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How to Attract Non-Resident Investors to Local Currency Bonds: the Cases of Ukraine, Panama, Colombia, and Brazil

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ABSTRACT

The assumption that emerging market countries could only sell their government securities to non-residents in foreign currency started melting at the beginning of the new millennium.

Driven by abundant liquidity and searching for better returns, many foreign investors became well acquainted with bonds denominated in the local currencies of emerging market countries. As documented by the country cases in this paper, Debt Management Offices (DMOs) in these countries happily embraced access to a “new” funding source and a more diverse investor base.

The note explores how countries attracted foreign investors for local currency financing. DMOs have used several avenues to sell local currency securities to non-resident investors: from issuing Credit Linked Notes, or, Global Bonds offshore; to facilitating non-resident access to the domestic local currency bond market either by building a bridge with an International Clearing Securities Depository (ICSD), or, by fully integrating them through their participation in the local CSD.

Countries, including Chile, Peru and Ukraine, frequently used Credit Linked Notes (CLNs) in the initial stages of local currency domestic bond market development. Others, such as Brazil and Colombia at times and Uruguay more frequently, relied on local currency Global Bonds. These securities save non-residents from the uncertainty of the local jurisdiction and the hurdles of the local clearing and settlement for which investors are willing to accept lower yields than the ones paid by domestic government securities.

Neither of these avenues bring non-resident investors directly to the domestic bond market which is desirable if the DMO wants to reap the benefits of a more liquid and transparent market and potentially lower government’s borrowing costs. The participation of non-residents in the domestic bond market would require building a bridge with an ICSD, or, relying on the local CSD. The bridge has been the solution in countries where custody and settlement processes pose unsurmountable obstacles for non-residents to jump into the domestic debt market; successful experiences of this avenue include countries like Mexico, Chile and Peru. The alternate avenue is to develop a local infrastructure robust enough so that non-residents do not miss the ICSD; this has been the path chosen by Colombia and Brazil. No alternative has emerged as a superior solution and each arrangement must be assessed under the context of the particular country.

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Glossary

ADB	Asian Development Bank
AfDB	African Development Bank
BIS	Bank for International Settlements
BRL	Brazilian Real
CLN	Credit Linked Notes
COP	Colombian Peso
CSD	Clearing, Settlement and Depository
DGCPNT	Public Credit and National Treasury General Directorate (Colombia)
DMO	Debt Management Office
EIB	European Investment Bank
EM	Emerging Market
EMBI	Emerging Markets Bond Index
ETP	Electronic Trading Platform
FX	Foreign Exchange
GBI-EM	Global bond index - Emerging Markets
GDP	Gross Domestic Product
GoS	Government Securities
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
ICSD	International Clearing, Settlement and Depository
IFI	International Finance Institution
IFC	International Finance Corporation
IIF	Institute of International Finance
IMF	International Monetary Fund
IRP	Investor Relations Program
LX	Local Currency
MOF	Ministry of Finance
NTN-F	Brazilian T-Bond (<i>Nota do Tesouro Nacional, Serie F</i>)
OTC	Over-the-Counter
PD	Primary Dealer
USD	U.S. Dollar
WBG	World Bank Group



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How to Attract Non-Resident Investors to Local Currency Bonds: the Cases of Ukraine, Panama, Colombia, and Brazil

>> 1. INTRODUCTION

The assumption that Emerging Market (EM) countries could only sell their government securities to non-residents in foreign currency started melting at the beginning of the new millennium. With the sustained decline of yields in the developed world resulting from the expansionary monetary policies of major Central Banks (CBs), international investors chasing for higher yield found avenues to buy government securities (GoS) issued by EM countries in their local currencies (LX).

Most Debt Management Offices (DMOs) in EMs continue to actively attract non-resident investors. Witness to the fundamental contribution of these investors in improving the functioning of their domestic debt markets, many EMs continue promoting their participation. Foreign banks in Latin America have become Primary Dealers bringing healthy competition to the primary market and injecting dynamism to the secondary market. Their participation has also incentivized an upgrade in the market infrastructure from custodial activities to more efficient clearing and settlement procedures that has benefited the entire financial system. Moreover, this expansion of the local sell-side has facilitated the entering of foreign investors and the diversification of the investor base. Enlarging the investor base through a greater participation of foreign investors has the advantage that they commonly demand medium- and long-term bonds, helping governments lengthening the maturities of their debts.

While DMOs in EMs have embraced access to this new funding source, they do so at the expense of the risk of a potential reversal in capital flows. Several debt crises in the past serve as reminders to EMs of the consequences of sudden stops and their damaging impact on the exchange and interest rates and, more broadly, on the overall economy. It was precisely in reaction to the Global Financial Crisis that Hungary and Lithuania opted for a rather cautious approach towards foreign investors. In Hungary, for instance, the DMO policy directive was to raise the bulk of the domestic debt with local retail and institutional investors thereby minimizing

the vulnerability to the sharp reversal of capital flows.¹

As shown by the Global Financial Crisis, for the authorities to prepare and timely react to sudden changes in capital flows they need to closely monitor non-resident's participation on the LX debt market. Such a monitoring requires timely information on non-resident holdings and transactions of government securities, which is not easy when they participate through nominee/omnibus accounts either with a custodian, or, through an International Clearing Securities Depository (ICSD).

Another potential risk is that access to this new funding source is viewed as a vehicle to circumvent the budget constraints dictated by a sound fiscal policy. As stated in the Debt Management Guidelines "...debt management should be anchored in sound macroeconomic and financial sector policies to ensure that the level and rate of growth in public debt are sustainable".³ Respect of prudent macroeconomic policies and close coordination with debt management would ensure that the benefit of attracting non-residents to purchase local currency securities is not far outweighed by the creation of macroeconomic imbalances. Foreign investors that witness DMOs circumventing the budget constraints through an opportunistic use of the "new" funding source will most likely leave the country since sooner rather than later the weakening of the macro fundamentals will depress the prices of the government securities.

Regarding government funding costs, the impact of non-resident investors depends on the channel and volume of participation. In general, because non-residents bring a net increase in the demand for government securities, their participation tends to reduce the overall cost of funding; the impact is larger the larger is the volume bought by non-residents and the more integrated they are to the local debt market. There could be cases where non-residents acquiring small volumes of LX bonds through CLNs, or, isolated Global bonds make no material difference in the overall cost of LX debt. Returns to domestic and non-resident investors on the other hand could differ depending on the channel used: CLNs would typically offer lower relative returns to non-residents because of the fees charged by the intermediary, while Globals can also offer lower returns compared to onshore bonds because of their better liquidity and preferred jurisdiction of issuance (legal risk).

Before deciding whether to invite non-resident investors to buy government securities denominated in local currency each country should evaluate the pros and cons. Each country conditions are different and so are the pros and the cons as well as the way policy makers value them; it is therefore futile discussing in abstract the advisability of selling LX GoS to non-residents, or, trying to determine the optimal share of these investors in the domestic debt market. Consequently, the paper offers no guidance on the extent countries should seek, or, increase the participation of non-resident investors in their domestic debt market. Instead, the idea is to offer selected experiences of countries that have decided to expand the investor base by inviting the participation of non-residents.

Those DMOs willing to attract non-resident investors on a non-speculative basis need to offer an economy with healthy macro fundamentals, government securities reasonably liquid and a robust market infrastructure. Macroeconomic and financial comprehensive and timely information are essential to assess the issuer's history, standing and prospects. Market liquidity refers not just to easy entry to and exit from the market at a reasonable cost, but price transparency and ability to transact in the volumes typically traded by these investors. Lastly, market infrastructure includes minimum standards of security and efficiency in the trading, clearing, settlement and safeguard of the securities, and the compliance with all regulations, including taxation, affecting transactions.

The relevance of this paper lies in the illustration of a range of benefits non-residents can bring to EM issuers. The paper shows that at the minimum, non-residents bring more demand for LX securities with the potential for reducing the government funding costs and the exposure to FX risk. At best, non-residents could help DMOs diversify their investor base, improve competition in the primary and secondary markets and upgrade market practices, for instance, by contributing to a more robust market infrastructure. To the extent that for most EMs the size of the domestic market and the local investor base are the major constraints to develop an active and deep market for government securities, non-residents offer an efficient avenue to help relax such constraints.

1. Although the principle of reducing the participation of non-residents and increasing the role of domestic retail investors in Hungary started before, it was made explicit in 2015 and has remained in the debt management strategies all the way through to 2020. It should be noted, however, that the cautious approach taken by Hungary aims at reducing rather than eliminating the participation of non-resident investors. In the past, both Hungary and Lithuania relied on the participation of non-resident investors to increase their borrowing in local currency and, more broadly, to develop a local market for government securities. For the rationale of the policy change in Hungary see "The Financing Plan of the Central Government and the Public Debt for the Year 2015" <https://www.akk.hu/download?id=6916294a-4685-47ad-ade1-084d144102f1>.
2. See "Revised Guidelines for Public Debt Management", prepared by the Staffs of the International Monetary Fund and the World Bank, March 11, 2015

Expanding and diversifying the investor base is also relevant particularly after the Covid outbreak triggered a dramatic increase in the borrowing requirements of most EMs. The surge in government deficits during 2020 and 2021 will, at the very least, widen out the investment-savings gap in EMs demanding further contributions of external savings in the form of government debt. This context makes it even more pertinent discussing the potential to attract non-resident investors towards the local currency markets.

>> 2. RECENT EM TRENDS ON NON-RESIDENT INVESTORS

Foreign investors purchase of local currency debt aid EMs fill the investment-saving gap helping mitigate the vulnerability of the economy to exchange rate shocks. EMs typically exhibit large investment needs that cannot be funded with the limited domestic savings. The attraction of non-residents to the LX government securities market facilitates the improvement in the composition of the debt portfolio that would otherwise lean on foreign currency and/or very short-term financing, while avoiding the crowding out of financing to the private sector. This therefore reinforces fiscal sustainability providing more space for private sector driven economic growth.

At the microeconomic level, the presence of non-residents can be an effective catalyzer for a substantial upgrade of the domestic debt market. Authorities interested in attracting non-resident investors must ensure that the market infrastructure satisfies minimum standards for the new investors to transact comfortably and safeguard their assets while complying with all relevant regulations. Meeting these standards also benefits local investors and other issuers.

The functioning of the primary and secondary markets may benefit from the boost in demand brought in by non-residents. Faced with larger demand, Primary Dealers (PDs) are incentivized to bid more aggressively improving the price discovery process and mitigating the potential for collusion in small markets. A well-designed PD system, where applicable, extends the incentives for competition to the secondary market which results in higher turnover, lower bid-ask spreads and larger ticket size of transactions. PDs response to profitable market making drives more aggressive participation in the primary market, generating a virtuous circle.

This paper aims to illustrate the different avenues countries use to attract non-residents to their local currency securities and derive some conclusions based on these experiences. Section II summarizes the benefits and risks of non-resident participation in the local currency government securities market³ and illustrates the evolution of such participation over the last decade. Section III provides a description of the different avenues for non-residents to acquire LX GoS in EMs and section IV illustrates how DMOs have used these avenues in four country cases. Finally, section V concludes.

Healthy competition brought by non-resident investors is not limited to a net increase in demand for government securities. All the market infrastructure development and communication efforts made to entice these investors to participate in the GoS market create positive spillovers for corporate debt and equity issuances, and for direct investment in the country. Investing in the country “risk-free” asset may serve as an entry door for investors learning more about its credit risk and market functioning, in a possible first step to future investments in the real sector of the economy.

Another critical contribution of non-resident investors relates to their appetite for medium and long-term securities. While they do buy short-term assets as a vehicle to place bets on exchange or interest rate changes, or as transitional investment when shifting strategies, these participants have the muscle and multi-country portfolio diversification to absorb large price changes and thus are interested in exactly the same instruments a Debt Management Office (DMO) would like to sell, namely, LX long duration bonds. Mexico and Brazil, with the largest domestic debt markets in Latin America, developed their nominal fixed-rate medium and long-term curve partly thanks to the demand from non-residents.

However, these benefits come at the expense of the risk of reversal of capital flows. Extensive evidence from the debt crises of the 1980s and 1990s⁴, the global financial crisis in 2008, and the COVID-19 turmoil illustrate the danger of shifts in investor sentiment that could trigger a sharp reversal of capital flows to EMs. While these markets have escaped a major debt crisis in the last 20 years, in part by increasing the issuance of LX government securities purchased by non-residents, they have found that borrowing in their own currencies does not

3. The Annex explores the pre-conditions for non-resident investors to acquire domestic bonds issued by EM countries in local currency.

4. The literature on financial contagion emerged as explanation to a succession of crises: Mexico in 1994-5, East Asia in 1997, Russia in 1998, and Argentina in 2001. See for instance: Guillermo A. Calvo, 2005. “Emerging Capital Markets in Turmoil: Bad Luck or Bad Policy?,” MIT Press Books; Valdés, Rodrigo O. “Emerging Markets Contagion: Evidence and Theory”, <http://dx.doi.org/10.2139/ssrn.69093>. Elvira Sojli (2007). “Contagion in emerging markets: the Russian crisis”, Applied Financial Economics, 17:3, 197-213; Ozkan and Unsal (2012). “Global Financial Crisis, Financial Contagion and Emerging Markets”, IMF Working Paper, WP/12/293.

make them immune to turbulent global financial conditions.

The channel through which capital outflows impact EMs is best described as a new version of the original sin⁵. When global financial conditions deteriorate, capital starts flowing out of EMs and the domestic currency falls. The sudden deterioration of the economic environment triggers a revaluation of risk causing the entire yield curve of EMs both in foreign and local currency to move upwards. EM CBs trying to contain the foreign currency outflow tighten monetary conditions which further slows the economic activity. Non-resident investors are hit by the drop in the price of the government securities and, more importantly, by the depreciation of the local currency⁶. If the losses are large enough, they trigger another round of sales of LX GoS which accelerates the fall of the local currency. In sum, EMs still suffer from the original sin, not because of the mismatch in the balance sheet of the borrowers but because investors returns are highly elastic to the exchange rate and may trigger sharp outflows if the changes in rates are significant.

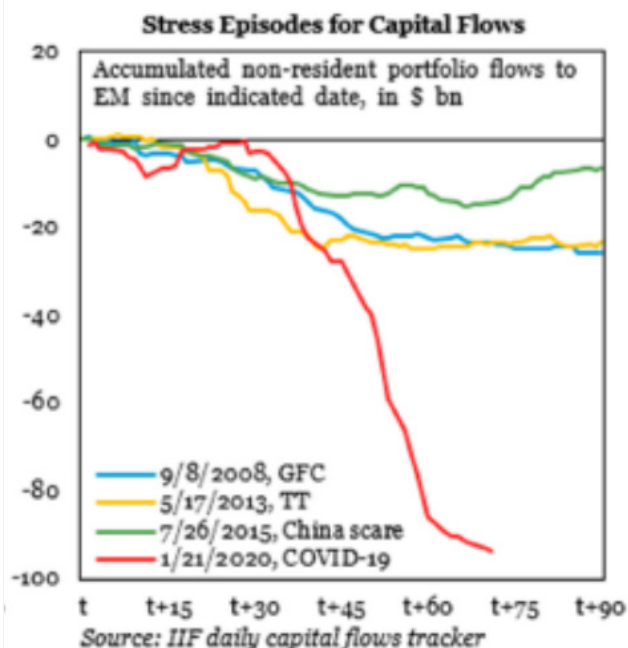
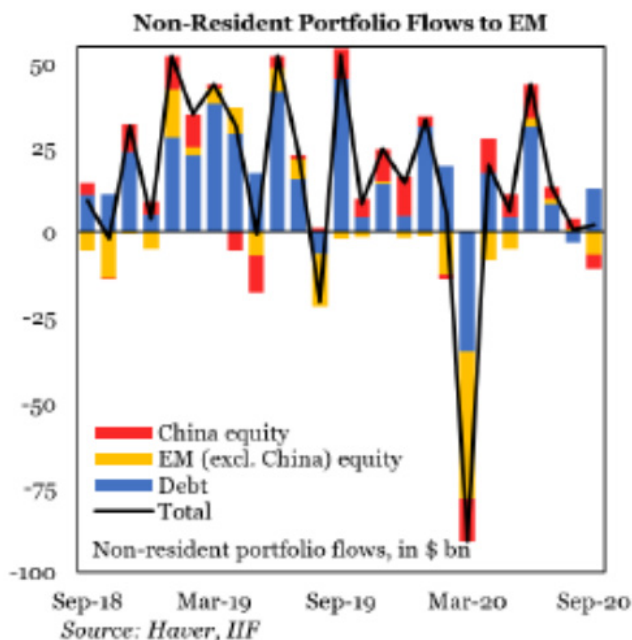
The potential for these capital outflows is proportional to the participation of non-resident investors and depends also on the depth of the domestic debt market, among others. After the Global Financial Crisis hit Eastern Europe, countries

like Hungary and Lithuania decided to limit their exposure decreasing the share of government funding raised with non-resident investors. Others however, with relatively large participation of non-residents, remained comfortable with the funding structure, possibly because they were confident that their foreign reserves were sufficiently large to withstand an attack on the exchange rate and/or because they have domestic markets with institutional investors capable of absorbing a sudden additional supply of GoS.

A severe reminder of the potential consequences of the materialization of this risk was given by the initial phase of the COVID-19 crisis. The outbreak generated a dislocation of all financial markets and a capital outflow from EMs peaked at USD80 billion, 4 or 5 times larger than those experienced in the taper tantrum and the Global Financial Crisis. Although the international capital markets remained open⁷, for a short period Eurobonds yields in foreign currency sharply increased and EM DMOs temporarily suspended their regular auctions of LX government securities, reduced the offered amounts, or, shortened the offered maturities amid rising uncertainty. Fortunately, the impact of the virus outbreak on the capital flows was relatively short lived thanks to the decisive action taken by CBs in advanced economies.

> > >

FIGURE 1 - Non-Resident Debt Investors Outflows from EM During Crisis Periods



5. Emerging Markets Aren't Out of the Woods Yet: How They Can Manage the Risks. Agustín Carstens and Hyun Song Shin. March 15, 2019. Foreign Affairs

6. See "Revised Guidelines for Public Debt Management", prepared by the Staffs of the International Monetary Fund and the World Bank, March 11, 2015

7. From March to May 2020, the following countries accessed the international capital markets: Peru, Guatemala, Hungary, Paraguay, Philippines, Lithuania, Chile, Serbia, Romania, North Macedonia, Mexico, Egypt, Israel, Panama and Indonesia. The last five countries issued at the 30-year segment of the curve or longer.

In most cases, EMs are better off selling government securities to non-residents that are denominated in local rather than in foreign currencies. It is difficult to picture a situation in which a selloff of LX bonds by non-residents leave the issuer worse off than if he had opted for issuing FX bonds. A depreciation of the local currency triggered by a capital outflow will raise the value of the outstanding debt proportionally to the share of the foreign currency debt: the larger this proportion, the larger will be the increase on the debt/GDP ratio and debt service payments. Also, if there is a strong savings industry, it's likely that the pension funds are able to buy LX securities from non-residents at attractive prices, establishing floors to these prices and helping to stabilize the local currency.

Over the last decade, there has been a sustained and significant increase in non-resident investors holdings of local currency. As shown in Figure 2, with the exception of Hungary and Lithuania, the participation of non-residents in the local currency debt market increased significantly over this period across all regions. By the end of 2019 the average participation of non-residents reached 20%, a level only reached by Hungary in 2009. While the share of non-resident investors during the last few years has dropped in Mexico, Brazil, Poland, Malaysia and Turkey, this has to do with the downgrade in the countries credit rating, or, the worsening

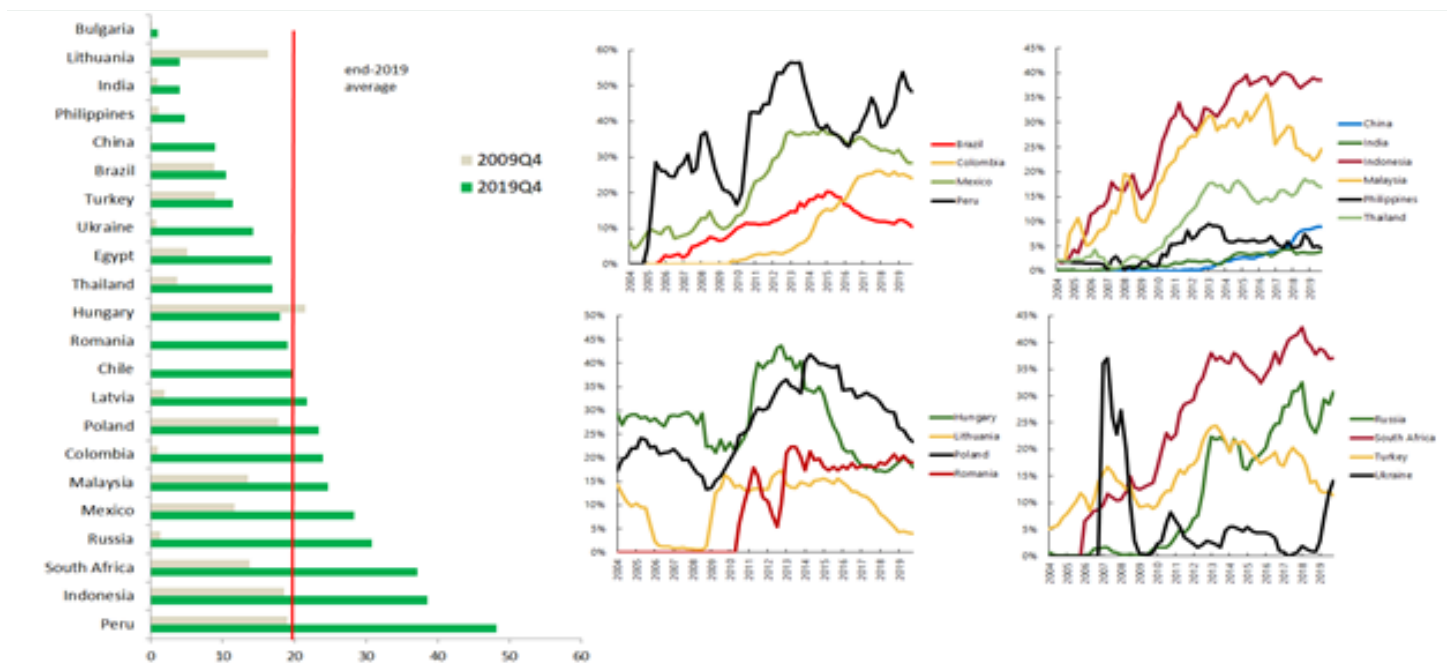
of the political and economic climate rather than explicit policies to disincentivize such participation. Indeed, the role of non-resident investors in these markets seems already consolidated.

Since not all EMs produce information on a regular basis, Arslanalp and Tsuda had to use multiple external sources to gather the data presented in Figure 2. This brings us back to the importance for EMs to have timely and comprehensive information on the participation of non-residents in the domestic debt market. As shown later, in the four country cases documented here, DMOs closely track such participation.

The different arrangements to gather this information across countries confirms that collecting the data on non-resident holders of domestic public debt in EMs remains a challenge. Sienaert (2012) has called the attention to the difficulties of ensuring the identification of the actual debt holders given the variety of custodial arrangements adopted across markets. The increasing role of Global custodians, International CSDs and the use of instruments such as credit-linked notes (backed by domestic government securities) require specific monitoring arrangements that are not always in place. In any case, the most common ways for DMO's to obtain these data is through the local CSD (and International, when there is a

> > >

FIGURE 2 - Foreign Holdings of Local-Currency EM Government Debt Securities (% of total)



Source: Arslanalp and Tsuda (2014, updated)

Note: The coverage of debt is central government local-currency debt securities. For Egypt, it is Treasury bills only; for South Africa, it is marketable government bonds only.

a bridge available) and through banks/primary dealers.

EM DMOs need also to track non-resident participation to map the demand for government securities; similarly, investors value the DMO's transparency in this regard as a key input to improve their decision-making. Brazil, Colombia, Panama and Ukraine publish in their websites on regular basis consolidated information on the main holders of domestic government securities. As mentioned above, in most cases, data is collected from CSD without regulation enforcing its timely submission or publication.

Finally, DMOs deciding to jumpstart the participation of non-resident investors in their local currency markets typically face an uphill battle trying to convince these investors. While EM countries would be willing to adopt regulatory changes and improvements in the market infrastructure to facilitate the arrival of foreign investors, such willingness is not enough. Non-resident investors require minimum preconditions before integrating these securities as a new asset class to their portfolios and these preconditions overlap to a large extent with those required for the development of the domestic debt market. Such preconditions are already covered in the literature and are summarized in Annex I together with useful references.

>> 3. DEBT INSTRUMENTS FOR NON-RESIDENTS

When considering attracting foreign investors to buy LX bonds, Governments need to be aware of four factors that differentiate alternative debt instruments. The first is the currency of denomination of the security; since in this paper we are only concerned with securities issued in the EM local currency, we direct our attention to the other three factors. The second one is the jurisdiction of issuance which will determine the legislation and regulation governing the issuance, marketing, trading and redemption of the security; in some cases, this could be the non-resident host country, or, internationally recognized markets, in others, the EM itself. The third factor is the currency of settlement of the purchase or sale of the security; in some cases, non-residents can settle these transactions in hard currency offshore, in others, settlement has to be in local currency which can raise issues of convertibility and liquidity of the foreign currency market. Finally, the fourth factor covers the entities charged with the clearing, settlement and safeguard of the security; these entities could be foreign institutions operating in the non-resident home country, or, entities locally organized and legally recognized in the EM.

Non-residents' choice of the channel to acquire an EM fixed income asset will depend on the assessment of those four factors. Investors that find the local currency too risky, or, unattractive from the point of view of the risk-return, will probably stay away from LX GoS. But if the LX EM asset is attractive from the risk-return point of view, non-residents will check whether they feel comfortable with the jurisdiction of issuance, the currency of settlement and the type of entities charged with clearing, settling and custody before committing to acquire the LX GoS. The more developed the EM government bond market, the easier it is for the non-resident investor to accept the EM jurisdiction, the settlement in LX and the safeguarding of the security with a local registered

custodian.

Accordingly, the channels for non-residents accessing LX GoS vary depending on the degree of their integration with the domestic government bond market. At one extreme, non-residents acquire exposure to LX GoS through Credit Linked Notes which are instruments that mirror and are backed by LX GoS but are issued, negotiated and settled offshore in foreign currency to avoid convertibility risk and the need to hold the security with a local, or, global custodian. At the opposite extreme, non-residents behave just like local investors: they participate in the auctions, transact local bonds in the domestic secondary market and hold the securities with the local CSD through a local or global custodian. There are two intermediate channels between these two extremes. Non-residents could buy LX GoS offshore when the issuer floats Global bonds under a foreign jurisdiction; these securities are issued under foreign legislation and settled and cleared in hard currency offshore. Alternatively, non-residents could buy LXGoS onshore without holding custody accounts in the local market if the issuer offers a bridge between local and international CSDs.

The instruments offered through these alternative channels differ in the operational costs, liquidity, return and, more importantly, on the risk absorbed by the non-resident investor. As it will be shown below, the more robust the domestic market infrastructure and the deeper the market, the more comfortable non-residents are to take on more exposure to the different risk types.

FIGURE 3 - Investor Risk Absorption in Different Debt Instruments⁸

Increasing investor risk absorption ↓	Instrument	Currency risk	FX credit risk	LC credit risk	Convertibility	Clearing & settlement
	Global bonds in USD (for reference)		■			
	Credit link notes	■		■		
	Global LX bonds	■		■		
	LX-local bonds with ICSD	■		■	■	
	LX-local bonds	■		■	■	■

>>> CREDIT LINKED NOTES

CLNs are issued by a depository bank upon the issuance of the underlying government security. The depository bank acquires the domestic GoS in local currency directly from the issuer and issues the CLNs upon request from the investors. CLNs trade, settle and pay interest and principal in hard currency and the depository bank conducts the currency conversion in relation to all cash distributions. Non-resident investors therefore assume three different exposures: foreign currency risk on the principal and interest of the LX bond, credit risk to the government issuing the security and credit risk to the depository bank (despite the CLN being an Asset-Backed Security). When issued in the US, CLNs offerings follow the same regulations used for Eurobonds issuances and are made available via Reg S to non-US institutional investors and via Rule 144A to US institutional investors.

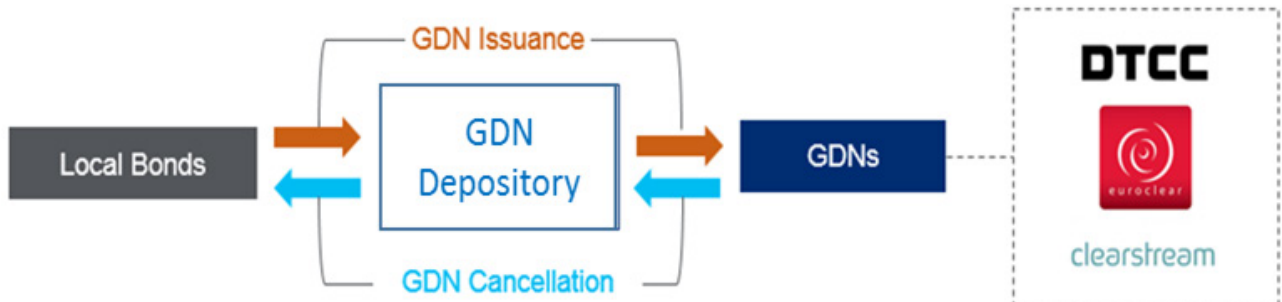
The distribution of CLNs takes place through the network of investors of the depository bank. Since the depository bank is acting mainly as an intermediary, it is well positioned to advise

the issuer on the type and size of the issuance. The issuer may also take advice from the depository bank on facilitating the issuance and redemption of CLNs .

CLNs are most popular in Latin America and the Caribbean but have also been issued in Asia and Africa. Active issuers in Latin America and the Caribbean include: Dominican Republic, Costa Rica, Mexico, Guatemala, Jamaica and Ecuador; in Asia: Turkey, Vietnam and Kazakhstan; and in Africa: Nigeria and Zambia .

These instruments provide a flexible mechanism for DMOs to expand the investor base to non-resident investors unwilling to access the domestic market (directly or through an ICSD bridge/link), or, to participate in a Global Bond transaction. CLNs serve well sovereign issuers with insufficient technical capacity to undertake transactions in the international capital markets in LX, or, where pre-conditions to entice non-resident investors participation in the domestic market are not in place. They may also be useful for issuers aiming to raise volumes that would be too small for a syndicated transaction.

FIGURE 4 - CLN Issuance and Cancellation Process



Source: Citibank (the bank is owner of the Global Depository Note brand, one of the most common types of CLNs)

8. Clearing and Settlement risk refers to the risk foreign investors may face due to the exposure to local CSD processes, regulations and systems, leading to operational and counterparty risk, otherwise mitigated when operating under an ICSD (which they are familiar with and also support them on transactions with other countries' GoS). We thank Steen Byskov for providing this table.
 9. There are different types of CLNs in the market. While some CLNs can be traded with other investors, others can be traded only with the depository bank. Also, although in most issuance of CLNs the depository bank acts in coordination with the issuer, nothing stops international banks to create asset-backed instruments that allow to replicate a LX GoS.
 10. After making a subset of their securities clearable through an ICSD it is unlikely that Chile, Panama and Peru continue raising funding through CLNs.

The recurrent issuance of CLNs on the other hand can fragment the LX GoS secondary market restricting the liquidity and delaying the deepening of the domestic debt market. Fragmentation occurs naturally as non-residents trade only CLNs and remain separate from domestic investors by the barriers explained above. Another significant disadvantage is the rather opaque issuance mechanism and the monopsonic position of the depository bank which translates into a lower transparency of placements compared to domestic auctions, or, syndicated transactions and in often high issuance/redemption costs to investors.

>>> GLOBAL BONDS IN LOCAL CURRENCY

Global local currency bonds are GoS denominated in local currencies, settled in USD and offered in international markets. LX Globals are issued like a regular Eurobond¹¹ in sizes equivalent to USD 500 million to 1 billion. Foreign currency risk is assumed by the foreign investors but since settlement takes place offshore in foreign currency, they do not need to assume the convertibility risk. As a Eurobond, LX Global Bonds are issued under the law of international jurisdictions, which these investors are accustomed to (UK or US, for example).

The offering of these bonds is undertaken through a syndicate of investment banks that serve as the sales force of the issuer and intermediate the communication with investors during the transaction. Contrary to an auction, syndicated transactions carried out in the international market require extensive documentation, legal advice and regular contact with lead managers. These institutions provide guidance to the issuer before (investors demand, appropriate time window for the deal), during (market conditions, book building, pricing) and after the transaction (settlement, secondary market overview, transaction outcomes information)¹².

In Latin America, Brazil, Colombia and Uruguay have issued LX Global bonds. Brazil and Colombia were active issuers of these bonds in the period 2005-2007¹³ and carried out scattered transactions until 2012. Since that year, both countries abandoned the idea of building an LX yield curve offshore to prioritize a program of local bond market development. Uruguay, the first issuer in the region in 2003, has five outstanding LX Global inflation-linked bonds, the

last one issued in July 2020 and two LX Global conventional bonds both issued in 2017. No other country has issued LX Globals in the region.

For the issuer and the non-resident investor, LX Global bonds are more competitive instruments than CLNs. Instead of dealing with investors through an intermediary (depository bank in the CLN), the use of a syndication mechanism allows the DMO to get the best possible price in a highly transparent transaction even after taking into account the fees to the lead managers and legal firms that help prepare the operation. Similarly, compared to a CLN, investors get a better return through a more transparent transaction directly offered by the issuer.

However, for non-resident investors looking for an active participation in the local currency domestic bond market, Global Bonds are not the appropriate instrument. Unlike the conventional bonds issued regularly through auctions, these bonds are issued infrequently in limited amounts. Non-resident investors that cannot enter the onshore market are confined to trade fewer government securities with a small subset of investors.

Also compared to regular LX bonds issued onshore, LX Globals tend to be less attractive to the non-resident investor and cheaper for the issuer. Interest rates on Globals tend to be lower than those offered by LX bonds regularly issued in the domestic market reflecting the offshore jurisdiction that may attract a broader set of investors.

>>> BUYING IN THE LOCAL MARKET AND SETTLING AND CLEARING THROUGH AN ICSD

Compared to Global bonds, a bridge between a local and an international CSD provides non-residents with a more continuous access to LX GoS. Since Globals are issued intermittently, access of non-residents to LX GoS through this channel is restricted and precludes non-residents from trading the full range of securities regularly issued onshore. In environments where custody and settlement processes pose unsurmountable obstacles for non-residents to jump into the domestic debt market, issuers can provide a solution by establishing a bridge between the local CSD and an

11. Similar to Eurobonds, LX Globals require the issuance of a Prospectus providing a detailed description of the macroeconomic and political situation and disclosing the risks associated to the credit and the offer itself. Collective Action Clauses (CAC) that provides specific regulations for resolution of default events are also regularly included.

12. For more details see Van der Wansem, Patrick B. G.; Jessen, Lars; Rivetti, Diego. 2019. Issuing International Bonds: A Guidance Note (English). MTI Discussion Paper; no. 13. Washington, D.C.: World Bank Group.

13. Brazil first issued a 10-y benchmark in 2005, 15- and 20-y references in 8 transactions in 2006, 2007 and 2010 and a new 10-y benchmark in 2012. Colombia debuted in this market with a 5-y bond in 2004, reopened in 2005, when a 10-y benchmark was also created. The latter was reopened three times (in 2005 and 2006), a 20-y bond was issued once in 2007 and a new 10-y benchmarks issued in 2010 and 2012.

international one.

The setup of the bridge/link requires that countries comply with legal, infrastructure and regulatory conditions for the ICSD to operate in a domestic debt market. Countries legal systems should not impose entry barriers to foreign investors and should allow ICSD to open nominee and omnibus accounts. Local CSDs, payment and custodial services must comply with international standards and be subject to appropriate regulation and legislation on settlement finality and insolvency. Finally, the tax authority should not pose burdensome obligations for the ICSD to comply with (for instance, imposing the obligation to collect taxes on capital gains). ICSDs are expected to adhere to information disclosure required by countries' regulation, however abiding to client confidential standards typically ruling in mature markets.

There are several legal barriers that restrict non-resident investors' ability to access and operate in the local debt market. These barriers typically include restrictions on: (i) full currency convertibility and transferability; (ii) international transfers of principal and coupon payments in the ICSD system; and (iii) international settlement of domestic securities. Establishing a bridge with an ICSD in such a constrained environment wouldn't make sense.

The legal framework should also allow ICSDs to open foreign nominee and omnibus accounts. Since non-resident investors often hold their securities in the name of an ICSD who acts as the nominee account operator of the omnibus account, this ICSD status and the concepts of foreign nominee and omnibus accounts should be legally recognized in the domestic market to enable the ICSD to provide its services¹⁴. Omnibus accounts have become standard practice in the international markets because of their benefits for liquidity management and collateral optimization.

To operate in a local debt market, ICSDs require that transfers and payments of financial products be properly regulated to avoid risks linked to the insolvency of participants in the transaction. These risks are subject of a thorough regulation and monitoring in advanced economies. For instance, in Europe the "Settlement finality in payment and securities settlement systems directive" (1998) specifies the rules to minimize such risks, strengthening settlement laws and

unifying regulation across settlement and payment systems in the region. ICSDs operations in EMs are also subject to the regulation of supervisory authorities in their home countries.

To establish presence in an EM, ICSDs also require minimum standards and regulation of custodial activities. These activities should all comply with standards set up by the relevant ICSD regulator and include: (i) holding securities in accounts at depositories in the relevant market; (ii) handling the distribution of coupons and principal that may involve several intermediaries; and (iii) keeping books and records of the beneficial owner, except for nominee and omnibus accounts.

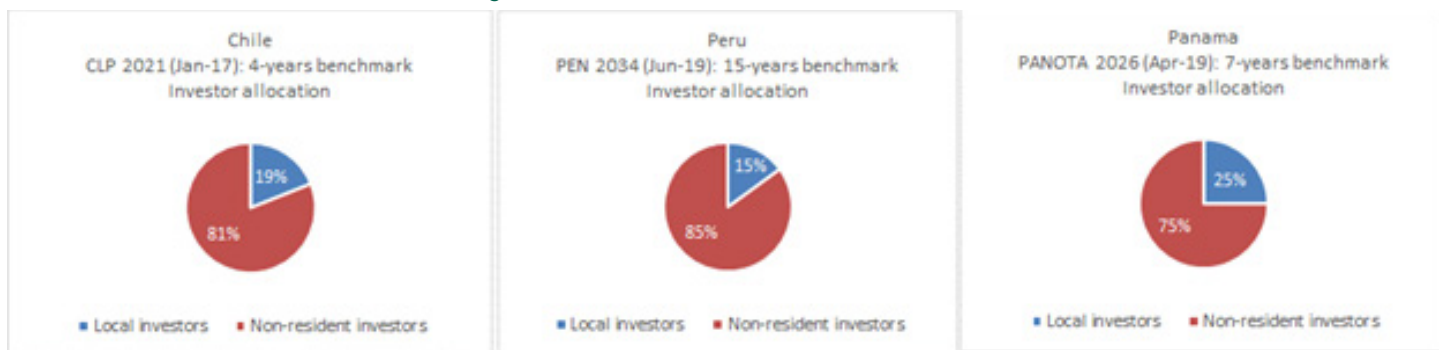
Compliance with all previous conditions allow ICSDs to offer non-resident investors the possibility to transact LX GoS in a secured and standardized manner. The ability to use a bridge between a local and an international CSD permits these investors to transact in an environment that mirrors that of their home country.

Some issuers prefer to establish the bridge with ICSDs for a subset of the GoS. DMOs in EMs typically limit the bridge to medium and long-term bonds and inflation linkers, where there is more interest in hosting capital inflows. Other issuers however make the entire universe of GoS clearable at ICSDs to maximize the participation of non-residents. In Latin America, Mexico has been the only country choosing to make all the securities euroclearable. Peru and Chile, and more recently Panama, have preferred to make only a subset of LX GoS euroclearable.

A few countries in Latin America have taken advantage of the bridge between a local and an international CSD to carry out syndications to offer local bonds¹⁵. Although syndications do not need a link with an ICSD, this connection with the international custodian attract stronger participation of non-resident investors. Chile, Panama and Peru have offered local bonds simultaneously in the international and domestic markets, enabling foreign investors to settle the transaction through Euroclear and domestic investors using the local CSD. In all cases non-resident investors have received most of the deals' allocation.

14. The name of the entity (rather than the investor's) appears on the register of the issuer. When securities are traded, the transaction is recorded in the single name of the ICSD, reducing administration time and costs. Nonetheless, in the case of default of the foreign nominee, the beneficial owner of the securities is protected. See PwC Strategy, "The impact of Euroclearability". April 2019, p10.

15. For decades syndications have been a traditional mechanism to issue bonds in the international capital markets (Eurobonds) but its use for local currency-denominated government bonds in the domestic market has been a more recent development, that originated in Europe shortly after the introduction of the Euro.

FIGURE 5 - Investor Allocation in Syndicated Transactions Settled in ICSD and Local CSD

Source: Countries' DMOs

Among the benefits of the bridge with an ICSD, DMOs typically point to the diversification of the investor base and the reduction of the funding costs. Peru and Mexico witnessed a profound impact in the demand for government securities largely, but not only, due to the setup of the bridge. In both countries the presence of non-residents infused a healthy dynamic to the domestic debt market that facilitated the lengthening of the redemption profile and the compression of yields along the yield curve. A PwC Strategy study estimates that for countries that have their LX GoS clearable through an ICSD the potential reduction in the borrowing cost in the domestic market ranges from 14 bps to 42 bps¹⁶.

The main benefit for investors is the wide access to onshore markets through their accounts with the ICSD. As stated before, thanks to the bridge non-resident investors need not worry about custody and settlement processes. In addition, the bridge provides local investors with the opportunity to trade financial instruments with a wider range of domestic and international investors. This opportunity has materialized in the Mexican government bond market but may be more limited in other EMs like Panama.

A potential disadvantage of the bridge is the fragmentation of the LX bond market. If non-residents access the local bonds through the ICSD and trade mostly among them, while residents trade in the domestic market through PDs, the government bond market may fragment. Although in theory investors could arbitrage between the two markets¹⁷, this may not occur if for some reason the two pools of investors do not interact; this can happen for instance, if the trade tickets of domestic investors are much lower than those of

non-residents, or, if in the absence of global market makers non-resident investors do not feel comfortable to trade with local players. Moreover, if non-residents opt to have accounts with ICSD rather than global banks with presence in the local market, their limited activity in co-related local markets (equity, corporate bonds, derivatives, repo) will contribute little to the broader development of the local capital market.

>>> BUYING IN THE LOCAL MARKET AND HOLDING THE GOS IN A LOCAL CSD

Brazil used the LX Globals as a vehicle to invite non-resident investors to participate in the domestic debt market later. After a debut Global issue and follow-up transactions, investors became familiar with the currency and the interest rate features of the "new security". The issuer then invited these non-residents to the onshore market which provided a broader array of government securities, investors and market makers, opening interesting alternatives for managing investors' portfolios. Brazil, as any other EM attracting non-residents to the local market, needed a sound clearing and settlement infrastructure, reliable custodial arrangements, and a fair and efficient tax treatment.

For non-resident investors to participate directly in the domestic debt market, the market infrastructure should align to international standards. The bridge mentioned in the previous section is an alternative because ICSDs provide a robust clearance and settlement infrastructure and processes that mitigate the associated risk (see Figure 3). If the local infrastructure is less efficient and effective, the DMO will be

16. See PwC Strategy, "The impact of Euroclearability", Apr. 2019, p6,18 for a more expanded view of the potential benefits. According to PwC, Chile, Russia, Peru, and Poland "... made significant progress in improving their financial market infrastructure and adjusting their legal framework to modernize their bond markets and ease foreign investor access to local markets...". See section 3 for a quantification of the benefits of an ICSD.

17. According to market players, PDs in Mexico have ample access to the domestic and the international trading pools.

less successful in attracting the non-resident investors to the domestic debt market.

An effective vehicle to attract non-residents to the domestic debt market is the presence of international/global custodians. These specialized financial institutions are responsible for safekeeping the GoS, settling transactions, collect coupons, administer related tax documents, maintain currency/cash bank accounts, and perform foreign exchange transactions. These entities are in fact “global” custodians because they safe keep assets for their clients in multiple jurisdictions around the world, using their own local branches, or, other local custodian banks with which they contract to be in their “global network” in each market to hold accounts for their respective clients¹⁸.

A non-resident investor holding a global custody contract with an international custodian could easily open an account to operate in a new emerging market. The use of international custodians is common in Brazil and Colombia, two of the main emerging markets in Latin America, that have opted to attract non-residents to the onshore market rather than opening a bridge with an ICSD.

Clarity and stability of the tax regime is essential to expand non-resident investors presence in the domestic debt market. Unclear tax regulation that leaves room for interpretation, opaque processes to determine administrative fees and procedures that are time consuming and change frequently will be a strong deterrent for foreign investors to enter an EM. Tax exemption is not a necessary condition. Taxes, as part of the cost, end up reflected in the security price when investors compare bonds from different countries, but exemption may significantly reduce investors’ operational burden to calculate and pay taxes.

The main advantage of the integration of non-residents in the domestic debt market is the increase in the demand for government securities and the broadening of the investor base, potentially improving GoS liquidity. DMOs welcome the interest of these new investors, particularly in long-term securities, because they pressure up the price of the securities and reduce the government funding costs. Non-residents benefit also because the onshore market provides regular access to a broader array of government securities and other financial instruments, opening interesting alternatives for managing their asset portfolios.

The main disadvantage relates to the potential for capital outflows to generate turbulence in the financial market, affecting interest and exchange rates and the impact this may have in the overall economy. As discussed in the introduction, EMs are familiar with the shocks generated by the sudden departure of non-resident investors which could be faster the more liquid the domestic debt markets are. Hungary is an example of a country that decided to reduce the vulnerability to these shocks by reducing the participation of non-residents in the market of LX GoS.

Mexico and Brazil, the two largest fixed-income markets in Latin America, have opted for different models to attract non-resident investors and both have been successful. Whereas Brazil attracted non-residents to the onshore market, Mexico opened a bridge with an ICSD. Although the Brazilian story has proven a resounding success on many fronts (see next section), non-resident participation in the government debt market has been more active in Mexico. Among other factors, this could be due to the more flexible FX regulatory requirements and the bridge with an ICSD in Mexico.

The following country cases show different approaches followed to bring in non-resident investors with the objective of improving the functioning of the domestic debt market, reducing FX exposure and lengthening their local currency yield curve.

18. Assets held in such a manner are typically owned by larger institutional firms including banks, insurance companies, mutual funds, hedge funds and pension funds. As of 2019, the 5 largest custodian banks in the world were: The Bank of New York Mellon, State Street Bank and Trust Company, JPMorgan Chase, Citigroup and BNP Paribas Securities Services.

>> 4. COUNTRY CASES

>>> THE CASE OF UKRAINE¹⁹

>>> CRISIS OF 2014-2015

Between 2014 and 2015 Ukraine experienced a perfect storm. The political volatility followed by massive shocks to the economy caused real GDP to contract by a cumulative 16 percent. Inflation rose to 43.3 percent from 0.5 percent two years before and the local currency, hryvnia (UAH), depreciated by about 70 percent (see Figure 6 below).

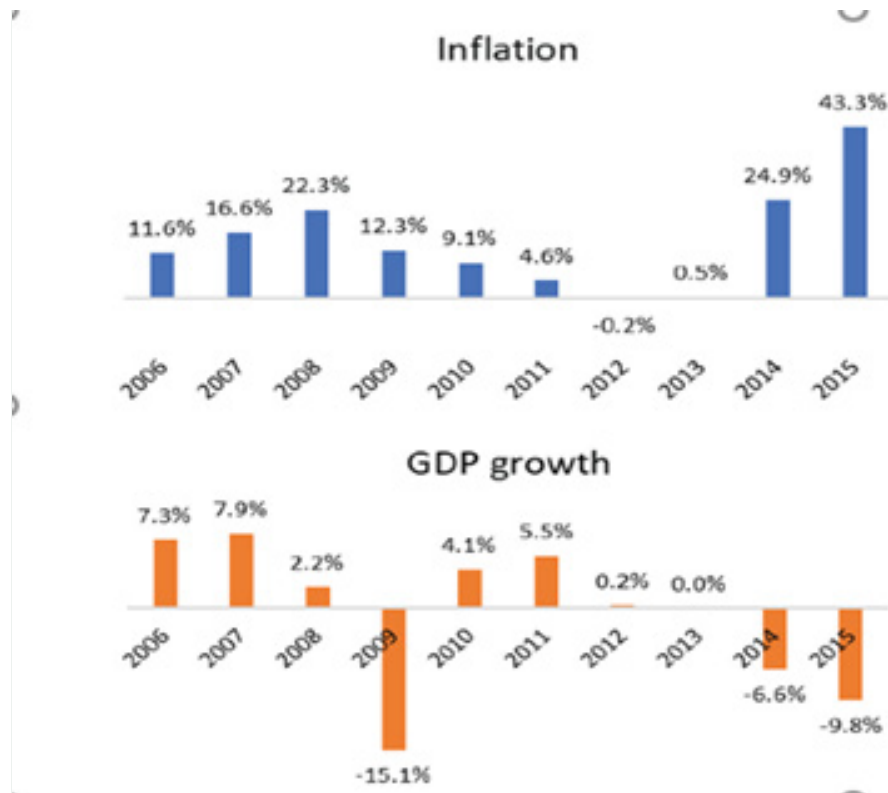
The devaluation of the Hryvnia resulted in lack of trust in the currency and sharply increased the dollarization of the economy. By end 2015, public and publicly guaranteed debt skyrocketed to 79 percent of GDP, from approximately 40 percent two years before, partially fueled by the need for funding the war, but also by the nature of the existing debt stock, 70 percent of which was denominated in foreign currencies.

To stabilize the economy, Ukraine had to restructure the external debt and requested a USD17.5 billion standby program with the IMF, followed by additional financial support from the WBG, the European Union, the US, and other partners. The disbursement of the financial package was based on reform commitments, including the requirement to strengthen public finances to make debt more sustainable.

Complementary to the decisive reforms, the Ukrainian debt office worked relentlessly to fill the large financing gap created by the crisis. By end 2015, the debt office had raised USD412 million, at a weighted average interest rate of 17% in local currency.

> > >

FIGURE 6 - Inflation and GDP Growth in Ukraine (2006-2015)



19. This section is based on a World Bank mission report prepared by Antonio Velandia and Jose Antonio Gagnani.

>>> FUNDING PROBLEMS IN 2016

After a nine-month break, the Ministry of Finance (MoF) resumed its UAH issuances in January 2016 and held 240 local currency GoS auctions throughout the same year, but 60 percent of those auctions failed due to lack of bids, or, bids with low prices that were rejected.

Poor auction performance was the result of four factors: auctions were cleared based on uneven fiscal needs along the year rather than market considerations; communication with the investors was lacking; debt instruments were highly fragmented; and the investor's base lacked diversity.

The Ukrainian debt office determined the cut-off rate of the auctions based on the available fiscal space, aiming to minimize the debt service impact on the budget deficit. However, the cut-off rate was invariably below the market interest rate, which limited investors' appetite.

There was a great disparity between what the DMO was offering in the auctions and the investors' demand mainly because there was no communication between them. This disconnection made it impossible for the Ukraine debt office to provide investors with meaningful issuance calendars.

Focusing on managing the cash inflows and outflows, the DMO opted for issuing small volumes of bonds with multiple maturity dates. In 2016, 75 percent of all outstanding UAH bonds had less than 35 days between maturity dates, sometimes with volumes below UAH100 million (USD 20,000). This approach created a massive amount of securities with the potential of cannibalizing each other making it impossible for market participants to trade these securities in the secondary market.

Finally, the investor base was small and homogeneous comprising only state and commercial banks whose assets were funded by corporates and households' short-term deposits. In the absence of pension funds and insurance companies, there was no natural demand for medium and long-term securities. The few banks that did buy medium-term bonds were required to put up capital to mitigate the interest rate risk created by the mismatch between short-term liabilities and medium-term assets. Non-resident investors who actively participated in the domestic debt market until before the war, had disappeared due to political and economic uncertainty.

>>> SETTING THE BASE FOR EXPANDING THE INVESTOR BASE

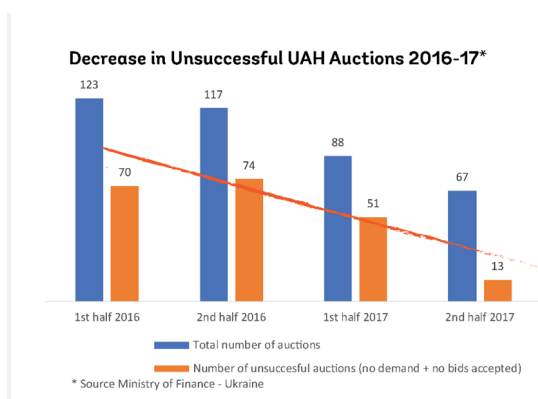
To address the lack of interest in UAH auctions the Ukrainian DMO opened a two-way communication channel with the banks, gauge the demand for government securities and started issuing bonds at market interest rates. In January 2017, the debt office started calling each and every one of the banks who had a potential interest to invest in the domestic UAH bonds; calls on Mondays were followed-up with auctions on Tuesdays. This was augmented with regular meetings with the primary dealers²⁰.

Gradually the number of unsuccessful UAH auctions decreased, from 63 percent in the first half of 2016 to 19 percent by the end of 2017, as both actions took hold, and the debt office and the market players views started converging.

Having more certainty on the results of the auctions allowed the authorities to better plan a quarterly issuance calendar. The ministry's commitment to the planned calendar increased over time and gave them more credibility which in turn encouraged the banks' more active participation in the primary market.

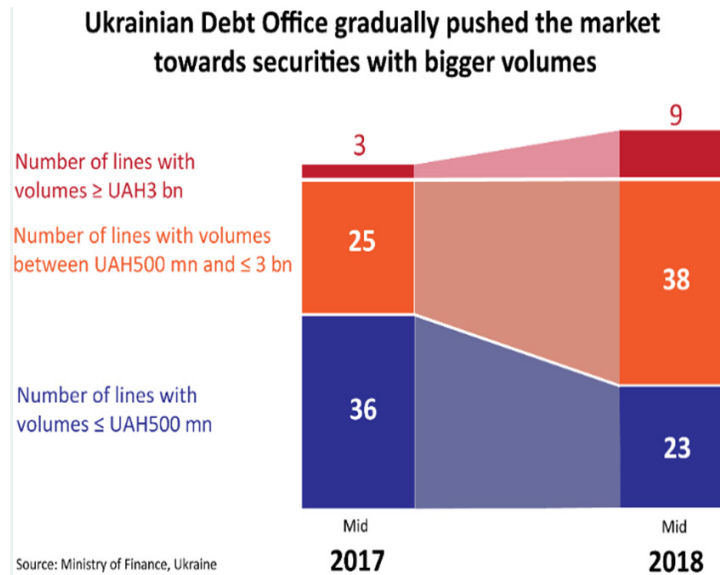
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FIGURE 7 - Total and Failed LX GoS Auctions in Ukraine (2016-2017)



20. Although the PD system was in place before the crisis, the domestic market came to stand still in 2014 and the system stop functioning. With the revival of the auctions in 2016 the PD slowly came back in that year only for those activities related to the primary market.

FIGURE 8 - Benchmark Bonds in Ukraine (2017-2018)



The ongoing communication with market players allowed the debt office to “sell” the need to reduce the number of security lines in the much-fragmented market. By being able to bring everybody on the same page, the debt office could stress the importance of developing benchmark bonds. The debt management office started re-opening particular bonds until they reached a critical mass, UAH3 billion, equivalent to about USD150 million, gradually pushing the market towards securities that would provide a reference for selected tenors which forms the basis of a yield curve.

>>> EXPANDING THE INVESTOR BASE

After clearing the auctions at market prices, establishing regular communication with investors and consolidating the issuance around fewer and larger benchmark bonds, Ukraine reached out to non-resident UAH investors. In 2018, Ukraine started exploring an expansion of the foreign investor base by allowing foreign banks with a presence in the domestic market to issue Credit Linked Notes (CLN). This allowed non-resident investors to acquire local currency securities without taking the convertibility risk and made offshore trading a possibility. The authorities also started discussions with Clearstream, an ICSD, to make UAH government securities eligible and explored issuing a local currency Global bond²¹.

Ukraine took multiple steps to provide the legal and operational framework for attracting international investors

such as currency liberalization (June 2018), adoption of the concept of the Nominee Holder (November 2018) and cooperation and linking with Clearstream (May 2019), eliminating the requirement for foreign institutions to use a local custodian.

As a result, non-resident participation in the local currency bond market increased from almost zero in July 2017 to 12 percent as of June 2019 and 30 percent by the end of that year²². A large portion of these capital inflows was invested in short-term securities in 2018 but investors’ appetite gradually moved to medium-term and long-term securities in 2019 (US\$2.8bn out of US\$3.5bn). There is no question that the presence of non-resident investors has increased competition, strengthened the price discovery process and improved the functioning of the domestic debt market.

Unfortunately, the market turbulence triggered by the COVID-19 outbreak caused a major reversal of capital flows in 2020. After reaching a maximum outstanding of UAH129 billion in mid-February, non-residents sold UAH29 billion in the second quarter and another UAH16 billion in the third after which their holdings stabilized at around UAH85 billion, about 16% of the marketable stock of local currency securities. At the time of writing this paper the situation had improved both for the local currency that recovered some ground and the yield curve had moved downward compared to the levels seen at the end of the first quarter. The authorities are conscious

21. This idea was dropped because the authorities thought there was a significant overlap between the demand for offshore and onshore securities and this would have fragmented the market.
 22. Ukraine Minister of Finance, Debt Department. The participation is calculated excluding the local currency bonds held by NBU.

of the threat represented by the potential reversal of these capital inflows and are working on the next critical objective: extending the average life of the domestic debt portfolio.

Finally, in the case Ukraine, it is especially relevant that debt management is anchored in sound macroeconomic and financial sector policies to ensure that the level and rate of growth in public debt are sustainable. Given its high debt levels and the substantial foreign currency and refinancing exposures of the government debt portfolio, it is of the utmost importance that Ukraine access to new financing provided by non-residents is not used as a manner to relax the fiscal stance that makes its debt sustainable.

>>> THE CASE OF PANAMA ²³

Panama is a fully dollarized economy with one of the lowest debt/GDP ratios in the region, about 40% in 2019. Panama reached high-income status in 2017, according to the World Bank classification methodology, and enjoys the highest per capita income in Latin America. At the end of 2019, Panama central government debt reached USD 31 billion, comprising official loans from bilateral and multilateral institutions, 20%, Global Bonds, 58%, and government securities issued in the domestic market, 22%²⁴.

In Panama, excess demand for government securities by the Social Security Fund (the largest pension fund in the public sector) reduces the yield of these securities to abnormally low levels deterring other investors from buying government securities and inhibiting PDs to fulfill the function of market

makers. To address this market distortion and improve the price discovery process, the authorities built a bridge with Euroclear and launched a local bond through a book building process with a strong participation of non-resident investors: this local bond was launched in April 2019 and reopened in September 2020.

>>> CONTEXT: SUPPLY AND DEMAND OF GOVERNMENT SECURITIES

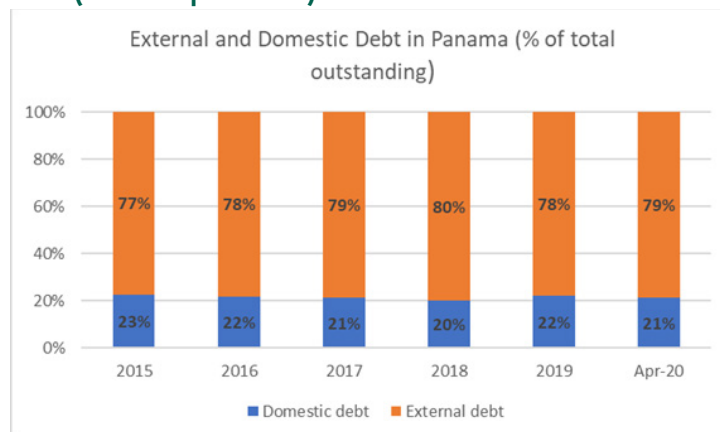
Panama meets its financing needs mainly by issuing bonds in the international capital market and borrowing from multilaterals. Only a fifth of the government debt is raised in the local market. Panama aims to increase this share up to 30%, partly in response to the assessment of the rating agencies²⁵.

Local debt instruments include 6, 9 and 12-month T-Bills and fixed coupon securities with maturities up to 10 years. All securities are placed in auctions conducted through the Stock Exchange and open exclusively to the Primary Dealers (PDs) and entities aspiring to the primary dealership (APD). The security leg is cleared through Latin Clear (local CSD) and the cash leg through BNP (Banco Nacional de Panama) without DVP.

Domestic debt in Panama is small relative to other Latin American economies. Although few domestic benchmark bonds were built up in the past few years, their sizes barely reach USD 1 billion. This reflects the authority's preference for placements in the international capital market combined with too many domestic securities and relatively small financing needs.

> > >

FIGURE 9 - Debt Composition (2015 - April 2020)



Source: Public Financing Directorate, Ministry of Economy and Finance

23. This section is based on World Bank mission reports written by Antonio Velandia, Leandro Secunho and Carlos Blanco.

24. Source: Public Financing Directorate, Ministry of Economy and Finance

25. See debt management strategy document 2014-18 in <https://publico.mef.gob.pa/es/SiteAssets/Home/FolletoEstrategia.pdf>

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TABLE 1 - Domestic Debt and Benchmark Bonds in Selected Latin American Countries (2019/2020)

	ABSOLUTE DOMESTIC DEBT (USD BN)	DOMESTIC DEBT/GDP	NUMBER OF BENCHMARK NOMINAL BONDS > USD 1BN	NUMBER OF BENCHMARK NOMINAL BONDS > USD 3BN
BRAZIL	1,463.80	80.4%	5	5
COLOMBIA	95.30	29.1%	10	8
CHILE	65.92	26.2%	9	5
PANAMA	6.80	10.2%	3	0
PERU	37.90	16.6%	10	7

Source: BIS and DMO's websites

> > >

TABLE 2 - Size and Number of Auctions by Instrument (2015-2019)²⁶

in USD Mn

Type of instrument	2015			2016			2017			2018			2019		
	#	Range	Average	#	Range	Average	#	Range	Average	#	Range	Average	#	Range	Average
T-bills	21	26-95	58	13	18-35	27	11	13-60	26	11	23-50	29	12	20-40	31
Notes															
Panota 2019	6	25-125	48	7	19-120	45	-	-	-	-	-	-	-	-	-
Panota 2023	-	-	-	-	-	-	3	22-60	40	6	35-100	64	3	52-100	82
Bonds															
Pabonds 2024	-	-	-	4	99-300	175	4	32-145	88	1	94	94	2	112-140	126

represents the number of auctions in the respective year

> > >

TABLE 3 - Domestic Debt Stock of Marketable Instruments (2015-2019)

USD Mn

	2015		2016		2017		2018		2019	
T-bills	604.0	15%	252.0	6%	288.0	6%	323.0	7%	331.5	5%
Bonds	1,464.0	36%	2,162.5	50%	2,514.5	52%	2,608.5	55%	3,281.4	51%
Notes	1,949.1	49%	1,942.5	45%	2,061.0	42%	1,776.4	38%	2,878.6	44%

26. The government debt instruments in Panama are classified according to their tenor: Treasury Bills up to 1 year; Treasury Notes between 2 and 10 years; and Treasury Bonds equal or greater than 10 years.

Coupon securities are issued few times a year in sizes roughly ranging from USD30 million to USD150 million. On-the-run securities are regularly reopened until a target level determined by decree at inception is reached. This level ranges between USD600 million and USD1 billion. Compared to the Global Bonds, the outstanding stock of local bonds is much smaller.

Until 2019 more than half of the stock of government securities issued locally were held by the public sector with the Social Security Fund (Caja del Seguro Social - CSS) absorbing one third of the total. Private banks held another 20%, equivalent to less than 1% of their total assets, that exceeded USD100 billion. The rest was held by other investors.

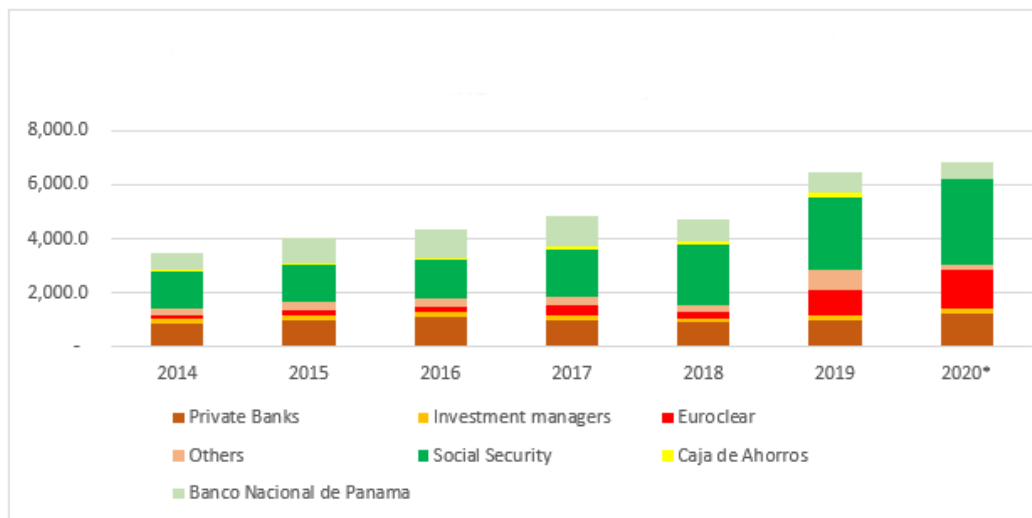
CSS balance sheet and cash inflows are too large for the size and frequency of the auctions of local bonds. As per its investment policy, the bulk of CSS long term assets is invested in Panama government securities and bank deposits. In 2019 the CSS had reserves in excess of USD7 billion and close to USD3 billion were invested in GoS, most of it in local coupon bearing securities. With assets growing at an annual rate close to 20%, CSS is by far the dominant player in GoS auctions²⁷.

Banks do not show much appetite for government securities despite the relatively friendly regulation of the Superintendencia of Banks²⁸. First, local bonds are illiquid, leading some institutions to allocate risk capital even though this is not required by the Superintendencia of Banks; and second, local securities are too expensive compared to Panama Global Bonds.

Until April 2019, other investors also found local bonds unattractive because of their relatively low return. Non-residents had no incentive to open a custody account in an unfamiliar market where expected returns and liquidity are generally below those of the Global Bonds. Retail investors on the other hand find government securities too expensive compared to the competitive rates offered by bank deposits in a country that has no history of banking crisis. Figure 10 shows the dominant position of CSS and the recent gain in importance of non-resident holdings through Euroclear.

> > >

FIGURE 10 - Evolution of Holders of Government Debt Instruments (USD MN)



(*) September 2020

Source: MEF Directorate of Public Finance and CSS financial reports 2014 and 2015

27. The CSS latest available financial report for 2018 (<http://www.css.gob.pa/estados%20financieros%202018.pdf>) showed USD0.7 billion invested in Eurobonds and USD1.6 billion in domestic bonds; a provisional balance sheet for 2019 shows an increase of about USD1 billion in long term investments (<http://www.css.gob.pa/rendiciondecuentas2020.pdf>). Other public investors include entities charged with collecting obligatory savings from public servants and educators; as of closing to 2019 their total savings were close to USD0.5 billion and grow at a 15% annually. These entities delegate the management of savings to specialized fund managers who place most of the funds in bank deposits and about 20% in local bonds.

28. Holdings of GoS whether local or external do not consume risk capital and are considered liquid assets for all liquidity indicators. In addition, GoS do not compute for the limits related to economic conglomerates. See Superintendencia of Banks' Acuerdos 004-2008 y 008-2016: https://www.superbancos.gob.pa/superbancos/documents/laws_regulations/rules/2008/agreement_4-2008.pdf https://www.superbancos.gob.pa/superbancos/documents/laws_regulations/rules/2016/rule_8-2016.pdf

>>> THE RELATIVE PRICE AND LIQUIDITY PROBLEM

Small and infrequent auctions together with the monopsonist power of CSS make local bonds illiquid. A large part of the supply of local bonds ends up in CSS balance sheet at abnormally high prices, misaligned with those of the Global Bonds and drastically reducing their potential trading in the secondary market.

Due to their higher liquidity, investors would expect Panama Global Bonds to yield less than their local peers. This was indeed the case for many years and the relative high yield of the local bonds was the main explanatory reason for the authorities to lean more towards external funding. The situation however inverted with the rapid growth of CSS balance sheet. While lower funding costs driven by CSS aggressive bidding are good news to the government, such a benefit comes at a high cost to pensioners that may need to be compensated in the future by government transfers and, more importantly, by the damage inflicted to the secondary market.

The relative illiquidity of the local securities becomes apparent when compared to the Global bonds issued under the New York law. Whereas typical tickets of Globals are USD20-30 million, tickets for local GoS are USD0.5 million. Orders for several millions of local bonds cannot be executed in the Stock Exchange platform without moving the price. The liquidity problem is compounded by the fact that Global Bonds can be easily used in repo transactions, whereas local bonds cannot, and the relevance of the liquidity argument is further aggravated by the fact that contrary to other EMs, Panama lacks a central bank that can act as a lender of last resort.

In a nutshell, the relatively small size of the domestic securities auctioned by the DMO combined with the large absorption by the CSS distort the price discovery process, compressing the yields below those of similar securities issued offshore. As a result, these artificially low yields reduce the appetite of other investors and inhibit the potential for trading in the secondary market.

>>> PANAMA'S APPROACH TO FIND A SOLUTION

In April 2019 Panama issued a large government bond (Panota 2026) under Panama law through book building and clearable and settled directly in Euroclear for non-residents and through the local CSD for resident investors. The objectives were to attract widespread interest from both local

and non-resident investors and strengthen domestic funding as an alternative to the external funding. These objectives are fully aligned with the government debt management strategy to make the government finances more resilient to external shocks and sudden stops of capital flows²⁹.

The security was a 7-year benchmark and the issue size USD1 billion. Although the bond was issued under local law, the offering documentation followed 144-A/Reg S format to facilitate the marketing with non-resident investors. The security was listed in LatinClear and Euroclear. Two thirds of the placement were allocated to asset managers (67%) and the rest was distributed among pension funds and insurance companies (16%), banks (14%), and hedge funds (2%). Local investors received 25% of the placement, US investors 48% and the remaining 27% was allocated to investors from other countries.

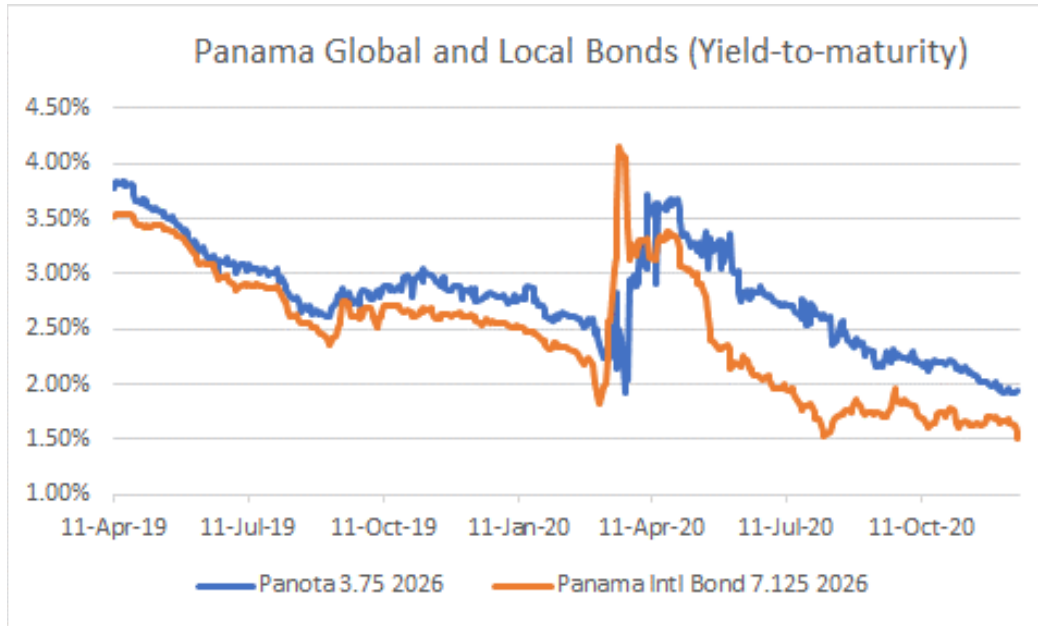
The substantial increase in size made the local bond more attractive to all investors, diluted the participation of the CSS and significantly improved the price discovery process. Together with the size of the placement which could not be achieved in an auction, two other features were essential for attracting a strong demand especially from non-residents. First, the fact that the security was Euroclearable increased the demand because investors could use the security as collateral for repo operations offshore which they couldn't do with the local securities since local repos do not comply with the Global Master Repurchase Agreement (GMRA). Second, is the potential for the security to be included in the EM bond indices.

Pricing looks more aligned with the fundamentals. As illustrated in Figure 11, since its inaugural issuance the spread between the Panota (new domestic 7-year benchmark) and the Global Bond, both maturing in 2026, has averaged 31bps as of December 2020, with the local security yielding more than the Global Bond, probably reflecting the jurisdiction and issue premium. This spread widened out significantly after the yields spike observed in the beginning of the COVID-19 crisis and the subsequent stronger price recovery on the Global bond compared to the domestic note (averaging 61 bps from May 18th to mid-December 2020). In the last quarter of 2020, the average spread has tightened to 45bps.

29. See <https://publico.mef.gob.pa/es/SiteAssets/Home/FolletoEstrategia.pdf>

> > >

FIGURE 11 - Yield-to-Maturity of Domestic Panota and Global Bond, Both Maturing in 2026



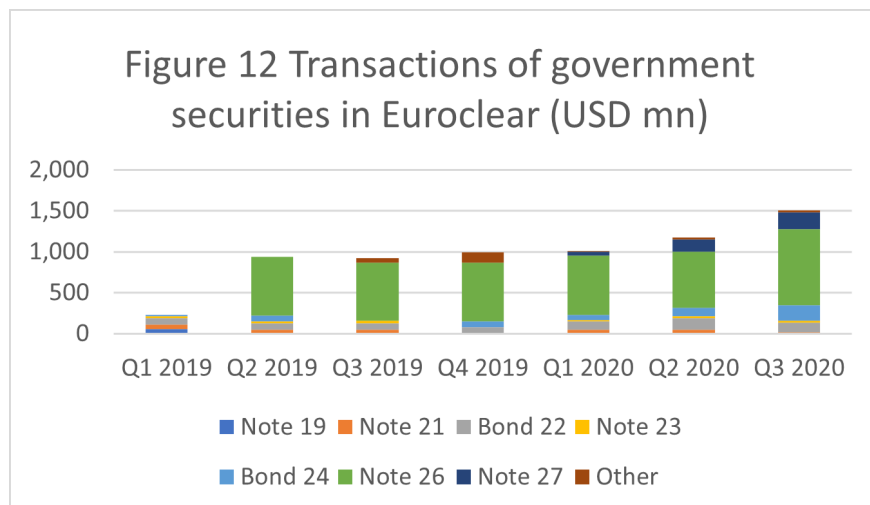
Source: Directorate of Public Finance

Better pricing has also promoted more active trading in the secondary market. Although there are no consolidated figures on the turnover of government securities, reports from the Stock Exchange and from the DMO indicate a strong pick up of trading in 2019 and 2020 after the launch of the Panota 2026. In the first nine months of 2020, transactions with Treasury Notes in the Stock Exchange reached USD0.8 billion to represent 42% of all secondary market activity; this is a substantial increase compared to the entire 2019 with USD0.3 billion and 17%, respectively.

Most trading however has not occurred in the Stock Exchange but in the Euroclear platform. As shown in figure 12, transactions in Euroclear quickly grew after the launch of Panota 26 exceeding the USD1 billion mark in the second quarter this year. It is important to point out that these figures may include repos and could grossly overestimate the true turnover of securities. Nonetheless this information together with the reports from the Exchange do offer strong evidence of higher trading activity after the operation conducted in April 2019.

> > >

FIGURE 12 - Transactions of Government Securities in Euroclear (USD MN)



Source: Directorate of Public Finance

The Panota 2026 was reopened in September 2020 in a triple-tranche transaction for a volume of USD 325 million, out of USD 2,575 million total deal, paying an annual return of 2.77%. The yield of the reopening was 100 basis points below the original one due to the compression of yields in EM bonds; however, the yield of the Panota 2026 has increased relative to the Globals. In fact, the new 10-year Global maturing in 2032 issued in the same transaction was priced at a yield of 2.25%, significantly lower than the one paid by the reopened Panota, regardless of being 6 years longer. This may indicate that issuance jurisdiction and possibly investors' expectation in terms of liquidity still favor the external instruments.

Panama's experience suggests the timeliness of a review of the debt management strategy to help attract non-residents to the local market. The debt management strategy could lean more on the domestic debt instruments and make it explicit a policy to create and maintain large benchmark bonds. Such policies will help build more volume in selected points along the yield curve while reducing the problem created by the dominance of CSS.

Auctions may not always be the best mechanism for the placement of government securities and, in the case of Panama, could contribute to the pricing and liquidity distortion created by the dominance of CSS. Small economies like Slovenia privilege the use of syndications over auctions to deal with the combination of low funding requirements and a small local market. Syndications guarantee better pricing and facilitate the functioning of the secondary market as a continuous mechanism for price discovery.

Auctions could still be used for T-Bills and even for reopening of benchmark bonds initially launched by syndication. The latter possibility could be reinforced if CSS is given investment alternatives other than government securities. Both the large size of the syndications and the alternative investment opportunities will reduce CSS's dominant role in the GoS market mitigating the current distortion.

Finally, while newly issued Euroclearable bonds will be better priced and more liquid than other domestic bonds there is the danger that the market for domestic government securities splits into two. The fragmentation may occur if non-residents keep trading in the Euroclear platform while local investors trade with PDs and settle and clear their trades in the local CSD. Nonetheless, if price divergences arise, international players with access both to the domestic and the international

trading pools may take advantage of arbitrage opportunities mitigating this potential fragmentation.

>>> THE CASE OF COLOMBIA³⁰

At the end of 2019, Colombia considered launching a 30-year nominal domestic bond in local currency. The longest maturity for a nominal TES was 15 years and the authorities weighted the potential of a longer tenor bond in terms of smoothening the redemption profile, providing a reference rate for mortgages and becoming the only issuer in the region, aside Peru, of 30-year securities in local currency. This section summarizes the analysis conducted in mid-2019 that supported the launching of a 30-year domestic bond in September 2020³¹.

>>> SUPPLY AND DEMAND OF LOCAL CURRENCY BONDS

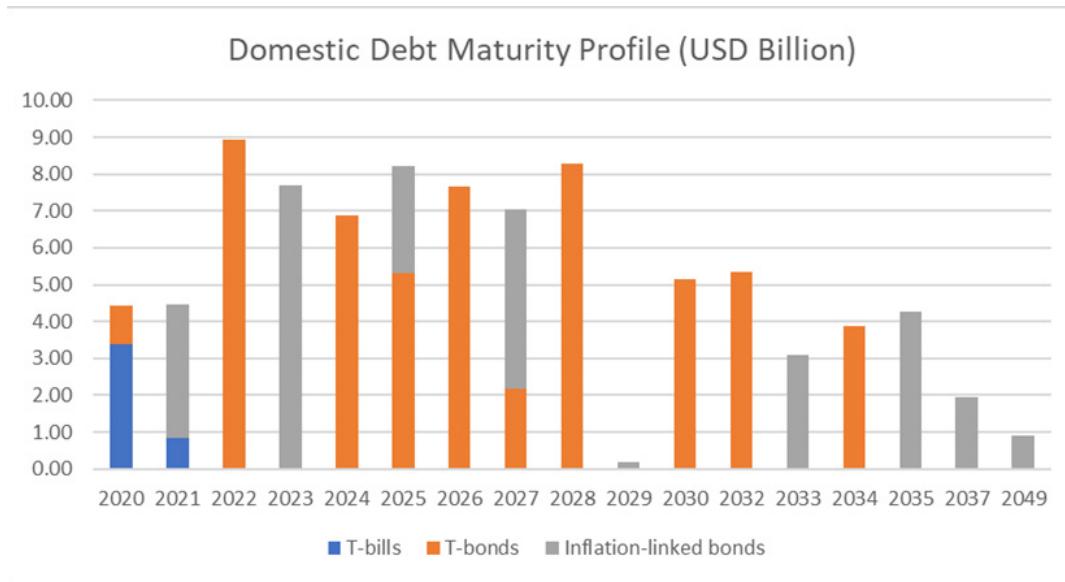
The outstanding stock of domestic government securities at the closing of May 2019 was COP 316 billion, 28% of GDP; one third comprising inflation-linkers and the rest nominal fixed-rate bonds. All domestic bonds (TES) are issued through weekly Dutch auctions restricted to PDs. Nominal and inflation-linked bond auctions alternate every other week and all on-the-run benchmark maturities are offered at every auction. The size of individual lines in the regular auctions is on average less than USD100 million equivalent.

Benchmarks for nominal bonds are 5, 10 and 15-years and 5, 10 and 20-years for inflation-linkers. The longer maturities are reopened until their remaining life reaches the next shorter benchmark. At the beginning of 2019, there were 16 benchmark lines. While no defined target is set for the outstanding volume of a benchmark bond, there is an indicative ceiling for the debt maturing in any given year equal to 8% of total debt outstanding to contain refinancing risk. This ceiling amounted to approximately COP 25.2 billion, or USD7.6 billion in 2019 and was exceeded by several individual bonds as illustrated in the redemption profile presented in Figure 13.

Domestic pension funds are the largest holders of TES, representing close to 30% of the total. They are followed by non-resident investors slightly above 22%, with a focus on the longer maturities (10-year and beyond). Commercial banks (17%) and public sector entities (18%) also hold a significant share of the domestic debt (see Table 4 below).

30. This section is based on a report prepared by Sebastien Boitreaud and Antonio Velandia.

31. The decision to launch a 30-year TES in local currency was made later in 2019 and should have been implemented during the first quarter of 2020; however, due to the market turmoil unleashed by COVID-19, the transaction was postponed until September 2020.

FIGURE 13 - Redemption Profile of Colombian Domestic Government Debt

Source: DGCPNT

TABLE 4 - Ownership of TES by Category of Investors in May 2020

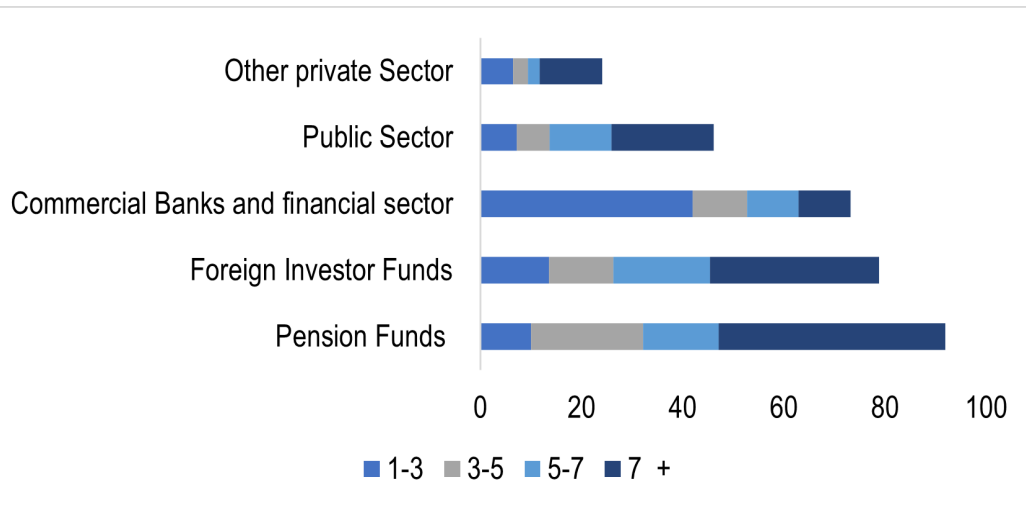
CATEGORY OF INVESTORS	% OF PARTICIPATION
PENSION FUNDS (DOMESTIC)	29.73
NON-RESIDENTS	22.57
COMMERCIAL BANKS (DOMESTIC)	16.60
PUBLIC SECTOR (DOMESTIC)	18.39
INSURANCE COMPANIES (DOMESTIC)	5.13
REST OF THE PRIVATE SECTOR (DOMESTIC)	7.58

Source: DGCPNT

The share of non-residents has been increasing over the past ten years partly because of the reduction in the withholding tax, from 14% to 5% in 2019, and partly in response to the inclusion of the TES in the GBI-EM in 2014. Over the 18 months previous to May 2019, these investors' share had been relatively stable at around 25% (USD 23 billion) and remained diversified. From a geographical perspective, accounts from Northern America represented the largest share (41.3% in 2018), followed by Europe (39.8%) and Asia-Pacific (16.8%).

In total there are about 2,000 non-resident investors who hold TES through accounts with local custodians as there is no bridge between the domestic central securities depository (CSD) and international CSDs such as Euroclear or Clearstream. Demand for long-term securities concentrates on pension funds and non-residents. As illustrated in the chart below, the bulk of GoS with tenors beyond 7 years is held by these investors.

FIGURE 15 - Holdings of TES by Maturity and Investor Type in September 2019



Source: DGCNT. Maturity is expressed in years and the horizontal axis measure volumes in COP billions

>>> ANALYSIS CONDUCTED IN MID-2019: CHALLENGES FOR LAUNCHING A 30-YEAR LOCAL CURRENCY BOND

The main snag for launching a 30-year peso TES was its long duration and corresponding high interest rate exposure for those investors with short-term horizons. This is typically the case of commercial banks and most public and private investors with limited capital to absorb large fluctuations in the securities' market value. Pension funds are the only domestic investors with a balance sheet that could comfortably absorb the new security. This is partly because of the size of their assets and the nature of their liabilities, but also because pension funds can classify their bond holdings for trading, or, held to maturity and only those securities held for trading need to be booked daily at market prices.

Non-resident asset managers however were willing to take the risk as returns were attractive and market liquidity provided a reasonable exit door. In terms of aggregate size, non-residents demand could easily surpass that of the domestic pension funds especially if the new security were incorporated into the global indices. These investors typically trade large tickets and would be uninterested if the amounts placed were relatively small.

The Colombian authorities estimated that for a USD1 billion issue of the new security a third of the demand could come from pension funds and other domestic investors. This means that the bulk of the demand for a new 30-year TES would have to come from non-resident investors.

Auctions presented a main obstacle for the participation of non-residents as their tickets (USD20-50 million) are too large for the auction size (average: USD100 million for inflation linkers and USD200 million for nominal bonds). For many nonresident investors, syndications are the preferred investment mechanism because they have better control on the pricing and can acquire the desired volume in a single transaction. Similarly, large size auctions leave little room for the issuer to react if demand surprises on the low, or, high side compared to syndications where they have more flexibility to adjust both the price and the quantity.

In the absence of non-residents, PDs could reduce their participation in the auction since it would be more difficult for them to make a market for these securities. Capital consumption of these bonds for banks is large and pension funds monopsonist position would make the market making of these securities a highly risky proposition for the PDs. In addition, for the issuer, the absence of non-residents presented the risk that pension funds would push up the yield of the bond, increasing the cost of financing to the government.

To avoid these snags Colombia decided to frontload the participation of non-resident investors through a domestic syndication rather than an auction. The main advantage of the syndication was the attraction of non-resident investors. Syndications also provide a more robust price discovery process which is particularly important given that the TES yield curve for nominal bonds went out to 15 years only. Pricing through a syndication is superior for two reasons: (i) the basis for the pricing is a placement 10 times larger than that of an auction; and (ii) the iterative process allows feedback

to adjust the bids involving the issuer, lead managers and a large number of investors. More balanced allocation between different investors profile is also facilitated in a syndication transaction.

On the other side, reputational risk needed to be cautiously assessed in case that the transaction failed due to mistake in the market reading. Lead managers could provide a backstop, absorbing possible lack of demand, but this could also jeopardize trading in the secondary market. To mitigate this risk and maximize the probability of a successful transaction it was critical for the DMO to clarify the plans for future reopenings of the security through further syndications, or, regular auctions.

Clear communication with local investors and PDs and strong marketing were identified as the key elements to the success of the transaction. The public announcement of the government intention to issue a new 30-year nominal rate benchmark bond had to be followed by a discussion with key domestic investors about the benefits of adding a new point to the yield curve, the manner this will affect the issuance strategy and the issuer's commitments to regular re-taps through auctions, including the market making on the secondary market.

Finally, deal and non-deal roadshows were considered to help affirm interest of non-resident investors already familiar with the issuance of LX GoS and attract new accounts. Thereafter the transaction could be announced to the market with the details of the mandate³². In the execution of the transaction the price guidance and the intended issuance amount following informal discussions between the lead managers and investors regarding demand were considered critical for their implications on the performance of the security in the secondary market.

>>> EXECUTION: THE TRANSACTION IN DETAIL

A 30-year local currency bond was launched on September 9th, 2020 for a total amount of USD1.2 billion equivalent (COP4.8 billion) priced at par with a yield of 7.25%. The new security maturing in 2050 issued under Colombia law is the longest-term fixed-rate bond in local currency that has been issued in the country and is the first placement made through the mechanism of syndication.

Three bookrunners were selected for the transaction, all

high-performer PDs for government securities according to the evaluation conducted by the DMO. Among the bookrunners, a Colombian bank with a large balance sheet and a wide network with local investors played a critical role to ensure a smooth clearing and settlement of the transaction. The other two bookrunners focused on different pockets of non-resident investors all of which already had custody accounts in Colombia³³.

The bid-to-cover ratio was close to 2 and the transaction was executed in less than 6 hours. The transaction attracted purchase orders for close to USD2.2 billion equivalent (COP9.1 billion) and the DMO opted to close the transaction relatively quickly after seeing strong demand from real money investors and the marginal yield converging at the high end of the range anticipated by the bookrunners and internal assessments.

Most of the new securities were allocated to non-resident investors. The final allocation to non-residents was close to 70%³⁴, higher than the 60% anticipated by the DMO. As expected, the major domestic investors were the Colombian pension funds. Also, as expected, very quickly after its launch the security was included in the JPM and Barclays local currency bond indices.

The transaction settled in T+3 to facilitate the role of the local CSD, mitigate the volatility on the FX market and limit operational risks. Following the local standard of T+0 would have been inconvenient given the size and innovative dimension of the transaction. Allowing a longer window for settlement helped mitigate the impact of the transaction on the FX market as non-residents had more time to convert foreign currency into COP.

Since the inaugural transaction, the 2050 TES has been reopened at regular auctions for a total amount of USD300 million equivalent close to 25% of the original outstanding. The yield of the 2050 TES has compressed significantly in the secondary market reaching 6.88% at the end of October 2020 and the new bond is one of the top 3 securities most traded in the secondary market. Part of this activity has been triggered by anecdotal evidence about the opening of new custody accounts by non-resident investors. After the syndicated transaction, the bond was included in the list of eligible securities PDs are requested to trade, as the minimum required volume for the activation of this obligation was achieved.

32. Selection of 3-4 book runners / lead managers who will prepare the transaction: settlement modalities with the local CSD, legal documentation, feasibility of a bond exchange, informal feedback from non-resident investors, etc.

33. Even though investors with a global account with any international custodian could open a local account in Colombia in about 3 business days, there was no evidence of new accounts participating in the transaction.

34. On the share allocated for non-resident investors, 2/3 was sold for fund managers, 1/4 for pension funds and the remainder for insurance companies, private banks and hedge funds.

It's important to emphasize that the transaction was conducted as a pure domestic offering without any 144a/Reg S documentation or SEC filings. Avoiding 144a/Reg S documentation or other SEC filings required that the book-building process, communications, underwriting and settlement be all managed by the local offices of the banks involved. The documentation emphasized that the placement was offered outside the US exclusively to Colombian residents, or, to investors with custody accounts in Colombia.

Judging from its main two objectives, the transaction was an outstanding success. First, the transaction achieved the objective of elongating the domestic yield curve helping mitigate refinancing risk at a juncture when the pandemic has dramatically increased the financing needs in the middle of a very difficult macroeconomic environment. Second, the TES 2050 contributes to the development of the Colombian capital market, serving as a benchmark for potential issuers from the public and private sectors of long-term instruments such as pensions, annuities, insurance, mortgages and infrastructure financing.

>>> THE CASE OF BRAZIL

Brazil successful stabilization monetary and fiscal policies adopted in early 2000s, led to a significant improvement in

the composition of the government debt towards the end of the decade. These reforms undertaken against the backdrop of external debt crises in the 80's and 90's allowed the stabilization of inflation anchored on the tripod of a primary surplus, a floating exchange rate and an inflation target regime. The diversification of the investor base, including larger participation of non-resident investors and increasing reliance on the domestic market underpinned this transition. The accumulation of international reserves³⁵ driven by portfolio and direct investment inflows and greater reliance on domestic LX GoS helped reduce FX risk and avoid the repetition of the external crises witnessed in earlier decades.

>>> BACKGROUND: DEBT COMPOSITION AND INVESTOR BASE IN THE EARLY 2000S

At the end of 2002, the Brazilian debt composition was highly concentrated in overnight floating rate bonds³⁶ and FX securities issued domestically and offshore. Domestic debt³⁷ represented 70% of the total but had a high exposure to foreign currency, interest rate and refinancing risks. By December 2002, the share of fixed-rate bonds was only 2.2% and debt maturing in 12 months was about 40%. Targets set for the main risk indicators in the 2002 Annual Borrowing Plan were not met due to the difficult market conditions faced in that year.

> > >

TABLE 5 - Debt Composition and Maturity Profile (Brazil, 2000-2002)

Brazilian Domestic Public Debt Profile (end-of-year) - %					
	2000	2001	2002	Targets at ABP 2002	
				Min	Max
Fixed-rate	14.8	7.8	2.2	7	10
Floating (overnight)	52.2	52.8	60.8	51	56
Inflation-linked	5.9	7.0	12.5	6	8
FX	22.3	28.6	22.4	25	30
Others	4.8	3.8	2.1	3	4
Average time to maturity (in months)	29.8	35.0	33.2	34	38
Average time to refixing (in months)	10.7	12.4	20.0	13	15
% maturing in 12 months	42.4	25.6	38.9	26	29

Source: Brazilian National Treasury

35. International Reserves/GDP: 6.4% in Dec 2001, 11.4% in Dec 2008 and 20.1% in Dec 2018.

36. These instruments called "Letras Financeiras do Tesouro", LFT, are floating rate bonds with interest that compounds daily and are issued in tenors up to 7 years.

37. Debt issued in the domestic market irrespective of the residence of the investor, or, the currency of denomination of the issuance.

The risky debt profile was not just a reflection of the macroeconomic environment and the contagion in the previous 5 years, but, to an important extent, a result of a homogeneous investor base. In December 2002, domestic commercial banks and mutual funds held more than 80% of the domestic debt stock. While the former are typically funded by short-term deposits, the latter tracked the overnight rate, holding portfolios with very short-term securities.

>>> BUILDING-UP PRIOR CONDITIONS TO DEVELOP THE DOMESTIC MARKET AND ATTRACT NON-RESIDENT INVESTORS

To address the vulnerability of the government debt portfolio, Brazil implemented policies to develop the domestic market. These policies included the reorganization of the DMO, the creation of domestic bond indices, a significant upgrade of the DMO communication with the market, the creation of a PD system, and the consolidation of issuance on benchmark bonds.

An institutional reform in 2001 reorganized the debt management office under a back-middle-front office structure prevailing in the most advanced countries. A dealing room was established in 2002 to strengthen the market monitoring and communication with market participants³⁸.

In 2001, before the creation of benchmark bonds, the Brazilian Association of Financial and Capital Market Association (ANBIMA) launched the first fixed income index tracking domestic public bonds. Later in 2005, under a joint effort with the DMO, ANBIMA (former ANDIMA) expanded the family of indices aiming to provide references for mutual funds, which are key players in the Brazilian financial market and whose portfolios track mostly the overnight rate. Alongside with a general index that follows the return of all GoS issued under competitive mechanisms, subindices reflecting groups of securities (fixed-rate, inflation-linked, floating-rate, and subdivisions by tenor and duration) were also introduced in the following years³⁹.

A dedicated investor relations unit was set up in the middle-office to strengthen the DMO and MoF communication with market participants in 2002. The new unit conducted the communication function in a systematic manner and enhanced the transparency already in place (Annual Borrowing Plan

published since 2001 and Monthly Debt Report since 2000). An Annual Debt Report was first published in 2003, and auctions and other information started to be published in English and uploaded to the website together with presentations for investors covering areas beyond debt management. More importantly, a handout was made available in the website covering the overall process for non-resident investors to access the local market⁴⁰.

A Primary Dealer system was created in 2003 under a joint arrangement with the Central Bank. In the initial structure, PDs were split in two groups: primary market and specialists. The PD system regulated the PDs participation in the auctions and trading in the secondary market. Quoting obligation in electronic trading platforms was introduced only in 2008.

The policy for the creation and maintenance of benchmarks was also established in 2003. The consolidation of government securities under fewer benchmark securities facilitated PDs to comply with the quoting obligation and fostered liquidity in the secondary market. While the longest tenor for fixed-rate nominal GoS was only 18 months⁴¹, 2003 represents a turning point from the perspective of the organization of maturities: T-bills (zero-coupon bonds) started to be issued with maturities in the first day of January, April, July and October; floating rate zero-coupon bonds in March, June, September and December; and inflation-linked bonds would to be issued to mature on May (for odd maturity years) and August (for even maturity years).

>>> LENGTHENING DEBT MATURITIES AND IMPROVING DEBT PROFILE: THE ROLE OF NON-RESIDENT INVESTORS

The efforts to lengthening the yield curve and improve the debt composition continued in 2004 and 2005 with the launching of 4, 5 and 7-year fixed-rate bonds.

The next step, in September 2005, was the placement of a 10-year LX Global Bond. Aware of the lack of domestic demand for such a long tenor, the DMO decided to issue an offshore local currency Global Bond⁴². At 12.75%, the yield of the Global was over 200 basis points lower than the longest nominal fixed-rate domestic bond, which was a 7-year benchmark⁴³.

38. In the same year, the Brazilian DMO launched a retail debt program (“Tesouro Direto”) to promote financial education and expand the access to government securities.

39. https://www.anbima.com.br/pt_br/informar/precos-e-indices/indices/ima.htm

40. <https://www.gov.br/tesouronacional/en/federal-public-debt/investor-relations/non-resident-investors-handout>

41. Floating-rate zero-coupon bonds were issued with maturities up to 4 years, while inflation linked bonds (mostly targeting pension funds and still representing a small portion of the debt) were issued for tenors up to 28 years.

42. The first 10-year benchmark was issued on September 19th, 2005 with a maturity date on September 2016 for a volume of BRL 3.4 billion, equivalent to approximately USD 1.5 billion at the time of the deal.

43. The 7-year local bond (NTN-F) maturing in 2012 was sold in a regular auction on September 20th, 2005 at an average yield of 15.10% for a volume of BRL 0.25 billion. The spread of 235 bps (despite of the local bonds being 4 years shorter) illustrates how attractive local currency bonds offshore were to the DMO.

In 2006 and 2007 the DMO kept issuing local currency bonds in the international markets to extend the maturity profile. Seven transactions were conducted during this period including the launching of new 15- and 20-years benchmarks. As with the initial transaction, the authorities found very strong demand from non-residents and were able to extend the yield curve at an attractive cost. Two additional LX Global bonds were launched in 2010 and 2012⁴⁴ to take advantage of relatively low yields, but by then the DMO had decided to concentrate its efforts in deepening the domestic debt market and concentrate efforts in the International Capital Markets on the development and maintenance of liquidity in the USD curve.

In May 2015, the participation of non-resident investors in the LX domestic bond market peaked at 20.8%, possibly indicating that LX Global bonds would not bring as much value as they had in the past. Non-resident investors had become familiar with the domestic market infrastructure, standards and procedures. Also, the liquidity of T-bonds⁴⁵ had improved significantly underpinned by the diversification of the investor base, PD system reforms and the substantial improvement in debt composition.

The 10 and 7-year benchmarks, the preferred habitat of non-residents, have become increasingly important in the government borrowing strategy. To speed up the buildup of new 10-year benchmarks, the DMO supplemented the regular

auctions with exchanges and special incentives for PDs in the first auctions of a newly created benchmark (occurring every 2 years). This practice was conducted regularly until 2018 and was abolished in 2020, as the new benchmarks could be developed relatively fast through regular weekly auctions. Adjustments in the Annual Borrowing Plan and auction calendar were also made in 2020 given the impact of COVID-19 in the market and the borrowing financing needs.

Since 2015 the participation of non-residents in the domestic debt market has steadily declined. This trend responds to the loss of the country investment grade in 2015/2016, the political turbulence that has accompanied the country during the last two administrations and, to a less extent, the decline in domestic interest rates⁴⁶. However, the role of non-residents in the extension of ATM remains critical as illustrated by the fact that although their share of total domestic debt in October 2020 was 9.8%, their holdings of Notas do Tesouro Nacional, Serie F - NTN-Fs (medium- and long-term fixed-rate T-bonds) securities was over 40%.

The Brazilian Annual Borrowing Plan for 2020 indicates the possibility of issuing, for the first time, a fixed-rate benchmark longer than 10 years in the local market. Given the development of the COVID-19 outbreak, this plan has been postponed as the Treasury has to deal with a sharp increase in market volatility and a significant steepening of the yield curve.

>> 5. CONCLUSIONS

Macroeconomic and market characteristics of each country are different and so is the authorities' evaluation of the pros and cons of the participation of non-resident investors in the LX public debt. Consequently, the paper offers no guidance on the extent countries should seek, or, increase the participation of non-resident investors in their domestic debt market, or, via LX Global bonds. However, during the last two decades the participation of these investors in LX emerging bond markets has increased significantly suggesting the DMOs' perception that the pros outweigh the risk of sudden capital outflows.

DMOs that opt to rely on non-resident investors to support the implementation of their government debt management strategies find four main channels. These channels include: using CLN-type of instruments, issuing of LX Global bonds,

establishing a bridge between local and international CSDs and integrating these investors to their domestic debt markets. CLNs and Global Bonds seem to be associated to early stages of the process of attracting non-residents whereas the bridge with ICSD and the full integration with domestic bond markets correspond to a more advanced stage.

The CLN channel is the easiest and most flexible to implement. It offers an avenue to attract non-resident investors unwilling to access the domestic market, with a minimal effort from the DMO and great flexibility to accommodate relatively small amounts that would not be economical in a syndication operation. Ukraine began using this avenue right after the war as the only acceptable possibility for non-residents at the time. While some DMOs have switched from using CLNs to a bridge

44. The last offshore operation in local currency bonds took place in 2012. It was an exchange that helped create a new 10-year benchmark. In this transaction, the Global BRL bond maturing in 2024 was issued with a yield of 8.60% while the 10-year benchmark in the domestic market (NTN-F 2023) was issued in an auction 2 days later with an average yield 10.77%. This spread seems to indicate the continued importance of convertibility risk for non-residents, although considerations on scarce/inferior supply in the previous years need to be made.

45. A 10-years local benchmark bond was firstly issued in 2007. Since then, the 10-years benchmark became increasingly important in the government borrowing strategy representing a reliable reference in the yield curve. Currently, bonds maturing in 2027, 2029 and 2031 are issued in the auctions (2027 and 2029 have alternate fortnightly issuances, while 2031 is weekly issued).

46. There is no question that the diversification of the investor base has helped to avoid major turbulences in the market on the back of these capital outflows. In October 2020, roughly ¼ of the debt was held by pension funds, another ¼ by banks and same share by mutual funds.

with the ICSD, others trying to follow the same route have not been able to do so because the issuer does not meet conditions of minimum issuance volume, or, has regulations that restrict operations of foreign investors, or, obligations on tax collection that the ICSD cannot meet.

Local currency Global Bonds have been used as a temporary option to attract the interest of non-resident investors. The authors found no evidence of countries whose strategy for attracting non-resident investors is anchored on the issuance of Global Bonds for a sustained period of time. Rather, as shown in the case of Brazil, these instruments tend to be used in transition to integrating non-residents to the domestic debt market, or, opportunistically when yields are significantly lower than those of onshore securities. The reason could be that issuers try to avoid creating two yield curves: one offshore and one onshore, which splits the liquidity and may become an obstacle for the deepening of the local currency bond market.

In countries with an established base of non-resident investors, there is no strong evidence that a strategy to clear and settle domestic government securities locally or internationally would make a difference in the contribution of these investors to the development of the domestic bond market. Nothing in the evidence analyzed in this document allows us to conclude that for a DMO having non-residents buying in the local market and holding the government securities in a local CSD is better, or, worse than establishing a bridge with an ICSD. In the Latin American region, Mexico, Chile and Peru went for the ICSD option whereas Colombia and Brazil preferred that non-residents trade LX GoS using the local infrastructure underpinned by the presence of global custodians.

The success in attracting non-residents reflects the breadth and depth of the domestic market and the inclusion of LX securities in the global indices rather than the channel used to bring in the non-residents. All the five Latin American countries referred to above have active secondary markets and a strong presence in the global local currency bond indices. Peru, for instance, found that a policy for issuing large benchmark bonds was a precondition to improve liquidity in the secondary market and for the inclusion of its bonds in international indices. After the setup of the bridge with the ICSD, Peru has seen a dramatic increase in the demand from non-residents and a corresponding tightening in the yields of government securities. The case of Colombia shows that targeting the inclusion of the 30-year TES in the JPMorgan and Barclays local currency bond indices was key to attract

strong demand from non-resident passive asset managers and other sophisticated investors.

Brazil and Colombia have preferred to have non-resident investors use their domestic market infrastructure. Compared to establishing a bridge with an ICSD, this channel is far more demanding for the issuer needs to convince investors that the local infrastructure for clearing, settlement, custody as well as the environment for exiting the market fully satisfy their requirements. Three motives could help explain why Brazil and Colombia declined using the ICSD channel: (i) The presence of global custodians in the domestic fixed income market; (ii) having non-residents clear their trades in the local CSD integrate them more fully in the domestic bond market reducing the risk of fragmenting trading in different platforms: for instance, one in the ICSD for non-residents and another one for domestic investors; (iii) a robust clearing and settlement infrastructure for domestic bonds that host foreign investors can be easily expanded for other financial assets, benefiting other agents and contributing to the broader agenda of developing the domestic capital markets.

While the integration of non-residents to market development in Brazil and Colombia was critical, other countries with less developed domestic markets may choose a different route. Many Middle-Income countries in Latin America and elsewhere lack the breadth and depth of a domestic bond market to justify the changes in the legal and regulatory framework and the substantial upgrade in the market infrastructure needed to adopt the Brazil/Colombia model. For instance, for countries with relatively low domestic funding, like Panama, the ICSD path could be more efficient and realistic.

In Chile and Peru, the evolution from using CLNs to a bridge with the ICSD has proved a sound and successful choice. This evolution has de facto terminated with the CLN channel that has become inefficient and expensive. The creation of a link with an ICSD has been shown an effective mechanism to attract foreign investors not only in EM but also in advanced economies. This market infrastructure tool does not need to be discontinued once foreigners directly access the domestic market through global custodians. As shown in Mexico, the two avenues can coexist; however, considerations need to be made in terms of possible market fragmentation and the objective of a broader development of the domestic capital market.

>> APPENDIX - PRECONDITIONS FOR NON-RESIDENT INVESTORS TO COME⁴⁷

In the search to maximize profits, non-resident investors are constantly exploring opportunities to enter markets that provide attractive risk weighted returns. This includes carry trades and short-term bets on exchange rates that drive large capital flows. Because of the potential destabilizing forces, few small EM economies are fully open to capital flows. Controls on the FX operations, reserve requirements, limits on type/amount assets non-residents can buy and taxes are frequently used to limit capital inflows. EMs however welcome medium and long-term investments. In this annex we explore the conditions non-residents need to integrate local currency government securities as a new asset class in their investment portfolios⁴⁸.

Non-resident investors assess emerging markets by the underlying macro fundamentals and demand reasonable liquidity and a robust market infrastructure to integrate them into their portfolios. Macroeconomic and financial comprehensive and timely information are essential to assess the issuer's history, standing and prospects. Market liquidity refers not just to easy entry to and exit from the market at a reasonable cost, but price transparency and ability to transact in the volumes typically traded by these investors. Market infrastructure includes minimum standards of security and efficiency in the trading, clearing, settlement and safeguard of the securities, and the compliance with all regulations, including taxation, affecting transactions.

>>> M A C R O E C O N O M I C FUNDAMENTALS

Macroeconomic policies largely determine the fundamentals of local currency government securities. A sound monetary policy reflected in low and stable inflation provides a base for stable growth, whereas a responsible fiscal policy with sufficient fiscal space and buffers for bad times enhances the issuer repayment capacity. These internal policies are complemented with those to manage the balance of payments. The latter serves as an indicator of the adequacy of the exchange rate and the appropriateness of the level of international reserves. Sound fundamentals include also a robust financial system with a well-capitalized and well-functioning banking system that lend to the private sector and the efficient handling of a secure payment system.

Fundamentals also include political stability, the soundness of the institutional arrangements and the robustness of the legal and regulatory framework. Political turmoil, volatile regulations and a weak rule of law constitute highly risky environments where swift decisions by authorities on exchange controls, taxation, or other fees can severely affect the return of assets on which non-resident investors have little protection. Investors are naturally interested in reform agendas that improve these environments to take advantage of attractive returns; otherwise, faced with such a high risk, investors maybe opt for a peer market where remuneration may be lower, but risks are too.

Although the issuer fundamentals are typically assessed by the credit rating agencies, such an assessment is not always complete and timely as proven by the last global financial crisis. In consequence, non-resident investors need rapid access to information related to the so-called fundamentals, or, any other information that may lead to the change in the issuer's credit rating. Having to choose between two similar EMs, non-resident investors would lean for the one where information is more transparent and timelier.

>>> FUNCTIONING OF THE PRIMARY AND SECONDARY MARKETS

When non-residents acquire local currency government securities through the primary market, transparency and predictability of the issuances are essential. First, the issuer is expected to publish an annual borrowing plan⁴⁹ supplemented by regular updates (quarterly or monthly auction calendar) with further detail of securities and aggregate amounts to be placed. Second, auctions need to be announced with a few days of anticipation indicating the expected amounts to be issued on each due date. Third, the results should be announced quickly after the auction is closed. Auctions regularity in terms of frequency and volumes is also highly valued by investors because it facilitates the buildup of positions according to market conditions and investment strategies⁵⁰.

Non-residents will probably be reluctant to enter markets where the government funding is perceived to deviate from competitive market practices. This could be the case of countries where financial repression keeps interest rates

47. This annex is in part based on a 2019 Technical Assistance report authored by Sebastien Boitreaud (Finance, Competitiveness and Innovation Global Practice) and Sylvain Choquette (international consultant).

48. Even though non-residents may leave if the financial conditions turn unfavorably, their investments are not exclusively driven by the expectation of short-term returns associated to exchange or interest rates, but by the contribution of the new asset class to their overall portfolio return.

49. Ideally underpinned by a Medium-term Debt Management Strategy (MTDS).

50. In a few small economies with a strong fiscal position, public debt and borrowing needs are so low that regular auctions are not feasible. A few syndicated transactions, or, scattered auctions may offer a better alternative.

significantly below market levels, or, where DMOs use private placements with selected investors, such as public banks, or, State Owned Entities (SOEs), to lower the cost of funding below what could be considered fair market levels. Although flexibility on cutting the auction is desirable from the issuer's perspective, setting interest rate caps that do not reflect investors' demand can jeopardize price discovery and reduce the demand for government securities.

A clear policy to create and maintain benchmark bonds is particularly important because it contributes to the liquidity of the securities in the secondary market. The more aligned with the international standards primary markets are, the more comfortable non-resident investors feel about adding LX GoS to their portfolios. Among these practices⁵¹, a clear policy to create and maintain benchmark bonds determines to a large extent the functioning of the secondary market and the liquidity of the securities which is a condition for the non-resident potential exit of the market.

Benchmark bonds not only foster their liquidity in the secondary market but define key nodes of the yield curve. Well-defined tenors and a strategy to build them up facilitate non-residents understanding the menu of available instruments and the comparison across EMs⁵². These references are not limited to long-term bonds, and governments should not overlook the development of short-term references (up to 1-year) in coordination with the central bank, anchoring the establishment of a reliable yield curve and contributing to develop a healthy money market.

The inclusion of benchmark bonds in the most widely used domestic bond indices is a highly effective tool to attract non-residents to the LX GoS. JP Morgan GBI-EM, FTSE EMGBI (ex-Citi) and Bloomberg Barclays EM LX are the most popular in the asset management industry. The inclusion of LX GoS in these indices places immediate demand from investors that follow passive strategies by replicating the indices and put the asset in the radar screen of others to include it as alternative for active management⁵³. DMOs should be aware of the conditions for access to these indices, for instance the minimum size, and make sure they are complied with.

51. Other less critical standards refer to the calculation of price and yield.

52. Bloomberg provides updated prices for domestic local currency GoS broke down by tenor (benchmark), for countries with well-established points along the yield curve.

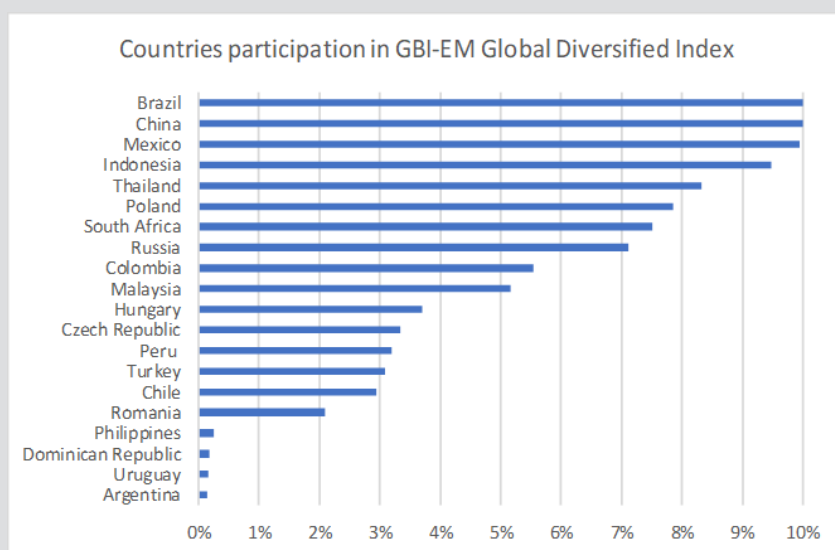
53. Being in the index could even help those issuers with low levels of yield that in principle are not enough to attract the attention of non-resident investors. On the one hand, investors who replicate the index strive to hold all of the underlying securities in the index. During periods of high risk, a flight to quality benefits the safest stocks in the index, even if their performance is low.

>>> BOX 3: EM LOCAL CURRENCY BONDS INDEXES: CAPTIVE DEMAND FROM PASSIVE FUNDS

The increasing participation of foreign investors in EM local currency bond markets illustrated in Figure 2 has multiplied the number of countries investors need to monitor to manage the risks created by these “new” securities. Portfolio diversification using passive management strategies, for instance, through ETFs, is a common way to mitigate these risks by taking exposure to an asset class instead of individual countries, and to substantially reduce the cost of monitoring the issuers.

The implementation of these type of strategies has been greatly facilitated by the availability of indices that capture the theoretical return of the asset class. Such indices also become the benchmark to measure the performance of fund managers that adopt active strategies placing bets on specific assets expected to outperform the asset class.

In the early 1990’s, JP Morgan launched the Emerging Market Bond Index (EMBI) that became popular with investors monitoring the yield spread of a specific country against an average of EMs, based on the return of their Global dollar-denominated bonds. Later in 2005, JP Morgan launched the EM Local Currency Bond Index (GBI-EM) shifting the universe of assets from Eurobonds to domestic bonds. The GBI-EM comprises 20 EM countries with the weights given by the market value of eligible bonds and a cap to ensure that no country exceeds 10% of index. According to JP Morgan (Thompson Reuters), by September 2019, this index was tracked by funds with net asset value amounting USD202 billion.



Before including a country in an index, its bonds are temporarily kept on a “watchlist” to confirm that all index conditions are met and modifications in the index are phased throughout months to avoid abrupt changes in the benchmark. The first step already tends to pull in inflows to the local currency market and the flows typically accelerate after the confirmation.

During the last three years, Chile increased the size of euroclearable local currency bonds through liability management operations. This increased the country’s share in GBI-EM to 3.3% in September 2019 from 0.1% in 2016. Using a similar strategy, Peru lifted its share in the index to levels close to Chile and the participation of non-resident investors in the local bonds market rose from 34% on early 2016 to 48% at the end of 2019.

However, the participation in an index can also trigger capital outflows from non-residents. In recognition of the progressive opening of China’s financial market, 9 of its bonds started to be included in the index as of February 2020, which will set China’s GoS share at the 10% cap, reducing by about 1% the weight of countries like Thailand, Poland, South Africa, Colombia and Malaysia.

For non-residents entering through the secondary market pre and post-trade transparency are fundamental conditions. Non-residents should know the price at which they can transact at any time⁵⁴. This includes the availability of a reliable yield curve to price any individual security. Similarly, the timely reporting of prices and volumes of closed transactions allows the investor to monitor what is going on in the market.

Electronic trading platforms (ETP) complement the phone-based over-the-counter (OTC) market and help improve price discovery and transparency⁵⁵. Phone-based OTC is the dominant trading environment in most emerging and advanced markets, where big ticket transactions are usually undertaken. However, ETPs serve as an important and complementary tool for non-resident (and other) investors to easily monitor price changes and, in some cases, to facilitate post-trade compliance. These platforms typically host PD quoting obligations (where verification of fulfilling them is made possible) and provide an enabling environment for market making (business-to-business – B2B).

The more PD systems align with international best practice, the more familiar they are for non-residents and the easier for them to trade in the new market. Most non-residents are familiar with PD systems. PDs rules that promote trading of key benchmarks in minimum size with reasonable bid/offer spreads will most likely incentivize the participation of non-residents.

However, in some countries, PD systems may not be the appropriate vehicle for fostering the demand in the primary market and the liquidity in the secondary market. A minimum market and debt size, appropriate market infrastructure and a reasonably diversified investor base should be in place for a PD system to work. The costs and benefits for the issuer in establishing the system and for candidate institutions to participate should be carefully assessed. Also, the conditions to attract non-resident investors may be reasonably satisfied without the existence of a PD system.

>>> MARKET INFRASTRUCTURE

Secure and efficient clearing and settlement systems is another requirement typically demanded by non-resident investors. They will be unwilling to take counterparty risk if trades are settled in an institution that is not well capitalized, or, that is not properly regulated and supervised to protect the rights of the participants. Markets that require buyers to

freeze the money leg in advance, or, more generally where settlement is not Delivery versus Payment (DVP) can also be regarded as inconvenient to non-residents. Similarly, blocking of the securities before trading poses an additional constrain for market-making, limiting secondary market liquidity.

Non-resident investors may be unwilling to open an account with the local CSD through a local custodian. Entering into an unknown market through unknown counterparty requires a thorough due diligence process that is likely to be too cumbersome and expensive. Since there are many EMs competing to attract them, foreign investors would choose those offering a clearing and settlement environment they are already familiar with.

A plausible alternative is offered by specialized entities that act as custodians in many different markets becoming in practice Global Custodians. Once an investor opens a custody account anywhere in the world it is relatively easy to open accounts in other countries since the due diligence (know your client, KYC) has already been completed. Global Custodians therefore save non-residents going through the detailed assessment of the local counterparties and the CSD process.

Some large non-resident investors may prefer to trade, clear and settle directly from their own accounts with International Clearing and Settlement Depositories (ICSD). This alternative is made possible when the issuers establish bridges between CSD and ICSD letting non-residents use their accounts with ICSD and eliminating the additional layer offered by the global custodians.

Robust regulatory and legal frameworks are required to address failed transactions and enable covered short-selling, which can also be supported by an active repo market.

Another component of the market infrastructure relevant for non-resident investors is the availability of liquid foreign currency hedging tools. While FX hedges should not be a hard constrain for non-resident investors to acquire LX GoS, their availability is highly desirable. These instruments may be preferably offered in the interbank market; however, if this is not the case, the central bank can partially fill this gap. FX hedging instruments are also key for international issuers to consider issuing bonds denominated in the local currency of a specific EM country.

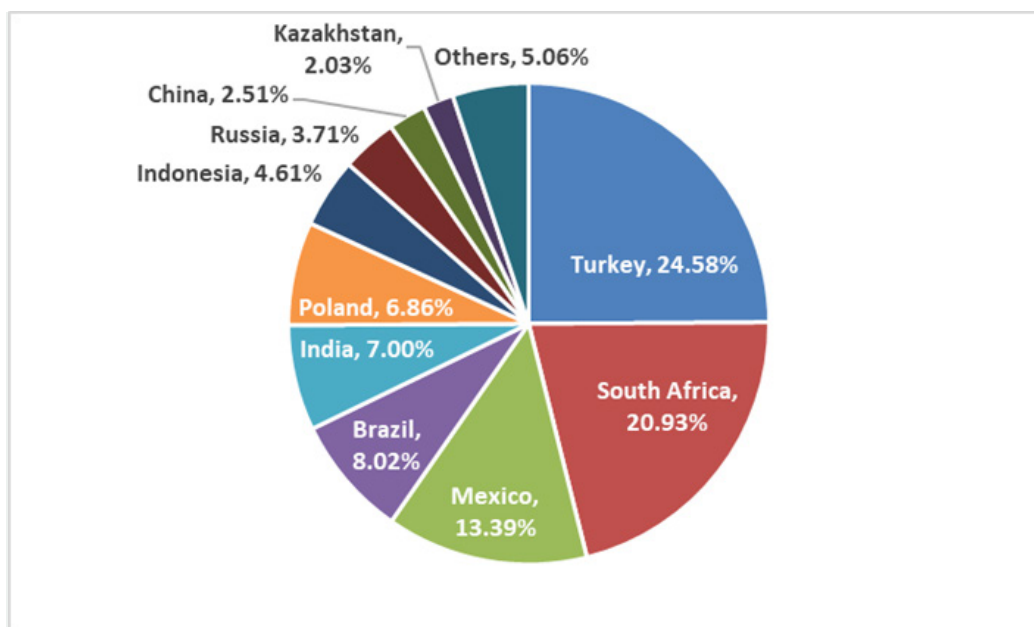
54. In some countries where markets are shallow, securities are priced for regulatory reasons based on yield curve models. These prices may not accurately reflect those available in the secondary market.

55. In Europe, ETPs are considered OTC since they are not a regulated market. However, this is not the case of most EMs.

As of December 2019⁵⁶, International Financial Institutions (IFI) had issued LX bonds in at least 38 currencies⁵⁷ with an outstanding over USD 85 billion. The success of these transactions suggests that investors were willing to take the currency exposure but not the credit risk of the countries issuing those currencies, or, were reluctant to use their market infrastructure. If this interpretation is correct, IFIs bonds in EM LX might be a first step for non-resident investors to add LX GoS to their portfolios. The figure below shows the main local currencies in which IFIs have issued:

> > >

FIGURE 3 - Countries of Currency Denomination of IFI's LX Bonds



>>> FUNCTIONING OF THE PRIMARY AND SECONDARY MARKETS

DMOs with captive local investors and negligible presence of non-residents see little relevance in establishing and cultivating strong and long-standing relations with investors. In these countries, investors are regarded as agents focused on maximizing their profits at the expense of higher funding costs for the government and transparency is perceived to work against the interest of the issuer. This perception is reinforced by DMOs that see the primary market as the border of their remit⁵⁸ and by a captive investor base comprising SOEs and large public asset managers accustomed to operating in a rather opaque environment.

In contrast, the participation of non-resident investors frequently leads the DMO to establish clear and regular communication with investors. Often, the active participation of non-residents triggers local authorities to review the processes for communicating their intentions, the predictability of their actions, the way funding plans are designed and executed, the clearing and settlement of the transactions as well as the custodial arrangements available for investors.

Non-residents need abundant information before they decide whether to incorporate a LX GoS to their portfolio. It's not enough for this information to be available: it should be easy to find and timely produced. International sound practice indicates that investors are used to dedicated channels where

56. Source: Bloomberg. It considers the existing stock of local currency bonds issued by IBRD, IFC, EIB, EBRD, ADB, AfDB and IADB.

57. Figure 3 shows the currencies of denomination of LX bonds placed by IFIs. Under the category "Others" there are 28 countries, each representing less than 1%: Romania, Argentina, Czech Republic, Philippines, Hungary, Georgia, Ukraine, Colombia, Peru, Uruguay, Nigeria, Ghana, Croatia, Zambia, Chile, Malaysia, Uzbekistan, Armenia, Costa Rica, Egypt, Botswana, Serbia, Uganda, Namibia, Kenya, Bangladesh, Korea and Thailand.

58. Moreover, this approach is contrary to the need to promote the development of a local market for government securities and to the objectives of building a debt portfolio resilient to shocks while lowering medium-term funding costs.

all relevant information can be readily found on a timely basis. These channels, managed by Investor Relations units, include dedicated websites, pages in Bloomberg, meetings with investors, emails and other contact access among others.

The website is probably the most important communication channel. Aside from the information on the planned supply of GoS, dedicated websites typically include: (i) comprehensive guide for investors including guidance on how to buy GoS, regulation of capital and foreign exchange markets, taxation, prospectus; (ii) key data on the government securities such as relevant regulation, auctions results and transactions in the secondary market; (iii) historical statistics on yields and volumes primary and secondary market; and (iv) presentations for roadshows and conferences covering macroeconomic and other relevant issues of the public finances.

Another key communication vehicle are the roadshows in which the issuer presents at various locations a sales pitch to institutional investors of the security to be offered. During roadshows the issuer may take the opportunity to attract specific investors and enhance the transaction⁵⁹. Non-deal roadshows serve to provide public information to investors, including updates on the issuer situation and vision for the future, except that no debt securities are offered.

The Institute of International Finance (IIF) launched in 2004 the “Principles for Stable Capital Flows and Fair Debt Restructuring” which includes the evaluation of Investor Relations programs (IRPs) in 38 countries⁶⁰. The assessment that includes 20 criteria for the evaluation of Investor Relations and 23 for the evaluation of the data dissemination may be used as a guide for countries aiming at improving their communication strategies and attracting non-resident investors.

59. Brazil also use the roadshows to promote investment opportunities beyond the GoS: Excellence in Securities Transactions (BEST), created in 2004 as a roadshow managed by BRAIN (Brasil Investimentos e Negócios) to promote Brazil as a Financial Center, under a joint initiative of the Brazilian Financial and Capital Markets Association (ANBIMA), the Brazilian Exchange and the Brazilian Federation of Banks (FEBRABAN), with the support of the Brazilian Securities and Exchange Commission (CVM), the Central Bank of Brazil, and the Brazilian National Treasury (GoS issuer) - <http://brainbrasil.org/en/best-en/about-best/>

60. https://www.iif.com/Portals/0/Files/content/Research/pcg_report_10_22_2019.pdf

>> REFERENCES

Arslanalp and Tsuda (2014, updated) – <https://www.imf.org/~media/Websites/IMF/imported-datasets/external/pubs/ft/wp/2014/Data/wp1439.ashx> Accessed on June 25th, 2020;

Brazilian National Treasury - Ministry of Economy of Brazil - <http://www.tesouro.fazenda.gov.br/en/annual-borrowing-plan> / <http://www.tesouro.fazenda.gov.br/en/monthly-debt-report> / http://www.tesouro.fazenda.gov.br/documents/10180/268746/Informe_emissao_BRL_2024.pdf/7bd1ec9d-80cf-4594-b7ab-78b7f883da5e / <http://www.tesouro.gov.br/resultados-dos-leiloes> Accessed on June 26th, 2020;

Elvira Sojli (2007). “Contagion in emerging markets: the Russian crisis”, Applied Financial Economics, 17:3, 197-213;

Guillermo A. Calvo (2005). “Emerging Capital Markets in Turmoil: Bad Luck or Bad Policy?,” MIT Press Books;

Institute of International Finance (IIF), October 2019 – Principles for Stable Capital Flows and Fair Debt Restructuring - https://www.iif.com/Portals/0/Files/content/Research/pcg_report_10_22_2019.pdf Accessed on June 26th, 2020;

Investor Relations Colombia – Ministry of Finance and Public Credit - http://www.irc.gov.co/webcenter/portal/IRC/pages_publicdebt/statistics/outstandingtesbonds / http://www.urf.gov.co/webcenter/ShowProperty?nodeId=%2FConexionContent%2FWCC_CLUSTER-128301%2F%2FidcPrimaryFile&revision=latestreleased Accessed on June 26th, 2020;

Ministry of Economy and Finance of Panama – Directorate of Public Financing - <https://publico.mef.gob.pa/en/informacion> Accessed on June 26th, 2020;

Ministry of Economy and Finance Peru - https://www.mef.gob.pe/contenidos/english/presentations/MEF_London_presentation.pdf / https://www.mef.gob.pe/contenidos/english/investor_relations/B8_Debt_31122019.pdf / https://www.mef.gob.pe/contenidos/deuda_publica/bonos/internos/bonos_sobe/stock/Stock_bonos_soberanos_310520.pdf Accessed on June 26th, 2020;

Ministry of Economy and Finance of Uruguay - <http://deuda.mef.gub.uy/innovaportal/file/28779/2/sovereign-debt-report-may-2020.pdf> / http://deuda.mef.gub.uy/innovaportal/file/6297/1/2009-07_debt+report+july+2009.pdf Accessed on June 26th,

2020;

Ozkan and Unsal (2012). “Global Financial Crisis, Financial Contagion and Emerging Markets”, IMF Working Paper, WP/12/293.

PwC Strategy&, April 2019, Impact of Euroclearability;

Thomson Reuters (international information agency) - <https://www.reuters.com/article/china-markets-bonds/update-2-jpmorgan-adds-china-to-emerging-bond-index-from-february-2020-idUSL5N25V3F4> Accessed on June 26th, 2020;

Valdés, Rodrigo O. “Emerging Markets Contagion: Evidence and Theory”, <http://dx.doi.org/10.2139/ssrn.69093> ;

Van der Wansem, Patrick B. G.; Jessen, Lars; Rivetti, Diego (2019). Issuing International Bonds: A Guidance Note (English). MTI Discussion Paper; no. 13. Washington, D.C.: World Bank Group.

