

Webinar: What's next for foreign investors' **China** portfolios?

Magdalene Tay

Head of Global Markets Management, Asia Pacific Asset Servicing and Digital, BNY Mellon

Akinchan Jain

Head, Asset & Liability Operations, World Bank Treasury

Senan Yuen

Head of Investment, China, Fidelity International

Magdalene Tay

Hello everybody, and welcome to the BNY Mellon webinar on What's Next for Foreign Investors' China Portfolios. My name is Magdalene Tay, I'm the APAC Lead for Global Markets Management, and I'll be the moderator.

Today's session is interactive. And so, we encourage you to submit your questions throughout the session by typing your questions in the Q&A chat box, and we will do our best to get back to you. So, let's get started.

In our recent white paper titled "The Next Mile: Smoothing the Path for Foreign Investors Assessing China" published last month, we interviewed over 300 global investors from the asset management and asset owner segments alongside a series of expert interviews to explore key issues they face in managing their China portfolios. And the survey results show that 80% of the respondents plan to grow their China holdings over the next two years, but most of them are proceeding with caution.

Now, as investors scale up their portfolios and explore a broader range of investment instruments, they need to overcome market access and operational challenges when investing into China.

So, in today's session, we're going to cover about the current market landscape influencing foreign investors' allocation decisions, identify the operational challenges which investors are encountering when they access the China market, the further enhancements that investors would like to see. And also, the future outlook of the China capital markets.

And I'm pleased to have two industry experts joining our session today. First, we have Senan Yuen who is the Head of Investment, China, at Fidelity. And Akinchan Jain, Head of Asset and Liability Operations at World Bank Treasury. And so, thank you both for joining us today.

So, let's start with the first question with Senan. What are the main factors influencing your firm's allocation decisions into the Chinese capital markets?

Senan Yuen

So, Fidelity has been investing into the China market since 2011, and so a lot of the operational challenges that some newer market participants have encountered, I think we have overcome to some large degree. So, today, our allocation decision isn't limited by operational constraint as such. It's more based on China's current position and economic cycle, the valuation of the companies currently, as well as the forward-looking forecast based on measures from regulators and based on sustainable growth in today's market.

It's been a very interesting year in today's market with Central Banks around the world managing inflation, given supply chain disruptions around the world. China is in a different stage of economic cycle, with increasingly supportive fiscal and monetary policy. The market is going at a very different macrocycle, and although it's not immune to the global recession, I think it offers diversification and potential upside. I think because of its position where it's more self-reliant on supply chains, we're in a position to introduce more policies to support economic growth and the market. And this is why our experts believe that China stands in a relatively strong position amongst this worldwide-scale disruption.

In terms of valuation, I think it's an interesting time because at this point, the last time I looked, the P/E ratio of MSCI China is about 12.5 times. It's the lowest it's been in the last six years. So, the valuation of China A-shares is at historical lows. And amidst a very interesting time, we look at the market very carefully.

And so, as investors, we're looking forward not just six months from now, but forecasts based on three to five years outlook.

Our allocation decisions are based on long-term positive and short-term cautiously optimistic for recovery in the coming year. Thank you.

Magdalene Tay

Over to you, Aki. Do you share similar views?

Akinchan Jain

Indeed, Magdalene. And firstly, greetings to everyone.

So, there are many reasons why Chinese bond markets should be on the radar for any fixed-income asset manager. I'll share a few reasons.

One is just the size. And according to the S&P, the size of the Chinese bond market, it's well in excess of \$17 trillion. And in fact, the market has been growing at a double-digit rate since the year 2000, very much in line with the growth of the Chinese economy. And now, the market stands next only to the U.S. domestic capital markets in size. So, just from a size point of view, it's a market that's too big to be ignored.

Another reason is from an access point of view. So, we've always known that the liquidity in the onshore market is significantly better than in the offshore market. And over the last few years, thanks to easing restrictions, foreign portfolio managers can now access the onshore market either through the interbank market or as qualified institutional investors, or through Bond Connect from Hong Kong. And that's just created a lot more opportunity for foreign investors.

A third reason, which is not so much the case recently, but generally, is the level of absolute yields in the Chinese bond market. And we have been in this long era where much of the debt issued in developed countries was negative yielding. And for a long time, Chinese bonds provided attractive absolute yields. That's, of course, changed more recently with the growth in inflation and rising interest rates. But that has been a factor as well.

If we move to the specifics, the reasons are a little different, again, for Central Banks and official institutions versus for institutional investors. So, for Central Banks and official institutions, a big driver for the interest was the inclusion of the renminbi in the SDR basket. So, this is the IMF's special drawing rights, which comprises dollars, euro, pound sterling, and Japanese yen. That's where Central Banks primarily maintain in reserves. And with the inclusion of the renminbi now, that has created a natural demand from many foreign portfolios – for many Central Banks and official institutions to access the Chinese market.

A second reason is just a significant growth in trading relationships that China has that not only with the developed world but also with the developing economies. And as trade has increased, investors have found that they have more reserves in renminbi to invest.

Now, moving on for institutional investors, the reasons are a little different. So, firstly, Chinese bonds are now part of many benchmark indices, such as the Bloomberg Index. There is the J.P. Morgan Emerging Market Bond Index, the FTSE World Government Bond Index, and that has created, again, automatic demand, and several hundreds of millions of dollars have flown into the domestic market because of that.

And then a second reason is just from a diversification point of view. There are well over 6,000 issuers domestically. And credit aside, even from a correlation point of view, various studies have shown that the Chinese bond markets show very low correlation compared to both risk-on asset classes, such as equities, as well as risk-off asset classes such as U.S. Treasuries.

So, again, depending upon different reasons, Chinese bond markets do warrant a look for any fixed-income portfolio investor.

Magdalene Tay

So, it's interesting to hear the diverse views and according to our survey's results, there are three key issues that will influence foreign investors' further allocation into the China market. One is the regulations. Two, the operational challenges. And three, the ESG disclosures.

Now, that leads us to the second question, Aki, to you. What are some of the operational challenges that you encounter when diversifying into the China market?

Akinchan Jain

Yes, thanks, Magdalene.

So, again, we just talked about why these markets are important for any investor. Now, that notwithstanding, there are challenges which any investor should consider and be prepared for ahead of making investment decisions.

The first one is related to the domestic settlement and reporting infrastructure, which is actually very different from what we see with the bonds internationally, and compared to ICSDs such as

Euroclear and Clearstream. There are many more reporting and settlement requirements in the domestic market.

Now, many of these are set up with a view to minimize settlement fails, to increase data transparency, but it does create a difference.

Many domestic banks in China offer these services to foreign portfolio investors, but oftentimes, foreign investors don't have those relationships, and sometimes language can be a problem as well.

Now, typically, foreign investors would want to just work with their global custodian to be able to access the market in China, to just extend and leverage that relationship. Many foreign or global custodians – or a few global custodians do have a direct presence in China, but many others work with a network of sub-custodians and BSAs to access that market. And that works well, it's just that it can take time to develop these relationships, to set up these contractual arrangements. So, any investor should just be mindful of that and prepare for that ahead of time.

A second challenge is related to maturity profile. So, according to a study done by Fitch, in the first quarter of 2021, the average maturity profile of bonds in the Chinese market was about three years. And that compares to about 10 years in the case of Japan, and about 17 years in the case of the U.S. Now, this not only creates some refinancing risk for the domestic issuers, but from an investor point of view, not having full access across the full yield curve can be a problem.

A third challenge is related to credit ratings. And I mentioned there are many domestic issuers, and many of these issuances are created by domestic rating agencies. But the domestic rating agencies follow a different rating scale than what foreign investors are used to with the international credit rating agencies. There are also some restrictions because of which domestic credit rating agencies have limitations in assigning sub-investment-grade ratings.

And so, what this creates is this perceived ratings inflation. So, again, according to some estimates, more than 80% of the domestic issuances have a rating of double-A or better. And so, what that does is – foreign investors, in order to be able to normalize the ratings, they have to spend time and effort in just doing their own analysis. And that analysis can sometimes become challenging because a lot of the financial statement reporting is done in the local language. It's also a bit hard to decipher the extent of the implicit Government support for some of these issuances. And disclosure standards are also different, domestically and compared to international standards.

So, these are some of the challenges that any investor should be mindful of and prepared for as they look to invest in the domestic Chinese market.

Magdalene Tay

Senan, could you also shed some light on the challenges when investing into China? And what are the challenges that you face around the Chinese ESG landscape as well?

Senan Yuen

I was going to just going to agree with Aki's points on fixed-income investment in China and some the difficulties encountered there. I think some of these challenges can be dealt with an

active fundamental research in-house resources on the ground that can reach out, engage the investor companies on information requests, financials. And that could help resolve some of the rating challenges that Aki's mentioned before.

Just with regards to QFI, this is one of the things I first worked on for FIL when I joined in 2007. So, most of the major challenges for investment for Fidelity back then has really been resolved over the years.

Major challenges for investors at the time was ability to invest at any time: The ability to repatriate your funds out of the market any time to invest in other markets, clarity on capital gains tax for investment into China. and clarity on beneficial ownership of securities held in China other than the fund.

And a lot of these uncertainties were clarified since 2015. So, for me, looking back from now to 2007, a lot of the major challenges for mass access to the market for all our offshore funds have mostly been resolved.

So, today, FIL has over 100 funds invested into China through QFI, through the Connect programs, through the interbank bond programs. So, there are challenges. It is different from other markets. But I think as long as you work with your global custodian, you can overcome these challenges as we have.

Having said that, it is not easy the first time. You have to go through the process. And there are residual challenges as of today. And I would categorize those challenges into three parts.

One is trading related. There is an ever-going debate whether you use Stock Connect or QFI. I guess, for most investors, if you – 90% of the investment universe of Stock Connect meets the requirements of overseas investors. But as soon as you start going to the smaller cap investments in China, or you want to look into other instruments like futures or the local funds, then you have to look at QFI.

So, as a result, with QFI, you're limited to single broker by market and practice. Stock Connect is multi-brokers. So, ideally, you can have a similar approach in both markets, so you don't have different trading models for different markets.

In China, because of QFI, the way it's set up, we're very selective on the types of brokers that we engage with. The broker needs to be able to provide high-touch trading. They've got to have a good counterparty credit rating, and ability to provide good market color, so that's the requirements on the trading aspect.

The other thing I can think of also was harmonization of the holidays. If the Hong Kong market has a holiday and the China market does not, then investors cannot trade through the Connect program. So, I think it would be good to align market holidays. And I think there is an initiative underway to do that, and it's good to see that the regulators are addressing that difference.

On the ESG front, this is interesting because I think the biggest issue in the market is, in the past, there hasn't been a consistent or standardized approach in the way companies disclose their ESG matchers. And as a result, there's not enough data from third-party vendors to provide an ESG rating on those companies. And it doesn't mean that the majority of the market is not sustainable or ESG-worthy, it's just that there's not enough information to make that

assessment. And I think it's in the benefit of companies to signal to investors they can do that. And this is what most international investors are interested in.

And so, to the extent that companies don't provide that ESG reporting, they could be overlooked or challenged by investors, or have a third party create that ESG rating without their input. So, it's important that the companies and regulators work together to improve that reporting standard and frequency. And I'll go into that in the next question where I think that we are seeing some improvements in that area.

And then finally, just a minor point is for companies like Fidelity who are trying to expand into China, onshore China through creating a fund management company onshore. How does that work with the rest of the organization? Could the onshore company provide investment management expertise for QFI funds or institutional funds? What is the taxation for that matter? Those are things that we're still working with the regulators to try to clarify.

So, for me, I think the challenges are three. One is the residual of trading differences between QFI and Connect, ESG, and then finally, taxation. Thank you.

Magdalene Tay

Next question to you, Senan. As a foreign investor, what are some of the further enhancements that you would like to see that the Chinese regulators will prioritize and why?

Senan Yuen

Okay. So, I think having a good ESG framework is a three-pronged approach. It requires the company's ESG disclosure, active stewardship by the investor to vote to express their view, and all this underpinned by regulatory policy to set standards and guidelines on what do you do.

And all of this, also, is related to product. So, if there's ESG product in the market, there is a standard, a requirement as to what constitutes an ESG product.

And so, I think the challenge of China in the past is that there has been not a clear common reporting standard. And so, it's hard to make that data assessment. Having said that, we've seen quite a bit of improvement. The number of listed companies in China providing ESG disclosures has gone from 565 in 2011 to double, 1,106 by 2021. And so, although it's still only 30% of the market, it's good to see that companies are starting to recognize that it's important to make that ESG disclosure.

So, disclosure is one thing, but then quality is another thing. If every company is making a different format, different quality of how they are disclosing their ESG matters, it's still difficult to make that assessment. And again, it doesn't mean that 70% of the market aren't sustainable companies, there's just not enough information to make that appraisal.

And I think as an investor, in the absence of regulatory policy or company disclosure, FIL will engage the company. We have set up our own proprietary ESG framework to ask companies questions, to engage them. And through our framework, we can assess the different industries in the market. Globally, FIL has 60 ESG analysts and we work together with our fundamental analysts to engage them. But this requires internal resources.

So, I think in the absence of resources from companies, policy support is necessary to push the market along. And we have seen some positive changes in the last year. We see new disclosure requirements of including ESG reporting information in their financial reports. We were engaged in the consultation paper to provide advice on what are some points to include in E, and S, and G in financial reports.

In all of the RFPs I've come across in the last year or so, ESG has been one of the major focuses from international investors. So, I think there's a lot of potential in this space to further attract long-term institutional investors into this market by improving this part of disclosure, product development guidelines, common taxonomies. All of this will help push the agenda.

The second thing I thought that would really be good for improvements in the market would be clarity or common taxonomies on cross-border data sharing. Now, previously, all inbound, outbound, and onshore programs are more or less independent of each other. So, if you're a QFI, there's not much interaction with your onshore domestic fund company. But over time, all these programs are meshing together.

So, for example, nowadays, your QFI fund could invest into your onshore domestic fund, for example. And I think there's a lot of value in the local fund management company collaborating on research with offshore global entities of the same organization, or sharing data for regulatory filing and compliance purposes.

So, this cross-border data sharing is a complicated issue, and we hope to see further clarity on this space because we consider some non-sensitive data that can be shared for the benefit of both sides of the border, and for the benefit of the end investor.

So, that's my two cents on regulatory changes that, I think, would benefit the market for both onshore investors and offshore investors. Thank you.

Magdalene Tay

Let's shift gears and talk about what lies ahead. How do you see the future landscape of China's capital markets in the next two years? First to you, Aki, and then followed by Senan.

Akinchan Jain

Yes, thanks, Magdalene. So, again, looking ahead, we talked about some challenges but why the market looks set to continue to grow.

I'll mention a couple of points related to this. So, firstly, the credit markets in China are still dominated by bank financing. So, when we look at the overall share of debt capital markets – the market capitalization towards the overall economy – if you compare that to the United States, the Chinese bond markets could potentially double in size. So, from that perspective, there is reason to believe that the markets will continue to grow.

And then as more and more foreign investors access the local market, what we will see is there will be continued enhancements and improvements in transparency. And that will further attract foreign investor interest.

Now, that said, I'll say there are a couple of other areas where I think focus around those areas will lead to further investments in the domestic market. One of them is very much – like Senan was saying – is related to the ESG sector.

So, what we have seen is thanks to efforts by the Chinese Government, China is now a leading issuer of green bonds. In fact, China now issues more – there are more green bond issuances in China than even in the United States. And a big reason for that is that there have been a lot of improvements in – Senan talked about green bond taxonomies and disclosures, there are improvements to be made, but a lot of progress has been made there. And what I think is that if that gets broadened from just green bonds to the broader area of sustainable development bonds, then that can attract further interest.

So, I define sustainable development bonds as a bond where the issuer commits to using the proceeds to finance anything related to sustainable development as outlined by the 17 Sustainable Development Goals issued by the U.N. a few years ago. And so, that would then broaden the focus from just the E – which with green bonds they just focused on the E, which is the environment part – but the sustainable bond umbrella will cover the S and G aspects as well. And just similar to the lead that the domestic issuers have taken in the issuance of green bonds if that gets broadened to sustainable development bonds, then that can attract further interest.

And another area where China can take a leading role is in the issuance of a subcategory of bonds called Catastrophe Bonds. And catastrophe bonds work like any other bond, except that investors get an enhanced return in the form of a risk premium, but they stand to lose some or all of their principal if certain predefined criteria are met with respect to natural disasters. So, for instance, if the earthquake is of a certain intensity or wind speeds are beyond a certain level, then the bond gets triggered.

And what we have seen over the last few years, because of the impact of climate change and because there's increased urban density in the coastal areas and in plains which are prone to flooding, there's just been an increase in the amount of natural disasters. And this is where we see capital markets can complement the capacity provided by insurance companies.

And the Asian market overall is... data has shown that a third of the natural disasters occur in the Asian region. And so, this is another area where issuance of catastrophe bonds, establishment of a hub for that in China can, again, further attract interest through the market domestically.

Senan Yuen

I think domestic investors are increasingly looking to allocate more of their financial assets into the same things that international investors want. So, in 80% of the senior managements I've attended this year, the things that they've been asking for are building blocks for pension, and what's the strategy for accumulation? What's the strategy for decumulation? Tell me more about your ESG platform. How do we collaborate on that?

And so, I'm starting to see a meshing of more local demands, investor demands which are very similar to international investor demands. And as a result, I think that over time we'll see more and more conversions of onshore, outbound, and inbound programs. That's my personal view.

And so, I think the traditional players and tri-party solutions that we tend to use today will expand over time. So, for example, QFIs today can invest into onshore private funds and mutual funds. This is a great idea because this means that if you're an international multi-asset fund and you want to allocate money into an onshore fund – and there are much more flavors of onshore funds and strategies in the China market – it's a great diversification, a great idea to do so.

But as I've discovered, the infrastructure is not there, it's not yet there in place through the traditional means or traditional counterparties. But if you consider more local counterparties and online platforms, then they have the expertise to streamline the process. So, for example, like Tiantian platform has access to all the funds in the market.

And so, I think the use of local counterparties will expand over time. It will not be just limited to your traditional players. And this expands to things like data providers, so the traditional use of MSCI for ESG ratings, I think that is a great starting point, but because of the limitation of data, the need to engage companies to acquire that ESG information to meet that assessment, using an alt data provider such as some of the local providers in the market can be useful to help asset managers assess the sustainability of a company.

So, I think in terms of your traditional parties, I think that will expand over time.

And then finally, in terms of the ESG landscape, it will accelerate. Based on all the meetings I've attended, I think the market regulatory change will accelerate to align more with international standards from disclosure to product development over time. And for example, as Aki mentioned, we've seen the latest official common taxonomies on green bonds to have this more aligned with the international stage.

So, that's my two cents for the future of the China capital market. Thank you.

Magdalene Tay

So, thank you, Senan and Aki, for not only your insights but for your candor.

I'm sure our audience also has appreciated that, and that clearly are some valuable learnings that we have heard from both of you. And there is still some market friction for foreign investors when assessing China but there are ways to overcome, such as working with service providers to navigate the operational challenges in trade execution, in settlement, exploring triparty solutions to increase flexibility in collateral management, and adopting the advanced ESG data analytics platforms to overcome gaps in disclosures.

And I would also like to thank the audience for listening in. I hope you have found the session informative and useful. Before you leave, do check out our latest white paper by scanning the QR code here.

So, stay tuned for our next webinar and I hope that you have a good day.

bnymellon.com

BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may be used to reference the corporation as a whole and/or its various subsidiaries generally. This material does not constitute a recommendation by BNY Mellon of any kind. The information herein is not intended to provide tax, legal, investment, accounting, financial or other professional advice on any matter, and should not be used or relied upon as such. The views expressed within this material are those of the contributors and not necessarily those of BNY Mellon. BNY Mellon has not independently verified the information contained in this material and makes no representation as to the accuracy, completeness, timeliness, merchantability or fitness for a specific purpose of the information provided in this material. BNY Mellon assumes no direct or consequential liability for any errors in or reliance upon this material.

The Bank of New York Mellon, a banking corporation organized pursuant to the laws of the State of New York, whose registered office is at 240 Greenwich St, NY, NY 10286, USA. The Bank of New York Mellon is supervised and regulated by the New York State Department of Financial Services and the US Federal Reserve and is authorized by the Prudential Regulation Authority (PRA).

The Bank of New York Mellon operates in the UK through its London branch (UK companies house numbers FC005522 and BR000818) at One Canada Square, London E14 5AL and is subject to regulation by the Financial Conduct Authority (FCA) at 12 Endeavour Square, London, E20 1JN, UK and limited regulation by the Prudential Regulation Authority at Bank of England, Threadneedle St, London, EC2R 8AH, UK. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request.

The Bank of New York Mellon SA/NV, a Belgian limited liability company, registered in the RPM Brussels with company number 0806.743.159, whose registered office is at 46 Rue Montoyerstraat, B-1000 x, Belgium, authorized and regulated as a significant credit institution by the European Central Bank (ECB) at Sonnemannstrasse 20, 60314 Frankfurt am Main, Germany, and the National Bank of Belgium (NBB) at Boulevard de Berlaimont/de Berlaimontlaan 14, 1000 Brussels, Belgium, under the Single Supervisory Mechanism and by the Belgian Financial Services and Markets Authority (FSMA) at Rue du Congrès/Congresstraat 12-14, 1000 Brussels, Belgium for conduct of business rules, and is a subsidiary of The Bank of New York Mellon.

The Bank of New York Mellon SA/NV operates in Ireland through its Dublin branch at Riverside II, Sir John Rogerson's Quay Grand Canal Dock, Dublin 2, D02K6V0, Ireland and is registered with the Companies Registration Office in Ireland No. 907126 & with VAT No. IE 9578054E. The Bank of New York Mellon SA/NV, Dublin Branch is subject to limited additional regulation by the Central Bank of Ireland at New Wapping Street, North Wall Quay, Dublin 1, D01 F7X3, Ireland for conduct of business rules and registered with the Companies Registration Office in Ireland No. 907126 & with VAT No. IE 9578054E.

The Bank of New York Mellon SA/NV is trading in Germany as The Bank of New York Mellon SA/NV, Asset Servicing, Niederlassung Frankfurt am Main, and has its registered office at MesseTurm, Friedrich-Ebert-Anlage 49, 60327 Frankfurt am Main, Germany. It is subject to limited additional regulation by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany) under registration number 122721.

The Bank of New York Mellon SA/NV operates in the Netherlands through its Amsterdam branch at Strawinskylaan 337, WTC Building, Amsterdam, 1077 XX, the Netherlands. The Bank of New York Mellon SA/NV, Amsterdam Branch is subject to limited additional supervision by the Dutch Central Bank ('De Nederlandsche Bank' or 'DNB') on integrity issues only (registration number 34363596). DNB holds office at Westeinde 1, 1017 ZN Amsterdam, the Netherlands.

The Bank of New York Mellon SA/NV operates in Luxembourg through its Luxembourg branch at 2-4 rue Eugene Ruppert, Vertigo Building – Polaris, L- 2453, Luxembourg. The Bank of New York Mellon SA/NV, Luxembourg Branch is subject to limited additional regulation by the Commission de Surveillance du Secteur Financier at 283, route d'Arlon, L-1150 Luxembourg for conduct of business rules, and in its role as UCITS/AIF depositary and central administration agent.

The Bank of New York Mellon SA/NV operates in France through its Paris branch at 7 Rue Scribe, Paris, Paris 75009, France. The Bank of New York Mellon SA/NV, Paris Branch is subject to limited additional regulation by Secrétariat Général de l'Autorité de Contrôle Prudentiel at Première Direction du Contrôle de Banques (DCB 1), Service 2, 61, Rue Taitbout, 75436 Paris Cedex 09, France (registration number (SIREN) Nr. 538 228 420 RCS Paris - CIB 13733).

The Bank of New York Mellon SA/NV operates in Italy through its Milan branch at Via Mike Bongiorno no. 13, Diamantino building, 5th floor, Milan, 20124, Italy. The Bank of New York Mellon SA/NV, Milan Branch is subject to limited additional regulation by Banca d'Italia - Sede di Milano at Divisione Supervisione Banche, Via Cordusio no. 5, 20123 Milano, Italy (registration number 03351).

The Bank of New York Mellon SA/NV operates in Spain through its Madrid branch with registered office at Calle José Abascal 45, Planta 4ª, 28003, Madrid, and enrolled on the Reg. Mercantil de Madrid, Tomo 41019, folio 185 (M-727448). The Bank of New York Mellon, Sucursal en España is registered with Banco de España (registration number 1573).

The Bank of New York Mellon SA/NV operates in Denmark as The Bank of New York Mellon SA/NV, Copenhagen Branch, filial of The Bank of New York Mellon SA/NV, Belgium, and has its registered office at Tuborg Boulevard 12/3, 2900 Hellerup, Denmark (CVR number: 41820063). It is subject to limited additional regulation by the Danish Financial Supervisory Authority (Finanstilsynet, Århusgade 110, 2100 København Ø).

BNY Mellon Fund Services (Ireland) Designated Activity Company is registered in Ireland No 218007, VAT No. IE8218007 W with a registered office at One Dockland Central, Guild Street, IFSC, Dublin 1. BNY Mellon Fund Services (Ireland) Designated Activity Company is regulated by the Central Bank of Ireland.

The Bank of New York Mellon (International) Limited is registered in England & Wales with Company No. 03236121 with its Registered Office at One Canada Square, London E14 5AL. The Bank of New York Mellon (International) Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

Regulatory information in relation to the above BNY Mellon entities operating out of Europe can be accessed at the following website: <https://www.bnymellon.com/RID>.

The Bank of New York Mellon has various subsidiaries, affiliates, branches and representative offices in the Asia-Pacific Region which are subject to regulation by the relevant local regulator in that jurisdiction. Details about the extent of our regulation and applicable regulators in the Asia-Pacific Region are available from us on request. Among others, The Bank of New York Mellon, Singapore Branch, is subject to regulation by the Monetary Authority of Singapore. For recipients of this information located in Singapore: This material has not been reviewed by the Monetary Authority of Singapore. The Bank of New York Mellon, Hong Kong Branch (a banking corporation organized and existing under the laws of the State of New York with limited liability) is subject to regulation by the Hong Kong Monetary Authority and the Securities & Futures Commission of Hong Kong. The Bank of New York Mellon, Shanghai and Beijing branches are subject to regulation by the China Banking and Insurance Regulatory Commission. The Bank of New York Mellon, Seoul Branch is subject to regulation by the Financial Services Commission, the Financial Supervisory Service and The Bank of Korea. The Bank of New York Mellon, Taipei Branch is subject to regulation by the Financial Supervisory Commission R.O.C. (Taiwan) and Central Bank of the Republic of China (Taiwan).

The Bank of New York Mellon is regulated by the Australian Prudential Regulation Authority and also holds an Australian Financial Services Licence No. 527917 issued by the Australian Securities and Investments Commission to provide financial services to wholesale clients in Australia.

The Bank of New York Mellon Securities Company Japan Ltd, subject to supervision by the Financial Services Agency of Japan, acts as intermediary in Japan for The Bank of New York Mellon and its affiliates, with its registered office at Marunouchi Trust Tower Main, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-1005, Japan.

If this material is distributed in, or from, the Dubai International Financial Centre ("DIFC"), it is communicated by The Bank of New York Mellon, DIFC Branch, regulated by the DFSA and located at DIFC, The Exchange Building 5 North, Level 6, Room 601, P.O. Box 506723, Dubai, UAE, on behalf of The Bank of New York Mellon, which is a wholly-owned subsidiary of The Bank of New York Mellon Corporation. This material is intended for Professional Clients and Market Counterparties only and no other person should act upon it.

Past performance is not a guide to future performance of any instrument, transaction or financial structure and a loss of original capital may occur. Calls and communications with BNY Mellon may be recorded, for regulatory and other reasons.

Disclosures in relation to certain other BNY Mellon group entities can be accessed at the following website: <http://disclaimer.bnymellon.com/eu.htm>.

This document and the statements contained herein, are not an offer or solicitation to buy or sell any products (including financial products) or services or to participate in any particular strategy mentioned and should not be construed as such. This material is intended for wholesale/professional clients (or the equivalent only), is not intended for use by retail clients and no other person should act upon it. Persons who do not have professional experience in matters relating to investments should not rely on this material. BNY Mellon will only provide the relevant investment services to investment professionals.

Not all products and services are offered in all countries.

If distributed in the UK, this material is a financial promotion. If distributed in the EU, this material is a marketing communication.

This material, which may be considered advertising, is for general information purposes only and is not intended to provide legal, tax, accounting, investment, financial or other professional advice on any matter. This material does not constitute a recommendation or advice by BNY Mellon of any kind. Use of our products and services is subject to various regulations and regulatory oversight. You should discuss this material with appropriate advisors in the context of your circumstances before acting in any manner on this material or agreeing to use any of the referenced products or services and make your own independent assessment (based on such advice) as to whether the referenced products or services are appropriate or suitable for you. This material may not be comprehensive or up to date and there is no undertaking as to the accuracy, timeliness, completeness or fitness for a particular purpose of information given. BNY Mellon will not be responsible for updating any information contained within this material and opinions and information contained herein are subject to change without notice. BNY Mellon assumes no direct or consequential liability for any errors in or reliance upon this material.

This material may not be distributed or used for the purpose of providing any referenced products or services or making any offers or solicitations in any jurisdiction or in any circumstances in which such products, services, offers or solicitations are unlawful or not authorized, or where there would be, by virtue of such distribution, new or additional registration requirements.

©2022 The Bank of New York Mellon Corporation. All rights reserved.