



INSTITUTO SUPERIOR DE CONTABILIDADE E ADMINISTRAÇÃO DE LISBOA

Mariya Gubareva

Impact of the Covid-19 on liquidity of emerging market bonds

WP01/2020

Working Papers

ISSN 2184-3325

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Mariya Guareva¹

Abstract

We analyze liquidity of the emerging market (EM) bonds during the Covid-19 fueled uncertainty. Using bid/offer spreads we demonstrate that the apogee of both, liquidity and credit stresses is reached in late-March, and that although liquidity has improved since then, it has not yet returned to the pre-Covid levels. In particular, we find that the EM financials are more resilient to liquidity shocks than the EM corporates and sovereigns. Moreover, we observe a decoupling in the dynamics of the liquidity and credit risk metrics, as credit spreads have been tightening very slowly due to the Covid-19-triggered repricing of default risk.

Keywords:

COVID-19 pandemic, Liquidity, Emerging markets, Fixed-income, Bid/offer spread, Option-adjusted spread (OAS).

JEL codes:

G01, G1, G10, G12, G15

¹ ISCAL – Lisbon Accounting and Business School, Instituto Politécnico de Lisboa & SOCIUS / CSG - Research in Social Sciences and Management, Lisbon, Portugal

1. Introduction

Financial markets worldwide have been severely affected by the global pandemic of Covid-19. The rapid spread of this pandemic has stalled trading in extremely volatile markets and resulted in elevated levels of risk because of disturbances in usual activity of investors scared by uncertainty (see, e.g., Godel, 2020, Zhang et al. 2020, among others). In particular, the Covid-19 crisis has negatively impacted the emerging markets (EM). The spread of COVID-19 to emerging economies has highlighted their excessive dependence on external financing. Foreign investors have rushed from high uncertainty of the developing economies to the safety of the developed ones, as Covid-19 has been negatively affecting emerging economies' growth prospects and fiscal accounts, see, for instance, Baldwin and Mauro (2020).

This move of international investors is quite rational; as EM are affected by Covid-19 at least by the three following drivers (Hevia and Neumeyer, 2020). The first driver is linked to the direct effect of the social distancing on economic activity due to the restrictions on the output of many industries such as travel and entertainment. The second channel is related to the international trade as many commodity-exporting countries are experiencing a sharp fall in the prices of the commodities they export, adversely affecting their GDP. Finally, yet importantly, the third is the global financial liquidity shock that causes drastic portfolio shifts from riskier assets to safer liquid assets and increases cost of funding of the developing economies.

Still, the impact of Covid-19 pandemic on financial markets is mostly addressed in relation to the stock markets in the developed economies. For instance, He et al. (2020) study the impact of Covid-19 on eight major stock markets. Rameli and Wagner (2020) investigate the US and European stock price reactions to Covid-19. Alfaro et al. (2020) analyzes whether changes in Covid-19 infection could predict US stock returns.

However the coverage of Covid-19 impacts on debt markets are rather scant (see Acharya and Steffen, 2020; Haddad et al., 2020; and Kargar et al., 2020). Moreover, once again these studies are limited to the developed economies, not providing a coverage of the debt markets of the developing countries.

Hence, our motivation is to shed light on liquidity conditions of EM USD-denominated bond market during the Covid-19 crisis. This is an important market, which is supposed to fuel global growth, in general, and the global recovery from Covid-19, in particular. Still a year ago, according to the Institute of International Finance as of April 2019 its size had surpassed 3 trillion USD. It has been representing a valuable source of financing for EM corporate and sovereigns, being an attractive opportunity for investors, as, on average, the overall debt level of the EM issuers relative to GDP is lower than that of the issuers in the developed economies.

The contribution of our research to the contemporaneous state of art on Covid-19 impact on EM bond secondary market is three-fold. First, we fill-in the existing gap related to the lack of empirical research in this domain. It is important as a well-functioning secondary market supports a better access of the EM issuers to funding through the primary market bond issues. Second, our paper adds to the current literature on financial markets response to Covid-19 economic impacts. As our sample period covers the most recent global crisis caused by the pandemic, our findings provide useful insights for investors, traders, risk managers and regulators of fixed-income markets. Third, we document that bid/offer spreads on EM bonds drastically widened in late February and early March reflecting a rather disrupted trading activity, thus evidencing a drop-off in liquidity that severely hit the EM bond market already affected by the Covid-19-caused repricing of credit risk.

The rest of the paper is organized as follows. Section 2 discusses the data and the methodologies employed. Section 3 presents the results and provides their interpretation. Section 4 concludes.

2. Methodology and Data

One of the most used metrics of bond market liquidity is the so-called bid/offer spread, i.e., the difference between the price at which dealers are ready to buy a security and the price at which they are willing to sell, see, e.g., Kargar et al. (2020). Although other measures could also be used to reflect liquidity levels depending on certain markets, many researchers show that the bid/offer spread has traditionally provided a better measure of differences in liquidity across instruments for markets operating via request-for-quote, such as corporate and sovereign bonds (Gabrielsen et al., 2011; and Fleming, 2003). Hence, within the scope of our research we stick to this metrics, especially as we are interested not so much in absolute values of the cost of liquidity, but rather in a timely tracking of liquidity in relative terms across various types of issuers: corporate, financials, sovereigns.

As we deal with the EM bond market, which is largely over-the-counter (OTC) market where prices are quoted privately, we opt to use the publicly available Bloomberg Valuation Service (BVAL) prices. The BVAL is an evaluated pricing service that provides credible, transparent and defensible valuations across a broad spectrum of fixed financial instruments. It is an independent information source that draws on market data contributed from thousands of market participants to produce objective third-party price valuations.

Our data-set includes the debt issues, which are the constituent members of the USD-denominated Bloomberg Barclays EM Investment Grade (IG) indices and High Yield

(HY) indices. These indices are based on, respectively, 1274 securities, issued by the IG issuers from 31 EM and 787 securities, issued by the HY from 74 EM. Hence, our research covers more than two thousand USD-denominated EM bonds.

We gauge liquidity levels for secondary EM bond market during the first five months of 2020, performing observation with twice-a-month frequency for January, February, and May, while use a weekly frequency during the more accurate tracking of the liquidity crisis extremums in March and April. At each date and for each security we extract BVAL bid and ask prices, and the option-adjusted spread (OAS) obtained via Bloomberg yield and spread (YAS) calculator. Thus, we can calculate the bid/offer BVAL spread for each bond and compare its time dynamics to the OAS behavior. We perform our analyses on an aggregated level within each, IG and HY ratings ranges, as well as segregate our analyses by issuer type. The next section is dedicated to the discussion of our results.

3. Results

Figure 1, below, presents the behavior of the bid/offer spreads observed for the secondary market EM bonds from the two credit rating ranges, IG and HY, along the first five month of 2020.

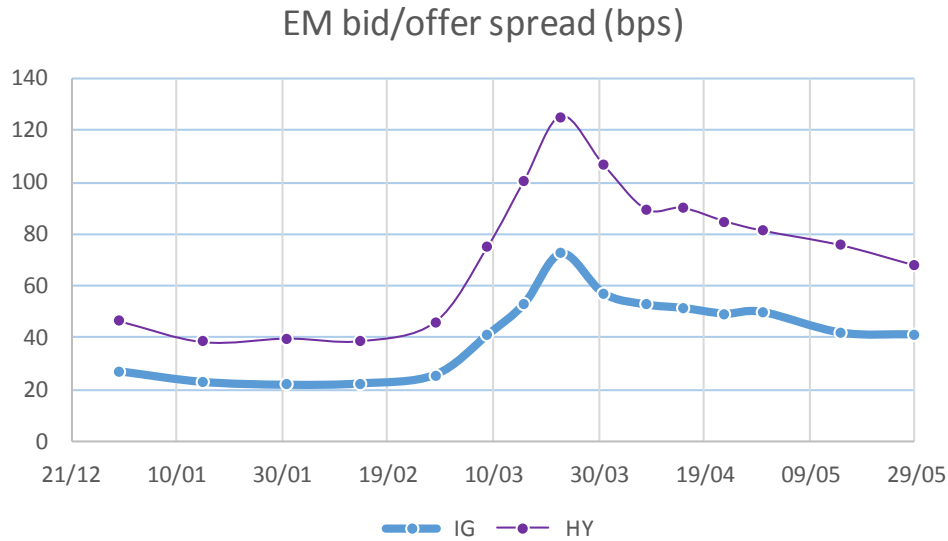


Figure 1. Bid/offer spreads for secondary market IG and HY EM bonds, Jan-May, 2020.

As per Figure 1, the transaction cost for both IG and HY bonds exhibits a very similar time dynamics, being the HY bid/offer spread in the range 55-60% higher than bid/offer spread for IG. We observe that liquidity in the EM bond market became severely affected, starting from mid-February and reaching the apogee of the Covid-19 provoked liquidity crisis on March 23, when, on average, bid-offer spreads turned to be about triple in comparison to their pre-Covid values. We link this liquidity crisis to a rise in volatility and, then, to a complete disruption of EM bond trading, happened mostly due to the two following reasons. First, the sell-side traders, obliged to work from home due to the social distancing, became unable to quickly and reliably access information otherwise easily available at trading floors. Second, due to the drastic spikes in volatility, many traders disabled the algorithms used to generate quotes and, hence, stopped electronic trading based on auto-quoting bond prices, resorting to voice trading. While since then liquidity levels have improved, they have not yet reached the pre-crisis levels.

Figures 2 and 3, below, compare the time dynamics of the bid/offer spread with that of the OAS, for IG and HY bonds, respectively.

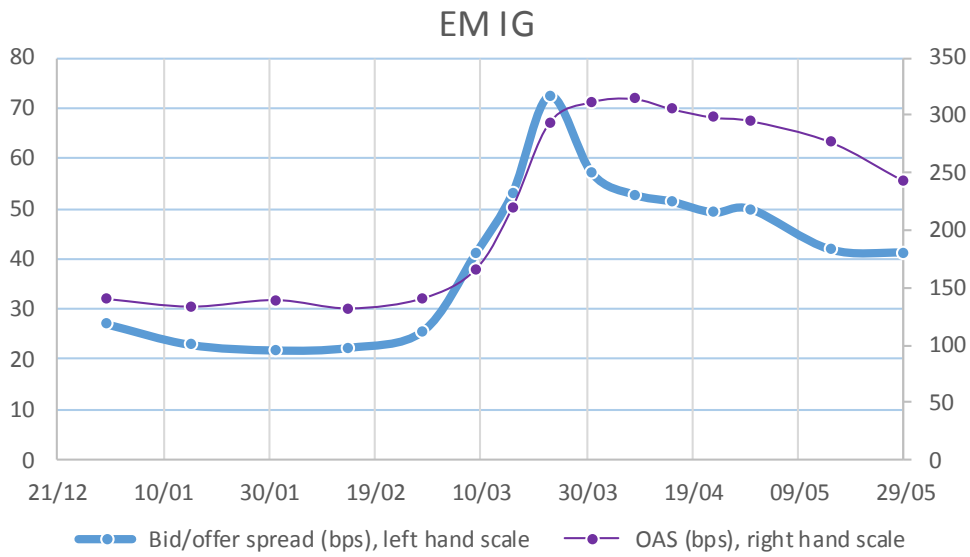


Figure 2. Bid/offer spread and OAS for EM IG bonds, Jan-May, 2020.

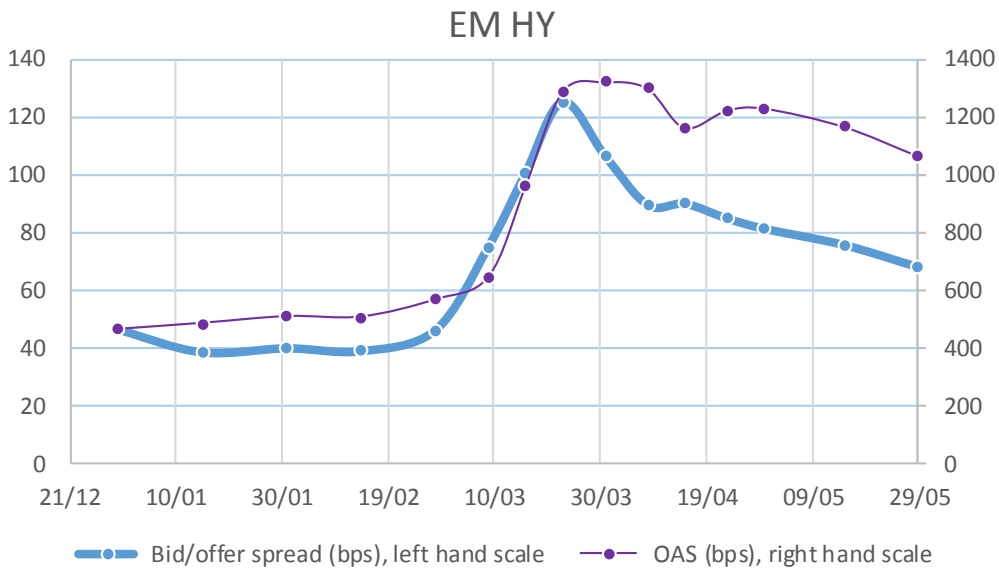


Figure 3. Bid/offer spread and OAS for EM HY bonds, Jan-May, 2020.

As could be seen in Figures 2 and 3, the liquidity spike and credit squeeze occurred during the same period for both, IG, and HY ranges. After the observed in March spike in market illiquidity, the transacting costs, as measured by the bid/offer spreads, have

largely retraced during April-May, although not yet reached the pre-Covid levels. However, the OAS exhibits a different, slower, return towards the pre-crisis widths. This 'decoupling' make all the sense, as it evidences a substantial repricing of EM credit risk, as reflected by OAS, which was caused by the economic impact of the Covid-19 pandemic.

As a by-product, from quantitative point of view, we find that five months average ratios 'bid/offer spread over OAS spread' are 19% and 8% for IG and HY, reaching during the apogee of liquidity crisis 25% and 12%, respectively. It is an expected result as the weight of default component in credit spread is found to be lower for IG in comparison to HY (Gubareva, 2019).

3.1. IG liquidity per type of issuer

Figure 4 below presents the EM IG bid/offer spreads per type of issuer: corporate, financial, sovereign.

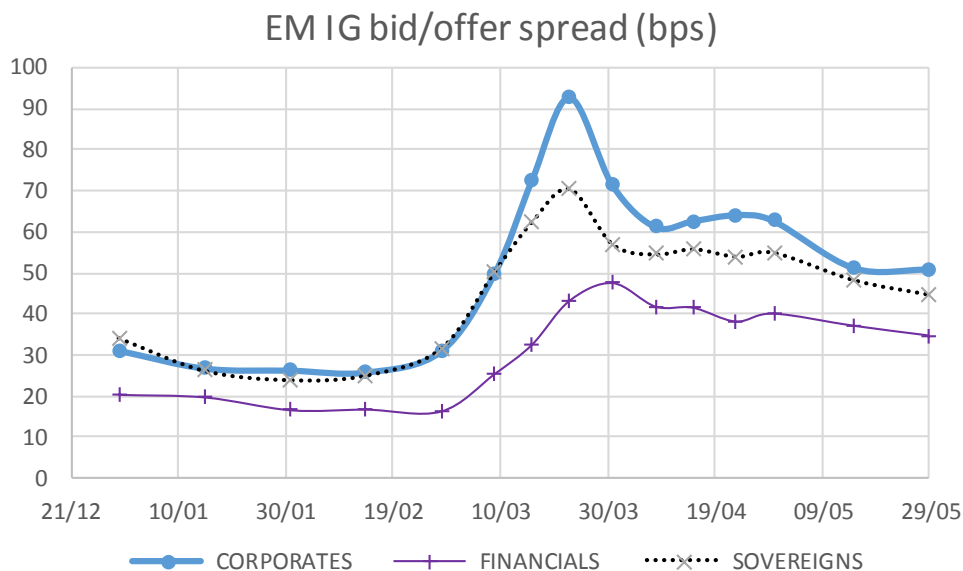


Figure 4. Bid/offer spreads for EM IG corporate, financial, and sovereign bonds.

It is clearly observable that the transacting cost for the sample of 112 bonds issued by EM IG banks and financial companies, are always lower than the respective costs for corporate and sovereign bonds, whose samples contain respectively 308 and 254 debt securities. Another important aspect to mention is that the EM IG financials suffers maximum liquidity stress on March 31; one week after the peak observed in the bid/offer spreads for corporate and sovereign bonds on March 23. The observed liquidity squeeze in financials is less steep than in corporate and sovereign domains, meaning that the financials are more resilient to the liquidity crisis caused by Covid-19 financial turmoil.

3.2. HY liquidity per type of issuer

Figure 5 below presents the EM IG bid/offer spreads per type of issuer: corporate, financial, sovereign.

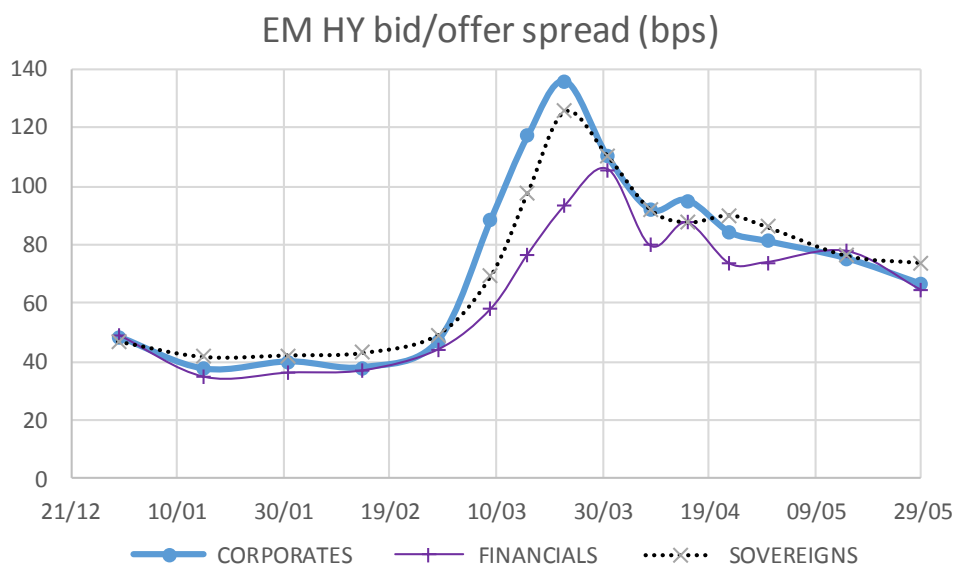


Figure 5. Bid/offer spreads for EM HY corporate, financial, and sovereign bonds.

For HY, the difference in the bid/offer spread per issuer type is less pronounced than in the case of IG, perhaps meaning that the lower rating, the less attention market players

pay to the sector of economic activity of the issuer. However, similarly to the case of IG, we also observe that the HY financials (65-securities' sample) reveal a higher resilience to liquidity stress, as their squeeze is less steep, with the bid-offer spread maximum reached a week after the respective maxima for bonds issued by the non-financial issuers, represented, respectively, by 296 sovereigns and 294 corporates.

4. Conclusion

The present empirical study investigates impacts of the Covid-19 uncertainty on liquidity of emerging market (EM) bonds. We analyze the bid/offer spread dynamics for investment grade and high yield debt. Our research is performed separately for sovereign, financial and corporate issuers. We find that liquidity and credit squeezes were reached simultaneously in the second half of March. While EM bond liquidity has improved since then, the pre-crisis levels have not been reached yet. However, credit spreads recover very slowly as credit risk in EM has increased due to the Covid-19 and then been repriced. In addition, we find that EM bonds issued by the financial sector are more resilient to liquidity shocks than corporate and sovereign securities. Our results could be useful for investors, traders, risk managers and regulators of fixed-income markets.

5. Acknowledgments

This work was supported by FCT, I.P., the Portuguese national funding agency for science, research and technology, under the Project UIDB/04521/2020, and by the Lisbon Polytechnic Institute (IPL) as part of the IPL/2020/MacroRates/ISCAL project.

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