Scenario

Na comparação com a edição de fevereiro, nosso Mapa de Riscos verificou em março estabilidade nos indicadores que o compõem. O contexto no qual tais indicadores operaram no mês de fevereiro foi um no qual os principais índices acionários nacionais obtiveram performance negativa, no sentido oposto das demais economias emergentes e mundiais (gráfico 2.1). Acrescenta-se ainda que o comportamento dos indicadores de volatilidade foi análogo, crescente para o mercado nacional e decrescente para os demais (gráfico 2.2). Os demais índices de referência para demais ativos de risco nacionais, por sua vez, tenderam a demonstrar performance positiva concomitante com alta em sua volatilidade (gráficos 2.5 e 2.6).

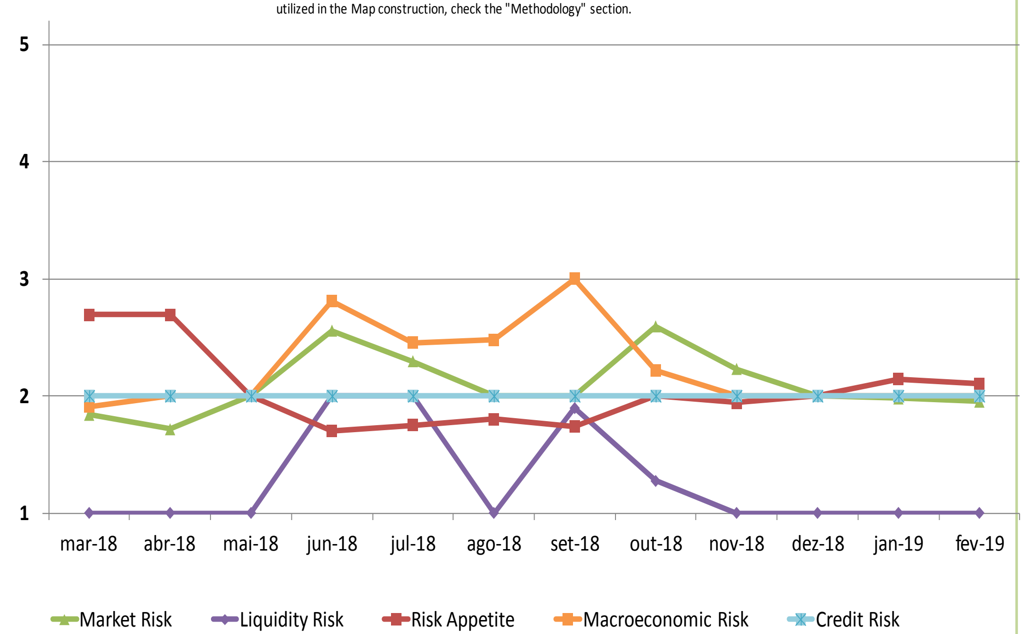
No esteio da mudança na orientação geral do Fed com respeito a intensidade do ritmo de aumento de taxas de juros a perseguido, dando a entender uma postura mais dovish do que até então esperado, destaca-se outro mês de performance positiva para os índices de títulos de renda fixa corporativos, em especial aqueles associados a economias emergentes (gráfico 2.3). Quanto a esse último ponto acerca das economias emergentes, este encontra-se correlacionado com o desempenho de apreciação dos indicadores cambiais (gráfico 1.1), de queda nos juros nominais e CDS soberanos (gráficos 1.2 e 1.4).

Como pontos de atenção, nota-se que a curva de juros americana continua mostrando sinais de inversão em novos vértices, ainda que a sinalização do Fed tenha alterado para uma postura mais dovish [1]. Nesse sentido, análise do Goldman Sachs mostra que é a maior proporção de inversão da curva de juros desde a crise financeira global de 2008 [2]. Alguns analistas apontam para o novo estoque recorde de títulos de renda fixa com rendimentos nominais negativos como outro ponto de atenção [3]. Sendo assim, mantém-se a consideração de que o cenário externo pode ser uma força a pressionar negativamente os indicadores do Mapa nas próximas edições, ainda que forças internas ao país possam apontar para outra direção.

Risk Map - last 12 months

Sources: Bloomberg; CVM. Design: Office of Economic and Risk Analysis/CVM.

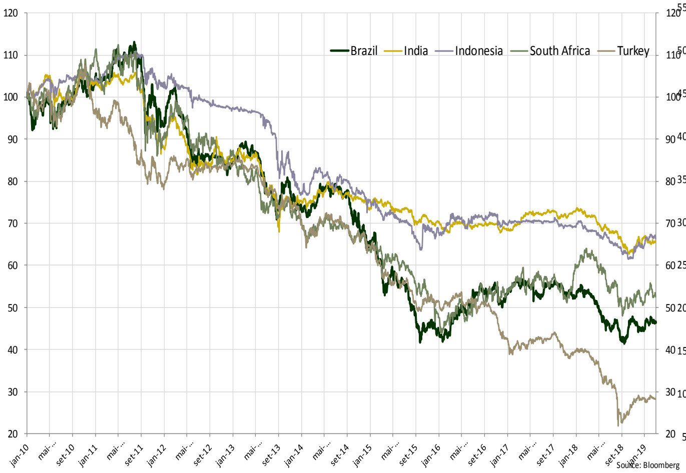
Note: Changes in the depicted scenarios are calculated based on selected "Bulletin" indicators. For a detalied explanation of the criteria utilized in the Map construction, check the "Methodology" section.



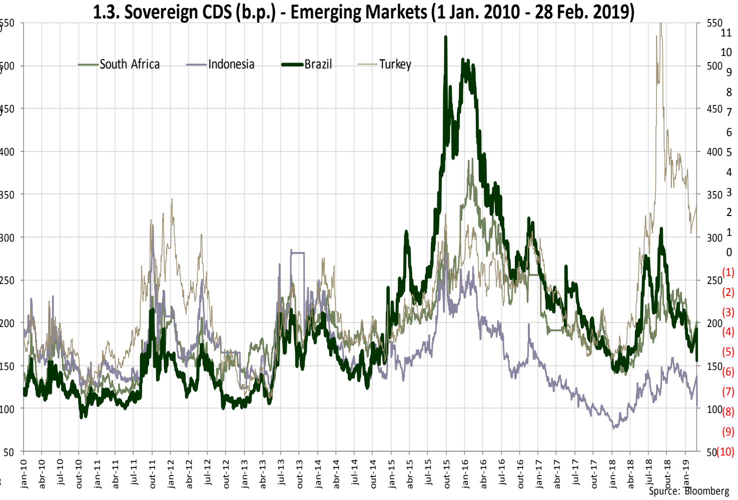
Note: Data collected untill 02/28/2019 and does not reflect any future changes that may have occurred after such date. Reference Notes available in the last page.

1. Macroeconomic Risk

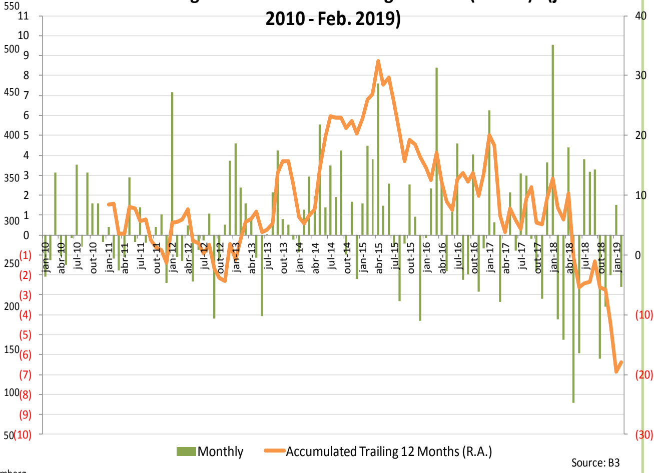
1.1. Selected FX return (USD pairs) - (2 jan. 2010 - 28 Feb. 2019)



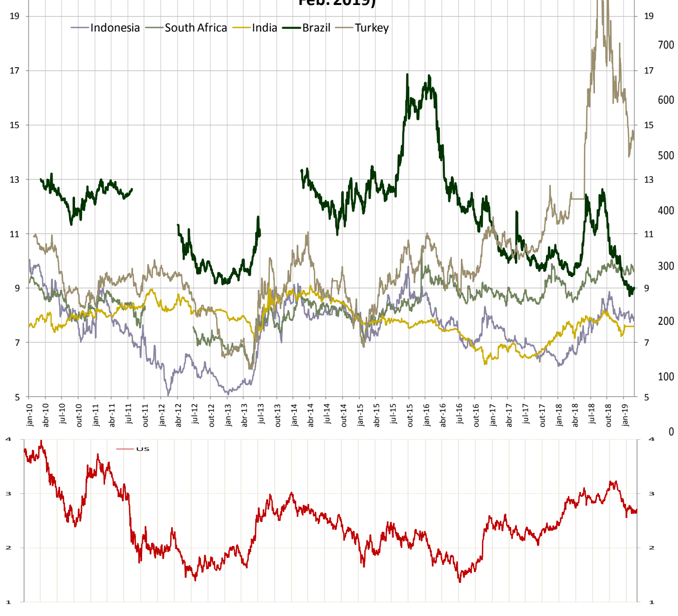
1.3. Sovereign CDS (b.p.) - Emerging Markets (1 Jan. 2010 - 28 Feb. 2019)



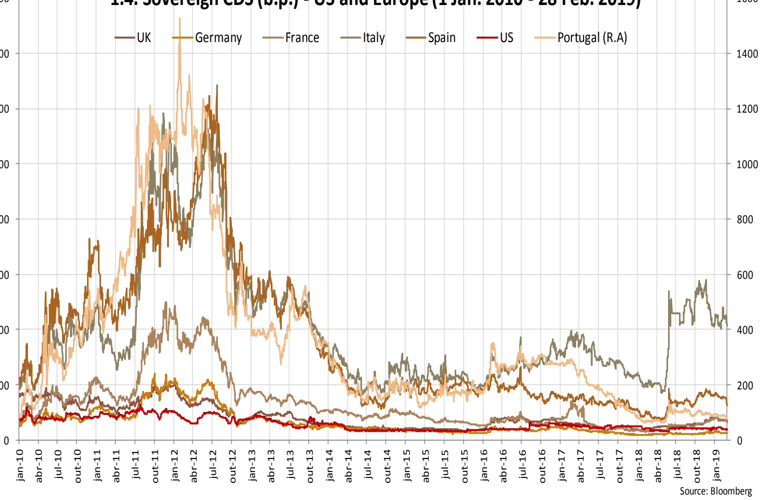
1.5. Net Foreign Investor Stock Exchange Inflows (USD bi) - (jan. 2010 - Feb. 2019)



1.2. Interest Rates (% year) - Sovereign 10 Year Bonds (2 jan. 2010 - 28 Feb. 2019)

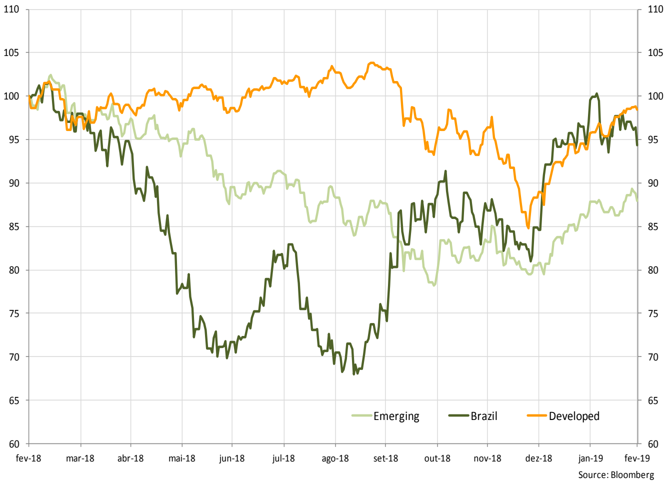


1.4. Sovereign CDS (b.p.) - US and Europe (1 Jan. 2010 - 28 Feb. 2019)

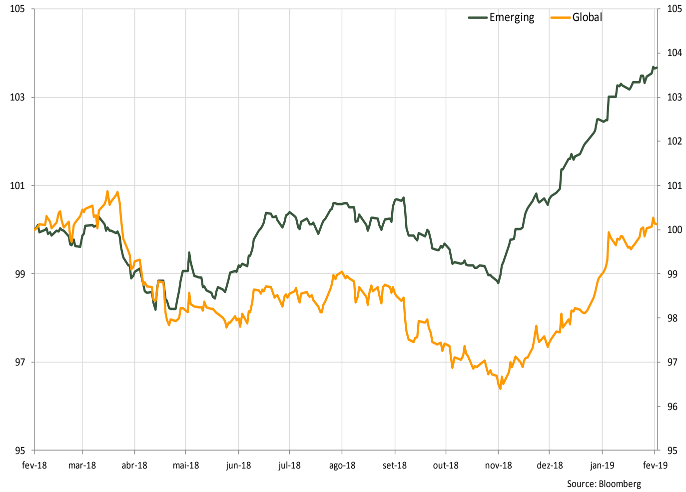


2. Market Risk

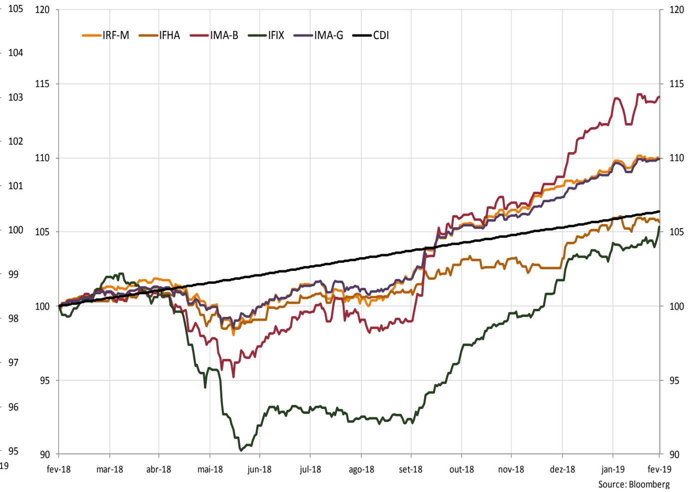
2.1. Equity indexes (MSCI) - trailing 12 months (USD)



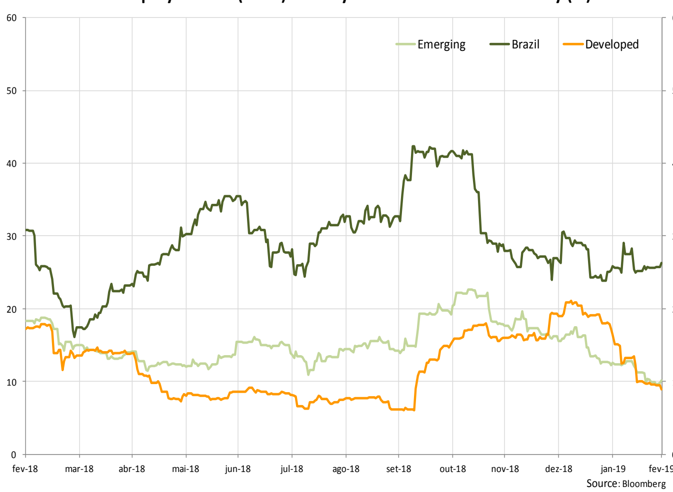
2.3. Corporate bond indexes - trailing 12 months return - base 100)



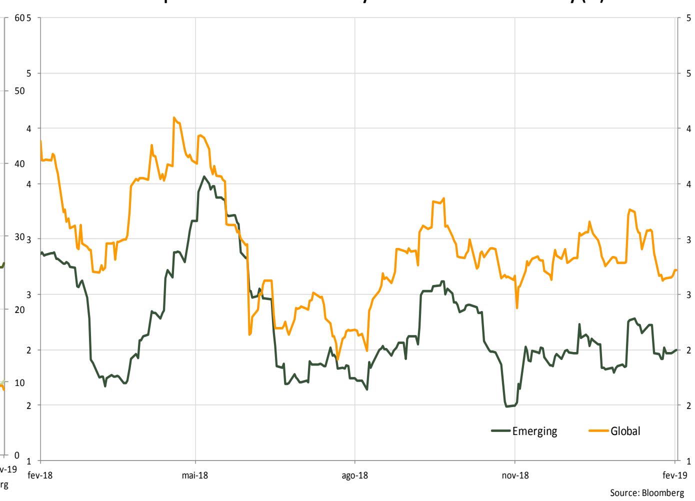
2.5. Reference indexes trailing 12 months return - base 100



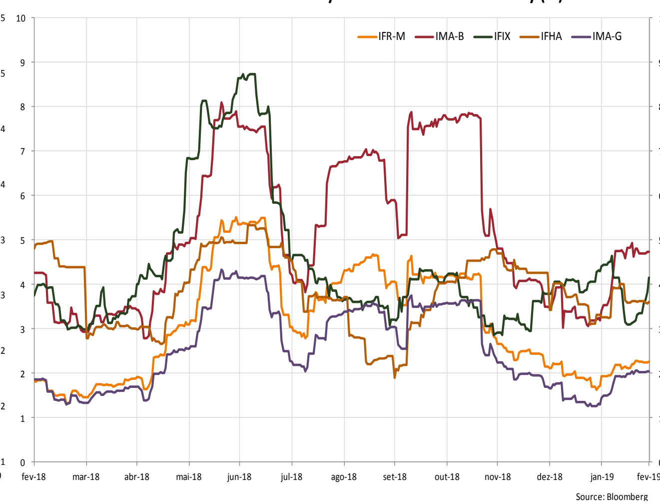
2.2. Equity indexes (MSCI) - 30 day realized annualized volatility (%)



2.4. Corporate bond indexes - 30 day realized annualized volatility (%)

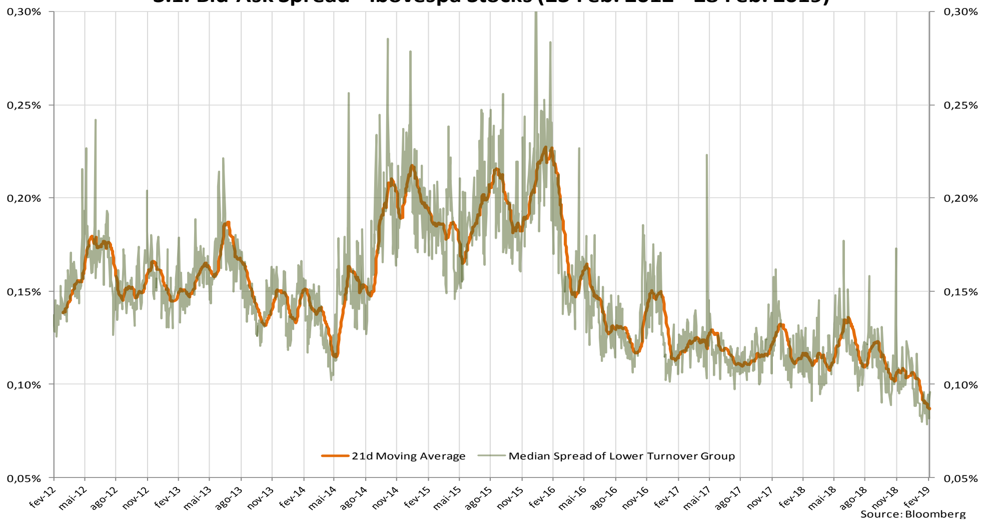


2.6. Reference indexes - 30 day realized annualized volatility (%)

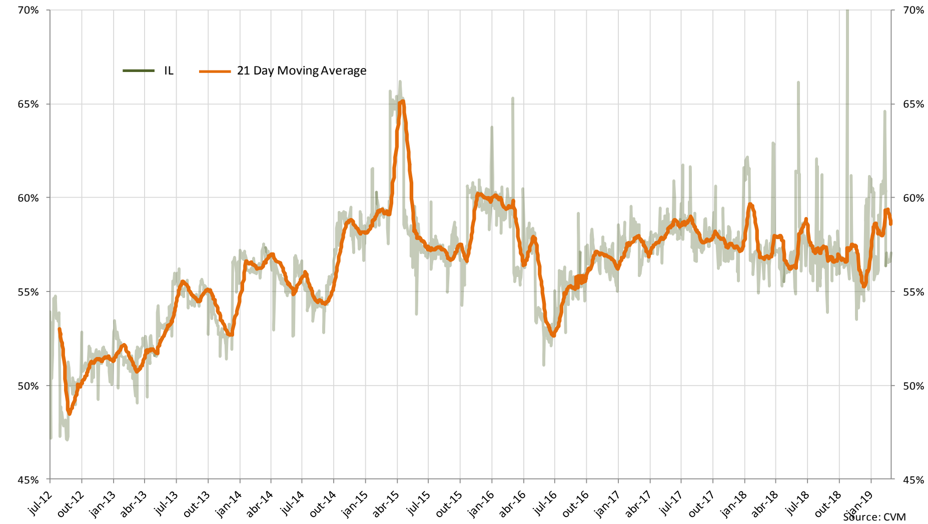


3. Liquidity Risk

3.1. Bid-Ask Spread - Ibovespa Stocks (23 Feb. 2012 - 28 Feb. 2019)

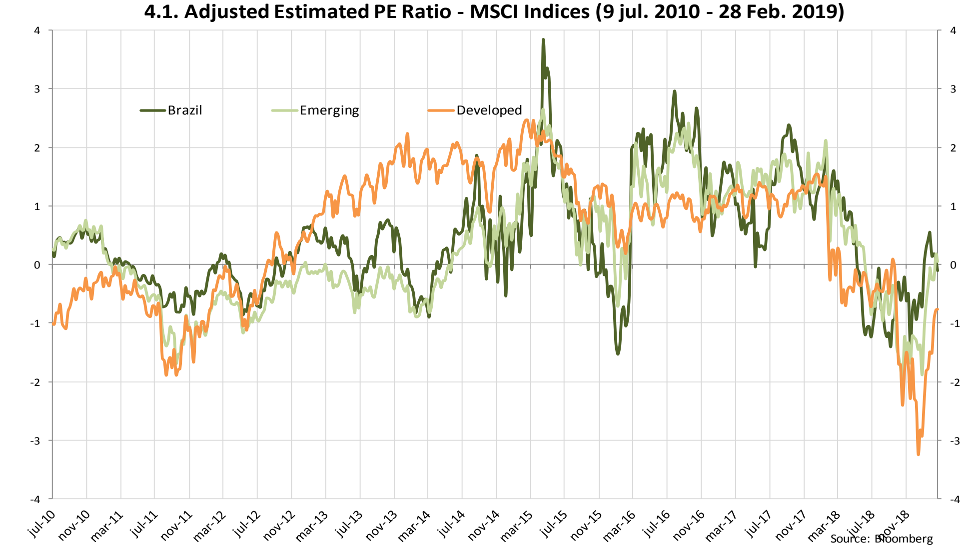


3.2. Liquidity Index - ICVM 555 Funds (2 jul. 2012 - 28 Feb. 2019)

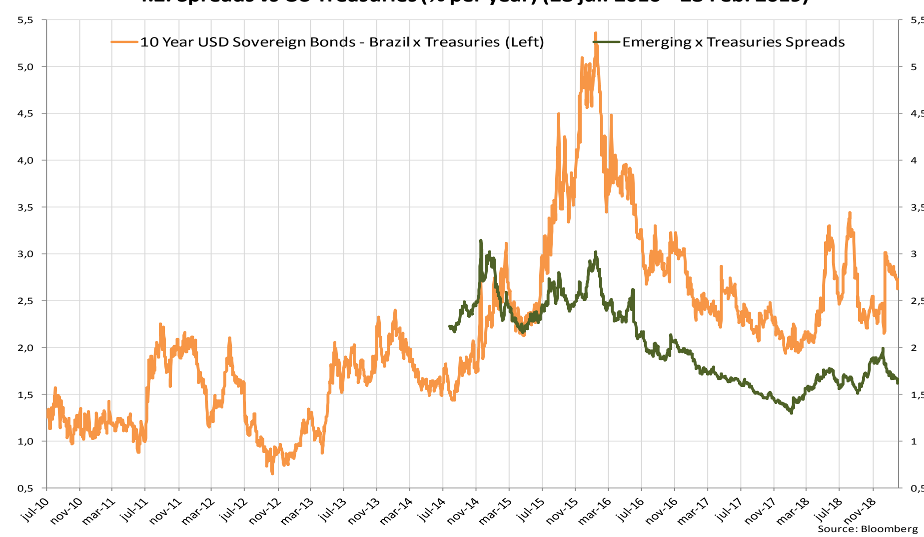


4. Risk Appetite

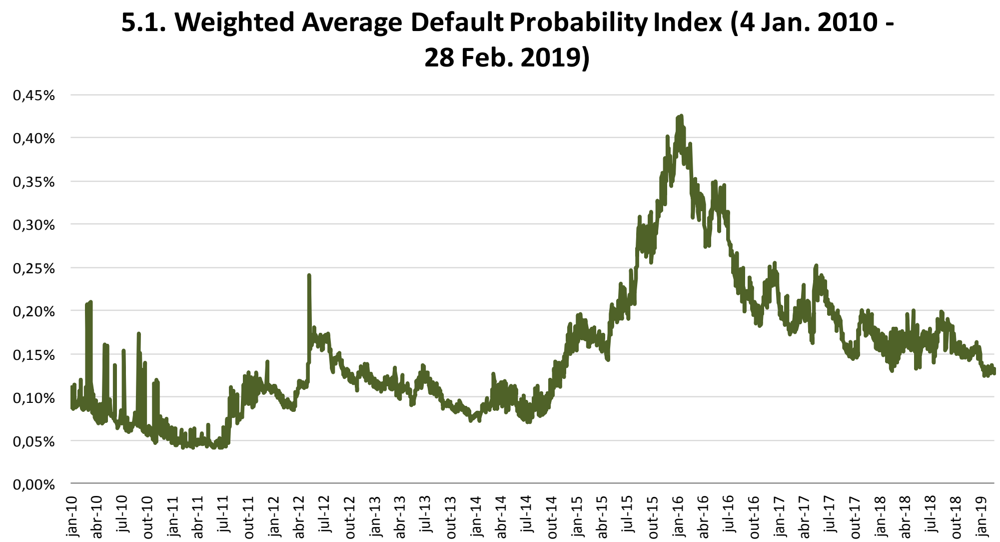
4.1. Adjusted Estimated PE Ratio - MSCI Indices (9 jul. 2010 - 28 Feb. 2019)



4.2. Spreads vs US Treasuries (% per year) (28 jul. 2010 - 28 Feb. 2019)



5. Credit Risk



Source: Bloomberg

Scenario – Reference Notes

[1] O mesmo continua estacionado próximo a inversão (com spread abaixo de 10 pontos-base), agora também considerando o vértice 3 meses – 10 anos. Ver: https://www.zerohedge.com/news/2019-03-25/yield-curve-crashes-10y-yield-plunges-below-fed-funds-3m-10y-freefall.

[2] Ver: https://www.zerohedge.com/news/2019-03-26/curve-inversion-bad-its-steepening-after-kills.

[3] Ver: https://www.bloomberg.com/news/articles/2019-03-25/the-10-trillion-pool-of-negative-debt-is-a-late-cycle-reckoning.

Methodology

Graphs and analysis contained in this report are partially or fully based on non—proprietary data, including commercial providers and other public authorities. CVM does utilize this data in good faith and does not hold itself responsible for its accuracy and completeness. The content of this report is merely analytic and does not constitute neither does implies investment recommendations.

Risk Map

Macroeconomic Risk: simple monthly average of the daily Z-score (2500 day rolling window) of the Brazilian sovereign CDS (graph 1.3). Z-score Intervals and corresponding Risk Scale: Above 2sd => 5; Between 1,5 e 2sd => 4; Between 0,5 e 1,5sd => 3; Between-1 e 0,5sd=> 2; Below -1sd => 1.

Market Risk: simple average of two indicators, the first indicator corresponding to the arithmetic monthly average of the daily Z-score (1250 day rolling window) of the 30 day realized annualized volatility of the MSCI Brasil Index, and the second corresponding to the Anbima IMA-G Index (see below) counterpart. Z-score Intervals and corresponding Risk Scale: Above 2sd => 5; Between 1,5 e 2sd => 4; Between 0,5 e 1,5sd => 3; Between-1 e 0,5sd=> 2; Below -1sd => 1.

Liquidity Risk: simple monthly average of the daily Z-score (1250 day rolling window or maximum window, in case the number of observations is lower 1250) of the bid-ask spread indicator (graph 3.1). Z-score Intervals and corresponding Risk Scale: Above 2sd => 5; Between 1,5 e 2sd => 4; Between 0,5 e 1,5sd => 3; Between-1 e 0,5sd=> 2; Below -1sd => 1.

Risk Appetite: weighted average of three values: the simple monthly average of the weekly Z-score of the Adjusted Estimated PE Ratio (graph 4.1 – see below), this series with a 0.5 weight; the simple monthly average of the daily Z-score (1250 day rolling window) of the two series that compose the Spreads vs US Treasuries graph (graph 4.2 – see below), each series with a weight equal to 0.25. Z-score Intervals and corresponding Risk Scale for the Adjusted Estimated PE Ratio: Above 2sd => 5 Between 1,5 e 2sd => 4; Entre 0,5 e 1,5sd => 3; Between -1 e 0,5sd => 2; Below -1sd => 1. Z-score Intervals and corresponding Risk Scale for series composing the Spread x US Treasuries graph: Below -2sd => 5; Between -1,5 e -0,5sd => 4; Between -0,5 e 1sd => 3; Between 1 e 2sd => 2; Above 2sd => 1.

Credit Risk: the Weighted Average Default Probability Index (described below, corresponding to the graph 5.1) is daily transformed in a number in the range of 1 to 5 based on the Z-score (1250 day rolling window) of the indicator, and as a further step the simple monthly average is calculated. Z-score Intervals and corresponding Risk Scale: Above 2sd => 5; Between 1,5 e 2sd => 4; Between 0,5 e 1,5sd => 3; Between-1 e 0,5sd=> 2; Below -1sd => 1.

Macroeconomic Risk

Selected FX return (USD pairs). Daily trend of the local currencies of some emerging markets usually considered peers to Brazil against the USD.

Interest Rates. Daily trend of yearly interest rates for local currency sovereign bonds, calculated based on Bloomberg bond indexes for the US and for some emerging markets usually considered peers to Brazil.

CDS (Credit Default Swap). Credit derivative in which its buyer disburses a series of payments (known as “spread” or “premium”) for the seller in exchange for protection against a credit event impacting the reference entity. The higher the default probability, the higher will be the traded CDS premium, hence working as a proxy for the credit risk of the reference entity. The graphs depict the daily trend of the closing price (in b.p.) of the 5YR sovereign CDS spreads of some emerging markets usually considered peers to Brazil, and of some European countries most followed by the market analysts.

Foreign Investment in Stocks. Monthly foreign investor net inflows in the B3 secondary market (equity and equity derivatives only).

Foreign Investiment in Portfolio. Monthly foreign investor net inflows according to ICVM 560, only related to flows in the Brazilian organized secondary markets, not corresponding to the Balance of Payments methodology.

Market Risk

MSCI Indexes. Equity indexes calculated by the Morgan Stanley Capital International. The MSCI World Index (denominated in this report as “Developed”) reflects the performance of the equity markets of several developed markets. The MSCI Emerging Markets Index (denominated in this report as “Emerging”) reflects the performance of the equity markets of several emerging markets, including the so called “BRICS”. The MSCI also values single markets, such as the case of the MSCI Brazil Index.

Fixed income indexes. Indexes developed by Barclays/Bloomberg to measure the performance of investment grade bonds, converted to USD when appropriate. The BEHGTRUU Index (denominated in this report as “Emerging”) refers to bonds in emerging markets, while the LGCPTRUU Index (denominated in this report as “Global”) does the same for the developed markets. In Bloomberg methodology, the bonds are weighted by market value, without currency hedge.

Reference indexes. IRF-M = index composed by a basket of sovereign fixed-rate bonds (LTN and NTN-F). Works as a benchmark for the fixed-rate fixed income portfolios. IMA-B = fixed income index that depicts the trend, at market prices, of a basket of inflation-linked sovereign bonds (NTN-B). IHFA = index for the mutual fund industry in Brazil, whose value reflects, in local currency, the performance of a hypothetical portfolio of mutual funds selected according to a methodology developed by ANBIMA. IFIX = theoretical portfolio composed by shares of the most traded REITs and measures the performance of the Brazilian REIT industry. IMA-G = weighted average of the daily returns of IMA-B, IMA-C (wholesale price inflation linked sovereign bond index), IMA-S (floating rate sovereign bonds index) e IRF-M indexes.

Volatility. It is a dispersion measure for the realized returns of an index or of a security. The 30 day realized volatility refers to the annualized standard deviation of the closing price returns in the last 30 trading days, expressed in percentage terms. It is one of the most frequently used indicators to measure the market risk of a security. The higher the volatility, the higher the market risk of the security.

Liquidity Risk

Bid/Ask Spread. It is the difference of bid and ask prices of a security, utilized as a measure of market liquidity. In comparing different securities, it is common to refer to the ratio of the bid-ask spread against the midprice of the security. The lower this percentage ratio, the more liquid the security is. The graph refers to the daily trend of the median spread calculated based on a sample comprised by the half of the Ibovespa Index stocks with the lowest turnover for a given month.

Liquidity Index –ICVM 555 Funds. Daily trend of the ratio between the total reported Liquid Assets (according to ICVM 512) and the total reported NAV, expressed as a percentage. Excludes funds of funds.

Risk Appetite

Adjusted Estimated PE Ratio. It is the ratio between the current price of an index or security and its estimated positive earnings for the following accumulated 12 months, according to the consensus of market analysts, excluding companies with negative EPS projections. Hence, the PE ratio can be understood as the payback time necessary to recover through its profits the capital investment in a given company. A high PE ratio indicates that the security might be overvalued relative to its recent profit potential. Inversely, a low PE ratio points that the security might be undervalued relative to its profit potential. In this report, the country/region analysis is done using the weekly PE ratio for the corresponding MSCI Indexes as a reference. The calculated indicators refer to the Z-score (250 week rolling window) of such ratios. Finally, values above 2 standard deviations indicate that stocks are, on average, overvalued (+2sd) or undervalued (-2sd).

Emerging vs US Treasuries Spread. Spread between the yields of a corporate and sovereign bond index (*investment grade*) for emerging markets and the yield of US treasuries, expressed as an annual percentage yield. Calculations use the BEHGTRUU Index (emerging markets corporate and sovereign investment grade bond index) and the BUSY Index (US treasuries bond index), both available through Bloomberg.

10YR USD Sovereign Bond Spread – Brazil x US Treasuries. Difference between the yields of a generic 10YR USD-denominated sovereign Brazilian bond and an analogous US bond, both calculated by Bloomberg.

Credit Risk

Weighted Average Default Probability Index. Daily indicator built in order to grasp the average default probability of non-financial corporates traded in the B3 exchange. The calculation of the index proceeds as follows: for each trading day and for the whole available sample of companies in that day, the weighted average (by market cap of the companies traded in that day) of the 1YR default probabilities is calculated (“BB_1YR_DEFAULT_PROB”), as made available by Bloomberg.