Capital Markets

ROUNDTABLE SERIES

2022 – A Year in Review

European Agencies and Supranationals

FEBRUARY 2023

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FOREWORD

Welcome to RBC's 2022 SSA review

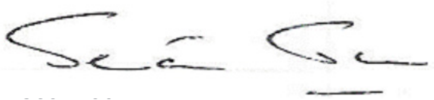
As we ease into 2023, it is our great pleasure to once again bring you valuable insight on the state of the SSA market from a series of roundtable discussions with key market participants in the sector. Our prestigious panel members offered their analysis of what mattered in SSA in 2022, as well as their forecast of what lies ahead in 2023. As always, we are hugely grateful to all who contributed their time and expertise to this review.

The past year has not been an easy ride for SSA market participants. High inflation, rising interest rates and ongoing geopolitical unease all contributed to high market volatility. Meanwhile, hawkish central bank behavior saw limited issuance windows, particularly in the US dollar space. However, without exception, the issuers we spoke to had successfully carried out their funding plans in 2022, with some even exceeding their original targets. The year also witnessed the continued success story of labeled bonds, which made up a higher percentage of issuance than ever. Overall, despite the challenging environment, the picture painted by market participants is a positive one.

As one of the most important and innovative fixed income sectors, SSA plays a key role in RBC's global fixed income franchise. Some of the highlights from another strong year for our SSA platform in 2022 included:

- RBC led 28 USD SSA Benchmarks for 20 different issuers totaling over $50 billion, including a number of SOFR FRN and ESG transactions.
- We ranked #2 in GBP SSA (excl. UK DMO) with 38 transactions executed for 22 different issuers, totaling over £17 billion.
- In Canada, RBC ranked as the top underwriter of Canadian domestic government bonds (ex. Quebec), having led 79 transactions totaling ~C$22.5 billion or ~21% of the sector's ~$107 billion.
- In Australia, RBC led ~54% of all Kangaroo SSA supply, ranking #1 on the Kangaroo SSA league table. RBC continues to be a leader in the ESG space, remaining the #1 underwriter of Kangaroo Sustainable debt, working with issuers to place debut and repeat ESG transactions into the Australian investor base.
- RBC ranks as the #2 underwriter in SSA Risk Free Rates globally since 2018, having led over 20 inaugural SSA RFR transactions.
- We are a strong supporter of the ESG bond markets and have acted as bookrunner on a number of inaugural Sustainability, Social & Green Benchmarks for issuers, as well as being active across a wide variety of currencies (AUD, CAD, EUR, GBP, NZD, USD, TRY, ZAR).
- Our secondary trading and distribution capabilities continue to provide liquidity even during times of volatility.

While there are plenty of known unknowns on the horizon – and even the potential for some "unknown unknowns" – we were pleased to find the mood among our panel members largely optimistic. I'd like to take this opportunity to wish everyone a successful 2023, in which the SSA market continues to play its important part in international finance.



Head of European DCM
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KEY TAKEAWAYS

1. **Issuance was strong, albeit down from post-COVID highs**
   Despite challenging market conditions, SSA issuance was healthy in 2022. While overall figures were lower than in 2021, European agencies enjoyed a strong year, with all our panelists either meeting or exceeding their planned targets. Funding requirements in the supranationals space were lower as COVID-driven demand receded, yet several of our panelists reported record issuance for their organizations in 2022.

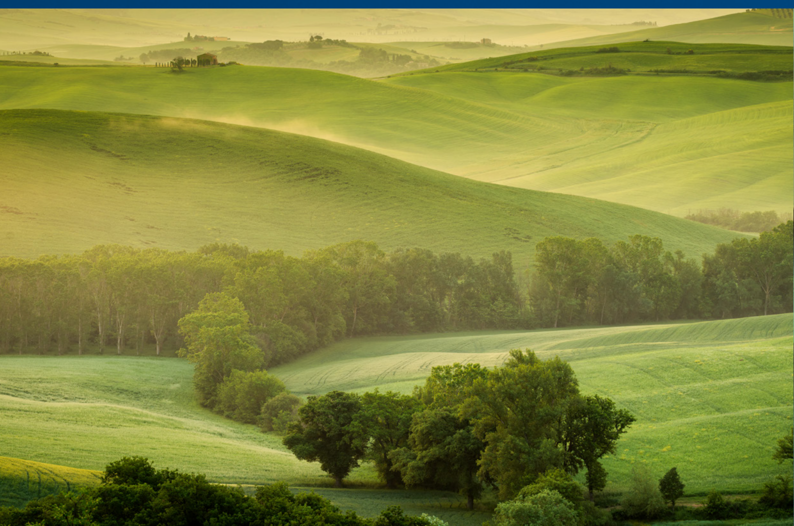
2. **Market volatility saw issuers employ an agile approach**
   Inflation, rising interest rates, geopolitical uncertainty, disrupted supply chains and the withdrawal of QE presented a series of challenges for SSA markets in 2022. Increasing hawkishness from central banks resulted in limited windows for issuance, particularly in the US dollar space, while price discovery often proved difficult in the face of fluctuating demand. Issuers adapted by taking a nimble approach to issuance.

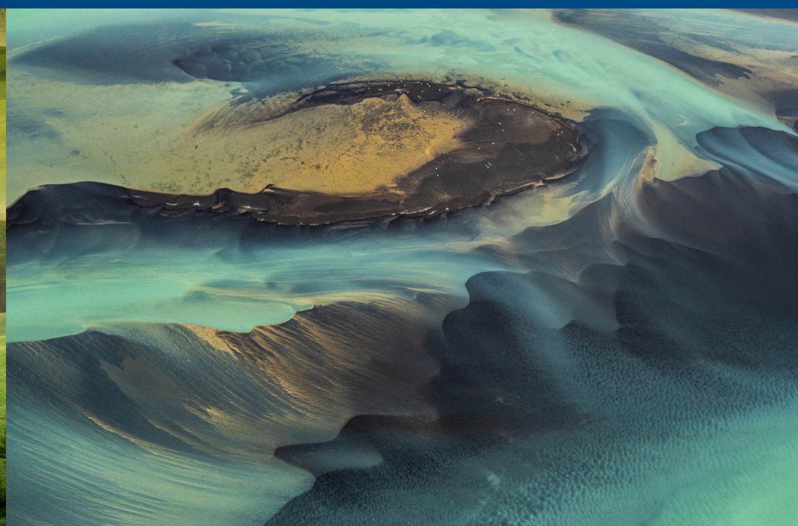
3. **Labeled bonds are more popular than ever**
   The rise of ESG-focused issuance continued unabated. While there may be much talk of the end of the "greenium," our panelists reported stronger demand than ever for their labeled bonds, with issues often heavily oversubscribed. Most expect this trend to continue, and plan to expand their issuance of green and sustainable bonds accordingly, although a point is foreseen when essentially all issuances will be "sustainable".

4. **Diversification is a key focus for SSA issuers**
   With conditions volatile, issuers are keen to diversify across a wide range of currencies. Looking beyond the euro and US dollar markets for buyers, issuers tapped UK sterling, Australian and Canadian dollars, Scandinavian currencies and even the renminbi. Going forward, diversification is likely to continue to be a focus, especially if US dollar market access remains difficult and the end of QE leads to oversupply in the euro market.

5. **Issuers seek to frontload in the face of an uncertain year**
   As we enter 2023, continuing geopolitical tensions, a tight labor market, the strength of the US dollar and the possibility of recession all contribute to a considerable level of uncertainty. Overall issuance is expected to be lower, but issuers remain cautiously optimistic, while focused on taking a pragmatic approach in the face of ongoing uncertainty. Several of our panelists planned to frontload their issuance in 2023 to take advantage of current demand.

ROUNDTABLES





SUPRANATIONALS STEP UP DESPITE DIFFICULT CONDITIONS

The Supranational sector once again successful navigated a turbulent year; this time one driven by market volatility, rising interest rates & uncertainty around global central bank policy. Fluctuating demand at certain periods made price discovery more challenging, while issuance windows were often harder to come by. However, despite lower overall issuance in the wake of Covid-driven highs, 2022 was a record year for more than one panelist's organization. ESG-focused issuance remained a common theme, and diversification into different currencies became increasingly important. As we entered 2023 the list of economic and policy challenges was long, however, the supranational sector once again appears well placed to navigate varying market conditions.

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2022 OVERVIEW & 2023 OUTLOOK

James Taunton: Clearly, we came into 2022 with hopes for a more "normal" year as the pandemic came to an end. However, spiking inflation and the consequential shift in global central bank policy, as well as the Ukraine-Russia crisis (among many other events), clearly fueled yet another incredibly volatile year. How did your issuance program developed in 2022 versus expectations? Are you able to comment on your funding outlook for 2023's program?

Flora Chao: The world is reeling from a series of shocks: first the pandemic, then the war in Ukraine, followed by the highest levels of inflation in decades. All this has led to an increase in extreme poverty and severely challenged the private sector in emerging markets and developing economies. As central banks raise interest rates, financial conditions are tightening in emerging markets and developing economies, and market volatility has been on the rise globally.

However, IFC is in a different position to many other financial institutions due to its countercyclical nature. Unlike many others, IFC is stepping up its support for our clients globally. And, after record commitments of US$32.8 billion in FY2022 – which started on July 1, 2021 and ended on June 30, 2022 – IFC continues to support our clients by providing long-term finance, as well as by rolling out innovative solutions like the Global Food Security Platform.

Given that the size of IFC's funding program is highly dependent on the dynamics of loan disbursements made to clients (both actual and projected), we expect that the size of the funding program in FY2023 will increase versus the previous year. IFC has already issued US$7.5 billion so far, out of the anticipated US$12 billion program for FY2023. In fact, the US$12 billion amount that was anticipated at the beginning of the fiscal year may shift upward, depending on the dynamics of loan disbursements made to clients.

On the negative side, the most obvious shift due to capital markets dynamics is that our average cost of funds increased toward the end of the 2022 calendar year. At the same time, achieving a successful public deal has become more challenging due to increased market volatility, fewer windows, waning investor demand, and more difficult price discovery, all underpinned by general uncertainty.

Because of the relative size of our issuance program (which is in the mid-size range compared to our peers), combined with our team's experience and presence across time zones, we have been able to execute a number of public trades successfully, even toward the latter part of the year. Private placements, which have traditionally constituted up to 50% of our program annually, came down toward the end of the 2022 calendar year, so we entered the public markets more than we had initially projected. We envision and hope for more private placement flows as the new year progresses, as we understand there is still money to be put to work by investors – especially in January, when there are quite a few redemptions across markets.

Richard Van Blerk: For 2022, we hoped for the pandemic to fade away and with it, a return to more modest supply for the SSA sector. This general decline in supply was mirrored in a more modest EIB EUR45 billion funding program as well. High inflation and the withdrawal of monetary stimulus both pointed to more challenging circumstances.

Nevertheless, as in most years, issuance found receptive markets. In euros, the withdrawal of QE that only made itself felt well into the year and the near historical wides of swaps spreads were supportive of the market. In US dollar markets, meanwhile, the spread to US Treasuries bottomed out and markets remained relatively unsettled. From an investor perspective, at least the spreads on offer widened to historic records versus SOFR (in its first real year as the new floating rate benchmark), but also in terms of levels versus Treasuries that were not seen for a few years.

For 2023, EIB expects to continue with a funding requirement of similar dimension as this year's, so a continuance of EIB funding needs toward the lower end of the range ought to keep our product scarce and sought after.

Eusebio Garre: IDB Invest had a record year in 2022. Our funding program started very successfully with our first Kangaroo social benchmark and our inaugural global dollar benchmark, and finished with our debut euro benchmark. Overall, the program grew from an initial target of US$2 billion to US$2.5 billion in five different currencies, fueled by strong demand from our clients with projects with strong social and environmental impact. For 2023, we expect a program of similar size, i.e., between US$2 and US$2.5 billion.

Jens Hellerup: NIB has been able to adjust to market volatility and carry out its usual funding strategy. In fact, 2022 represented a record year for us, with the highest funding volume ever (EUR9.5 billion), a record number of transactions (108), and a record issuance of NIB Environmental Bonds or NEBs (EUR1.1 billion). Altogether, we have issued in 12 different currencies.

For 2023, we expect to issue EUR8-9 billion; as such the strategy will not change. We aim to carry out our two global US dollar benchmark bond issues, probably with a maturity of three and five years. We will also continue issuing our euro NEB benchmark bond and hopefully some additional NEB bonds. It remains to be seen which markets will work, but we are keen to issue in the Nordic currencies, as we need these currencies on the lending side. Naturally UK sterling has been an important currency for us over the last few years (our second largest currency in 2022), so we hope we will be able to revisit that market in 2023.

James Taunton: Following significant growth during the COVID-19 period, overall issuance volumes within the SSA sector are down 29%, which was mirrored within the supranational sector (-30% year-on-year); were there any specific factors that one can point to that explain this? Has the global economic slowdown already started to impact your clients' lending requirements or your funding programs, either positively or negatively?

Flora Chao: This past calendar year 2022 was marked by a number of developments which affected IFC's funding activity. In the first half, IFC was extremely liquid and, as such, our funding program for the full FY2022 was a little over US$9.1 billion raised – the lowest in quite some time. However, in our new fiscal year, or the second half of calendar year 2022, we saw an increase in cash needs from IFC's lending operations, and therefore we issued approximately US$7.5 billion. Of course, as always, we prefer to frontload our issuances, so this also played a factor in our increased issuance toward the end of the calendar year.

IFC, unlike some of our peers, did not greatly increase its funding program during the COVID-19 period. As you know, we had our US$5.5 billion capital increase, and thus were not pressured to increase our funding program, even with the new COVID-19 programs that were created to support our clients.

As mentioned before, IFC has not seen an impact on our clients' lending requirements due to the global economic slowdown. On the contrary, we anticipate a continued steady growth in our portfolio, given the countercyclical nature of IFC.

Richard Van Blerk: Strong disbursements over the pandemic in combination with subsequent cautious behavior from our borrowing clients led to a lower funding requirement for 2022, and as far as we can see this trend is unlikely to change in light of the currently prevailing uncertainties. While EIB, along with a number of its peers, has been linked to a potential pipeline of new projects – including RepowerEU and the eventual reconstruction of Ukraine – the timing of actual disbursements (if any) in this context remains unknown. For this reason, our base scenario envisages EIB funding around the EUR45-50 billion mark.

Eusebio Garre: We still see healthy demand from our clients and expect our 2023 funding program to be of similar size as in 2022.

Jens Hellerup: We have seen positive developments at NIB this year and there has been very good demand for our loans. We have increased our lending in 2022 by EUR1.0 billion compared to plan, and for 2023 we have increased our forecast by EUR0.5 billion. This has increased our 2022 funding plan by EUR1.5 billion, and in combination with market movements, which affect collateral flow, the total funding for 2022 was EUR9.5 billion, compared to a funding plan at the beginning of the year of EUR7.0 billion.

ISSUANCE DYNAMICS

James Taunton: Against the backdrop of rising rates and volatile execution conditions, how did you find your experience in the US dollar and euro markets this year? Were there any specific highlights?

Flora Chao: IFC continues to be successful in issuing, despite volatility and uncertainty in the markets. Fortunately, investors continue to see value in IFC's high credit quality and in our position as a premier development finance institution, in addition to our rarity – as you know IFC's issuances are smaller and fewer compared to some of our peers. Just as an example, our latest benchmark in US dollars, issued in September 2022, was heavily oversubscribed and the quality of the book was stellar. We also achieved excellent pricing, equivalent to +12.5 basis points over the corresponding three-year US Treasury note at the time.

Richard Van Blerk: In euro markets, the extreme widening of swap spreads was as unexpected as it was welcome to a sector that measures itself against swaps. In a context where general demand for euro SSA paper was feared to drop, as QE faded and rates spiked, SSA paper offered an attractive pickup versus European Government Bonds. In US dollar markets, the new risk-free benchmark SOFR rate made its way into US dollar pricing versus swaps, and it is not unreasonable to say this is taking some time to bed down. The advent of SOFR, with its myriad conventions and upending of traditional relative value measures, has been challenging for markets. While the market has probably become more accustomed to the new SOFR levels over the course of the year, we would not be surprised if the spread to Treasuries would not start looking more appealing as a pricing reference, as the G-spread in particular has proven to be an anchor of value in an ocean of SOFR calculations.

Eusebio Garre: The increased market volatility, as well as the pivot by global central banks to a rising rate regime and the end of quantitative easing, were certainly felt in the markets. Being nimble and reacting quickly to shifting market conditions is key to success in such an environment, and we expect this to remain the case in 2023.

Jens Hellerup: This year the issuance windows have been ever fewer. However, being a smaller issuer, you have the benefit of not having to be in the market all the time. We had no bigger challenges in finding suitable issuance windows for our two US dollar benchmarks and one euro environmental bond in 2022. Diversification is important for us; hence we were happy to see a good split between geographic regions, including Asia, the Americas and EMEA. Central bank and bank treasury investors continue to dominate.

James Taunton: Were there any investor regions or investor types that particularly pleased or surprised you this year?

Flora Chao: IFC has traditionally enjoyed strong support from central banks and government institutions, as well as commercial banks' treasuries globally. FY2023 has not been an exception in this regard. In fact, this year we have seen a number of new investors among central banks and government institutions buying large amounts of our US dollar benchmark. In terms of regional focus, Asian and North American investors were particularly active, while for our thematic green issuances there was a steady demand from Swedish investors.

Eusebio Garre: We were very pleased by the strong positive reaction of ESG investors to our sustainable bond allocation and impact report, especially from Europe. This was our first report after having launched our Sustainable Debt Framework in 2021, and we received very encouraging feedback in many investor meetings afterwards. Among other things, investors liked the clear layout of the report, the detail of the data provided, and the fact that we report the actual impact of our projects, not just the expected impact most other issuers report. Our Sustainable Debt Framework and the allocation and impact report have been key to the success of almost every single bond we issued in 2022, because they so clearly portray IDB Invest's strong ESG credentials and lead more and more investors to participate in our bonds.

Jens Hellerup: In general it's good to have access to different markets and different types of investors. This year, in addition to public bonds we've been able to issue a substantial number of private placements in various currencies.

James Taunton: The US dollar market has seen supply fall 32% in 2022 YTD, with an approximately US$84 billion decline in issuance. How do you see this developing in 2023, in light of perhaps more challenging conditions in the EUR market?

Flora Chao: Indeed, with more challenging conditions in the euro market, we may see issuers focusing more on the US dollar market in 2023, especially for US dollar-based funders. But, as we mentioned earlier, with overall issuances projected to be lower in 2023, we may still see US dollar supply muted.

Richard Van Blerk: We continue to value both US dollar and euro markets at their own face value and will likely continue to do so in the future. While many issuers may choose to be more opportunistic in opting between euro and US dollar markets on the basis of cost, we believe that in 2023 strategic choices, based on more than just short-term relative cost, will determine the selection between euro and US dollar markets. Access to issue windows, relative ease of execution and the availability of a different investor base all continue to favor a more diversified funding strategy. Having said that, it is not unfeasible that the Federal Reserve might reach its terminal rate before the ECB, and the cost-benefit might then swing in the other direction, leading to more European competition for US dollar windows in 2023.

Eusebio Garre: More challenging conditions in the euro market may make the US dollar market more attractive for euro-based issuers, propping up supply. For our own program, we expect our US dollar issuance volumes to remain stable and will diversify up to 50% of our program into other currencies if the pricing is right.

Jens Hellerup: From an issuer's point of view, the split between euros and US dollars is to a large extent driven by relative value, where the euro/US dollar basis swap has played an important role. This is based on how deep the market is and how well it can absorb all the SSA supply. However, in 2023 it might not be that simple, basically due to missing demand from the ECB. We foresee the US dollar picking up again in 2023, simply because there might be a limit to how much supply the euro investor base will be able to absorb. This will impact relative value and favor US dollar supply until a new equilibrium is found.

James Taunton: Have there been any particular markets that have impressed you this year, or that have notably increased in your funding program?

Flora Chao: Since IFC has a US dollar-based balance sheet, the US dollar curve is the primary curve against which we benchmark. However, we have also established a presence and focus on certain parts of the curve in different markets over the years. For instance, the Australian dollar Kangaroo market is a very important one for us, especially when we seek an attractive cost of funding relative to US dollars. Year to date, more than 20% of our funding volume has come from the Australian dollar market and the levels have been consistent through our US dollar curve. We also continue to maintain presence in UK sterling and New Zealand dollars and would like to do the same in Canadian dollars.

Richard Van Blerk: If hard-pressed, we would point to an enlargement of the investor base as positive, and higher yields seem to have brought back a number of real-money investors into SSA. Hopefully, more will return to the market as rates increase further.

Eusebio Garre: We certainly enjoyed the reception of our debut euro five-year social bond in November. After an intense two-week roadshow, we knew there would be healthy demand once the right window opened, and so it proved when we launched the deal and found that instead of our planned EUR500 million issuance we could print EUR650 million.

Jens Hellerup: I'll mention two markets which have been quite strong for NIB this year. In Norwegian krone we have issued more than NOK11.5 billion (EUR1.2 billion), which makes it the fourth largest funding currency for NIB in 2022, accounting for 12.2% of our total funding. This makes NIB the second largest foreign issuer of Norwegian krone denominated bonds this year. Our fifth most important funding currency in 2022 was the offshore renminbi. In 2021 we carried out our first renminbi trade. In 2022 we completed twelve trades denominated in renminbi for a total value of more than EUR550 million, which contributed positively to our funding.

ESG MARKET

James Taunton: Over recent years, investors have become significantly more sophisticated and aware of the underlying use of proceeds of specific ESG transactions, partly because of work within the marketplace to harmonize reporting. However, as the market has moved toward more volatile conditions, have you seen investors pushing back on any "greeniums" presented and have you sought to address the liquidity in ESG products?

Flora Chao: As you are well aware, the media has alerted us that greeniums have all but disappeared with the volatile market backdrop. For example, the *Financial Times* recently stated that the change in issuance and market share has led green bonds to price roughly in line with their counterparts, and that the discount companies get when issuing it has shrunk from a peak of 15-20 basis points to low single digits, or even zero.

Nonetheless, as a funder, we continue to charge tighter spreads for our green and social issuances, as we see demand and willingness from investors to pay a greenium.

With regards to the liquidity of ESG products, at IFC, we are strong believers in expanding the market of sustainable bonds by continuing to issue under two established labels: green and social. This builds liquidity in the market and helps limit compartmentalization. Along these lines, for example, IFC gender projects fall under our social bond eligibility criteria.

With respect to Green Bonds, earlier this year, IFC published our *Guidelines for Blue Finance*, which were developed to guide the market on the identification and selection of blue economy projects in a way that is consistent with the Green Bond and Loan Principles. We have since adopted these guidelines and incorporated them into our own green bond framework, alongside projects that support biodiversity.

Richard Van Blerk: The EIB issues two use-of-proceeds bond products in addition to its conventional funding: Climate Awareness Bonds (CABs), with proceeds earmarked for climate change mitigation, and Sustainability Awareness Bonds (SABs), spanning environmental objectives beyond climate, as well as social objectives.
This year, CABs and SABs together made up over 40% of EIB's overall funding, or EUR20 billion equivalent, an absolute record. This was possible thanks to EIB's growing volumes of green lending; our *Climate Bank Roadmap* foresees that at least 50% of new annual lending by 2025 should support climate and environmental sustainability. However, it also reflects the strong market reception to this type of product, in particular when issued as large, liquid and standardized transactions. Consequently, this year we have been mainstreaming CABs and SABs into our benchmark program – issuing, for the first time, a minimum of EUR3 billion equivalent in euro or US dollar-denominated bonds.

Eusebio Garre: We don't think the greenium is a lasting feature of the market for multilateral development bank bonds; we see it more as an artifact, caused by a shortage of green bonds versus an increase in interest from investors, including central banks, that in our view has no reason to be everlasting. Eventually, as this supply-demand imbalance recedes, there is no reason why the market should price a green bond differently from any other bond from an issuer with such strong environmental safeguards and policies as IDB Invest and many of our supranational peers.

Jens Hellerup: For NIB it is difficult to access the greenium. We have issued four NEBs (NIB Environmental Bonds) this year, one in euros and one in each of the Nordic currencies (Danish krone, Norwegian krone and Swedish krona). In euros, Danish krone and Swedish krona we have not issued any non-green public bonds. In Norwegian krone it can be argued there has been 1-2 bps of greenium, which is in general what we have seen over the last years.

INNOVATION

James Taunton: COVID-19 drove rapid adoption of technology within capital markets and clearly heightened focus on digitalization across a number of areas. Although still in the relatively early phases of development, there has been noteworthy progress on blockchain issuance and central bank digital currencies (CBDC), as well as on several other technological initiatives. Are there any specific topics or areas of innovation that you see as particularly relevant to the SSA sector in the coming years?

Eusebio Garre: The digital currency market is evolving constantly, and as the example of FTX shows, not necessarily only in one direction. We follow developments closely and we think that the successful development of CBDCs and their adoption by investors will be essential for digital bonds to become mainstream for issuers like us.

Jens Hellerup: We are following all the developments with great interest. We have especially engaged with green bond impact reporting data providers and post trade digital solutions. Regarding block chain trades, we have had a good dialogue with our peers, who have done these. At current stage we have to admit we might not have enough resources to proceed with all initiatives in the market. However, we will follow it closely and prepare ourselves for future developments.

CONCERNS AND EXPECTATIONS FOR 2023

James Taunton: What are your biggest concerns looking ahead to 2023?

Flora Chao: The outlook for 2023 indicates continuing unprecedented challenges and transitions, with risks tilted toward the negative. Central banks will be tasked with ushering economies though the next phase of the cycle. Among the key issues facing policymakers worldwide are the global energy price crisis, disruption of global supply chains – including potential food insecurity, the war in Ukraine and multiple geopolitical tensions reaching their tipping points, tight labor markets, the continued strength of the US dollar, heightened inflation, and the looming threat of global climate change, which could exacerbate each of the current challenges.

With inflation peaking, real rates are on the rise as central banks inch toward their terminal rates, and economies worldwide are likely to fall into recessionary territory in the next few quarters. This sets the stage for a potentially explosive combination of economic and policy challenges, unparalleled in recent memory. It is expected that central banks will hold their ground, maintaining a restrictive stance throughout most of 2023, as inflation gradually subsides and recession sets in. However, the dynamics remain uncertain.

Richard Van Blerk: Across most major markets, 2023 is destined to bring more rate hikes together with less liquidity, while for many the underlying economy might end the year in recession. Specific to the euro SSA market, we would add a substantial increase in net supply to spice things up further.

Eusebio Garre: The biggest overall concern is the ability of central banks to credibly rein in inflation without triggering a big global recession. Since investors seem to be keenly aware of it and have likely positioned their portfolios accordingly, the risks are probably somewhere else. The resolution of the war in Ukraine and how China deals with the end of their zero-COVID policy are two other factors investors are focused on.

Jens Hellerup: Concerned might be a strong word, but we do feel that as an issuer, we need to be humble going forward. We are going from a regime which has been an issuers' market to more of an investors' market. Timing and a careful assessment of new issue premium will be important. We also believe there will be times when different markets will be closed. Hence, it is very important for us to have access to different markets.

In the euro market, we need to consider the implications of the ECB stopping its buying program. Our understanding is that some euro funders have increased their funding programs, which could create an interesting dynamic.

Then we should not forget the economic outlook. We believe a small recession in Europe is priced in, as well as a potential softer landing in the USA. A large deviation from this could have an impact on the demand-supply outlook. However, the bond market has previous dealt with recession, and we believe that as a supranational we will still have good access to the bond market even if there is a larger recession.

James Taunton: Clearly, you have a huge amount of experience between you; looking ahead to the upcoming year, are there any specific ways in which you look to plan your funding for the coming 12 months?

Flora Chao: IFC is quite intentional when planning its funding program. We have annual and mid-year reviews as well as quarterly updates of funding projections. These are very much driven by developments on the disbursements of the IFC loan portfolio, and we align ourselves with developments on the corporate side. In addition to this and within the funding team, we have weekly discussions on funding plans, looking at different markets, analyzing recent deals, comparing costs, discussing investor demand, and so on, and we are always responsive to private placement inquiries. This is in addition to our daily conversations with banks like yourselves and within the team to discuss opportunities and needs. In addition to all these avenues of communication, we keep an open dialogue with investors, discussing their needs and market views. This multilayered and constant process allows us to calibrate the forecasting for funding for the next 12 months and beyond and stay in sync with IFC's overall business needs.

Regarding opportunities, as the year opens we expect investor interest to increase as they put cash to work, so we will be monitoring that interest and continuing our investor engagement work. As always, we will continue to diversify our funding across different currencies and markets.

Richard Van Blerk: We have a tried, tested, prudent and syst$ematic approach to accessing markets that has stood the test of time and market vicissitudes.

Eusebio Garre: We have a clear view of our 12-months funding needs, and we update these quarterly to reflect changes in our pipeline and outlook. That allows us to react swiftly and stay nimble in delivering our funding plan.

Jens Hellerup: Naturally, we always plan ahead; the estimated funding plan for 2023 is approximately EUR8-9 billion. That can be adjusted during the year, depending on markets, disbursements and collateral flows. Even with long experience, it is difficult to forecast which markets will work best.

James Taunton: A global bear market in bonds has characterized 2022 to date. Although some Central Banks may be attempting a "pivot," much of the rhetoric remains hawkish. How do you see this impacting your funding plans in 2023, and do you expect a change in currency distribution in 2023 versus previous years?

Flora Chao: As mentioned before, in FY2023 IFC's funding team has decided to frontload the program in anticipation of pressures materializing more tangibly. The rising rate environment has resulted in higher demand for shorter duration fixed-rate products and floating rate notes, while substantial dislocations in currency basis swaps made some offshore currency borrowings quite an attractive proposition. Being a global borrower, we are utilizing our access to diversified funding markets, and benefitting from our global presence in three major financial hubs in terms of responsiveness while being close to our investors.

Furthermore, the nature of the borrowing process has changed, with funding windows becoming narrower, higher execution risk and wider new-issue concessions. Navigating around economic releases is becoming ever so important now.

Richard Van Blerk: The EIB has successfully funded itself in capital markets for several decades across many economic and political cycles. While our expectations for the 2023 market context are not exactly rosy, experience suggests we should be confident that markets will once again allow the institution to fund itself without any hiccups.

Eusebio Garre: We expect 2023 to remain challenging as long as central banks keep raising rates and maintaining hawkish rhetoric. This can change quickly if and when data show that their efforts are effective. Since we don't know if or when that will happen, we expect to have quite a bit of frontloading this year.

Jens Hellerup: We don't foresee bigger changes to our funding strategy, but as already mentioned, some markets could be closed from time to time; therefore, a diversified funding program will be more important than ever. We will emphasize this even more going forward.

EUROPEAN AGENCIES ACT NIMBLY IN A CHALLENGING ENVIRONMENT

The consensus from our European agency panel was that despite multiple headwinds, 2022 was a successful year. All the agencies we spoke to either met or exceeded their funding targets, although volatility – exacerbated by the war in Ukraine – demanded a flexible approach. With the US dollar market offering limited windows, agencies tended to focus on the euro market while acting more opportunistically in terms of US dollar issuance, as well as across a range of other currencies. Looking forward, the hope is that that central bank actions will lead to stabilization in markets. In the meantime, 2023 will require a similarly agile approach.

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FUNDING OVERVIEW 2022

Eleanor Singer: Despite 2022 seeing significant volatility and challenging conditions at times, SSA issuers were still able to navigate and successfully access primary markets during the year to complete funding programs. How has your issuance program developed in 2022 versus expectations and how has this changed compared to prior years?

Antti Kontio: We've issued almost EUR9.0 billion year-to-date and have basically completed our program for 2022. Our aim was to be more active in euro and US dollar benchmark markets this year, but due to high volatility and the war in Ukraine we found it more challenging to find good windows and took a slightly more opportunistic view in funding, by issuing much more than planned in sterling, Norwegian Krone and private placements.

Monika Seitelberger: At the beginning of the year our expected long-term funding for 2022 was around EUR4.0 billion; that was slightly increased due to more business activity on the asset side. Our annual funding program has generally been around EUR3-4 billion in the past few years, with 2020 being an exception at EUR5.5 billion, due to increased lending and the implementation of the government´s COVID support programs. This year we have issued EUR4.2 billion so far. By issuing our US dollar global bonds as no-grow, we were able to issue a third US dollar benchmark, as opposed to only issuing two per year. Alongside our US dollar bonds we also issued our third Sustainability Bond, a EUR500 million benchmark, tapped our outstanding UK sterling lines several times and issued a new Australian dollar Kangaroo line. Private placements in Hong Kong dollars and Chinese renminbi at attractive levels rounded off the program.

Dr. Frank Richter: NRW.BANK's funding year 2022 was euro centric. There's no question that the agency was able to tap into capital markets to fund its development loans programs. However, it is also obvious that funding activities in foreign currencies were challenging. There were only a few "windows of opportunity" to show our name in the non-euro space. In January and February our success was mixed; while we took advantage of the sterling market we missed the Australian dollar window. In late October we made use of the US dollar opportunity and issued a three-year bond. Beyond that, the only foreign currency activity was a Norwegian Krone transaction in May. What went well and smoothly was our euro funding, especially when we issued in the green or social format.

Monetary policy action to fight inflationary pressure turned into a sharp rise in yields, and clearly central banks were reluctant to take any duration risk at all in their reserve management. Central banks are the key target as an investor group on the US dollar side. Finally, the sterling market suffered from the political turmoil in the UK.

At the end of 2022 there was a good opportunity to demonstrate how beneficial it is if you can rely on an engaged and diverse funding base.

Michiel Matthijssen: In 2022 we issued approximately EUR16 billion, with an average maturity of close to eight years. We were able to successfully raise funding in the longer tenors, which comes off the back of relatively high average duration on the asset production side. At the same time, with the highly favorable rates for Eurosystem targeted long-term refinancing operation (TLTRO) funding coming to an end, we combined the need for duration with benchmark activity for shorter tenors in the second half of the year.

Eleanor Singer: Rapidly rising inflation, a shift in global central bank policy, as well significant geo-political uncertainly (among many other events) clearly fueled yet another incredibly volatile year. How did you find your experience in the US dollar / euro benchmark markets in 2022?

Antti Kontio: We can agree that much has changed this year – however, it has been good to see that general markets have been functioning. We've issued three new public benchmark transactions and we've been pleased with all of them. In euros, the investor base has remained more-or-less unchanged and execution risk has therefore also been lower. Levels have also remained low, despite the change in interest rates. In the US dollar market, it has been challenging to find windows, and clearly issuing successful trades we've seen in the past has become more challenging. It is, however, important to have functioning benchmark curves in both euros and US dollars going forward.

Monika Seitelberger: Despite challenging market conditions, we were able to find extremely attractive issuing windows throughout the year. By issuing our US dollar globals in a "no grow" format, a clear message was sent out to investors that the size would be capped from the outset, creating an incentive to place their orders early in the book building process. All our global issues were two-to-three times oversubscribed, so allocations had to be sized accordingly. It was sometimes difficult to assess fair value when pricing the bonds, often due to illiquid secondary market levels, but peer comparisons did help in the process. This is also something we experience when issuing euro bonds, since we are not in the market as frequently. The relatively large pickup versus the Republic of Austria in euros this year proved to make buying our name an attractive proposition.

Dr. Frank Richter: You are right, the market environment was rough. To deal with that you need intense communication with investment banks and investors to meet demand, tenors and spreads. Given our strong green and social profile, issuing labeled bonds in euros works very well. The funding base in euros is broad and deep. We can rely on asset managers, insurance companies, and bank treasuries. The AUM with a dedicated green/social mandate is growing rapidly. NRW.BANK has the products to serve this accelerating demand. Issuing US dollar benchmark was more challenging, given that central bank portfolio managers were sidelined.

Michiel Matthijssen: You are quite right about the interesting market backdrop; nevertheless, we found that, depending on timing, there remained a constructive, balanced market. Our experience during euro and US dollar benchmark deals this year was positive, while being aware of a world in which QE moved away from the stage. We saw investor orders in a less QE-dominated world as real support and an expression of investor demand, and we aimed to allocate as fairly as possible.

Eleanor Singer: Was there any particular funding highlight that stood out to you in 2022?

Antti Kontio: We are very pleased with our new seven-year Green Bond, which was issued in May. Despite the market conditions, we managed to print a very successful new benchmark and attract new investors.

Monika Seitelberger: The highlight was issuing three incredibly successful US dollar globals in a difficult and volatile market environment. The books were of the highest quality and all were two-to-three times oversubscribed. It was also possible to tighten IPTs by 2-3 bps. And the other highlight was being able to issue our third Sustainability Bond with a volume of EUR500 million, which was in fact eight times oversubscribed, something we had never witnessed before.

Dr. Frank Richter: We had nicely oversubscribed labelled bond order books. I remember very well the first billion-euro green bond from the summer. I counted interest from 118 investors, representing an order volume of EUR4.1 billion!

Michiel Matthijssen: Besides the longer-dated issuances throughout the year, we were also happy with our issuance of shorter-dated (around two year) US dollar benchmarks. We had not been very active there in the last few years, so we were quite thrilled to see many investors back that we have known for a long time. It was also definitely a special moment for us to make our return to the Canadian dollar market in 2022 after several years of absence.

Eleanor Singer: On the contrary, what did you find most challenging in 2022?

Antti Kontio: Market volatility has been high and finding issuance windows has been challenging. In addition, pricing dynamics have changed due to swap spreads and new issue premiums. Discussions on the go/no-go calls have been much longer than previously, which shows that setting the right pricing levels has been difficult.

Monika Seitelberger: With the sharp rate hikes in the US and Europe, and the deteriorating geopolitical backdrop since the beginning of the year, issuance windows were scarcer than in previous years. The challenge was to find the near perfect window with no or little competing supply, and to establish fair value when issuing a new bond.

Dr. Frank Richter: Dealing with the enormous volatility was really challenging. Identifying investor appetite for tenors and currencies, finding the right pricing and getting the timing right was crucial. Intense communication with banks and investors was and is key for making a successful deal. RBC's advice was a necessary ingredient for building initial momentum that resulted in a highly oversubscribed book with superior investors in our three-year US dollar benchmark transaction.

Michiel Matthijssen: The uncertainty of issuance windows and circumstances created more challenging execution conditions as an issuer. Navigation is and remains key here, which we would expect not to be much different in the coming year.

Eleanor Singer: Did you notice any change in investor dynamics in 2022? Did certain sectors or regions feature more heavily in your bond issuance and what are your expectations going forward?

Antti Kontio: We are lucky that investor demand for MuniFin has remained strong. In euros, the investor base has been good, but in the US dollar market, we've noticed that the investor base has become smaller – and order sizes have been smaller as well. On the other hand, we've seen stronger demand for our issuance in UK sterling and Norwegian Krone compared to previous years, and demand for green bonds remains strong as well.

Monika Seitelberger: There have been some noticeable changes in investor dynamics this past year. Bank treasuries continue to buy for regulatory purposes but have become more active over time and have taken over a larger proportion of the placement of our US dollar global bonds. In 2022, bank treasuries took 34% of our globals on average, compared to 26% in 2021. This is even more evident when looking at the bank treasury placement statistics of the three individual OKB bonds in 2022: from only 14% (OKB 5/2025), placement increased to 42% (OKB 9/2027) and even further to 47% (OKB 11/2025). Central banks' participation has decreased slightly in the last few years – they used to take up almost 60% of our issues and are now at around 50%. However, the central bank community will remain a major and reliable buyer of OKB paper.

Another change has been the fact that participation from Asian accounts has decreased over the last year, from 21% in 2021 to 16% in 2022. We have heard that, in general, Asia has been buying less in the primary SSA space this year (due to FX reserve management). The Americas have taken up this portion by increasing their participation in our US dollar bonds from 43% to 47% in 2022.

We believe that central banks, bank treasuries and asset managers will continue to be the key drivers and buyers of OKB bond issues. The regional distribution is difficult to predict, but the Americas and EMEA are increasing their participation, while Asian support is slightly shrinking due to the volatility in FX currency markets.

Dr. Frank Richter: The most relevant issue was the change in how portfolio managers manage their central bank foreign reserve portfolios. The mood went south; deep into risk averse territory. I don't see their US dollar demand coming back until the Fed pivots. In the meantime, bank treasury and official institutions are filling the gap, but their capabilities are limited. This year will therefore be another difficult one for US dollar funding. We will shift our investor relations activities into the treasury sector in an effort to keep the US dollar market open for us. On the euro side, labeled formats are key. We will increase our presence in the green and social segments. Overall, it is realistic that a third of our funding will come from themed bonds. Four years ago, only 5% of annual funding came via green bonds.

Michiel Matthijssen: We saw roughly a two-thirds share of our annual funding come from European demand, which is not unrelated to the fact that we issued the largest proportion of our funding in euros. At the same time, we are seeing significant interest from the Americas and Asia in our books, relating to our benchmark activities in US dollars. This year, as has traditionally been the case, we see strong participation in our books from central banks, official institutions and bank treasuries, followed by asset managers. Going forward we envisage a similar picture.

Eleanor Singer: Given the removal of many COVID-related travel restrictions, did you conduct many in-person investor meetings, and if so, how did you value this interaction versus virtual meetings?

Antti Kontio: We started to travel again this year, although still on a much smaller scale than pre-COVID. Going forward we'll try to find a good balance between physical and virtual meetings. All the physical meetings we've had have been very encouraging, however, we need to rethink how often these meetings should take place physically going forward.

Monika Seitelberger: We restarted our in-person investor meetings in May in the US and have taken our roadshow to Toronto, Ottawa, Washington D.C., and London in the second half of the year. Not all investors were ready to schedule physical meetings, since they are either still working from home or are not willing to meet in person yet. Although virtual meetings were doable during COVID and may be the preferred alternative for ESG bond marketing, meeting investors in person is more interactive, and the dialogue can go more into detail.

Dr. Frank Richter: Everybody is enjoying face-to-face meetings. Nevertheless, we didn't reach pre-pandemic levels of travel. One-to-ones in Europe, North America, Japan and Australia are "easy" to organize. However, if you want to catch up with investors from the developing world, it turns out that many travel restrictions are still in place. Even if national rules were relaxed, employees are still working from home; home office working patterns in the developed world make meetings on Monday or Friday difficult. So, you see, we are not where we want to be. But I think the long COVID-19 shadow will eventually disappear.

Michiel Matthijssen: We have greatly appreciated the possibilities 2022 has brought (back) to us. We did a number of physical road shows in Europe, as well as participating physically in conferences in North America, Asia and Australia, which we combined with the opportunity to meet investors face-to-face. It has brought back the dynamism and stronger engagement of personal meetings with investors, which we regard as very valuable. The same goes for the renewed personal contact with our peers, which was lacking during COVID. We are of course also available for online investor meetings, depending on investors' preferences; we have found that the hybrid format works very well for us.

Eleanor Singer: There has been a growing focus on digitalization, with for example blockchain and related products gaining increasing traction within the financial services industry. Are there any initiatives you are currently exploring? And are there any specific topics or areas of innovation that you see as particularly relevant to the SSA sector in the coming years?

Antti Kontio: We are open to any initiatives where the funding issuance process could be automated and shortened. There are many good initiatives already in place, but most of these platforms are still at an early stage and would require significant input from the issuer. As our resources are limited, we'd hope to see more standardized products for issuers, but it is understandable that we are not there yet. Innovation in the whole funding process, from indicative pricing to trading and documentation, is relevant for the SSA sector and will hopefully take steps forward in 2023.

Monika Seitelberger: We have been approached by various companies offering systems to simplify the workflow of the issuance procedure and will look at and monitor these developments closely going forward. The issuance of digital bonds is being implemented by some of our peers in the SSA sector – we are also closely watching new developments, such as blockchain technology, with great interest.

Dr. Frank Richter: We are following developments closely. But don't expect to see NRW.BANK frontrunning; no activities are planned in this respect for 2023.

Michiel Matthijssen: This year we have explored opportunities to improve our post-trade workflow. To that end, we are currently in the process of onboarding Origin, a platform which allows us to automate the documentation process of our transactions. We expect to see the market moving toward more automatized and digital solutions. We are closely monitoring these developments and believe they will keep adding to the efficiency of the sector.

Eleanor Singer: What are your plans for printing green, social and sustainability bonds in 2023?

Antti Kontio: In recent years we've been an active issuer of green and social bonds, and we're committed to continuing that in 2023. We are currently in the process of setting longer-term goals for sustainability finance, which would also have a positive effect on our issuance in the sustainability format.

Monika Seitelberger: We updated our framework in March by adding two new categories – Green Buildings and Circular Economy – and by emphasizing a stronger alignment with the EU Taxonomy. This should potentially help in pooling more assets to refinance via sustainability bonds.

We continue to look at issuing sustainability bonds on a regular basis and depending on asset growth will look to issue again next year.

Dr. Frank Richter: That's straightforward. Our plans are:
- At least one EUR1.0 billion green bond issue
- Two EUR500 million and/or EUR1.0 billion social bond issues
- Australian dollar denominated social bond activities

Michiel Matthijssen: This year we increased our ESG issuance (sustainable and social bonds) to almost EUR6.0 billion nominal. ESG issuance accounts for 36% of our long-term issuance, which was an increase, compared to a percentage of just below 30% last year. In 2023 we aim to keep up both the percentage as well as the absolute amount of our ESG issuance, with the ambition to increase if possible.

Eleanor Singer: For currency diversification, 2022 was a challenging year, with the likes of the sterling market enduring a number of months of significant volatility and limited primary issuance (down 30% year-on-year). Were you able to take advantage of the UK sterling, Australian dollar and Canadian dollar markets, and are there any currencies that you would like to be more active in during 2023?

Antti Kontio: We've very active in UK sterling this year and issued almost 20% in that market. UK sterling has actually been the second largest funding currency for us after euros this year. Last year we issued 15% in UK sterling so volumes in the currency have grown. We hope to be active in UK sterling as well as other public markets in 2023 as well.

Monika Seitelberger: We managed to tap our outstanding UK sterling lines several times in H1 2022 at competitive levels and just recently concluded a couple of taps amounting to £160 million at extremely attractive funding costs. After issuing our last Australian dollar tap three years ago, we were finally able to issue a new Australian dollar ten-year line this year. For 2023, we hope to issue a new UK sterling line and, if possible, a new line or tap in Australian dollars. Medium term notes in various currencies, such as Chinese renminbi and Hong Kong dollars, are also on the agenda for next year.

Dr. Frank Richter: We issued in sterling before the Truss turmoil started. In January and February 2022, we were in the market with £325 million split into two tenors. Unfortunately, no prints in Australian dollars or Canadian dollars.

We will come back to the Australian dollar market in 2023. We are committed, and our approach is consistent and follows a strategic effort to diversify our funding base into Asia Pacific, addressing Investors in Japan and Australia. What we like as well is that the Australian dollar market can offer us duration. Social bonds denominated in Australian dollars are very fashionable these days. We are able to catch up with demand.

Michiel Matthijssen: In these three markets – UK sterling, Australian dollar and Canadian dollar – we were able to bring new deals to the market, as well as several line increases. Despite the volatility, we were very happy with our transactions' success, and we would be pleased to continue this going forward. Besides euro and US dollar markets, where we provide our largest benchmarks, each of these three currencies is important to us from a funding diversification perspective. We were close to a return to the Swiss Franc market but that did not eventually go ahead. That and other currencies that we were active in in the past hence remain an ambition for us in the future.

Eleanor Singer: A global bear market in bonds has characterized much of 2022. Although some central banks may be attempting a "pivot," much of the central bank rhetoric remains hawkish. How do you see this impacting your funding plans in 2023 and do you expect a change in the currency distribution in 2023 versus previous years?

Antti Kontio: It is clear that capital markets will remain volatile next year as well. Hopefully the actions taken by central banks will stabilize interest rates and lower inflation. If this happens, we are going to see some stabilization next year but if not, issuance conditions will be like this year or worse, making the strategy and issuance timing very important. In terms of currency distribution, we are expecting to be a bit more active in euros and US dollars next year.

Monika Seitelberger: Our funding program for next year will be around EUR5 billion and will be higher than what we have issued this year. Our focus will continue to be issuance in US dollars, since that is the most attractive funding source, due to the basis swap versus issuing directly in euros. We plan to issue three US dollar benchmark globals, a new UK sterling line, possibly an SOFR floating rate note or a sustainability bond in euro benchmark size. We will continue to monitor opportunities in medium-term note or private placement format in various currencies.

Dr. Frank Richter: At least the first six months will be challenging. A done deal is a good deal and – this is my advice – use any opportunity the market is showing you. It will be euro focused – I do not see a revival of US dollar products until the Fed pivot. After the summer break, maybe some clouds will disappear, and the market will come back. Given the redemptions from the past, investment pressure will be high. Anyway, there are many known unknowns and a couple of unknown unknowns ahead.

Michiel Matthijssen: Central bank behavior and rhetoric has had a large influence on available windows per currency and hence the execution of the funding plan. We expect a similar backdrop in 2023, in that sense. In terms of currency distribution, it will be central bank activities as well as other developments, such as cross-currency bases and the duration of our asset production, that may influence our final distribution. Either way, we expect our (benchmark) presence in euros and US dollars to be stable and hope to maintain our presence in the currencies that we have been active in this year.

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SUPRANATIONALS STEP UP DESPITE DIFFICULT CONDITIONS

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