
Fixed Income LC	0.4	3.8	1.4

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	-1.1	-2.1	0.1
Fixed Income FX	-0.7	-1.9	1.0
Fixed Income LC	-0.9	-1.5	0.8

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	-1.5	-4.5	-1.9
Currency	-1.8	-1.7	-0.6
Credit Risk	-0.1	-1.0	0.9

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	7,215	7,313	7,065	7,310	6,641
Change %		-1.3%	2.1%	-1.3%	8.6%
PER	18.8	19.1	18.8	20.5	20.3
PB	3.12	3.15	3.03	3.00	2.83
1M Vol.	0.9%	0.9%	1.1%	1.0%	1.0%

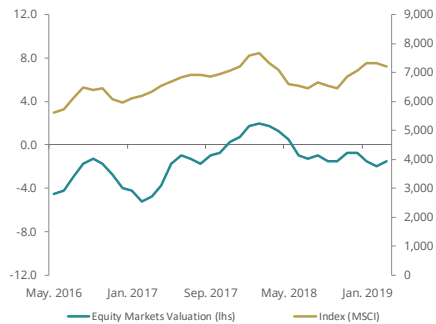
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	195.6	196.2	226.6	177.9	209.6
Change (bp)		-1	-31	18	-14
1M Vol.	4.12	6.03	5.51	6.01	7.03

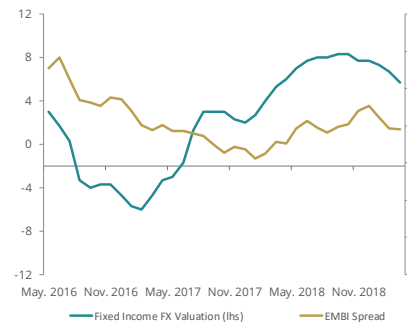
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	528	532	537	409	512
Change (bp)		-4	-9	119	16
1M Vol.	2.46	4.53	5.39	5.57	4.33

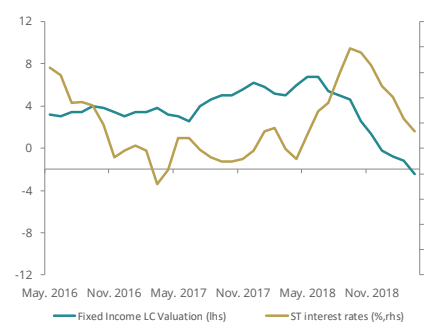
Equity markets Valuation and MSCI



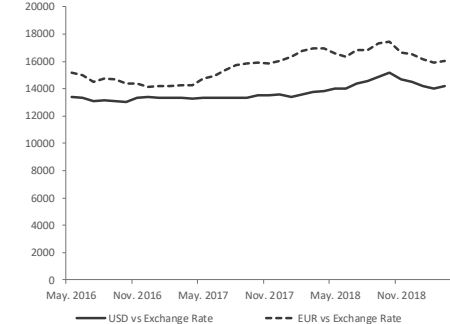
Fixed Income FX valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs IDR

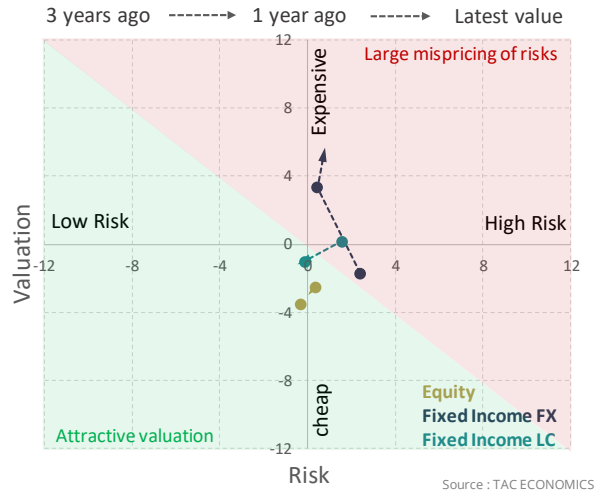


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Mexico

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	-3.0	-3.5	-2.5
Fixed Income FX	5.7	3.3	1.2
Fixed Income LC	-1.2	-1.0	1.2

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	0.0	-0.3	1.4
Fixed Income FX	0.8	0.4	2.0
Fixed Income LC	-0.5	-0.1	1.3

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	2.7	1.7	3.3
Currency	-2.6	-1.6	-0.3
Credit Risk	-0.6	3.0	2.3

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	39,383	40,399	38,626	45,019	44,337
Change %		-2.5%	2.0%	-12.5%	-11.2%
PER	15.5	16.9	17.0	17.7	19.5
PB	2.03	2.06	1.98	2.23	2.22
1M Vol.	0.7	0.7%	1.6%	0.8%	0.8%

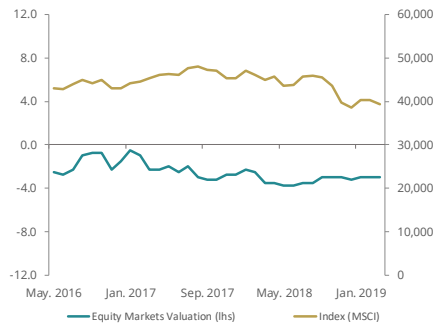
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	309.5	319.2	341.4	245.8	276.2
Change (bp)		-10	-32	64	33
1M Vol.	6.55	7.90	12.49	6.09	9.18

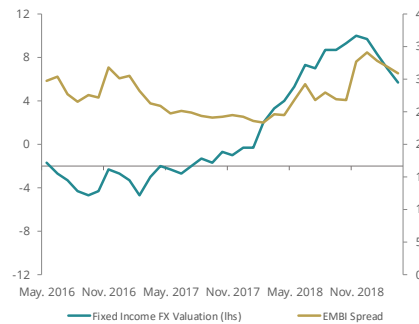
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	560	574	613	475	492
Change (bp)		-14	-53	85	68
1M Vol.	4.81	2.70	4.31	2.11	2.72

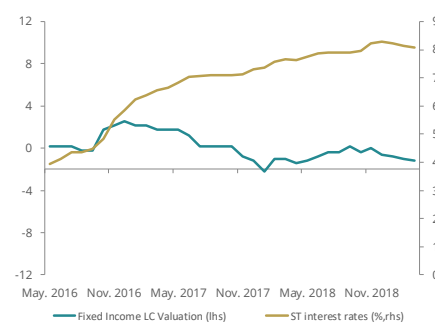
Equity markets Valuation and MSCI



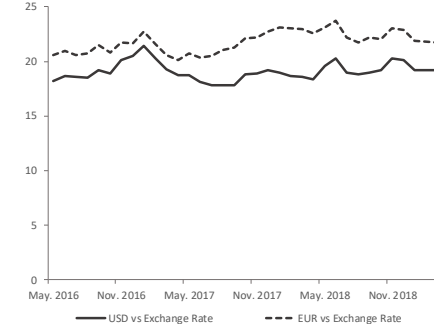
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs MXN

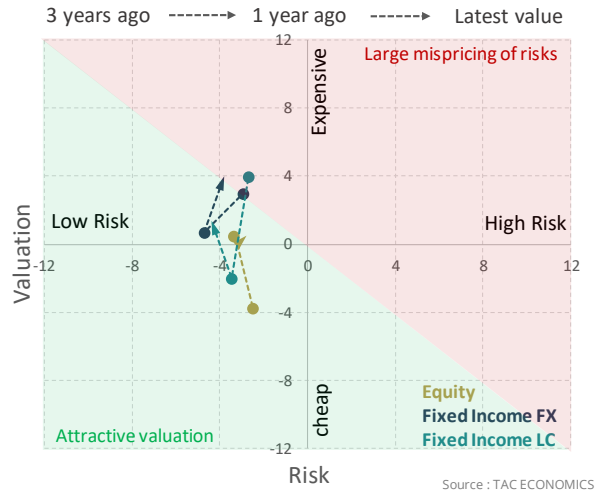


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Poland

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	0.5	0.5	-0.8
Fixed Income FX	4.0	0.7	1.2
Fixed Income LC	1.4	-2.0	0.9

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	-2.8	-3.3	-3.0
Fixed Income FX	-3.8	-4.7	-3.9
Fixed Income LC	-4.4	-3.4	-3.2

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	5.5	-1.7	-0.2
Currency	-2.3	0.2	-0.7
Credit Risk	-5.0	-2.4	-1.7

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	1,665	1,684	1,640	1,659	1,566
Change %		-1.1%	1.5%	0.4%	6.3%
PER	12.3	12.6	12.1	12.4	13.8
PB	1.22	1.23	1.19	1.25	1.23
1M Vol.	0.8%	0.9%	1.4%	1.1%	1.0%

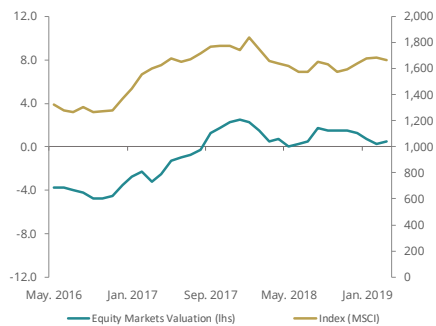
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	56.3	53.0	74.8	52.8	75.2
Change (bp)		3	-19	4	-19
1M Vol.	3.28	4.97	4.16	3.29	5.71

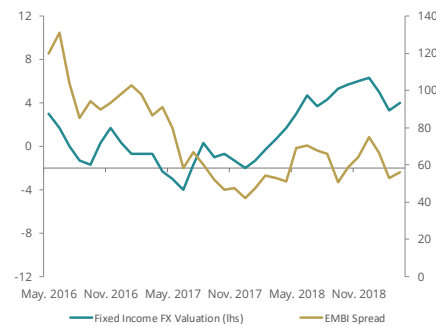
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	-28	-44	-48	-30	20
Change (bp)		16	20	2	-48
1M Vol.	3.16	2.52	2.16	2.68	2.49

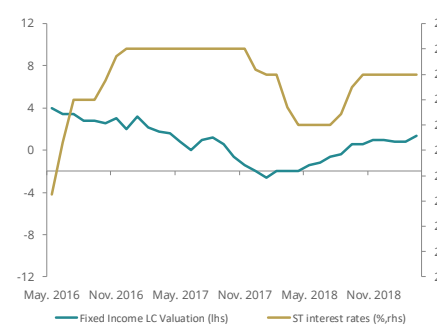
Equity markets Valuation and MSCI



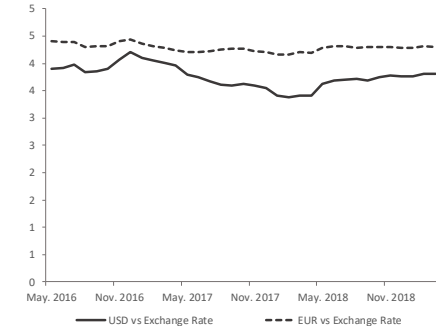
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs PLN

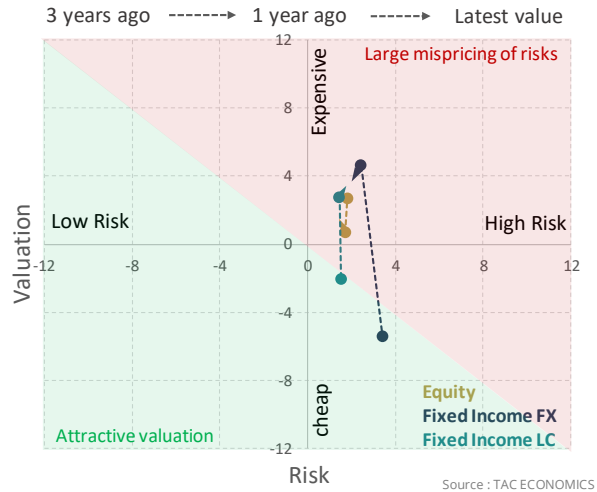


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Russia

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	1.5	0.8	1.8
Fixed Income FX	3.7	4.7	2.1
Fixed Income LC	3.4	2.8	2.1

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	1.4	1.7	1.0
Fixed Income FX	2.0	2.4	1.9
Fixed Income LC	1.7	1.4	1.0

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	-1.7	1.3	-0.6
Currency	0.2	-0.8	-1.2
Credit Risk	0.4	-0.5	-2.0

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	1,126	1,132	1,067	1,052	960
Change %		-0.6%	5.5%	7.0%	17.3%
PER	5.9	5.9	5.7	7.9	7.3
PB	0.93	0.93	0.90	0.86	0.84
1M Vol.	0.8%	0.8%	1.2%	1.0%	1.0%

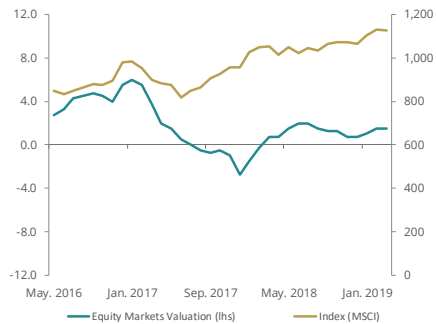
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	214.8	219.9	242.9	172.4	204.7
Change (bp)		-5	-28	42	10
1M Vol.	5.56	4.69	5.49	7.56	7.40

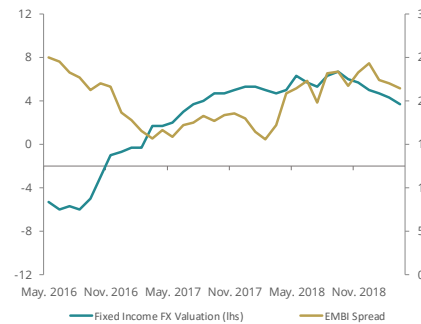
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	545	537	561	398	557
Change (bp)		8	-15	147	-12
1M Vol.	5.99	3.19	2.42	1.33	3.10

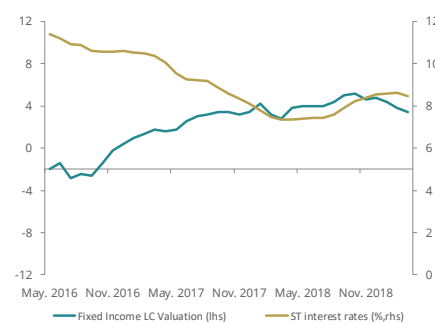
Equity markets Valuation and MSCI



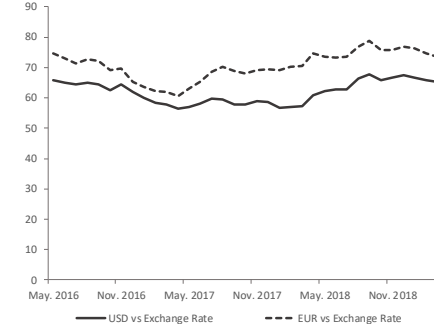
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs RUB

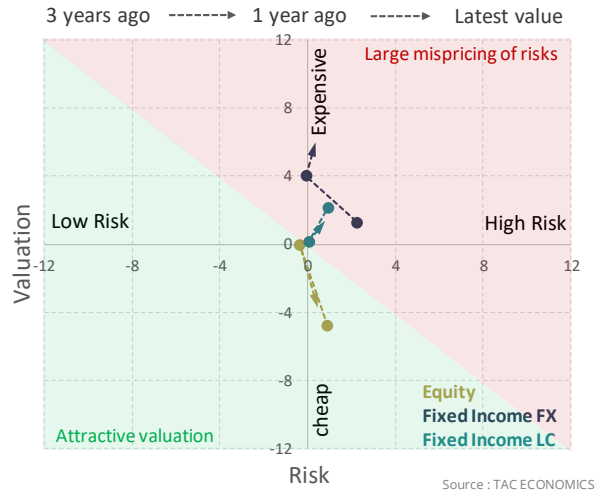


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

South Africa

Valuation and Risk



Source : TAC ECONOMICS

Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	-3.8	0.0	-4.0
Fixed Income FX	6.0	4.0	0.7
Fixed Income LC	1.4	0.2	0.1

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	0.4	-0.3	0.1
Fixed Income FX	0.3	-0.1	0.7
Fixed Income LC	0.8	0.1	0.6

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	1.2	1.5	1.6
Currency	1.5	-0.1	0.0
Credit Risk	3.5	4.2	2.8

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	1,358	1,345	1,288	1,491	1,372
Change %		1.0%	5.4%	-8.9%	-1.0%
PER	17.1	17.3	17.6	20.7	19.2
PB	2.31	2.30	2.19	2.41	2.25
1M Vol.	0.7%	1.0%	1.5%	1.3%	1.1%

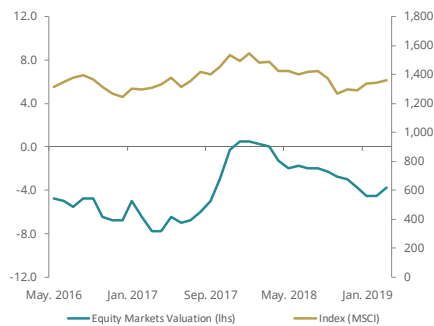
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	305.6	296.0	354.3	244.3	292.1
Change (bp)		10	-49	61	13
1M Vol.	9.66	12.77	8.52	8.92	11.93

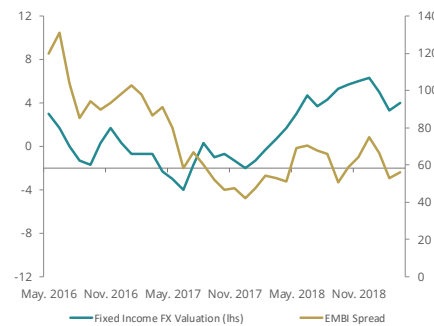
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	690	681	689	585	693
Change (bp)		9	2	105	-2
1M Vol.	2.42	2.20	3.39	2.97	2.41

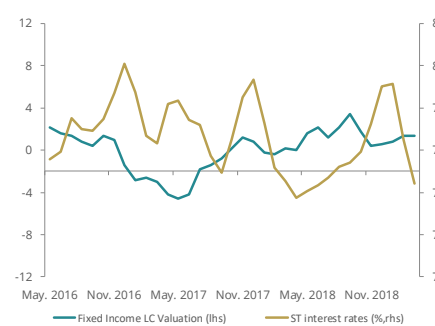
Equity markets Valuation and MSCI



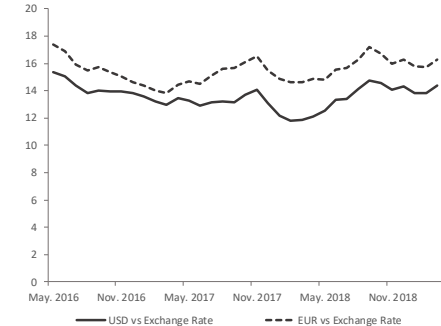
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs ZAR

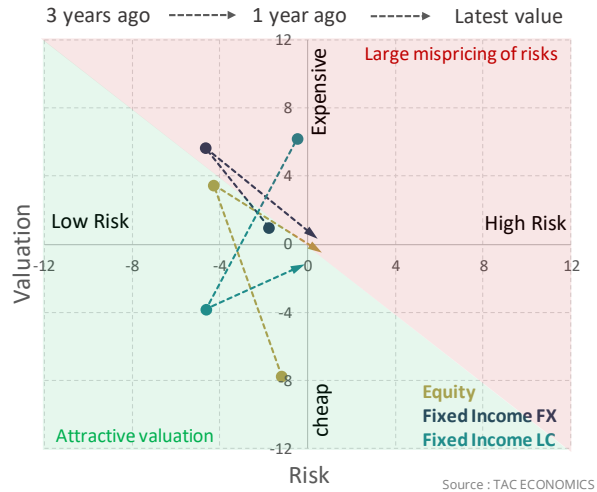


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

South Korea

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	-0.5	3.5	-1.2
Fixed Income FX	0.3	5.7	1.3
Fixed Income LC	-1.2	-3.8	1.1

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	0.7	-4.3	-1.7
Fixed Income FX	0.5	-4.7	-2.0
Fixed Income LC	-0.1	-4.6	-1.3

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	6.2	0.0	-0.1
Currency	0.3	-3.5	0.0
Credit Risk	1.1	-2.1	1.4

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	647	664	614	744	650
Change %		-2.5%	5.4%	-13.0%	-0.5%
PER	10.0	9.8	9.2	11.0	11.2
PB	0.99	1.02	0.95	1.00	0.98
1M Vol.	0.8%	0.9%	1.0%	1.1%	0.8%

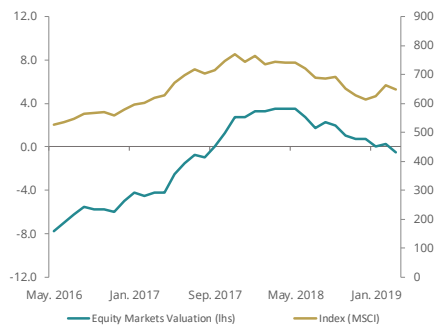
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	183.4	185.0	210.6	167.8	184.6
Change (bp)		-2	-27	16	-1
1M Vol.	3.06	4.71	4.05	4.48	5.20

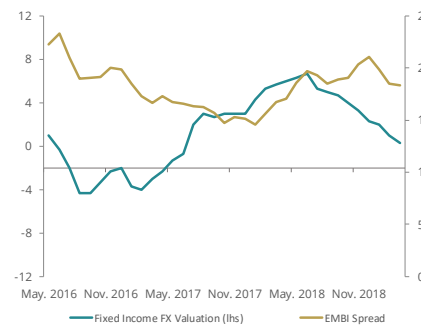
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	441	432	457	394	476
Change (bp)		9	-16	47	-35
1M Vol.	3.43	6.21	8.45	4.46	7.31

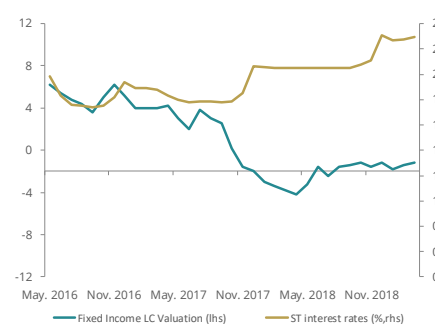
Equity markets Valuation and MSCI



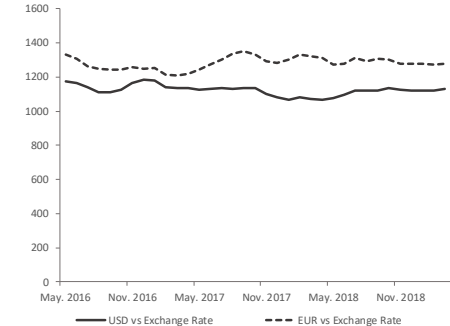
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs PLN

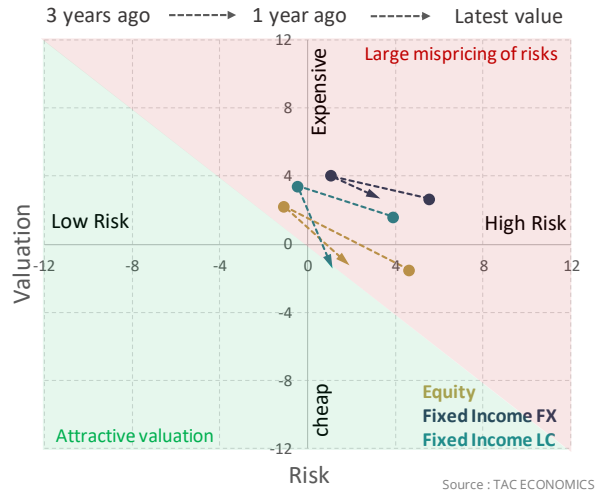


*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Turkey

Valuation and Risk



Macro Risk & Valuation Metrics Global summary

-12 cheap to +12 expensive

Valuation Metrics	Latest	1y ago	3y avg
Equity Markets	-1.3	2.3	-0.1
Fixed Income FX	2.7	4.0	1.0
Fixed Income LC	-1.4	3.4	0.6

-12 low risk to +12 high risk

Risk Metrics	Latest	1y ago	3y avg
Equity Markets	1.9	-1.1	1.2
Fixed Income FX	3.3	1.1	2.9
Fixed Income LC	1.1	-0.5	1.7

-12 low risk to +12 high risk

Risk Components	Latest	1y ago	3y avg
Cyclical	5.8	-3.2	-0.4
Currency	-2.8	-5.8	-2.2
Credit Risk	-2.8	1.1	1.0

Summary Equity Markets

	Latest	1m ago	3m ago	1y ago	3y avg
MSCI index*	13,749	14,202	12,544	15,888	13,067
Change %		-3.2%	9.6%	-13.5%	5.2%
PER	7.4	7.7	7.1	10.1	9.6
PB	1.18	1.21	1.09	1.25	1.17
1M Vol.	1.0%	1.1%	1.2%	1.0%	1.2%

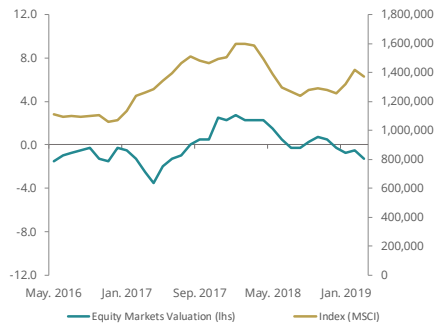
Summary Fixed Income FX

	Latest	1m ago	3m ago	1y ago	3y avg
EMBIG Spd	445.2	405.8	442.7	310.6	348.0
Change (bp)		39	3	135	97
1M Vol.	14.87	14.62	17.56	7.67	13.49

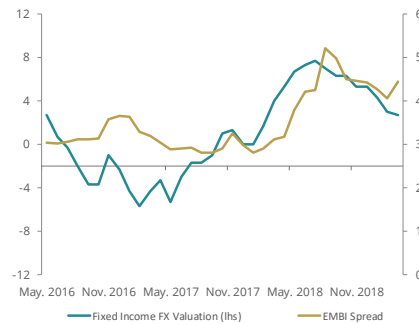
Summary Fixed Income LC

	Latest	1m ago	3m ago	1y ago	3y avg
GBIEM Spd	1446	1269	1476	977	1048
Change (bp)		177	-30	469	397
1M Vol.	11.73	11.60	23.59	3.92	10.79

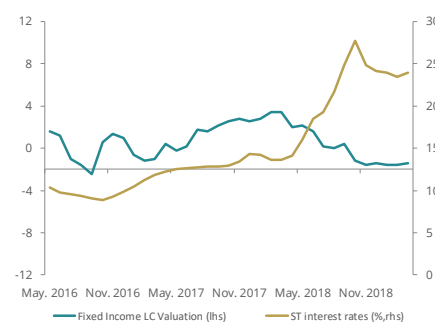
Equity markets Valuation and MSCI



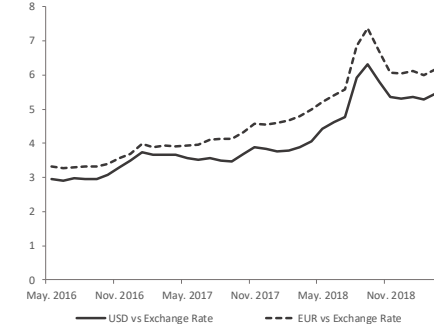
Fixed Income FX Valuation and EMBI



Fixed Income LC Valuation and short-term interest rates



EUR and USD vs TRY



*MSCI in Local currency, Unit = 10 mn for Brazil and 100 for Turkey

Data up to Mar. 2019

Methodology

This document and the research tools behind it aim at improving the confrontation between macro-based risk factors and markets' valuations in Emerging or Frontier Markets. The results presented here include:

- Composite indexes of market valuations for equity and fixed income markets, combining traditional valuation metrics (PER, PBV, EPS growth, interest rates, spreads, yield curves), which are statically normalized around their long-term average and scaled from -12 (very cheap or attractive valuation of assets) to +12 (very expensive asset);
- Composite indexes for macro risks for Emerging or Frontier Markets. The macro-risks used here are broken down into three "specific" types of risks (currency, cyclical, liquidity) as well as a global country risk measure incorporating political and governance risks. The macro risk indexes are also normalized around long-term trends and scaled from -12 (very low risk, favorable macro situation) to +12 (very high risk, unfavourable macro situation).

The analysis of such valuation and risk indexes for each market and a comparative confrontation of the two sets of measures enable to spot markets where the "mismatch" is maximum, suggesting a stronger potential for significant market movements, upside if the risk is dearly remunerated by low valuation and downside if valuation are too high for the underlying risk performance.

The outputs and composite indexes are not designed or statistically calibrated to provide forecasts of financial markets' performances, as they do not incorporate bottom-up and market-specific information and analysis.

Disclaimer

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