* ~~Research question~~.
* ~~Contributions~~
* ~~Decomposition.~~
* ~~Characterization of US MP transmission to EM yields (in terms of channels – components – by type of shock~~).
* Decomposition of nominal yields.
* ~~Construction, estimation, surveys, sensibility for individual countries~~.
* ~~Average decomposition, TP compensates for inflation uncertainty, avg(CRC) > 0.~~
* Characterization of US MP spillovers or transmission of US MP.
* ~~Yield response to US MPS is delayed.~~
* ~~US MP affects composition of EM yields: all components, not only TP, CRC matters, fiscal implications, Fed policies can increase and decrease CRC, Need 3-part decomposition to understand US MP spillovers, response (relative importance of components) depends on the type of US MPS.~~
* ~~US MP affects shape of EM YC, steeper relative to US YC, need to understand response of two (rather than one) YCs~~, Synthetic yields comove more than nominal yields.
* ~~Yield curve channel of UMP: Monetary autonomy is stronger at ST, LT yields are more correlated, GFCy is more relevant at LT, UMP limits the monetary autonomy of EMs along the curve, Risk spillovers at ST.~~
* Policy implications.

U.S. monetary policy has effects beyond its borders, yet the channels through which it influences the sovereign yield curves of emerging markets are not well understood. The ability of emerging markets to effectively mitigate any undesired domestic impact relies on understanding those transmission channels. Decomposing the yields and analyzing the effects on the components is a sensible approach. Traditional decompositions of sovereign yields, though, are not suitable for emerging markets because they assume that their yields are free of credit risk.

This paper answers the question: how does U.S. monetary policy transmit to sovereign yields with credit risk? Credit risk distinguishes between advanced and emerging countries. Over the last decades, the role of emerging markets in the global economy has increased as well as their reliance on local currency (LC) bonds as a stable source of funding (IMF-WB, 2020).1 But, even though they have the ability to print their own currency to avoid defaulting on their debt, emerging markets are prone to default (Reinhart and Rogo\_, 2011).2 Therefore, investors holding the LC bonds of emerging markets bear the risk of not receiving the promised payments.

The main contribution of this paper is to empirically quantify the transmission channels of U.S. monetary policy to the yields of emerging markets. To achieve this, I first decompose the yields of 15 emerging markets accounting for the credit risk embedded in them and then use those decompositions to characterize the transmission of U.S. monetary policy surprises to emerging market yields.

To account for credit risk, I use synthetic LC yield curves. They essentially swap the U.S. yield curve into a LC one, something akin to the U.S. issuing bonds in that currency. Synthetic yields can be seen as free of credit risk,3 and so traditional decompositions can be applied to them. A standard affine term structure model augmented with data on survey forecasts provides robust decompositions of (default-free) yields (Guimar~aes, 2014). To the best of my knowledge, this has not been done before. Synthetic yields have been widely used recently to study deviations from covered interest parity (CIP)5 but, instead of concentrating on the CIP deviations, I focus on the synthetic yields themselves.

I then decompose the nominal (or actual) yields of emerging markets into an expected future short-term interest rate, a term premium and a compensation for credit risk.4 The first two components come from the decomposition of the synthetic yields. The third component is the spread between the nominal and the synthetic yields; Du and Schreger, 2016 show that it captures the compensation for credit risk in the LC debt of emerging markets. Although the credit risk compensation component is characteristic of emerging markets, it has not been accounted for in the literature that decomposes their (nominal) yields. There is literature studying sovereign credit risk6 on bonds denominated in foreign currency. By explicitly adjusting for it, the resulting term premium component is genuine; that is, it is not contaminated by credit risk. I show that the three-part decomposition gives reasonable estimates for the particular circumstances of the countries in the sample. The paper also provides evidence supporting the view that the term premium compensates investors for bearing inflation uncertainty (Wright, 2011); in fact, the evidence for emerging markets is stronger, in line with the fact that their inflation is more volatile than in advanced countries (Ha et al., 2019). Although the three-part decomposition helps to characterize the transmission channels of U.S. monetary policy in this paper, it has of course many different applications in different contexts (e.g. to analyze the transmission of monetary policy domestically).

The main finding in the paper is that surprises in Fed's policy decisions give rise to a reassessment of policy rate expectations and a repricing of risks in emerging markets. Understanding these effects not only requires the three-part decomposition of the yields but to distinguish among the types of monetary policy surprises. The surprises are identified using intraday data around the Fed's monetary policy announcements, which is by now a well-established strategy to overcome endogeneity concerns because it isolates the surprise component of monetary policy decisions. Following the literature, I consider three separate types of U.S. monetary policy surprises, namely target, forward guidance and asset purchase surprises. The results characterizing the transmission of these surprises to emerging market yields

are summarized in three parts.

First, the responses to target, forward guidance and asset purchase surprises are economically significant, but they are sluggish and amplify over the month following the surprise; in particular, the effects on emerging market yields of forward guidance and asset purchase surprises last longer relative to the response of U.S. yields. This delayed response is consistent with the evidence for advanced countries (), which \cite{BrooksKatzLustig:2019} attribute to a portfolio rebalancing channel.

Second, the surprises spill over to all yield components, not only the term premium, and including the compensation for credit risk. Target easing surprises eventually reduce the expected future short rate but increase the long-term credit risk compensation. Forward guidance easing surprises led to a parallel decline in the term premium before the global financial crisis; since then, they eventually reduce the expected short rate and the term premium but also increase the long-term credit risk compensation. Asset purchase easing surprises eventually decrease all three components of the yields. For emerging markets, interpreting the transmission of U.S. monetary policy surprises requires to understand their effects not only on the nominal yield curve (like for advanced countries) but on the synthetic one. The surprises trigger (slow-moving) capital flows in and out of emerging markets. The relative effect they have on each curve in turn determines the effects on the yield components. In particular, the surprises alter the opportunity cost of lending to emerging markets in LC, which is reflected in the credit risk compensation required by investors. The potential fiscal implications for emerging markets of the Fed's monetary policies have so far not been discussed in the literature.

Third, since the global financial crisis, U.S. monetary policy has spilled over to emerging markets through a yield curve channel, according to which their monetary autonomy decreases along the yield curve. Their monetary autonomy is indeed stronger at the short end of the yield curve. Moreover, long-term yields are more correlated than short term yields, so the global financial cycle is more relevant at the long end of the yield curve. Therefore, unconventional monetary policies limit the monetary autonomy of emerging markets along the yield curve. These results are consistent with the mechanisms discussed by Obstfeld, K-O, Kolasa & W.

There is a growing literature analyzing the spillover effects of U.S. monetary policy on the LC yields of emerging markets.7 For instance, Hausman and Wongswan (2011) find significant spillovers to LC bond yields, Bowman et al. (2015) meanwhile compare the spillovers of conventional and unconventional monetary policies. The present paper is closely related to the work in Curcuru et al. (2018), Adrian et al. (2019) and Albagli et al. (2019), who decompose the yields to analyze the transmission channels of such spillovers, but differs in a number of dimensions. Most importantly, it accounts for the credit risk embedded in the yields of emerging markets, and considers different types of monetary policy surprises identified with intraday data.