

C AN OVERVIEW OF TRENDS IN BOND MARKET ISSUANCE DENOMINATED IN FOREIGN CURRENCY⁵²

This special feature article highlights a number of stylised facts on bond issuance that is denominated in a currency which is not the domestic one (i.e. foreign currency issuance). Since 2009 an increasingly large fraction of bonds have been issued in foreign currency, especially in emerging markets, where borrowers enjoyed a substantial “discount” by issuing in foreign currency. This suggests that interest rate differentials might be an important determinant of the currency choice of issuance, at least in emerging markets. Of the bonds issued in non-domestic currencies, the share issued in euro has declined since the start of the global financial crisis in 2008. This decline mainly reflects lower issuance in euro by non-euro area financial corporations and a strong increase in US dollar issuance by non-US issuers. Overall, the total amounts of the issuance in euro by non-euro area non-financial corporations and sovereigns were not strongly affected by the crisis and have picked up recently. The strong rise in US dollar issuance (by non-US issuers), especially by non-financial corporations, suggests that quantitative easing policies might have affected the currency composition of global bond issuance in recent years by lowering US yields.

I INTRODUCTION

Since the global financial crisis started in 2008, the landscape of international financial markets has changed substantially. As international bank activity shrank and the stock of bank cross-border claims decreased across the globe, sovereigns and firms increasingly relied on direct market financing by issuing bonds (Turner, 2014). This trend was supported by an unprecedented monetary accommodation at the global level, which created favourable financing conditions that further increased the incentives to issue bonds worldwide (Lo Duca, Nicoletti and Vidal, 2014).

In this context, gross global issuance of bonds reached record levels in 2013. While the largest share of bonds was issued in domestic currency, since 2009 an increasingly large proportion of the new issuance has been denominated in foreign currencies, especially in emerging market economies. On the one hand, these developments have enlarged the scale of local bond markets, which is an important step towards complete and developed financial markets in emerging economies.⁵³ On the other hand, the increasingly large issuance of foreign currency bonds suggests that the exposure of sovereigns and firms to foreign exchange risk might be increasing in the presence of less than perfect hedging possibilities. The risks implied by currency mismatches for bond markets worldwide have been discussed recently (Turner, 2014; and Caballero, Panizza and Powell, 2014) and a number of commentators (Shin, 2013) have related the recently observed larger sensitivity of emerging markets to global financial conditions to their increased borrowing in foreign currency. Overall, large currency mismatches might amplify the transmission mechanism of external shocks, increase business cycle synchronisation worldwide and thereby have pro-cyclical implications for the global macro-financial cycle.

Against this background, the first part of this special feature article presents an overview of the literature on the reasons behind the choice of currency in which the debt is denominated. The second part reviews the most recent trends in the issuance of bonds denominated in foreign currencies, assesses the features of bonds issued in foreign currency relative to bonds denominated in local currency and discusses the role of the euro and the US dollar in the issuance of new bonds at the global

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⁵³ However, in the absence of sound fundamentals, appropriate institutional frameworks and diversified domestic investors bases, local bond markets might be volatile, especially if the participation of leveraged foreign investors is substantial.

level.⁵⁴ The article focuses on gross bond issuance (i.e. the flow of new bonds issued worldwide), rather than on the existing stock of outstanding bonds as the former captures new trends.⁵⁵

2 WHICH FACTORS AFFECT THE CHOICE OF CURRENCY IN WHICH THE DEBT IS DENOMINATED?

Issuers might decide to adopt non-domestic currencies for a number of reasons. The literature mainly differentiates between motives for the private sector and those for sovereigns.

Concerning the private sector, the literature has highlighted several factors which can induce a firm to issue debt in a foreign currency. These factors include the macroeconomic context, microeconomic settings and conditions, and country or market-specific institutional features.

Relative costs, such as interest rate differentials – both real and nominal – as well as exchange rate expectations and currency volatility can influence issuers in their choices of currency (see, for example, BIS, 2005).⁵⁶ While in an ideal market the uncovered interest parity should prevent arbitrage between exchange rates and interest rates, the validity of this relationship at short horizons is limited from an empirical point of view. These motives have been examined in the recent literature also with respect to the decision of borrowing via bank loans in foreign currency.⁵⁷ In recent years, two factors may have induced firms and sovereigns to issue in foreign currency. First, higher interest rates in emerging markets relative to advanced economies have been accompanied by a continued appreciation of emerging market currencies. This made issuing debt in foreign currency attractive for emerging market borrowers as their currency was appreciating and increased investors' demand for such securities, owing to a search for higher yields. Second, monetary accommodation, associated with expectations of low interest rates for a protracted period of time could have encouraged the private sector to issue more debt in US dollars in key financial centres.

The microeconomic dimension or firms' characteristics can also play a role in the currency choice of debt. For example, internationally active firms might find it attractive to issue liabilities that match the currencies of a part of their assets or the currency of their revenues (Kedia and Mozumadar, 2003). This may be the case for financial firms that have cross-border activities or non-financial corporations, especially exporting firms, when the currency of invoicing is not the domestic currency. While in this case the issuance in foreign currency reflects the choice of the borrower, firm-specific characteristics can also affect the ability of the borrower to issue in foreign markets, and thus the ability to use foreign currency.⁵⁸

54 The article focuses on gross bond issuance (i.e. the flow of new bonds issued worldwide), distinguishing between the currency denomination of bonds (domestic currency versus foreign currency). As the focus is on the role of currencies, the article does not distinguish between bond issuance targeted at resident investors and bond issuance targeted at non-resident investors. This partially differs from the BIS data used in Section 4.2 of this report which looks at international bond issuance, i.e. issuance targeted at non-resident investors (BIS, 2003).

55 Also, this article focuses on the concept of nationality when separating bonds across countries. This means that a bond is classified as a foreign currency bond if the currency of denomination is not the domestic currency of the country of origin of the borrower. As noted by the BIS (see Turner, 2014), looking at the concept of nationality, which relates to the consolidated balance sheet of firms, is a more appropriate approach than the residence principle when evaluating the external positions of countries or sectors within a country.

56 For governments in particular, an important cost factor in the decision to issue more bonds in US dollars could have been the negative swap basis observed between euro and US dollar observed from the time of the Lehman collapse until recently; this additional factor made it cheaper to issue in US dollars and convert to euro via a swap.

57 Habib and Joy (2010) find that the choice of issuance currency is sensitive to deviations resulting from uncovered interest parity – especially for financial rather than non-financial issuers – but insensitive to deviations resulting from covered interest parity.

58 As asymmetric information between borrowers and lenders is typically higher in foreign markets compared with domestic ones, only firms that are perceived as more sound are typically able to issue in foreign markets. Having more tangible assets in the balance sheet and already being listed in a foreign equity market for example, are typically associated with stronger ability of the firm to issue debt in foreign currency, as such features help mitigate asymmetric information problems between borrowers and lenders in foreign markets (see Allayannis, Brown and Rodgers 2003).

Finally institutional and market-specific features, such as the lack of a stable domestic investor base or the lack of relatively sophisticated institutional investors, have been shown to induce borrowers to be more oriented towards foreign rather than domestic currency borrowing (see IMF, 2013). To provide a brief example, market regulation and the tax design for corporate bond markets as well as efficiently designed auctions for government securities can all be important institutional features that help developing local currency bond markets.

For sovereigns, beside the cost motives, such as interest rate differentials in two different currencies, the literature on the so-called “original sin” (Eichengreen, Hausmann and Panizza, 2003) has highlighted that when debt is denominated in the domestic currency, a sovereign issuer is able to manipulate the cost of it at the expense of the creditors, for example by creating inflation. For this reason, issuance of debt at long maturities by emerging market sovereigns tends to be denominated in foreign currency. Also in this context, institutional features, such as central bank independence and credibility, sound fiscal policies and political stability, could improve the ability of sovereigns to issue in local currency at longer maturities.

3 TRENDS IN FOREIGN CURRENCY-DENOMINATED ISSUANCE⁵⁹

3.1 OVERALL ISSUANCE

The global financial crisis has had strong implications for international finance. As internationally active banks reduced the size of their balance sheet, both at the domestic level and international level, and global monetary accommodation pushed interest rates to record low levels, sovereigns and firms across the globe increasingly relied on bond market financing. As a consequence, the gross issuance of bonds (Chart 23) was at unprecedented levels between 2009 and 2013. While gross issuance reached record levels in 2012 and 2013 across all issuer categories in emerging markets, in advanced economies gross issuance by financial corporations was lower in this period than the peaks before the crisis. In addition, bond market access has increased across the board in the past few years, with more sovereigns and lower-rated firms issuing bonds.

A striking feature of this “booming bond issuance” is that since 2009 an increasingly large proportion of bonds have been issued in foreign currencies (Chart 23 and Chart 24). While the trend is evident in both advanced and emerging economies, in the latter group of countries bond issuance in foreign currencies has increased more markedly. In 2013 it reached record levels, being just below 30% of total issuance in emerging economies. Looking at the composition of issuers in 2013, in emerging markets around 60% of sovereign bond issuance was in foreign currencies. This contrasts with the virtual lack of sovereign issues in foreign currencies in advanced economies. In addition, it also contrasts with the declining trend in the proportion of sovereign issuance in foreign currency which was observed before the crisis. In 2013 the share of foreign issuance in emerging markets was 40% for non-financial corporations and below 20% for financial corporations, while corresponding figures for advanced economies were about 30% for non-financial corporations and below 16% for financial corporations. In all of these cases, the numbers indicate an increase in the share of foreign currency issuance relative to the lower levels observed before the onset of the crisis in 2008.

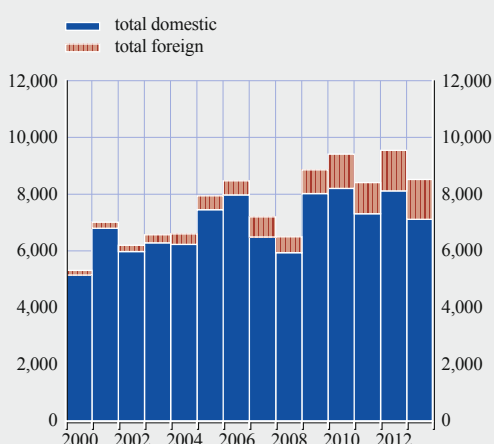
Looking at the regional dimension, issuance of bonds in foreign currency in 2013 was particularly elevated in Latin America, emerging EU countries and other G20 emerging market economies⁶⁰

⁵⁹ For this analysis we use data from Dealogic, a private data provider.

⁶⁰ “Other emerging market economies” refers to the Russian Federation, Turkey and South Africa.

Chart 23 Global gross bond issuance

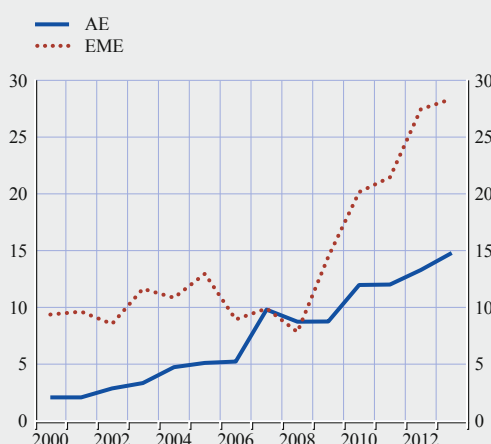
(all countries, all sectors, billions of euro)



Source: Dealogic.

Chart 24 Share of bonds issued in foreign currency in total gross bond issuance

(all countries; all sectors; percentages)



Source: Dealogic.

(Chart 25), while remaining relatively subdued in emerging Asia. Among other things, these figures might reflect the relative proximity and the large interconnection between the United States and Latin America, and between the euro area and emerging EU countries.

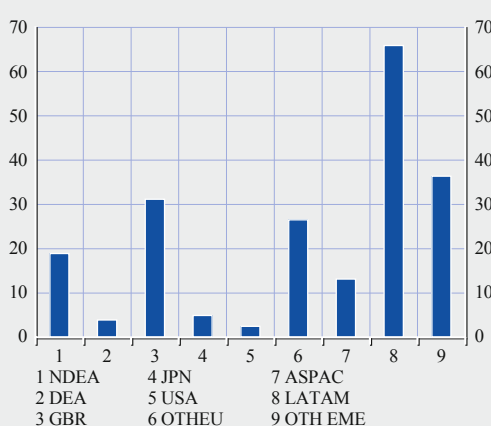
While in Latin America issuance in foreign currency has been broadly balanced across sectors, in the emerging EU countries and “other emerging market economies” the high share reflects strong foreign currency issuance by the private sector, including both financial and non-financial corporations. In the United Kingdom the high share of bonds issued in foreign currency partially reflects the international role of large firms effectively incorporated in the UK, such as public utilities and real estate corporations.

3.2 A COMPARISON OF THE FEATURES OF BOND ISSUANCE IN FOREIGN AND DOMESTIC CURRENCIES

In this section we look at differences in characteristics between bond issuance in foreign and domestic currencies. Some descriptive

Chart 25 Share of gross bond issuance in foreign currency by country/region

(percentage of total gross bond issuance in the country/region; all sectors)



Source: Dealogic.

Notes: “NDEA” includes euro area countries with large bond issuance that did not experience severe financial stress in relation to the banking and sovereign crisis (Austria, Belgium, Finland, France, Germany, Netherlands and Luxembourg). “DEA” includes euro area countries that experienced financial stress in relation to the banking and sovereign crisis (Cyprus, Greece, Ireland, Italy, Spain and Portugal). “OTH EU” includes other large EU countries (Bulgaria, Czech Republic, Hungary, Poland and Romania). “AS PAC” includes large emerging countries in the Asia Pacific region (China, Hong Kong, India, Indonesia, Korea, Malaysia, Singapore and Thailand). “LAT AM” includes large emerging countries in Latin America (Argentina, Brazil, Chile and Mexico). “OTH EME” includes other large emerging market economies belonging to the G20 (Russia, South Africa and Turkey).

statistics are collected in Table 5 for the period from 2012 to 2013, when issuance denominated in foreign currency was particularly elevated.

First of all, there is no substantial difference between the **rating** of the bonds issued in foreign and domestic currency, suggesting that similar firms – from a credit risk perspective – were able to issue either in foreign or domestic currency even in emerging markets.

Second, while there is not much difference between the **maturity** of foreign and domestic currency issuance for financial corporations, sovereigns and non-financial corporations tend to issue at longer maturities in foreign currencies, while in advanced economies the opposite is true. This finding may be a reflection of the “original sin” problem. It might also suggest that some issuers in emerging market economies are willing to trade foreign exchange risk against rollover risk. The same is true for foreign investors that are willing to finance EME issuers at longer maturities if their exposure to foreign exchange risk is lower.

Third, the overall high share of **floating rate** bonds could be reconciled in an environment of generally low interest rates, a situation in which investors are keen to hedge against likely future rate increases. Emerging markets tend to have a larger share of floating rates when they issue both in domestic and in foreign currency and across all issuers, probably also as a reflection of the “original sin”, at least for the domestic component, as interest rates might easily be influenced by governments.

Finally, we compare the **yields** of domestic currency bonds to foreign currency ones. To do this we control for sources of heterogeneity across bonds other than the currency of issuance that might affect yields. In particular, we calculate a spread of foreign versus domestic bonds by comparing yields of bonds from the same country and sector, with the same (or nearly the same) rating and maturity,

Table 5 Features of foreign currency bond issuance relative to bond issuance in domestic currency

(percentages)

Currency of issuance:	Advanced Economies		Emerging Markets	
	Domestic	Foreign	Domestic	Foreign
Rating (average)	AA-	A+	BBB+	BBB+
Sovereigns	AA	AA+	BBB+	BBB+
Financials	AA	AA-	A-	A-
Non-Financials	BBB	BBB+	BBB+	BBB-
Years to Maturity (median)	7.0	5.0	4.0	4.0
Sovereigns	8.5	4.8	5.1	10.0
Financials	6.1	5.0	3.0	2.0
Non-Financials	7.2	7.0	5.0	5.6
Share of Floating (average)	67	58	80	74
Sovereigns	73	55	84	95
Financials	64	55	78	68
Non-Financials	79	77	82	89
Spread foreign over domestic (median in p.p., similar deals)		0.80		-1.60
Sovereigns		-0.39		-1.44
Financials		1.06		-1.65
Non-Financials		0.03		-0.72
Spread foreign over domestic (median in p.p., tranches within a deal)		-0.03		-3.22

Source: Dealogic.

that were issued in the same period⁶¹ (“similar deals” in Table 5). The numbers in Table 5 suggest that emerging market borrowers enjoyed a substantial “discount” when issuing in foreign currency. This was especially true for financial corporations and sovereigns (the median “discounts” were -1.65 percentage points and -1.44 percentage points respectively), while the effect for non-financial corporations is more limited (-0.72 percentage point). The overall advantage of issuing in foreign currency for emerging market private sector issuers is confirmed also when controlling for all unobserved firm characteristics, which is done by looking at tranches of a single deal which differs only in the currency of denomination (“tranches within a deal” in Table 5)⁶². Overall, these findings suggest that while in advanced economies the issuance in foreign currency could probably be explained by the need to match liabilities with foreign assets and revenues, in emerging markets it mostly reflects interest rate differentials.⁶³

3.3 THE EURO AND THE US DOLLAR IN FOREIGN CURRENCY ISSUANCE

Since the global financial crisis started in 2008, the increased reliance on bond finance and the rising share of bonds denominated in foreign currencies coincided with changes in the shares of the euro and the US dollar in global bond issuance.

As for the euro, after reaching a peak of almost 40% in the share of new bonds denominated in foreign currency in 2007, its share declined to a minimum of around 16% in 2012, also reflecting the intensification of the sovereign and banking crisis in Europe. In 2013, however, the share of the euro in new foreign currency issuance posted the first increase since 2007, reaching around 20%.

Looking at different issuer categories, the share of new euro-denominated bonds issued by non-financial corporations and by sovereigns did not decrease much compared with pre-2007 levels (Chart 26). Furthermore, it was already rebounding after 2011, reaching 20% in 2013. Conversely, issuance by financial corporations was severely impaired by the financial crisis and the ensuing recession, and has not recovered since. In particular, the decline of issuance in euro by financial corporations reflected lower issuance by firms registered in the United Kingdom.

Overall, the decline in the share of the euro in foreign currency issuance since 2007 mainly reflects three factors: first, the reduced issuance of financial corporations outside the euro area, as a consequence of structural changes in banking systems, the retrenchment of international banking and the prolonged difficulties faced by the banking sector in Europe; second, lower euro-denominated issuance in non-euro area EU countries; third, a sharp increase in US dollar-denominated issuance. While in 2006 issuance in US dollars and euro by foreigners was around EUR 500 billion each, in 2013 issuance in euro was EUR 200 billion and issuance in US dollars was EUR 700 billion. Differences emerged as a result of a sharp increase in US dollar issuance by sovereigns (+ EUR 40 billion compared with 2007) and non-financial corporations (+ EUR 200 billion compared with 2007), and a sharp decrease in euro issuance by financial

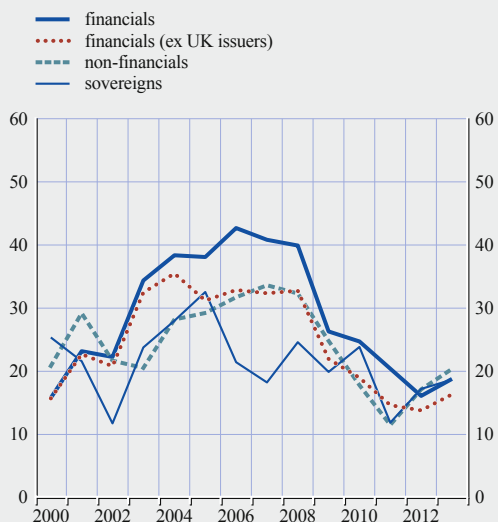
61 More specifically, in addition to matching foreign and domestic currency bonds by sector, we impose that the years to maturity at issuance for “peers” can differ by no more than 20%, the rating by no more than half a notch and that the settlement date of the two bonds cannot differ by more than ten days. The chosen set of controls, especially the matching by sector, could also partially control for whether the company has some natural hedging sources. Looking at tranches of the same deal (last row of Table 5), controls for the existence of natural hedging sources, although in this setting the number of available deals is much smaller.

62 We have also checked that the difference in the maturity of different tranches does not exceed 20% of years to maturity at issuance.

63 A more in-depth and robust analysis would need to control for the currency composition of assets and revenues of firms when comparing the results across emerging and advanced economies. However, the fact that the increase in foreign currency issuance in emerging market economies occurred with retrenching global trade and decreasing yields in financial centres supports the view that interest rate differentials played a role in driving it. More “static” firm features, such as the currency composition of assets and revenues, does not seem at first glance to be able to explain the timing of the increase in foreign currency issuance.

Chart 26 Share of the euro in global gross bond issuance in foreign currency by sector of the issuer

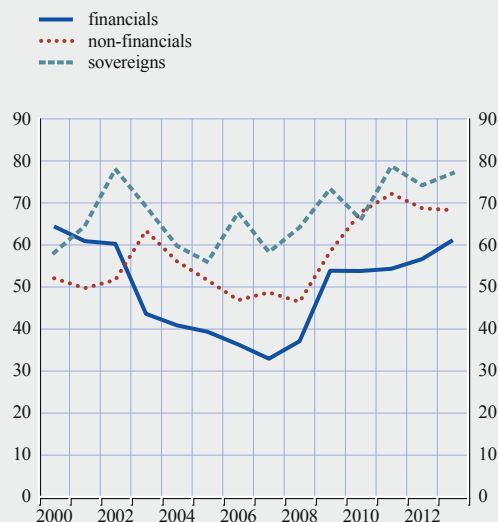
(percentage of total gross bond issuance)



Source: Dealogic.

Chart 27 Share of the US dollar in global gross bond issuance in foreign currency by sector of the issuer

(percentage of total gross bond issuance)



Source: Dealogic.

corporations (- EUR 300 billion compared with 2007).⁶⁴ As a consequence of these developments, the share of the US dollar (Chart 27) has increased since 2008 for all issuing sectors. In future, some of the factors that dragged down the share of issuance in euro may be seen as transitory, while others may reflect more structural issues. The reduction in issuance by financial intermediaries partially reflects a temporary weakness of the banking sector and deleveraging in the euro area and in this respect it can be seen as temporary in nature; however, in future, we might expect more subdued issuance activity from financial corporations compared with the pre-2007 period, given the new financial regulations and the need for increased equity to fulfil the Basel III requirements. The strong issuance in US dollars may significantly diminish in future by the part that has come about as a result of the expansionary monetary policy of the Federal Reserve System, which is currently tapering its Large-Scale Asset Purchase programme.

4 CONCLUSIONS

This special feature article highlighted a number of stylised facts on bond issuance denominated in a non-domestic currency (i.e. foreign currency issuance). Since the start of the global financial crisis, gross bond issuance across the globe reached unprecedented levels as borrowers diversified away from bank loans and took advantage of yields that were pushed to low levels by global monetary accommodation. Since 2009 an increasingly large proportion of bonds have been issued in foreign currency, especially in emerging markets which enjoyed a substantial “discount” when borrowing in foreign currency. Monetary accommodation in financial centres may have had an impact on the currency choice of bond issuance in two ways. First, from the issuers’ point of view, it reduced yields in financial centres and made “core” currencies attractive for foreign issuers. Second, from the investors’ point of view, monetary accommodation encouraged a search for yield:

⁶⁴ It is important to recall that none of these figures refer to total issuance in one currency: they refer to issuance denominated in a non-domestic currency.

global investors could buy bonds issued by foreigners but denominated in “core” currencies, thus enjoying higher yields, but remaining more insulated from exchange rate risk. Regarding advanced economies, the absence of any discount when issuing in foreign currency suggests that the currency choice of issuance could be the result of firms’ attempts to match the currency composition of assets and revenues with the currency denomination of liabilities.

The share of the euro in global bond issuance denominated in foreign currency (i.e. issuance in euro by non-euro area issuers) has declined since the start of the global financial crisis in 2008. However, the decline stems mainly from lower issuance in euro by non-euro area financial corporations and from a strong increase in issuance denominated in US dollars (by non- US issuers). Overall, the issuance in euro by non-euro area non-financial corporations and sovereigns was not strongly affected by the crisis in absolute terms and has recently picked up. The strong rise in US dollar issuance, especially by non-financial corporations, and the relatively low yields of securities issued in US dollars suggest that quantitative easing may have affected the currency composition of bond issuance in recent years.

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