ECBC

EUROPEAN COVERED BOND COUNCIL

33RD ECBC PLENARY MEETING

Munich, Germany | 13 September 2023

PLATINUM SPONSORS

CRIF – Together to the next level

DZ BANK

HARLEY & DIKKINSON

Helaba

LBBW

NORD/LB

GOLD SPONSORS

Berlin Hyp

FitchRatings

OP Financial Group

Rabobank

vdp The German Pfandbrief Banks

IN COLLABORATION WITH

Covered Bond Label

GlobalCapital euromoney | conferences

TranspArEEnS

WIFI – network : ECBC Plenary, password : Munich2023

33rd ECBC Plenary Meeting

Munich, 13 September 2023

Dear Delegate,

On behalf of the Chairman of the European Covered Bond Council (ECBC), Mr Morten Bækmand Nielsen, I would like to extend you a very warm welcome to the 33rd ECBC Plenary Meeting. We are delighted to welcome our global community to Munich and host you in important historical venues: The "Wappenhalle" – the former airport of Munich – and the "Allianz arena" – the Football stadium of the world-famous FC Bayern Munich and venue of the FIFA World Cup and UEFA-Champions-League Final. The "Wappenhalle" in particular is a best practice example of how the joining of forces between public and private global investment is critical in rebuilding, reshaping and repurposing existing strategic assets and in laying the economic and financial building blocks for a cultural 'renaissance' of a city, a region, a country, a continent, a planet.

"Mia san Mia" – "We are who we are" – is the chosen motto of the Bavarians and FC Bayern. This motto is also very fitting for our own community, with its instinct for working together towards a common objective, namely the building of a better future for our upcoming generations. "Mia san Mia stands for the complete will to succeed" (Thomas Mueller), a sentiment which reflects the willingness of our Industry to transform challenges into opportunities. The ECBC, more than ever, stands ready to play its role as the Industry think-tank and market catalyst supporting and connecting our members on their journey towards a common, sustainable European and global financial architecture.

The ECBC plenaries are the opportunity to network with industry leaders and European and global policymakers, and explore and discuss new solutions in challenging and disruptive times. Indeed, in the current context, the Covered Bond Industry feels the strong responsibility to channel private capital resources efficiently and deliver tangible solutions, which meet the real economic needs of families and citizens in all jurisdictions, at the same time promoting the idea of a single market. Global collaboration is the best approach to identifying challenges and solutions and securing evidence-based responses to deploy a new market ecosystem based on shared values which also takes account of the diversity in our communities and societies.

The last months have increased the economic pressure on the global markets and the fundamentals of our industry are changing rapidly, underlining the importance of a strong community. The Munich Plenary provides the perfect and timely opportunity to further develop our think-tank approach to ensure a long-lasting and sustainable industry which will continue to finance affordable and sustainable housing for all, built on values of common macroeconomic stability and social integration.

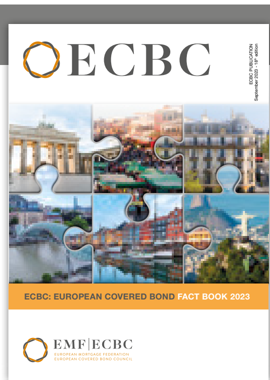
We would like to express our deep gratitude to all of our sponsors for making this event and the exchange of ideas and best practice possible. We would also like to thank our long-standing partner, Euromoney for their ongoing support and collaboration, as well as Professor Marja C. Hoek-Smit and Professor Mattheos Santamouris for their invaluable contributions to the ECBC Training Session on Housing Finance & Capital Markets.

Last but not least, we would like to thank you, our community, for joining us in Munich at this crucial time. We are at the dawn of new era and are delighted to see, as always, so many of you, coming from around the globe, with your experience, ideas and expertise and, most importantly, your readiness to contribute to our discussions. Together we can and will build the solid foundations for a new market architecture aimed at supporting the transition economy and securing a better future for all.

"Mia san Mia"

Luca Bertalot
EMF-ECBC Secretary General

Foreword of the ECBC Covered Bond Fact book



The publication of this year's European Covered Bond Council (ECBC) Covered Bond Fact Book, the 18th edition, comes at a critical geopolitical moment, when financial markets are entering uncharted waters and where high inflation and a new monetary policy landscape are once again highlighting the anti-crises nature of this asset class in providing, in parallel, stable and robust long-term financing and efficient asset liability management. During the recent months of market turmoil and volatility of deposits, lenders have been able to secure access to capital market funding by relying on the 250 years' old DNA of covered bonds and their macroprudential characteristics including low volatility, exceptionally low transaction execution risk, superb credit ratings, and decreased refinancing costs, and limit banks' reliance on riskier funding means and interbank markets.

This anti-cyclical, long-term financing instrument has become a pillar of financial stability and is the nexus between harmonised European financial innovation and the traditions that sit within national legal frameworks.

Together, via the harmonisation and convergence of efforts through the entry into force of the Covered Bond Directive and the ongoing pursuit of third-country equivalence for non-EEA countries, our industry continues to push geographical barriers and to firmly support the development of a robust green Covered Bond market through the Energy Efficient Mortgages Initiative. More in particular, with the call for advice received at the end of July 2023 by the European Banking Authority (EBA) from the European Commission regarding the performance and review of the EU Covered Bond Framework, the Covered Bond Industry is committed to providing data and technical input on the global Covered Bond market landscape. Indeed, as always, the ECBC stands ready to support the work of the European Institutions in the coming years, by gathering Industry know-how and best practices and through ongoing efforts to deliver a global Covered Bond market which supports the transition economy and ultimately contributes to a greener and more inclusive future.

In this context, the ECBC Fact Book 2023 stands as an Industry transparency and informative toolkit offering a deep dive in the covered bond world, summarising the latest market trends, providing a statistical overview and compiling detailed legal information, jurisdiction by jurisdiction. Moreover, the Fact Book sheds light on potential of this asset class to support the transition to a climate-neutral economy with their pivotal role in forging a path to sustainable growth, stability, shared prosperity and, in the end, a brighter future for all. The covered bond market continues to evolve and expand, transcending borders and bridging gaps between capital markets and the real economy.

The ECBC Covered Bond Fact Book together with the Covered Bond Label comparative database serve as a map and compass, guiding market participants, regulators and policymakers through the intricacies of the covered bond market.

This compendium of market developments encompasses the essence and collaborative spirit of the ECBC members' work, which amalgamates different cultures, perspectives as well as, more importantly, legal and financial features defined by a common qualitative and quantitative perimeter. Over the years, this collaborative and constructive approach has become the true *fil rouge* of our Industry's *modus operandi* i.e., always ready to adapt to challenges whilst preserving asset quality and ensuring investor protection. The Fact Book represents the collective effort of our community to produce a prime academic and statistical benchmark publication, whilst coordinating a discussion forum involving over 2,000 covered bond experts and aficionados around the globe.

Over time, this community has been able to foster a covered bond philosophy with clear macroprudential characteristics for investors, thereby ensuring capital market accessibility and financial stability for mortgage and housing markets.

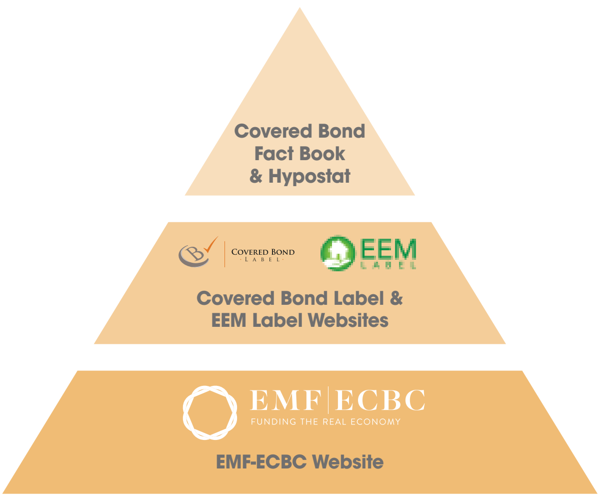
More importantly, beyond the purely financial aspects, for most jurisdictions the introduction of covered bonds has also resulted in the provision of more affordable mortgages, more funding choices for lenders and more long-term borrowing options for consumers when they make the biggest investment of their life.

On a daily basis, capital market participants need complete and accurate information to support regulatory compliance with the Covered Bond Directive, LCR eligibility and ESG-related diligence matters, to name but a few priorities, and this need is growing all the time. This is where the ECBC comes into its own. The ECBC-led Covered Bond Label, has become a qualitative benchmark as an informative gateway into the covered bond space.

Most recently, the ECBC has completely refreshed its Comparative Database on global covered bond legislative frameworks, which is embedded in the Covered Bond Label website.

During the recent periods of market turmoil, pandemic and technological innovation, the EMF-ECBC has played a prominent role as a market catalyst through its efforts to monitor and align best practices. Furthermore, through its technical committees, working groups and task forces, the EMF-ECBC has developed technical knowledge and centres of competence in relation to both the mortgage and covered bond businesses, with a focus on retail considerations, property valuation, prudential regulation, funding strategies, to name but a few key areas. By adopting a "think-tank" approach and adhering to a clear global market governance structure, the EMF-ECBC has applied this expertise to help minimise market disruption. At the same time, it has sought to deliver active coordination and implementation of initiatives aimed at harmonising procedures, standards, definitions and solutions, for example via the Covered Bond Label and its Harmonised Transparency Template (HTT), the Energy Efficient Mortgages Initiative (EEMI) or the Energy Efficient Mortgage Label (EEM Label) and its Harmonised Disclosure Template (HDT).

Significantly, all of this know-how and expertise can be accessed by way of a unique information "pyramid" which offers market participants with direct and rapid access to a wide variety of information and data on specific national markets or on European/global market and policy trends. The content and structure of this pyramid is fine-tuned on a regular basis with market participants in the covered bond and mortgage spaces.



The operational entry level of the pyramid is the EMF-ECBC website through which the EMF-ECBC provides access to all position papers, studies and analysis produced by its technical committees and working groups, offering a valuable window into the potential of current and future legislative and market evolutions. The EMF-ECBC website furthermore provides links to its member organisations, giving an insight into the experts behind the knowledge.

Stepping up a level, the next layer of the pyramid consists of the Covered Bond Label website, where more than EUR 2.1 trillion of covered bonds outstanding are officially registered. The Covered Bond Label website offers a unique level of transparency as the data it holds is managed directly by issuers, ISIN by ISIN, bond by bond, on: (1) liabilities' characteristics; (2) cover asset data via the Harmonised Transparency Template (HTT); and (3) the features of national legislation, which are summarised and comparable at global level. In a similar way, on the ESG lending side, the EEM Label website offers transparency in the energy efficient mortgages space for consumers, lenders and investors.

At the top of the pyramid are the EMF-ECBC's flagship publications offering a deeper dive into market dynamics and legislative developments: the ECBC Fact Book and the EMF Hypostat. The ECBC Fact Book crowns the Covered Bond Label website and Comparative Database with its deeper dive into key themes and trends having impacted the covered bond space in the previous year, national legislation, summaries of the overarching macroprudential value and regulatory treatment of the asset class, as well as synopses of rating agencies' methodologies. Through the Hypostat, the EMF-ECBC delivers a unique analysis of trends in Europe's mortgage and housing markets, offering a comprehensive asset side perspective of mortgage market dynamics and national characteristics for investors and other market participants.

Presently, this information pyramid acts as an operational magnifying glass which guides market participants through the labyrinth of compliance with the Covered Bond Directive, providing legal details, hard data and intelligence, all of which is crucial for investor due diligence. The pyramid's cornerstone lies in the compliance disclosure requirements, with the Covered Bond Label's HTT being fully aligned to Article 14 of the Directive.

At the global level, the ongoing prospect of a third-party equivalence regime is boosting the interest in adopting covered bond legal frameworks and helping to make compliance with the qualitative standards foreseen in the Directive a clear point of reference for regulators and legislators.

Access to information, market guidance and harmonisation efforts are the secret ingredients which make the covered bond space a unique area of the market rooted in stakeholder confidence that, in turn, represents the real essence of the crisis management capabilities of the covered bond asset class.

The EMF-ECBC has always sought to be part of the solution and, through the recent market turmoil, has activated the Industry's best resources to monitor, analyse, discuss and guard against potentially negative impacts for mortgage, housing and funding markets worldwide. As a community, the EMF-ECBC remains committed to supporting the transition to a more sustainable economy and society, encouraging countries to move from a pandemic mind-set towards a more sustainable capital markets infrastructure, and supporting consumers and borrowers in turning the current challenges into opportunities.

After so many years, there is no doubt that we are stronger together and we would like to thank all ECBC members for their input, engagement and continued support during what have been challenging times. We would particularly like to express our gratitude to the contributors to this year's publication for their work in ensuring that this 18th edition of the ECBC European Covered Bond Fact Book remains:

> The leading source of covered bond market intelligence; and

> The primary source for aggregate covered bond market data and statistics, and a comparative framework analysis.

Morten Bækmand Nielsen, ECBC Chairman

Luca Bertalot, EMF-ECBC Secretary General

Programme of Events

All Times CEST

Tuesday, 12 September 2023

9:00 – 12:00	**ECBC TRAINING SESSION ON HOUSING FINANCE AND CAPITAL MARKETS,** delivered in collaboration with HOFINET and dispensed by Professor Marja Hoek-Smit, Emeritus Director of the International Housing Finance Program, Wharton Real Estate Center of the University of Pennsylvania, USA, and Professor Mattheos Santamouris, Distinguished Professor of High Performance Architecture, Arts Design, University of New South Wales, Australia • **Prof. Marja Hoek-Smit:** How to finance climate solutions given current macro-economic and political constraints, particularly in EMDC • **Prof. Mattheos Santamouris:** Greening the building environment – climatic challenges, impact, mitigation and adaptation solutions Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany
12:00 – 13:00	**BUFFET LUNCH** MoNa Restaurant – Rosenheimer Str. 15, 81667 München, Germany *Participants to the ECBC Training Session, CBLF Label & ECBC Steering Committee members only*
13:00 – 14:00	**MEETING OF THE COVERED BOND LABEL FOUNDATION LABEL COMMITTEE** Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany *CBLF Label Committee Members only*
14:00 – 16:00	**MEETING OF THE ECBC STEERING COMMITTEE** Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany *Members of the ECBC Steering Committee only*
14:30 – 16:00	**COVERED BOND ROUNDTABLE FOR AUTHORITIES** Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany *Formal Representatives of National/International Regulatory Authorities Only*
16:00 – 16:30	**COFFEE BREAK** *ECBC Steering and CBLF Label Committee members and participants in the Regulatory Roundtable only*
16:30 – 17:30	**JOINT MEETING OF AUTHORITY REPRESENTATIVES & ECBC STEERING COMMITTEE** Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany *ECBC Steering and CBLF Label Committee members, and participants in the Regulatory Roundtable only*
17:00 – 17:30	**BUS TRANSFER** FROM HILTON MUNICH CITY TO THE ALLIANZ ARENA – GROUP 1
17:30 – 18:30	**GUIDED TOUR OF THE ALLIANZ ARENA – GROUP 1** Werner-Heisenberg-Allee 25, 80939 München, Germany
18:00 – 18:30	**BUS TRANSFER** FROM HILTON MUNICH CITY TO THE ALLIANZ ARENA – GROUP 2
18:30 – 19:00	**GUIDED TOUR OF THE ALLIANZ ARENA – GROUP 2** Werner-Heisenberg-Allee 25, 80939 München, Germany

19:00 – 22:30	**WELCOME DINNER** HOSTED BY THE COVERED BOND LABEL FOUNDATION AT THE ALLIANZ ARENA Busines Club (access through the Welcome Zone West) – Werner-Heisenberg-Allee 25, 80939 München, Germany
19:00 – 19:15	**INTRODUCTION** **Luca Bertalot, EMF-ECBC**
19:15 – 19:30	**SPEAKER** **Robert Hösl, Herzog & de Meuron, Architect of the Allianz Arena**
22:30 – 23:00	**BUS TRANSFER** FROM ALLIANZ ARENA TO HILTON MUNICH CITY

Wednesday, 13 September 2023

9:00 – 16:00	**33RD ECBC PLENARY MEETING** IN WAPPENHALLE Gewerbegebiet Technologiepark Messestadt West, Konrad-Zuse-Platz 7, 81829 München, Germany
9:00 – 16:00	**2ND EEMI SUSTAINABILITY AND DIGITALISATION PAVILION** IN WAPPENHALLE Gewerbegebiet Technologiepark Messestadt West, Konrad-Zuse-Platz 7, 81829 München, Germany
16:30 – 17:00	**BUS TRANSFER** FROM WAPPENHALLE TO LÖWENBRÄUKELLER
17:00 – 21:00	**EUROMONEY CONFERENCES SPONSORS' RECEPTION** IN LÖWENBRÄUKELLER Stiglmaierplatz, Nymphenburger Str. 2, 80335 München, Germany *Participants in the ECBC Plenary Meeting & EEMI Pavilion are welcome to join this Reception if registered*

Thursday, 14 September 2023

9:00 – 16:00	**EUROMONEY CONFERENCES / ECBC COVERED BOND CONGRESS 2023** AT THE MOC EVENT CENTER Lilienthalallee 40, 80939 München, Germany – map *Registered participants only*

Friday, 15 September 2023

9:00 – 11:00	**ECBC GLOBAL ISSUES WORKING GROUP MEETING** Hilton Munich City – Rosenheimer Str. 15, 81667 München, Germany *Members of the ECBC Global Issues Working Group only*

Agenda of the 33rd ECBC Plenary Meeting

Wappenhalle
Gewerbegebiet Technologiepark Messestadt West, Konrad-Zuse-Platz 7, 81829 München, Germany
9h00 – 16h00 CEST

Wednesday, 13 September 2023

8:30	**REGISTRATION AND WELCOME COFFEE**
9:00	**ECBC CHAIRMAN'S NOTE** **Morten Bækmand Nielsen**, Chairman of the ECBC
9:05	**AGENDA OVERVIEW** **Luca Bertalot**, European Mortgage Federation – European Covered Bond Council (EMF-ECBC)
9:10	**KEYNOTE SPEECH** **Cornelia Holthausen**, European Central Bank
9:30	**THE GERMAN PFANDBRIEF MARKET: LATEST DEVELOPMENTS & TRENDS – SESSION ONE** MODERATOR **Jens Tolckmitt**, vdp PANELLISTS **Thomas Cohrs**, Helaba **Friedrich Luithlen**, DZ Bank **Julien Marchand,** Nord/LB **Patrick Seifert**, LBBW → *The Pfandbrief in H1 2023: extending a long and proven track-record* → *A look at the German property market and banks' cover pools* → *Will ESG Pfandbrief become the new normal?*
10:15	**COVERED BOND MARKET STATE OF PLAY: CHALLENGES & OPPORTUNITIES – SESSION TWO** MODERATOR **Steffen Dahmer,** JP Morgan PANELLISTS **Arve Austestad,** SpareBank1 **Matt Cairns,** Rabobank **Cláudio Domingues,** Millennium BCP **Sanna Eriksson,** OP Financial Group **Hélène Heberlein,** Fitch Ratings → *The role of the Covered Bond Market in a world after the ECB purchases* → *Views on the EU Covered Bond Directive one year after it came into play?* → *Investor needs in today's world* → *Outlook for covered bonds in a context of ongoing high inflation and rate hike circles*
11:00	**COFFEE BREAK**
11:30	**KEYNOTE SPEECH** **Lars Overby**, European Banking Authority

11:50	**GLOBAL PERSPECTIVES FOR COVERED BONDS – SESSION THREE** MODERATOR **Colin Chen,** Chairman of the ECBC Global Issues Working Group & ABS PANELLISTS **Krishan Hirani,** Nationwide **Michael McCormick,** BMO Capital Markets **Olaf Pimper,** Commerzbank **Filipe Pontual,** ABECIP **Guy Volpicella,** Westpac → *Covered Bonds outside the EU: A global success story* → *The Covered Bond Label as a facilitator of investor due diligence at global level* → *Key common regulatory pillars for covered bonds worldwide*
12:35	**GLOBAL PERSPECTIVE: HOUSING FINANCE – SESSION FOUR** MODERATOR **Luca Bertalot,** EMF-ECBC PANELLISTS **Luiz de Mello,** OECD **Ievgen Metsger,** Ukrainian Financial Housing Company **Oscar Mgaya,** ISMMA Chairman **Farrukh Zaheer,** Pakistan Mortgage Refinance Company → *A new global landscape for housing finance: challenges & opportunities* → *Emerging best practice examples in housing finance* → *Key elements for a common global paradigm in housing finance*
13:05	**LUNCH BREAK**
14:15	**BUILDING A NEW SUSTAINABLE ECOSYSTEM – SESSION FIVE** MODERATOR **Luca Bertalot,** EMF-ECBC PANELLISTS **Tilmann Kuhfuss,** European Investment Bank **Alessandro Tappi,** European Investment Fund **Mattheos Santamouris,** University of New South Wales → *A new 'ecosystem': building added value for all stakeholders* → *Public finance & private capital: a joint venture in support of the climate transition* → *Role of public and private actors in the transition*
15:00	**FINANCING THE ENERGY TRANSITION: CAPITAL MARKETS SUPPORT – SESSION SIX** MODERATOR **Jennifer Johnson,** EMF-ECBC PANELLISTS **Rubens Bernascone,** Harley&Dikkinson **Giorgio Costantino,** CRIF **Miguel García de Eulate,** Caja Rural de Navarra **Stefano Patruno,** Intesa Sanpaolo **Bodo Winkler,** Berlin Hyp → *Embedding ESG in capital markets: challenges & opportunities* → *Optimising the value chain: a new 'ecosystem' as the key to a successful transition* → *ESN: further unlocking the potential of capital markets in support of the transition*
15:45	**CLOSING REMARKS OF THE ECBC CHAIRMAN & DEPUTY CHAIRMAN** **Morten Bækmand Nielsen,** ECBC Chairman **Stefano Patruno,** ECBC Deputy Chairman
16:00	**END OF PLENARY MEETING**

Speakers

Arve Austestad

CEO, SpareBank 1 Boligkreditt

Arve Austestad has been heading up SpareBank 1 Boligkreditt since 2010. In the period from 2005 to 2010, he served as the Chief Financial Officer in SpareBank 1 Boligkreditt. Prior to joining SpareBank 1 in 2005, he worked in management consulting developing credit models for Nordic banks. He is also managing SpareBank 1 Naeringskreditt. He is a member of the Norwegian Covered Bound Issuer Council.

Morten Bækmand Nielsen

Head of ALM & Investor Relations, Nykredit and Chairman of the ECBC

Morten Bækmand Nielsen is Head of Asset Liability Management & Investor Relations at Danish mortgage bank Nykredit and chairman of the ECBC. He holds a Master's degree in Economics from the University of Copenhagen and has attended courses at London Business School and University of Pennsylvania/ Wharton. He has spent most of his career in Nykredit, though he started out as a trainee at Nordea before moving to Nykredit's Group Treasury as a fixed income portfolio manager. He has later worked in fixed income research in Nykredit Markets and helped develop the bank's lending franchise outside Denmark. Later, he was responsible for a number of regulatory projects including the implementation of the CRD in relation to covered bonds. After returning to Group Treasury, he took over the responsibility for mortgage product development and investor relations and continued to be involved in regulatory issues including changes to the Danish covered bond legislation. For the past decade, the focus of Morten's work has been investor relations and regulatory affairs. He took up his current position in 2021. He has represented the Danish covered bond issuers in the ECBC's Steering Committee since 2017 and has also previously served as chairman of the organisation's Technical Issues Working Group.

Rubens Bernascone

Sustainability Strategist and Business Developer, Harley & Dikkinson

After completing his studies in Economics and Sustainable Business Development, Rubens Bernascone started working as a dedicated business developer, leading several projects and events that intertwine the themes of sustainability, green finance and social innovation. Over the past twelve years, he has built impactful partnerships with leading Italian companies, assisting them in formulating sound sustainability strategies. More recently, he has channelled his experience to bridge the knowledge gap between large corporations and small and medium-sized enterprises (SMEs), as well as the dynamic real estate sector. He strongly believes that their active involvement is a cornerstone in realizing the ambitious EU Net Zero goal.

Luca Bertalot

Secretary General, European Mortgage Federation - European Covered Bond Council (EMF-ECBC)

Luca Bertalot is Secretary General of the European Mortgage Federation - European Covered Bond Council (EMF-ECBC), representing the interests of EU mortgage lenders and the covered bond community in discussions with the European Institutions and stakeholders in general on all issues relating to the retail and funding sides of the mortgage business. Established in 1967, the EMF is the voice of the European mortgage industry, providing data and information on European mortgage markets, which were worth over €8.9 trillion at the end of 2022 (EU27 + UK, Norway and Iceland). In 2004 the EMF founded the ECBC, a platform that brings together covered bond market participants including issuers, analysts, investment bankers, rating agencies and a wide range of interested stakeholders. ECBC members represent over 95% of covered bonds outstanding, which were worth over €3 trillion at the end of 2022.

In his capacity as EMF-ECBC Secretary General, Luca is also Consortium Coordinator for the Energy Efficient Mortgages Initiative (EEMI). In addition, Luca is a member of the European Commission's Sustainable Energy Investment (SEI) Forum's Advisory Group, the Advisory Board of the Ca' Foscari University of Venice's Economics Department and a member of the Board of the Housing Finance Network (HOFINET).

Luca joined the EMF-ECBC in 2006, becoming Head of the ECBC in 2007 and was appointed Secretary General in 2014. Prior to this, he worked as a financial analyst in Italy and Australia. Luca holds a degree in Economics and Financial Markets from the University of Rome, Tor Vergata. He also studied at the University of Mannheim, Germany, and at the Wharton School - University of Pennsylvania, in the United States.

Matt Cairns

Head of Credit Strategy & Regulation, Rabobank

Matt Cairns is the Head of Credit Strategy & Regulation at Rabobank, based in London. His team covers financials, ABS, covered bonds, SSAs and the Dutch pension sector. Matt has been with Rabobank since 2014 in the capacity of Senior SSA and rates strategist before taking over responsibility for credit in 2020 where he focuses on covered bonds, SSAs and broader global macro investment themes.

Prior to this, Matt covered global credit and investment solutions at AXA Investment Managers in London and Paris, and has held senior strategy and investment roles at UBS, Dresdner Kleinwort and Moody's Analytics in Sydney and London. Matt is a regular speaker and presenter in the financial media and holds a PhD (2005) from the University of Melbourne, Australia.

Colin Chen

Managing Director and co-Head, Financial Institutions and Structured Products, Global Fixed Income, DBS Bank Ltd and Chairman of the ECBC Global Issues Working Group

Colin Chen has more than 23 years of Investment Banking and Structured Capital Markets experience. He is currently Managing Director and co-Head, Financial Institutions and Structured Products, Global Fixed Income at DBS Bank Ltd. and is responsible for building and expanding DBS' push to provide its clients structured fundraising solutions. He was previously the Head of Securitisation and Financial Engineering at The Bank of Tokyo-Mitsubishi UFJ., Ltd where he successfully expanded the firm's presence in non-Japan Asia. He started his career at the Union Bank of Switzerland in 1995 and was involved in establishing and building out the Asian Asset Backed Finance business for Asia and has held similar senior positions at CIBC World Markets and Bank of America. He has worked in the public, private and asset backed CP markets and has transaction experience in auto receivables, mortgages, credit cards, consumer loans, trade receivables, leases and collateralised loan and bond obligations. He is currently serving as the Association of Banks in Singapore's Chairman of the Standing Committee on Covered Bonds and elected as the European Covered Bond Council's Chairman of the Global Issues Working Group. He also chairs the Structured Credit Committee at the Asian Securities and Financial Markets Association and sits on the board of the China Securitisation Forum.

Thomas Cohrs

Head of Financial Institutions, Capital Markets, Helaba

Thomas Cohrs is responsible for the capital markets business of Financial Institutions and SSA at Landesbank Hessen-Thüringen (HELABA) in Frankfurt, with a strong focus on the international covered bond markets. Originally coming from the FX markets, he held various management positions in treasury, corporate finance and capital markets before joining HELABA in 2019. HELABA is a public sector institution and acts as the central bank for the majority of German savings banks. HELABA is not only one of Germany's top wholesale banks but also one of the largest issuers of German covered bonds.

Giorgio Costantino

Executive Director, Global Transformation Services, CRIF Group

After graduating and following six months' experience within the Finance Area of an Italian Retailer, Giorgio Costantino joined Accenture in 2000 (formally Andersen Consulting) where he spent 14 years within Accenture Management Consulting practice. He joined CRIF in 2015 as Director of Management Consulting Italy and international direct markets, and in January 2017 he assumed responsibility for Consulting and Solutions as Executive Director for Italy and EMEA Direct Markets. Since 2018, as part of the evolution of the Company, he took the responsibility of the Global Transformation Services the Worldwide Competence Center aimed at leveraging all Consulting, Advanced Analytics and Digital Solution services within and beyond the traditional Data Services.

During 2018 and 2019, he attended the Executive MBA (EMBA) organized by ALTIS (Higher Education School of Catholic University Milan) graduating in 2019 with distinction, presenting a final thesis on the evolution of Information providers leveraging Advanced Analytics and Digital Solution Services. Since 2021, as part of CRIF minority investments, he was appointed to the Board of Directors of a Venture Capital (Fool Farm) aimed at launching Artificial Intelligence and Blockchain startups.

Steffen Dahmer

Executive Director, Syndicate and Global Product Manager for Covered Bonds, J.P. Morgan

Steffen Dahmer is Executive Director–Global Product Manager for Covered Bonds and Syndicate at J.P. Morgan. He is based in Frankfurt and joined J.P. Morgan in Oct 2003, after working for three years at Barclays Capital as Head of Trading Germany and Member of the Local Management Committee in their Frankfurt, Germany office. Prior to joining Barclays in 2000, Steffen worked as Head of Pfandbrief and Eurobondtrading at DG Bank (today DZ Bank) in Frankfurt. Steffen started as a junior trader for Rentenbank and Dekabank.

Cláudio Domingues

Debt Capital Markets & Structured Finance Banker, Millennium BCP

Cláudio Domingues joined Millennium BCP in 2007, since then with responsibilities over conducting the bank's own covered bond and securitisation market issuances, serving both the bank's medium-to-long term funding strategy and its regulatory capital requirements, by procuring solutions towards funding cost optimisation and regulatory capital relief. Beforehand, at Barclays Capital, in London, his focus was on originating real estate structured investment finance loans, subsequently distributed through the bank's CMBS conduit program, where he was also responsible for negotiating and executing of junior loan sales to specialist investment funds. Earlier, at Cushman & Wakefield, London, he conducted feasibility studies on commercial real estate developments for pan-European development companies. He started his career as a building structural designer and project manager for engineering consultancies. He graduated from Porto University with a degree in civil engineering and holds an MBA from Baye Business School (formerly Cass BS), City University, London.

Sanna Eriksson

Managing Director & Head of Investor Relations, OP Mortgage Bank

Sanna Eriksson is the Managing Director of OP Mortgage Bank and the Head of Investor Relations in OP Financial Group in Finland. She has worked in the Group since 2000 in various managerial positions and the last 10 years in OP Mortgage Bank. In 2019, she became the Managing Director of OP Mortgage Bank, as well as the Head of IR. Green finance is close to Sanna's heart and OP Mortgage Bank has been the pioneer issuing the inaugural Green Covered Bond in Finland 2021 and the next one in 2022. She is also an active member of European Covered Bond Council´s (ECBC) Steering Committee representing Finnish Covered Bonds issuing entities. In addition, she is the chairwoman of the Finnish Taxonomy and Green Finance Hub organised by Finnish Green Building Council. Since its beginning, she has been a member of Finance Finland´s Mortgage Bank Committee and starting from 2023 its chairwoman. She holds a degree in Marketing from Helsinki School of Economics and finds sustainability to be an integral part of her life both on and off work.

Miguel García de Eulate

Head of Treasury and Capital Markets, Caja Rural de Navarra

Miguel García de Eulate is Head of Treasury and Capital markets at Caja Rural de Navarra (CRN, Pamplona) where he is responsible for the bank's liquidity management and funding strategy, including bond issuance under CRN's sustainability framework. CRN is a member of the Spanish Caja Rural Group Association (AECR, Madrid), where Mr García de Eulate currently participates in working groups and task forces to implement and develop capital markets related issues at a national level. He is also a member of the Financial markets and Sustainable finance working groups of the European Association of Cooperative Banks (EACB, Brussels). Previously, he has worked in various positions in the credit risk and corporate departments for this Spanish regional cooperative bank. He graduated in Economics & Business Administration from Deusto University (Spain) and holds a Postgraduate Certificate in Sustainable Business from the University of Cambridge (UK).

Hélène M. Heberlein

Managing Director, Fitch Ratings

Hélène M. Heberlein is a managing director in charge of the covered bonds analytical team at Fitch Ratings. The agency rates around 100 programmes from over 20 countries, totalling nearly EUR900bn of outstanding debt, mostly secured by mortgage loans, but also public sector exposures and more unusual collateral such as auto-leases. Previously, she led the Fitch Paris-based European securitisation team. Prior to joining Fitch, she worked as a product manager for asset backed transactions and as a loan syndication officer for a German Landesbank. She graduated from ESCP Business School (Paris-Oxford-Berlin).

Krishan Hirani

Head of Secured Funding, Nationwide Building Society

Krishan Hirani joined Nationwide Building Society in 2012 after graduating with a bachelor's degree in Mathematics and a master's degree in Finance and Accounting. The majority of Krishan's time at Nationwide has been on the Funding & Debt Capital Markets desk, with experience across money markets and capital markets in unsecured and secured formats. In 2017, he was made Head of Secured Funding - responsible for the end-to-end structuring, management and execution of covered bonds, securitisations and central bank funding schemes. He has a keen interest in technology advancement in capital markets and regulatory developments in structured finance. More recently, he led the Society's transition away from LIBOR.

Marja Hoek-Smit,

Founder and Emeritus Director of the International Housing Finance Program, Wharton School, University of Pennsylvania

Marja Hoek-Smit is the Founder and Emeritus Director of the International Housing Finance Program, Wharton School, University of Pennsylvania and Adjunct Professor in the Real Estate Department of the Wharton School. She continues to teach executive education programs in housing finance and housing market analysis and is a core teacher in the Housing Finance Course for Sub-Saharan Africa at Cape Town University, South Africa. She is also the Founder and Executive Director of the Housing Finance Information Network – HOFINET – a global web portal that consolidates international housing finance information and statistical data for public use. She is a frequent advisor to governments and private- and non-profit sector clients in Emerging Market and Developing Economies in the field of housing and housing finance policy and subsidy systems, housing market assessments and institutional development of the housing finance system. She is a member of the Advisory Board of Habitat for Humanity's Terwilliger Center for Innovation in Shelter and on the board of several other NGOs working in the field of affordable housing.

Robert Hösl

Partner, Herzog & de Meuron

Robert Hösl first joined Herzog & de Meuron for an internship in 1992. After completing his architecture degree in 1993 at the Technical University of Berlin, he returned in 1994 to start his collaboration as an architect. In 1998, he relocated to Munich to establish and manage the subsidiary office in Germany, where he was in charge of projects including Fünf Höfe, for the Munich City Centre, and Allianz Arena Football Stadium in Munich. He became a Partner of Herzog & de Meuron in 2004. Since returning to Basel in 2004, Robert has applied his experience in balancing both projects and business management and played key roles in the development of several business departments at Herzog & de Meuron. He is responsible for a number of projects in Switzerland and Germany. These include various projects in Basel for F. Hoffmann-La Roche, for SBB Real Estate, such as the Meret Oppenheim Hochhaus, as well as Helsinki Dreispitz; the west wing extension of the head office of Helvetia in St. Gallen; and the extension of the Küppersmühlemuseum in Duisburg, and the urban planning project Grasbrook in Hamburg, Germany. Robert Hösl is responsible for projects in Munich, such as: the former Postbank building in the city center, and the urban study for the Paketposthalle site, an area that encompasses 85.000 sqm around the heritage protected Paketposthalle.

Cornelia Holthausen

Director General Macroprudential Policy and Financial Stability, European Central Bank

Cornelia Holthausen is Director General Macroprudential Policy and Financial Stability (DGMF) at the European Central Bank since 2021. DGMF provides analyses and policy advice on macroprudential policies, financial stability, financial regulation and supervision. It identifies and monitors systemic risks stemming from the banking and the broader financial sectors in the euro area, including those emanating from market developments, insurance companies, pension and investment funds. DGMF is responsible, together with the ECB Banking Supervision, for carrying out stress-testing exercises to assess the banking system's resilience as well as macroprudential stress tests covering the broader financial sector. Additionally, DGMF is responsible for preparing the ECB macroprudential policy decisions. Previously, she held positions as Deputy Director General in DG Markets and DG Economics, as well as Head of the Financial Research Division at the ECB.

Jennifer Johnson

Deputy Secretary General, European Mortgage Federation – European Covered Bond Council (EMF-ECBC)

Jennifer Johnson joined the EMF-ECBC in 2002, where she is Deputy Secretary General, overseeing, in particular, the EMF policy work. She specialises in a range of mortgage-specific issues on both the retail and prudential sides of the business and therefore handles a variety of files from those with a consumer protection focus right through to liquidity, leverage and capital requirements, as well as a broad range of horizontal EU business regulatory files. She also closely follows the EMF-ECBC's covered bond-related activities and files. She is furthermore heavily involved in the management of the EMF-ECBC's Energy Efficient Mortgages Initiative. Before joining the EMF-ECBC, she studied French, German and European politics at the University of Wales, Cardiff.

Tilmann Kuhfuss

Head of Unit of the Western Europe Division Financial Institutions Department, European Investment Bank (EIB)

Tilmann Kuhfuss studied economics and law at the London School of Economics and the University of Heidelberg. He started his career in the German Banking sector before joining Standard&Poor's in London to work in its European structured finance group. He later transferred to S&P's Frankfurt office to cover the German structured finance market, rating mainly RMBS, consumer loan and auto loan transactions. In 2002, he joined the portfolio guarantees department of the European Investment Fund in Luxembourg, analysing guarantee operations in a wide range of countries, including Germany, Austria, France and Italy. Since 2004, he has been working for the European Investment Bank, first covering project finance operations, incl. public private partnerships in the UK and later transferring to the corporate and banking division of the Western Europe department, with a focus on clients in the UK, France, Benelux and Ireland. In 2013, he joined the Adriatic Sea Department, covering financings for innovation/R&D and SMEs in Italy. In 2017, he became Head of Unit responsible for intermediated financings in Italy, Malta, Slovenia and Croatia. Since 2022, he has been Head of Unit in the Western Europe Division of the newly established Financial Institutions Department, covering intermediated financings and guarantees in France, Italy, Benelux, Ireland, Slovenia, Croatia and Malta.

Friedrich Luithlen

Head of Debt Capital Markets & Syndication, DZ BANK

Friedrich ("Fritz") Luithlen is Head of Debt Capital Markets & Syndication at DZ BANK. Before taking up his current role in late 2017, Fritz ran the private placement business of the bank, and acted as Head of Covered Bond Origination, promoting the Bank's covered bond franchise with issuers across the globe.

In addition to his day-to-day activities, Fritz is also at the helm of a number of DZ Bank's digitalisation projects that aim to combine legal, financial and risk technologies in the digital realm to transform current business models in the primary markets.

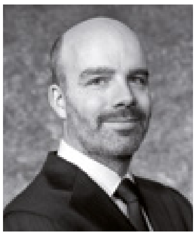
Fritz holds a Master of Arts in Philosophy and Economics from the University of Edinburgh, Scotland, and a Master of Business Administration from the Kellogg School of Business, Evanston, IL, and the WHU – Otto Beisheim School of Management in Vallendar, Germany. He is also an Alumnus of the Institute of International Finance's Future Leaders Programme.

Julien Marchand

Head of Origination FI/ SSA, Norddeutsche Landesbank (Nord/LB)

Julien Marchand is Head of Origination FI/ SSA at Norddeutsche Landesbank (NORD/LB) since June 2019. He joined NORD/LB's DCM team in 2011 and was responsible for Nordic and French issuers. NORD/LB is managing its entire DCM business from Hanover with Covered Bonds as one of the important cornerstones of the franchise with lead mandates in Europe, Asia and North America. The bank is offering issuers not only access to international institutional investors but especially to German Tier 2 and Tier 3 accounts.

Julien holds a diploma in business administration (Diplom Betriebswirt) from Freie Universität Berlin. In addition, he successfully completed a dual commercial training at Dresdner Bank in Berlin.



Michael McCormick

Head of FIG Origination, BMO Capital Markets

Michael McCormick is Head of FIG Origination for BMO Capital Markets and based in London. He has over 19 years of debt capital markets and structured finance experience, during which time he has engaged with issuers and investors across 25 countries and six currencies in the primary markets. In addition, he has structured a number of covered bond programmes for his clients across Europe and led several first-of-a-kind covered bond liability management exercises. He was a member of the ECBC Steering Committee from 2019 to 2022. Prior to joining BMO in May 2023, he was Head of EMEA DCM Advisory at Credit Suisse and Co-Head of Covered Bond Origination at HSBC.

Ievgen Metsger

Chairman of Management Board, Ukrainian Financial Housing Company (UFHC)

Ievgen Metsger is a Ukrainian economist and banker with over 22 years of experience in the banking sector. In 2018 and 2019, he was recognised as the best banker for small and medium-sized businesses (SMB) for continuously improving existing products and developing new mechanisms to stimulate SMB. Metsger served on the boards of the largest state-owned banks and subsequently advised the government on the implementation of the state programme for entrepreneurs 'Affordable Loans 5-7-9' to increase the competitiveness of small businesses. Since November 2022, he has been appointed as Chairman of the Management Board at UFHC (Ukrainian Financial Housing Company), a 100% state-owned company represented by the Ministry of Economy. Under his leadership, the company has successfully launched and is implementing the state programme of affordable mortgage lending named 'yeOselia' (means: 'You have your own housing'). His priorities include the introduction of innovative financial products, modernisation and development of the mortgage lending market in Ukraine.

Luiz de Mello

Director of the Policy Studies Branch in the Economics Department, OECD

Together with the policy studies teams, Mr. de Mello provides leadership and strategic direction within the economics department, ensuring the design and implementation of analysis and policies which promote stronger, cleaner, fairer and more inclusive economic growth for member and partner countries. Structural policy surveillance, short and long term economic outlooks, public finance and macroeconomic policy analysis are among the key workstreams for policy studies. Earlier in his career, Mr. de Mello held senior positions at the OECD, including Deputy-Director of the Public Governance Directorate and Chief of Staff and Counsellor to the Chief Economist. Prior to joining he OECD, he worked as a Senior Economist at the Fiscal Affairs Department of the International Monetary Fund, and as a Lecturer at the Economics Department of the University of Kent, United Kingdom. He holds a PhD in Economics from the University of Kent, United Kingdom.

Oscar Mgaya

Chief Executive Officer, Tanzania Mortgage Refinance Company & ISMMA Chairman

Oscar Mgaya is the Chief Executive Officer of Tanzania Mortgage Refinance Company (TMRC) since April 2013. He joined TMRC in January 2011 as Chief Operating Officer. He has over 20 years of commercial real estate and financial services experience. Prior to joining TMRC, he was Director of Real Estate for Limited Brands in the United States. He previously also worked for JP Morgan Chase, General Electric Company, and Merrill Lynch. He received both his Bachelor of Arts degree in Finance & Management, as well as his Masters of Arts degree in Management from Walsh University. He is also a Certified Leasing Specialist (CLS). Oscar is the board Chairman of the Association of Tanzania Employers (ATE) and the Chairman of the International Secondary Mortgage Market Association (ISMMA). He is a member of the Executive Committee of the International Union for Housing Finance (IUHF). He was also Chairman and board member of the African Union for Housing Finance (AUHF) Board of Directors.

Lars Overby

Head of Risk-based Metrics Unit, European Banking Authority

Lars Jul Overby is Head of the Risk-based Metrics (RBM) Unit in the Prudential Regulation and Supervisory Policy Department of the European Banking Authority (EBA). He is currently responsible for the EBA's regulatory work in the area of credit, market and operational risk in addition to covered bonds and securitisation. As part of his responsibilities, he is also leading the EBA work on implementing Basel III in EU. Prior to joining the EBA, he worked in Nykredit, Denmarks Nationalbank, ECB and Nordea. He holds a PhD from the University of Copenhagen in empirical market microstructure.

Stefano Patruno

Head of European Regulatory Policies, Intesa Sanpaolo, Deputy Chairman of the ECBC, Moderator of the ECBC European Secured Notes (ESN) Task Force

Graduated from Rome University in Economics, Stefano Patruno started his career with Crédit Agricole in Paris and then Milan, dealing with the foreign subsidiaries of the banking group. He subsequently joined Intesa Sanpaolo where he worked for Planning, CIB and Treasury Department. In the latter position, he was involved in the structuring of all proprietary securitisations and covered bond programmes, heading the management of all the CB programmes of Intesa Sanpaolo. Eventually, he took responsibility for the Supranational and Intragroup Funding unit. He spent recent years in Brussels, as head of the European Regulatory Policy team of Intesa Sanpaolo, within the overall Institutional Affairs Dept, entrusted with the analysis and advocacy on the EU banking and financial markets legislative files, e.g. prudential files, crisis management, securitisation, covered bonds, retail and financial markets legislation. In 2022, he has been appointed Deputy Chairman of the European Covered Bond Council (ECBC) and is the Moderator of the European Secured Notes (ESN) Task Force. Representing Intesa Sanpaolo, he also participates to the working groups of different EU banking associations, notably he is an alternate member of the AFME Securitisation Board, the Prudential Regulation Board and the European Public Policy Committee.

Olaf Pimper

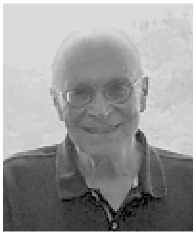
Liquidity Portfolio Management, Commerzbank AG Group Treasury

Olaf Pimper works at Commerzbank AG Treasury Department where he manages the LCR eligible Liquidity Portfolio. Starting at Dresdner Banks Treasury in 1998, he took over responsibility for the Collateral Portfolio in 2001. Since then, he has gained an in-depth knowledge of the whole covered bond universe. He joined Dresdner Bank in 1989 and moved to Commerzbank's Treasury in May 2009 after the take-over.

Filipe Pontual

Managing Director, ABECIP

Filipe Pontual is Managing Director of ABECIP - Brazilian Association of Real Estate Loans and Savings Companies. He has over 27 years' experience in the financial markets, having developed a career in Brazil and New York in areas such as mergers and acquisitions, corporate and structured finance, international capital markets and derivatives in large local and international banks. He is member of the Executive Board of CNF – National Confederation of Financial Institutions, and of the Superior Council of the Construction Industry of FIESP - Industry Federation of the São Paulo State. He is also a member of the FGTS (works severance fund) Board of Trustees. He holds a degree in Economics from PUC-RJ.



Mattheos Santamouris

Distinguished Professor of High Performance Architecture, Arts Design, UNSW Sydney

Mattheos Santamouris is a Scientia, Distinguished, Professor of High Performance Architecture at UNSW, and past Professor in the University of Athens, Greece. Visiting Professor : Cyprus Institute, Metropolitan University London, Tokyo Polytechnic University, Bolzano University, Brunnel University, Seoul University National University of Singapore, and UITM Univ Malaysia. Past President of the National Center of Renewable and Energy Savings of Greece. Editor in Chief of the Energy and Buildings Journal, Past Editor in Chief of the Advances Building Energy Research, Associate Editor of the Solar Energy Journal, E- Prime, Journal of Low Carbon and Sustainable Energy, and Member of the Editorial Board of 24 Journals. Editor of the Series of Book on Buildings, published by Earthscan Science Publishers. Editor and author of 20 international books published by Elsevier, Earthscan, Springer, etc. Author of 412 scientific articles published in journals. Reviewer of research projects in 29 countries including USA, UK, France, Germany, Canada, Sweden, etc. Ranked as the top world cited researcher in the field of Building and Construction by the Stanford University ranking system, for 2019-2022. Highly Cited Researcher in the Clarivate ranking for four continuous years. Ranked as no 538 researcher in the world in all scientific disciplines in the list prepared by Stanford University in 2021 for the 200000 more influential researchers. He has received many international awards.

Patrick Seifert

Head of Primary Markets and Global Syndicate, Landesbank Baden-Württemberg (LBBW)

Patrick Seifert is head of primary markets & global syndicate at Landesbank Baden-Württemberg (LBBW). Before this, he developed the FIG and SSA origination team into a leading franchise. Providing tailor-made funding solutions for demanding issuers, LBBW is particularly appreciated for its excellent distribution capacity throughout economic cycles. Patrick does leverage his extensive sales and strategic experience with former employers BHF-BANK and ING Group to help issuers respond to regulatory changes and market challenges: Ongoing investor diversification, central bank interventions and facilitating product innovations. The latter includes conditional pass-through covered bonds and the first ESG and Green Pfandbrief issues almost 10 years ago – in all of which LBBW played a vital role. Patrick holds Master's degrees from the University of Applied Sciences in Mainz as well as the University of Chicago and regularly lectures with the Frankfurt School of Finance and Management.

Alessandro Tappi

Chief Investment Officer, European Investment Fund

Alessandro Tappi is the Chief Investment Officer at the European Investment Fund (EIF), responsible for equity investments in Venture Capital, Private Equity and Private Credit Funds, as well as Credit Guarantee operations on SME financing portfolios. Recently, Alessandro's responsibilities have been extended to also cover the fundraising business, unifying the chain from mandate origination to transaction implementation and monitoring. He has a long track-record in SME financing and Capital Markets. Investments under his lead exceed EUR 10 bn a year, of which approximately one third in the Equity funds and two thirds in the Credit space. He serves as member of the Board of Directors of various Funds of Funds. Prior to joining EIF, Alessandro worked for several years in project financing at San Paolo Bank, Italy. Alessandro holds an MBA in Business Administration and a Diploma in Economics from the University of Turin, Italy. He has been a university lecturer and has led training courses on Structured Finance Products and Financial Modelling.

Jens Tolckmitt

Chief Executive, Association of German Pfandbrief Banks (vdp)

Jens Tolckmitt, born in 1971, was appointed Chief Executive of the Association of German Pfandbrief Banks (vdp) in June 2009. Between January 2003 and May 2009, he served as the Managing Director of the Association of Foreign Banks (VAB) in Germany. Before that, from 1998 to 2002, Jens worked for the Association of German Mortgage Banks in Bonn and Berlin (the predecessor organisation of the vdp) in several positions, finally heading the capital markets department of the association. Prior to this he studied economics, specialising in monetary macroeconomics and finance, and graduated in 1998.

Guy Volpicella

Managing Director & Head of Structured Funding & Capital, Westpac

Guy Volpicella was appointed to his current role in 2011. His primary responsibility is the structuring, execution and ongoing management of covered bonds, securitisation and capital-management transactions for the Westpac Group, as well as strategic M&A activities that involve securitisation. Guy has over 20 years' banking experience and has been involved in securitisation, structured-funding and capital related transactions for over 10 years. From 2004 to 2010, Guy was a Director in Westpac Institutional Bank (WIB)'s securitisation team. He was responsible for arranging, structuring and executing covered bond and securitisation transactions for Westpac and its clients. During this period, Guy also led the Treasury/ Funding streams of the RAMS and CFAL (part of Lloyds) acquisitions.Prior to that, Guy was a senior relationship manager within WIB's corporate and institutional banking division, managing accounts such as, Lion Nathan, McDonalds, Metcash, Westfield, and Unilever. Guy is the Chair of the Investment Advisory Committee for Westpac Foundation, Westpac Scholars and St George Foundation, having been appointed as a representative in March 2018. Guy is a member of the Regulatory and Prudential Sub-Committee of the Australian Securitisation Forum, having been the Chair of the committee and National Committee member from 2009 to 2016. Guy has a Bachelor of Commerce and a Master of Commerce from the University of New South Wales.

Bodo Winkler-Viti

Head of Funding & Investor Relations, Berlin Hyp AG

Bodo Winkler-Viti is Head of Funding & Investor Relations at Berlin Hyp AG in Berlin and is responsible for the bank's long term funding, its relations to investors and also to rating agencies. In addition, he looks after Berlin Hyp's activities in Green Bonds, Social Bonds and Sustainability-Linked Bonds. Before joining Berlin Hyp in 2010, he worked as a division manager at the Association of German Pfandbrief Banks (vdp) responsible for Pfandbrief and capital markets issues. Prior to joining the vdp in 2004, Bodo was an asset manager with Deutsche Kreditbank AG where he was in charge of the bank's fixed income portfolio. After starting his career at GrundkreditBank, Berlin in 1994, he worked as a money market trader at Berliner Volksbank. Bodo received a MBA from Lord Ashcroft International Business School in Cambridge and holds a degree in Business Administration from HTW Berlin University of Applied Sciences.

Farrukh Zaheer

Head of Treasury, Capital Markets & FI, Pakistan Mortgage Refinance Company

Farrukh Zaheer is the Head of Treasury, Capital Markets & FI at Pakistan Mortgage Refinance Company (PMRC), responsible for issuing Bonds, TFC's & Sukuk in capital markets, Asset & Liability Management, Placements and Investment for the organization. Farrukh is also on the board of trustees of Risk Sharing Facility which provides partial credit guarantees for low-income housing. Farrukh led the first issuance of PMRC's privately placed bond and has subsequently issued several debt instruments which also included first of a kind Sukuk in Pakistan. Currently, PMRC is one of the largest debt securities issuers in Pakistan. Prior to joining PMRC, Farrukh was associated with Citi Bank in the Treasury & Trade Solutions division as the Head of Trade, Global Markets & Commercial Banking division of Standard Chartered Bank and as Head Treasury Sales at NIB Bank which was recognised as the No. 1 Primary Dealer among several Financial Institutions. Farrukh holds an MBA in Banking & Finance from Institute of Business Management, additionally he is also a member of the Financial Markets Association of Pakistan and a Certified Board Director.

2nd EEMI Sustainability and Digitalisation Pavilion

Facilitating the green efforts of the covered bond and mortgage industry

Energy Efficient Mortgages Initiative

Following on from our previous events in Trento and Helsinki, the 2nd EEMI Sustainability & Digitalisation Pavilion offers a unique platform where discussions will focus on **facilitating the green efforts of the covered bond and mortgage industry.**

Econans

Econans AB is a Swedish green fintech partner that provides digital services for simulations and data gathering of energy consumption and energy efficiency actions. The services offered are based on research, statistics and financial regulations, combined with users' own data. The platform also provides necessary data for the banks to analyse, report and improve their mortgage stock.

European DataWarehouse

European DataWarehouse (EDW) is a Securitisation Repository designated by both the European Securities and Markets Authority (ESMA) and the Financial Conduct Authority (FCA). It was established in 2012 as the first Securitisation Repository in Europe to facilitate the collection, validation, and download of standardised loan-level data for Asset-Backed Securities and private whole loan portfolios. EDW stores loan-level data and corresponding documentation for investors and other market participants. Operating as a market infrastructure, EDW aims to increase transparency and restore confidence in the ABS market. Through EDW's data, users can analyse underlying portfolios in a more efficient way and compare portfolios on a systematic basis.

Evitec

Evitec is a versatile technology company in northern Europe with over 30 years of experience. Our core competence lies in modernising customers' businesses through software solutions, consultation services and business expertise, especially in the financial sector. We also offer analytics and data management services to several sectors. Evitec Covered Bonds is a cover pool management solution. It is a core system for a bank issuing covered bonds or for a mortgage loan lender planning to issue covered bonds. We have done several Evitec Covered Bonds system implementations for our Finnish financial sector customers. The solution is compliant with regulatory requirements in the EU area.

Kamma

Kamma is a UK based technology company that uses geospatial data to support regulatory compliance and drive the built environment to Net Zero. Kamma's solutions are powered by a proprietary engine built to detect, aggregate, cleanse and integrate messy and disparate information into central, usable and dynamic datasets. On top of Kamma's datastore and engine sit modern clean technology products, providing data, answers and business solutions via a suite of technology products.

Our initial core market was in solving the complex issue of property licensing: the diverse set of legislative tools introduced to devolve power and responsibility for raising minimum standards in the Private Rented Sector (PRS) to Local Authorities. Since launching that vertical, we have brought on the majority of large names in the industry, including brands such as Hamptons, Purplebricks, CBRE, Knight Frank, JLL and many more.

Kamma has since expanded its remit to accelerate the built environment to Net Zero as quickly and cost effectively as possible. We work with mortgage lenders, letting agents, local authorities, property funds and housing associations. We've combined millions of data points from disparate sources to create the most advanced environmental profiles for all 36 million residential properties in the UK. Our business solutions surface this data in a way that supports the major objectives of businesses and organisations linked to property, from supporting mortgage decisioning to ensuring regulatory compliance, creating portfolio pathways to Net Zero, and qualifying property-related assets as objectively green.

Net2Grid

NET2GRID is an Energy AI company that empowers banks to assist their residential customers in reducing energy consumption and cutting costs in their homes by transforming energy data into highly accurate insights. Our primary objective is to equip homeowners with personalized energy consumption insights and customized advice to enable them to make well-informed green home investments and take actions that promote energy efficiency and sustainable living.

Oper

Oper is a leading Belgian-Swiss cloud-based software provider with the mission to deliver the best-in-class mortgage experiences through digital channels. Its aim is to break down the barriers between lenders and borrowers by providing cutting-edge technology that supports both parties throughout the mortgage journey. Oper's digital mortgage solution is delivered to leaders in multiple European countries, enabling digital-first distribution with a seamless process from contact to contract.

Skenariolabs

Skenariolabs predicts the future of sustainable real estate using data and AI. They help a vast array of real estate professionals understand and manage the connections between property values, technical conditions, and ESG risks. They work together with financial institutions, property owners and local authorities. Skenariolabs supports multiple mortgage banks in their loan origination, monitoring and green finance processes and ESG risk detection.

Pakistan Mortgage Refinance Company

Pakistan Mortgage Refinance Company (PMRC) was set up as a Mortgage Liquidity Facility by the Central Bank of Pakistan to address the long-term funding constraint in the banking sector, which was hindering the growth of the primary mortgage market. Its thrust is three-fold: help reduce maturity mismatch risk for Primary Mortgage Lenders (PML's), increase the availability of fixed rate mortgages and increase the maturity structure of the mortgage loans. PMRC is a regular issuer of capital market debt securities through which it provides long term funding to PML's and is now one of the largest issuers in Pakistan. PMRC has also been appointed as a Trustee of Credit Guarantee Trust (CGT) which has been set up by the Government of Pakistan to provide partial Credit Guarantee cover on first loss basis for low-income housing, particularly those in the informal sector so that PMLs are encouraged to provide mortgage facilities to this group of mortgagors.

Synesgy

Established in 1988 in Bologna (Italy), CRIF has a global presence, operating over four continents (Europe, America, Africa and Asia). Today, CRIF is the leader in Italy for retail credit management and lending support solutions and, thanks to the expertise acquired over more than 30 years of activity in highly competitive markets, it is the leading group in continental Europe in the banking information sector and one of the main operators on an international level for integrated business and commercial information and credit and marketing management services. CRIF has been pursuing and supporting banks, insurance companies, and corporations on the path to sustainable transition for several years and has developed the Synesgy global digital platform that enables ESG self-assessment for sustainable assessment of both oneself and the entire supply chain.

Setle

Setle app (https://setle.app/) is a SaaS property tech that simplifies renovations. Their renovation app gives a thorough support in the pre-buying phase of renovation property. An easy-to-use interface that allows everyone to generate a renovation report and get insights on the renovation costs and the effect on the EPC-label. Setle gives transparency to the broker and buyer and facilitates the buying of renovation properties. Setle is on a mission to make renovations more transparent and helps to make better decisions during the renovation process.

vdpResearch / K.A.R.L.®

vdpResearch is the real-estate market research company of the Association of German Pfandbrief Banks (vdp), which focuses on compiling, analysing and forecasting real estate prices from a lending standpoint.

The K.A.R.L.® - Köln.Assekuranz Risiko Lösungen system offers an established concept for the analysis of natural hazard exposures. With the involvement of the Association of German Pfandbrief Banks (vdp), Köln.Assekuranz has further developed the K.A.R.L.® system in accordance with the legal requirements for mortgage cover assets. Together with vdpResearch, Köln.Assekuranz now provides the banking industry with online access to K.A.R.L.®.

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

On the Magnitude of Urban Climate Change, its Impact on Energy, Health, Productivity, Vulnerable Population, Economy and Environmental Quality. Heat Mitigation and Adaptation Potential and Proposals to Counterbalance Urban Heat.

By Mattheos Santamouris, UNSW, Sydney, Australia

INTRODUCTION

Cities exhibit a higher temperature than the surrounding rural and suburban spaces. The phenomenon is known as urban overheating and is due to the positive thermal balance of cities compared to their surrounding areas (1). There are more than 13,000 cities presenting overheating problems, and more than 1.7 billion people living under serious overheating conditions (2). The mean magnitude of urban overheating in the world cities is varying between 4 to 6°C, while the maximum temperature increase can be as high as 11°C (3).

Higher urban temperatures affect the quality of human life considerably (4). In particular, they raise the energy consumption for cooling purposes, increase the peak electricity demand and oblige power utilities to install additional power plants that operate just for few days per year, increasing the cost of electricity considerably. Urban overheating also decreases the performance of thermal and nuclear power plants, exacerbates urban pollution and in particular the concentration of ground level ozone, surges the magnitude of heat related mortality and morbidity and affects mental health, decreases human productivity and seriously affects the survivability of low income and vulnerable urban populations (5).

The development and implementation of advanced materials to be used in cities and urban buildings in combination with well-designed additional greenery systems is found to contribute towards a decrease of the peak urban temperature of up to 4°C. This achievement can lead to a reduction of the energy consumption for cooling purposes by 40% on average, improve the indoor and outdoor thermal comfort considerably and enhance resilience, while at the same time decrease heat related mortality by at least 30% (6,7).

Climatic forecasts predict a serious increase of the minimum temperature of cities, up to 4°C, as a result of the synergetic influence of global and regional climate change (8). Further increase of the urban temperatures is expected to cause a tremendous increase of the energy, environmental, health and economic problems at the city scale.

It is well accepted that current policies relative to the built environment are still falling short of the Paris objectives. Current policies both in the developed and developing countries are not sufficient to ensure the required levels of decarbonisation and the climatic improvement of the world cities. Development and implementation of innovative financial and social tools setting the minimization of the magnitude of urban overheating as an objective, are required.

IMPACT OF URBAN OVERHEATING

ENERGY IMPACT

Urban overheating increases the cooling energy consumption of buildings. It is estimated that the mean urban energy penalty induced by the increased urban temperatures is approximately 0.73 ±(0.64) kWh/m2/C, while the average annual global energy penalty per person is approximately 230 ±(120) kWh, and the average annual global energy penalty per person and degree of temperature increase is approximately 78 ±(47) kWh (9).

Higher urban temperatures raise the peak electricity demand during the cooling period. It is calculated that the average power penalty and the corresponding additional electricity demand induced by urban overheating is close to 21 Watts (± 10.4) per degree of temperature increase and per person (10). In parallel, overheating affects the generation capacity of the thermal and nuclear power plants. It is estimated that an increase of the ambient temperature by 1°C, induces a reduction of the power production of nuclear and thermal power plants by 0.6% and 0.8% respectively (11), while it is the main source of major grid failure events. It is characteristic that while the major electrical grid failure events in USA in 2015 were close to 45, by 2020 they had increased to 125 (12). Additionally, the price of electricity is seriously affected during extreme heat events. During the 2022 heat wave in France, because of the serious rise of the river's temperature, the operational capacity of the nuclear power plants was reduced considerably resulting in day-ahead baseload power prices about 10 times higher than the prices between 2017 to 2021 (13).

Forecasts of the urban climatic conditions for the next 20 years considering several emission scenarios show that the minimum temperature of cities may increase up to 4°C (14), resulting in a very serious increase of the human exposure to heat waves and ground level ozone (15,16). Such an important temperature increase is foreseen to skyrocket the cooling energy consumption. It is expected that by 2050, the energy consumption for cooling may increase between 250 and 1,500% compared to the current levels as a function of specific technological, economic and social developments (17).

ENVIRONMENTAL IMPACT

The increase of the ambient temperature in cities affects the concentration of harmful pollutants and especially of the toxic and oxidant ground level ozone, leading to potentially serious human respiratory and cardiovascular problems. High ambient temperatures accelerate the formation of ozone precursors. In particular, the reaction kinetics of volatile organic compounds and NOx's photochemically combined to generate ground-level ozone speeds up with increased ambient temperature (18).

Apart from the important increase of the ground level ozone, overheating increases the emissions of pollutants by power plants per degree of temperature increase: 3.32%/ °C ± 0.36%/ °C increase in CO2 emissions, 3.35%/°C ± 0.50%/°C increase in SO2 emissions, and 3.60%/ °C ± 0.49%/ °C increase in NOX emissions (19).

IMPACT ON HEALTH

Human exposure to high ambient temperatures can impact the human thermoregulatory system and results in increased health problems, especially in higher heat related mortality and morbidity (20). It is reported that the levels of heat-related morbidity increase between 0.05 and 4.6% on average per degree of temperature increase, while during heat waves it ranges between 1 and 11% (4). Moreover, Heat Related Mortality (HRM) increases as a function of demographic, socioeconomic and biophysical factors determining the magnitude of deprivation and vulnerability in cities compared to suburban and rural zones (21). Analysis of several studies has shown that living in the warmer neighbourhoods of a city causes almost 6% higher risk of mortality as opposed to living in the cooler neighbourhoods, while living in less vegetated urban areas presents 5% higher mortality risks than in the greener urban districts (22).

MITIGATION OF URBAN OVERHEATING

To face the problem of extreme urban temperatures and counterbalance the impact of urban overheating, innovative efficient heat mitigation technologies have recently been developed and implemented at the city scale.

Innovative mitigation technologies can decrease the temperature of cities substantially (23). Heat mitigation technologies include photonic passive day time radiative coatings and surfaces, reflective and fluorescent surfaces, appropriate green infrastructure integrated at the building façade, roof and urban structures, evaporative systems, solar control devices and systems linked with low temperature heat sinks (24).

Photonic, passive day time radiative materials enable sub-ambient cooling under direct sunlight due to the combination of very high emissivity in the mid-infrared atmospheric window and close-to-unity solar reflectance. This passive technology offers considerable benefits in terms of urban heat mitigation, indoor comfort, and cooling energy conservation (25). Estimations have shown that the implementation of passive day time radiative materials at the urban scale can decrease the peak temperature of cities up to 4.5°C (26). Fluorescence-based materials can also offer a very high mitigation potential due to their ability to re-emit a portion of the absorbed photons (27).

Increase of the green infrastructure in a city contributes to mitigate urban heat through solar control and evapotranspiration. Greenery must be properly designed to avoid the serious decrease of evapotranspiration during heat waves and to minimize the emitted harmful BVOC's (28). Additional greenery can decrease the peak day and night urban temperatures up to 1°C and 3°C respectively (29).

FINANCIAL TOOLS TO PROMOTE HEAT MITIGATION

Setting as a goal minimum urban overheating and pollution involves limiting the strength of warming and polluting sources and increasing the strength of urban heat sinks to balance the urban heat budget. Achieving a zero urban thermal and pollution budget requires:

- Changes in the way we design, build and operate urban buildings, spaces and infrastructures and transition to less warming and polluting patterns and policies.
- Assessment and control of the magnitude of overheating and pollution caused by selected major urban activities. Liable entities exceeding the threshold and causing urban warming must pay a price for every warming or pollution unit, shortfall cost, or they need to surrender the appropriate number of allocated units.
- Put a value on the urban mitigation and adaptation capital that limits the strength of local climate change and environmental quality.

It is critical to value urban overheating with liquidity in order to accelerate urban cooling and finance urban heat mitigation and adaptation. The development of a voluntary Urban Warming Market could bring urban mitigation and adaptation investments to the market sooner and make them more affordable. The scheme will bring new sustainable urban business, will boost profits, and will skyrocket the investment of new green capitals in cities.

An Urban Green Financing Scheme should increase the level of financial flows from the public, private and not-for-profit sectors to projects aiming to mitigate urban overheating and promote urban sustainable development priorities. The Scheme may include, among others:

- **Urban Green Bonds:** To finance Urban Mitigation and Adaptation Projects and the overall transition of Urban Climate Change. Standards should extend eligibility to green urban development projects.
- **Sustainable Real Estate:** Green Properties are very attractive financially and comprise low risk investments. Inclusion of proper performance indicators, green labels and urban benchmarking schemes towards urban climate change, is a requirement.
- **Microfinance:** Microfinance of low-income individuals or groups.
- **Financing Urban Business-led Innovation:** To accelerate growth beyond the state of the art on urban mitigation and adaptation and make inclusion of such projects more "affordable" by reducing the cost of the corresponding products and services.

The Scheme may include among other:

- **Urban Public Private Partnerships:** Through U-PPP major urban mitigation and adaptation projects can be financed, developing sustainable infrastructures and services to more urban citizens while they can allow for better allocation of risk between public and private entities. Public authorities can provide urban land and infrastructures offering attractive commercial opportunities for the private sector. In parallel, according to S&P Global Ratings' research:
  '60% of S&P 500 companies own assets that are at a "high risk" from the physical effects of climate change', and most of the assets are in cities. Thus, there is a serious incentive for the private sector to invest to decrease the risk.
- **Investments for Development of Large Scale Urban Mitigation and Adaptation Projects:** To support developing and transitioning economies to attract and generate more and better investments for large scale green urban projects promoting urban climate transition.

SOME CONCLUSIONS

The serious heterogeneity of the quantitative and qualitative conclusions drawn by the existing heat mitigation studies can be mainly attributed to the differentiation of the synergetic association of energy, pollution, health and vulnerability in the considered cases. The need to adopt a more extended and interdisciplinary frame for impact studies considering all possible synergies is quite evident.

Studies on the impact of overheating on energy, pollution, vulnerability and health provide knowledge on the specific impact on energy consumption, peak electricity, efficiency of the power plants, concentration of ozone, emission of power plants, vulnerability and health. While the provided information is rich in quantified data, it is highly fragmented and fails to consider the problem of the overheating impact in an integrated and holistic way.

Investing in and counterbalancing the urban climate change is the next productivity engine to drive growth.

REFERENCES

1. M. Santamouris , *Minimizing Energy Consumption, Energy Poverty and Global and Local Climate Change in the Built Environment Minimizing to Zero the Building Sector*, Published by Elsevier (2018)
2. Tuholske C, Caylor C, Funk C, Verdin A, Sweeney S, Grace K, et al. 2021. *Global urban population exposure to extreme heat*. PNAS 118(41):e2024792118
3. M. Santamouris. 2015. *Analyzing the heat island magnitude and characteristics in one hundred Asian and Australian cities and regions*. Sci. Total Environ. 512–13:582–98
4. M. Santamouris, *Recent progress on urban overheating and heat island research. Integrated assessment of the energy, environmental, vulnerability and health impact. Synergies with the global climate change*. Energy and Buildings, 2020. 207: p. 109482.
5. M. Santamouris,, R. Paolini, S. Haddad, A. Synnefa, S. Garshasbi, G. Hatvani-Kovacs, K. Gobakis, K. Yenneti, K. Vasilakopoulou, J. Feng, K. Gao: Heat Mitigation Technologies can improve sustainability in Cities. *An holistic experimental and numerical impact assessment of urban overheating and related heat mitigation strategies on energy consumption indoor comfort vulnerability and heat related mortality and morbidity in cities*. Energy and Buildings, Volume 217, 15 June 2020, 110002
6. M. Santamouris, A. Synnefa, and T. Karlessi, *Using advanced cool materials in the urban built environment to mitigate heat islands and improve thermal comfort conditions*. Solar Energy, 2011. 85(12): p. 3085-3102.
7. M. Santamouris, *Innovating to zero the building sector in Europe: Minimising the energy consumption, eradication of the energy poverty and mitigating the local climate change*, Solar Energy Volume 128, April 2016, Pages 61–94
8. K. Oleson: *Contrasts between Urban and Rural Climate in CCSM4 CMIP5 Climate Change Scenarios*, Journal of Climate, 2012, DOI: 10.1175/JCLI-D-11-00098.1
9. M. Santamouris : *On The Energy Impact of Urban Heat Island and Global Warming on Buildings*, Energy and Buildings, Volume 82, October 2014, Pages 100-113, 2014
10. M. Santamouris, Cartalis C, Synnefa A, Kolokotsa D. 2015. *On the impact of urban heat island and global warming on the power demand and electricity consumption of buildings – a review*. Energy Build. 98:119–24
11. Bartos M, Chester M, Johnson N, Gorman B, Eisenberg D, et al. 2016. *Impacts of rising air temperatures on electric transmission ampacity and peak electricity load in the United States*. Environ. Res. Lett. 11(11):114008
12. Brian Stone, Jr., Carina J. Gronlund, Evan Mallen, David Hondula, Marie S. O'Neill, Mayuri Rajput, Santiago Grijalva, Kevin Lanza, Sharon Harlan, Larissa Larsen, Godfried Augenbroe, E. Scott Krayenhoff, Ashley Broadbent, and Matei Georgescu: *How Blackouts during Heat Waves Amplify Mortality and Morbidity Risk*, Env Research and Technology, 2023
13. Bloomberg. 2022. Bloomberg Green Newsletter. New York: Bloomberg. https://www.bloomberg.com/green

14. Lei Zhao, Keith Oleson, Elie Bou-Zeid, E. Scott Krayenhoff, Andrew Bray, Qing Zhu, Zhonghua Zheng , Chen Chen and Michael Oppenheimer: *Global multi-model projections of local urban climates*, Nature Climate Change | VOL 11 | Februar 152 Y 2021 | 152–157 |

15. Yuwei Wang, Na Zhao, Chaoyang Wu, Jinling Quan, Mingxing Chen: *Future population exposure to heatwaves in 83 global megacities*, Science of The Total Environment, Volume 888, 25 August 2023, 164142

16. Xiaoyan Jiang, Christine Wiedinmyer, Fei Chen, Zong-Liang Yang, and Jeff Chun-Fung Lo: *Predicted impacts of climate and land use change on surface ozone in the Houston, Texas, area*, JOURNAL OF GEOPHYSICAL RESEARCH, VOL. 113, D20312, doi:10.1029/2008JD009820, 2008

17. M. Santamouris : *Cooling of Buildings. Past, Present and Future*, Energy and Buildings, 128 (2016) 617–638, 2016

18. Reid CE, Snowden JM, Kontgis C, Tager IB. 2012. *The role of ambient ozone in epidemiologic studies of heat-related mortality.* Environ. Health Perspect. 120(12):1627–30

19. P. Meier , T. Holloway , J. Patz , M. Harke , D. Ahl , D. Abel , S. Schuetter , S. Hackel , *Impact of warmer weather on electricity sector emissions due to building energy use*, Environ. Res. Lett. 12 (2017) 064014

20. Patz JA, Campbell-Lendrum D, Holloway T, Foley JA. 2005. *Impact of regional climate change on human health.* Nature 438(7066):310–17

21. Smargiassi A, Goldberg MS, Plante C, Fournier M, Baudouin Y, Kosatsky T. 2009. *Variation of daily warm season mortality as a function of micro-urban heat islands.* J. Epidemiol. Community Health 63(8):659–64

22. Schinasi LH, Benmarhnia T, De Roos AJ. 2018. *Modification of the association between high ambient temperature and health by urban microclimate indicators: a systematic review and meta-analysis.* Environ. Res. 161:168–80

23. M. Santamouris, L. Ding, F. Fiorito, P. Oldfield, Paul Osmond, R. Paolini, D. Prasad, A. Synnefa : *Passive and active cooling for the outdoor built environment – Analysis and assessment of the cooling potential of mitigation technologies using performance data from 220 large scale projects*, Solar Energy, Volume 154, 15 September 2017, Pages 14-33

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

Sustainability and ESG: Advanced Analytics accelerating the transition

CRIF
Together to the next level

By Giorgio Costantino, CRIF

"Is sustainable finance achievable?" This question is increasingly relevant in the New Normal following the global crisis and is influenced by the ability of the economic and political context to react. The united, consolidated response to the pandemic, which resulted in the strongest ever fund allocation to support the recovery path, has focused significantly on sustainability and energy transition: in Europe alone, more than EUR 400 billion have been allocated to finance the green transition. The energy crisis, exacerbated by the war in Ukraine, has strongly accelerated this trend, highlighting the need for alternative energy sources.

Sustainability assessments by financial institutions and sustainability certification for companies are the levers to unlocking the benefits that such a transition can deliver.

In Europe, the ESG compliance pathway has been strongly promoted by the ECB (European Central Bank) and other European authorities (primarily the European Banking Authority), which require all financial institutions to consider ESG risk within their risk strategy and governance, the evaluation of Internal Capital Requirements, and official capital disclosure.

"Sustainable finance is becoming a 'mandatory opportunity' given the huge funds earmarked by governments and institutions to address the green transition; the global challenges are still ongoing (pandemic and energy crisis) and the ECB requirements in Europe have strongly accelerated this pathway," commented Giorgio Costantino, Executive Director of CRIF Global Transformation Services.

Banks are expected to provide some specific information on their clients, mainly corporates and small and medium-sized enterprises (SMEs).

To achieve ESG compliance, the ECB also requires clients to provide estimates of direct and indirect GHG emissions (so-called Scope 1, 2 and 3 GHG emissions), the climate risk impacts given a certain climate scenario (so-called Physical Risk) as a degree of exposure to different natural hazards (flood, landslides, etc.), and the financial loss that a company may incur, directly or indirectly, as a result of the transition process toward a low-carbon footprint.

Although many big corporations have already started reporting ESG information through Non-Financial Reporting, most SMEs do not provide (and are not able to provide) information quantifying ESG risks.

The assessment of ESG risk is still at an early stage for the following reasons:

- **Shortage of data:** Lack of user-friendly, relevant, reliable and comparable data (impact of heat waves, windstorms, hurricanes, tropical cyclones,…);
- **Non-linear effects:** ESG risks are often "black swan" events and therefore difficult to assess in terms of all their possible ramifications (e.g., emissions, climate risk, transition risk);
- **Uncertainty:** The timing and impact of physical and transition risks, social and governance risks are difficult to quantify;
- **Multiple impacts:** ESG risks can simultaneously affect credit risk, market risk, capital and liquidity adequacy, …

ESG compliance can only be unlocked through a solid ESG dataset, a proven methodology to ensure a qualitative and quantitative ESG assessment (i.e., an ESG Score), and solid platforms and technology to enable ESG usage by banks and companies.

"Advanced analytics, information and proven methodologies, will play a crucial role in supporting financial institutions in assessing the ESG compliance of their clients and companies requiring certification. CRIF has leveraged its information network and strong risk management capabilities to create an ESG Data Lake, a proven Advanced Analytics methodology to address ECB expectations (mainly physical risks and GHG emissions), and technology platforms to support ESG compliance certification and assessment." commented Giorgio Costantino, Executive Director of CRIF Global Transformation Services.

Since 2018, CRIF has been investing in the development of a unique ESG Framework to unlock the ESG assessments of financial institutions and ESG certification of companies. The Framework comprises three main components: ESG Data Lake, ESG Scores and Advanced Analytics methodology, and ESG Platforms and APIs. The unique ESG Data Lake comprising more than 140 KPIs in line with the EU Taxonomy and EBA requirements; the data lake leverages single-name business information from the whole CRIF Group dataset, combined with other data from all other available datasets (e.g., EUROSTAT, European Commission, European Environment Agency, Copernicus, European Space Agency, etc.).

The result is a synthetic assessment (ESG Score) which, as a comprehensive **single-name** assessment of Environmental Social and Governance factors, provides the most valuable insights to inform the transition pathway.

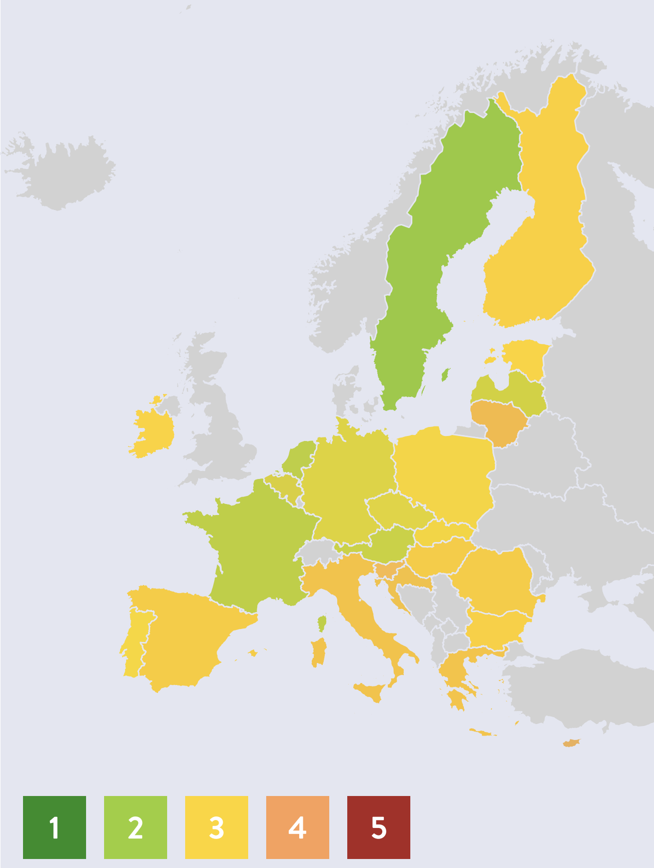
Secondly, a proven Advanced Analytics set of KPIs has been developed to address ECB requirements, combining a proven methodology (often with the support of trusted partners) and its Business Information Network to provide a single-name assessment regarding the following aspects:

- solid estimation of a company's Green House Gases, combining the industry GHG target with the business characteristics of each company (e.g., size according to turnover, number of employees, …);
- strong evaluation of the company's climate and physical risk through the estimation of the probability of occurrence of natural events at a micro-territorial level (e.g., coastal flooding with a spatial resolution of 25m) and the company's vulnerability to each natural event, based on the characteristics of the industry in which each company operates;
- a final combination of the above results, weighting and evaluating the level of investment required to mitigate the level of emissions (and reach the target) and the impact of physical risks.

Thanks to its internal dataset (business information, asset localization), the ESG Score and KPIs are available for all EU27 countries. Figure 1 shows an initial exercise carried out to apply the ESG risk score and rating to a sample of companies in each European country.

Combining the above quantitative KPIs with the information directly retrieved from the companies and a set of API enables banks to rapidly evaluate the level of ESG compliance of their client portfolio. This is available through "Synesgy" CRIF unique *industry-driven* platform.

FIGURE 1 – AVERAGE ESG SCORE FOR EACH EU27 COUNTRY (BASED ON A REPRESENTATIVE SAMPLE OF COMPANIES)



The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

Third Country Equivalence - Is there also something to lose?

DZ BANK

By Thorsten Euler, DZ Bank

In recent years, covered bonds have increasingly become a global financial product with many cross-border structural commonalities. However, differences in the legal frameworks and regulatory treatment of covered bonds still exist. With the implementation of the European Covered Bond Directive (CBD) in July 2022, the European Union has recently managed to set a minimum standard for the national covered bond laws of the EU member states, which also applies to the European Economic Area (EEA). In our view, the harmonisation of covered bond laws may also have served to secure for the future the regulatory privileges granted to covered bonds from the EEA in the past, which were granted irrespective of the quality of the respective national legal framework. These privileges, which especially represent incentives for investors from the banking industry, include in particular a lower risk weighting in the capital adequacy requirements compared to unsecured bank bonds as well as the possible consideration of covered bonds as a Level 1 asset within the framework of the Liquidity Coverage Ratio (LCR).

This special European treatment for covered bonds has so far only applied to covered bonds issued by issuers domiciled in the EEA. For covered bonds of issuers from third countries (e.g. Australia, Canada, Great Britain, New Zealand and Singapore), these advantages in European supervisory law do not apply or, in the case of Great Britain, no longer apply due to Brexit. With the implementation of the LCR regulations in 2015, the European legislator at least allowed covered bonds from third countries to be classified as Level 2A assets under certain conditions.

CBD OBLIGES EU COMMISSION TO THINK ABOUT AN EQUIVALENCE REGIME

Although the CBD did not improve the regulatory status of covered bonds from third countries, the EU Commission was required to consider this issue together with the European Banking Authority (EBA). According to Article 31 CBD, the Commission is to draw up a report in cooperation with the EBA on whether and under what conditions covered bonds from third countries could be recognised as regulatory equivalents (third country equivalence). The report may be supplemented by a legislative proposal and shall be submitted to the European Parliament and the European Council.

What is the issue of equivalence and why are third-country issuers likely to have a strong interest in it? Should the European legislator recognise covered bonds from third countries as equivalent, this will, in our view, result in improved regulatory treatment of these bonds in Europe. The complete extension of the regulatory privileges of EEA covered bonds to covered bonds from third countries is conceivable for us, but not a foregone conclusion. Third-country issuers should be happy about an improvement in the regulatory status of their covered bonds in Europe, as this could further expand the investor base and increase demand. Higher demand should also lead to lower risk premiums for these bonds compared to the status quo, thus lowering issuers' funding costs. Regulatory disadvantages have been repeatedly cited in the past as a reason for higher spreads of non-EEA covered bonds compared to their comparable EEA counterparts.

POSSIBLE CRITERIA FOR AN EQUIVALENCE DECISION

Whether the potentially declining refinancing costs for third-country issuers will become reality, depends to a large extent on which conditions the EU Commission and the EBA will attach to an equivalence decision, if they declare themselves in favour of it at all. In our view, the regulations of the CBD, together with the requirements for preferential capital treatment defined in Article 129 of the Capital Requirements Regulation (CRR), should be the starting point for the equivalence criteria to be placed on. However, the European legislator will presumably not require full compliance with these regulations for a positive equivalence decision. What is likely to be decisive is that key features and characteristics of covered bonds from third countries must be in line with European standards. The European Covered Bond Council (ECBC) published a concept paper ("Global Concept Note On Third Country Equivalence For Covered Bonds") on this topic in February 2023 and identified nine possible aspects for an equivalence assessment (see chart).

ECBC: POSSIBLE ASPECTS FOR AN EQUIVALENCE ASSESSMENT OF COVERED BONDS FROM THIRD COUNTRY ISSUERS

Possible aspects for equivalence assessment	**1)** issuance by a credit institution
	2) existence of a legal basis
	3) dual recourse
	4) asset segregation (bankruptcy remoteness)
	5) eligible cover assets (quality requirements in terms of asset type, derivatives, LTV ratios, valuation)
	6) coverage requirements (overcollateralisation)
	7) special public supervision
	8) liquidity rules
	9) transparency (reporting & disclosures)

Source: ECBC, presentation DZ BANK Research

It will be interesting to see whether the EU Commission insists that the required specifications must be anchored in the respective national covered bond law or whether regulations in the issuers' covered bond programme documentation could also be sufficient for a positive equivalence decision. Should a statutory anchoring be required, it would probably be much more difficult for some countries to achieve equivalence, since, for example, statutory regulations on liquidity protection (180-day liquidity buffer) or on the triggers of a maturity extension are often missing. In this context, the question arises whether the governments in the third countries would be willing to adapt their covered bond laws just for covered bonds from their country to receive a better regulatory treatment in Europe. It would be much easier from the point of view of the third country issuers if the regulations in the respective programme documentation were taken into account, which could be adapted accordingly by the issuers themselves. In this case, however, the objection could be raised that issuers from third countries would be treated "better" than European issuers, since in Europe all structural features of covered bonds are fixed by law with the associated transparency for investors. Compared to laws, programme documentation can be changed relatively easily and without much fuss, which would require a regular review of the content. A compromise could be that the relevant supervisory authorities in third countries close the identified gaps by issuing generally binding regulations. Regulations could also be changed relatively quickly. However, issuers could not do this arbitrarily themselves.

FURTHER PROCEDURE

What are the next steps in the process for an equivalence regime? The ECBC paper outlines a possible three-step approach. (1) First, the EU Commission would present its report mentioned at the beginning, which argues for the introduction of an equivalence regime and sets out the criteria to be met. (2) Subsequently, a legislative procedure would be launched to enshrine the equivalence regime in law with corresponding decision-making power for the EU Commission. (3) The EU Commission would then analyse the covered bond laws in the third countries in detail and take an equivalence decision.

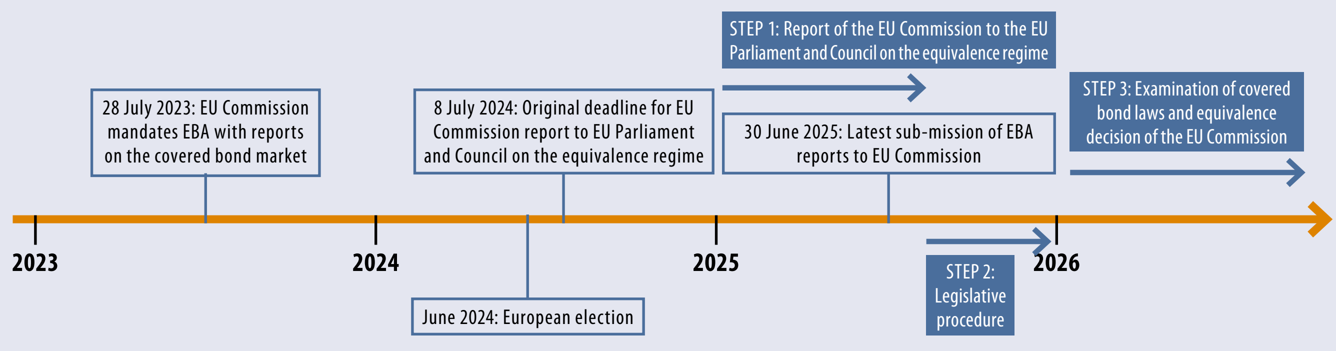
We expect that this process is likely to drag on for some time. According to Article 31 CBD, the EU Commission should submit its report (possibly supplemented by a legislative proposal) to the European Parliament and the European Council by 8 July 2024 at the latest. However, this deadline is unlikely to be met. The EU Commission has only commissioned the EBA on 28 July 2023 with some analyses of the covered bond market, which should also deal with a possible equivalence regime, among other things. Even if the EBA were to present its report on the equivalence regime well before the latest submission date of 30 June 2025, it is not a foregone conclusion that the project will proceed in time due to the European elections in June 2024. Political decision-making processes and timetables are, in our view, difficult to predict. However, we would be surprised if the EU Commission will present its report on an equivalence regime to the EU Parliament and the European Council before 2025. A possible subsequent legislative procedure and the actual analysis of the equivalence of the covered bond frameworks would follow and probably last until at least 2026. In this respect, some time is likely to pass before there is clarity about a possible better regulatory treatment for covered bonds from third countries.

IS THERE ALSO SOMETHING TO LOSE FOR COVERED BONDS FROM THIRD COUNTRIES?

Do the third-country covered bonds actually only have something to gain or perhaps also something to lose in terms of regulatory treatment? Should the EU Commission come to the conclusion in its review of covered bond laws that a third country does not meet the equivalence requirements, this could also call into question the classification of covered bonds as a Level 2A asset in the LCR calculation, which has been possible up to now. Among other things, the European LCR Regulation only allows this classification if the supervisory and regulatory arrangements in the third country are at least equivalent to those in the European Union (Article 11 (1) (d) LCR Regulation). Even if, according to our reading, this requirement should refer to the entire banking supervisory law in the third country, the justification for a Level 2A classification could become difficult in this case.

Link to DZ BANK AG's Regulatory Disclosures and Conflict of Interests: https://www.dzbank.com/content/dzbank/en/home/research/pflichtangaben-interessenkonflikte.html

POSSIBLE TIMETABLE FOR AN EQUIVALENCE REGIME FOR COVERED BONDS FROM THIRD COUNTRIES



Source: ECBC, DZ BANK, blue boxes = DZ BANK forecast for possible timing

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

Working for a Sustainable Europe

HARLEY & DIKKINSON

By Alessandro Ponti, Harley&Dikkinson

Residential buildings currently contribute to a substantial **40% of carbon dioxide emissions** across Europe. In fact, **75% of the housing stock needs to be redeveloped** in the old continent, with a percentage rising to 80% in Italy.

Harley&Dikkinson, a seasoned player in the building enhancement sector for over two decades, has readily embraced this challenge. The company has structured itself into distinct entities, poised **to offer cutting-edge services within the real estate redevelopment** landscape. These services are intricately **aligned with regulatory changes and technological advancements in the market**.

Through extensive interactions with associations, institutions and government bodies, Harley&Dikkinson captures market demands and legislator requests, transforming them into concrete solutions that encompass method, guarantee and finance.

At the heart of our operations is the art of making real estate renovation connections. Our track record boasts the endorsement of the largest Italian multi-utility, with the **redevelopment of over 3500 buildings throughout the country, and over 170,000 operations practices in individual residential homes and cottages**. Through our advanced platforms, we extend meticulous supervision to construction sites, carefully checking each stage of progress.

Operating through a **robust model**, our platform rigorously assembles and validates all necessary documentation, streamlining the process to on-schedule project completion. This method has evolved into an undeniable force, **enabling us to assure the financial system of project outcomes meeting estimations**.

Our team comprises accomplished **professionals**, including architects, engineers, and various specialized profiles crucial for real estate regeneration. Imbued **with expertise in energy efficiency and renewable technologies**, our engineers adhere to **ESG principles**, ensuring investments not only align with economic sustainability but also yield positive environmental impacts.

A strategic alliance with several Italian banks ensures secure project financing, further solidifying our standing. We're honing our capabilities to cater to an array of expanding markets, particularly residential and SMEs. Our start up, **H&DHome, guides homeowners through a comprehensive approach to redeveloping their spaces, offering a turnkey package** in collaboration with real estate agencies, **promoting quality and sustainability**.

Guided by local professionals, **the individual will have the opportunity to select from our platform a curated list of companies**, previously meticulously vetted by us, aligned perfectly with their specific requirements.

At the same time, through the group's ESG expertise, **we are assisting SMEs in mapping modular sustainability pathways towards carbon neutrality**. This process is supported by partner banks and by **HappyWay, a network of specialized professionals**, all working in tandem to achieve Europe's 2050 goals.

Our objective remains steadfast: **to act as a pivotal hub within the real estate sector, catalyzing Europe's energy transition aspirations**. The construction industry, although age-old, is undergoing a transformation. Much like major recent innovations – think for example of the reorganization of purchases (Amazon), meetings (Facebook, Teams), experiences (Airbnb) – **our goal is to streamline the renovation process, while also preserving the autonomy and value of every participant**.

We're pioneering change in real estate redevelopment to have refurbished buildings, curtailed energy consumption, **reduced CO2 emissions**, and occupants delighted by their **healthy and efficient living spaces** – a transformation that simultaneously adds **value to their homes**.

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

An Overview of the Sustainability Segment in the Covered Bond Area

LBBW

By Karsten Rülmann & Rodger Rinke, LBBW

Since the first ESG covered bond issue by Münchener Hypothekenbank in September 2014, the market for sustainable covered bonds has undergone an impressive development. While in the beginning there were only a few issuers from a handful of jurisdictions, ESG investors can now choose from 71 institutions from 18 different countries. As of the end of June 2023, the outstanding ESG Covered Bond volume converted into EUR amounted to EUR 97.4 billion. In total, there are ten different currencies to choose from. With a share of EUR 73.9 billion or 76%, the EUR is clearly the dominant issuing currency. The highest ESG covered bond volume comes from Germany (EUR 21.7 billion), followed by France (EUR 19.3 billion), Norway (EUR 15.0 billion) as well as Denmark (EUR 11.9 billion) and South Korea (EUR 9.5 billion).

ESG COVERED BOND MARKET DOMINATED BY EUR BENCHMARK SEGMENT

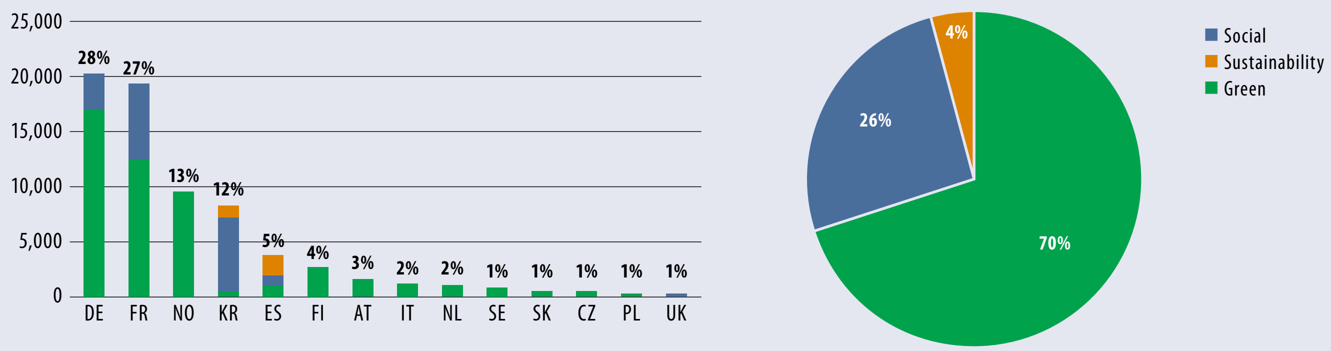
In the EUR segment, benchmark placements accounted for the bulk of issues at EUR 71.6 billion. In relation to the EUR benchmark covered bond market as a whole, the share of 7% still appears comparatively low. However, especially in recent years, there has been a steady increase in new issuers and jurisdictions. Accordingly, ESG investors specializing in the EUR benchmark format are also offered a corresponding diversity here with 40 issuers from 14 countries. Most of the institutions come from Germany (9), followed by France and Norway (6 each). In line with the overall ESG market analysis, German issuers also lead in terms of outstanding volume with a share of 28%, ahead of French (27%) and Norwegian institutions (13%). A look at the use of proceeds shows that green covered bonds clearly predominate (70%). Social and sustainability covered bonds account for 26% and 4%, respectively.

Green covered bonds are generally used to refinance loans for energy-efficient buildings. In contrast, the Public Sector Covered Bond programs of the German Bayern LB and the French CAFFIL stand out. Accordingly, Bayern LB issued its first Green Rail Public Sector Covered Bond last year. The proceeds from this are used to refinance loans to the public sector, which are used for electric rail passenger transport projects in Germany and Switzerland. The specifications for the use of funds of CAFFIL's green public sector covered bond can be found in the Green Bond Framework of the parent company SFIL Group. The loans to be refinanced are made to municipalities or departments, which in turn are used for projects in the following categories, among others: Sustainable Transportation, Sustainable Water Supply and Waste Management, Renewable Energy.

Rising housing costs and recent inflation trends have contributed to the increasing importance of social covered bonds. Accordingly, the promotion of affordable housing is one of the central uses of funds for social covered bonds. Other categories of use of funds include, for example, loans for the promotion of municipal health care as well as hospitals; loans to ensure public utilities (e.g. municipal water and wastewater utilities) or loans to support education and research. In this context, the Public Sector Social Covered Bonds of CAFFIL and Deutsche Kreditbank (including the "Blue" Social Covered Bond) deserve special mention.

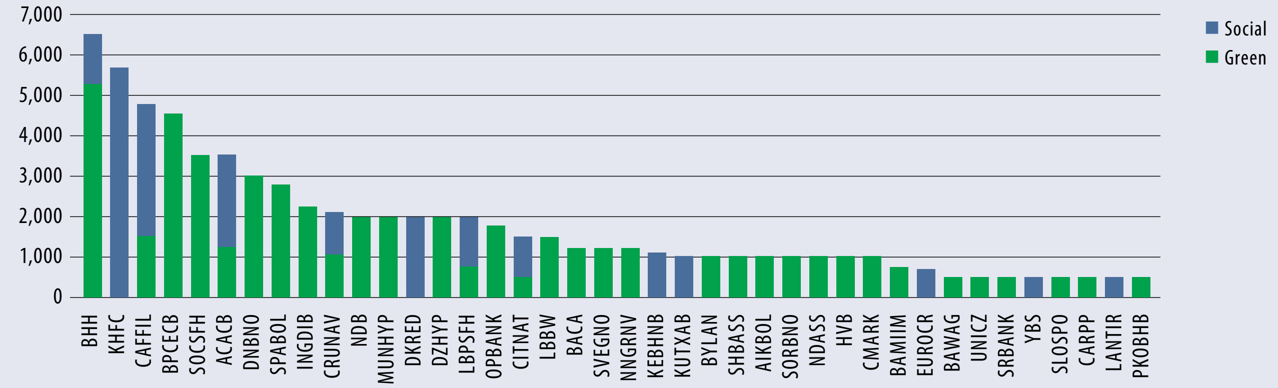
A look at individual issuers in the ESG EUR Benchmark Covered Bond segment shows that Berlin Hyp currently has the highest volume outstanding at EUR 6.5 billion, followed by the South Korean Korea Housing Finance Corp (EUR 5.65 billion) and the French issuers CAFFIL (EUR 4.75 billion), BPCE SFH (EUR 4.5 billion), Société Générale SFH and Credit Agricole Home Loan SFH (EUR 3.5 billion each).

OUTSTANDING ESG EUR BENCHMARK COVERED BONDS BY COUNTRY AND USE OF PROCEEDS



Sources: informa global markets, LBBW Research. Volume in EURm.

OUTSTANDING ESG EUR BENCHMARK COVERED BONDS BY ISSUER AND USE OF PROCEEDS



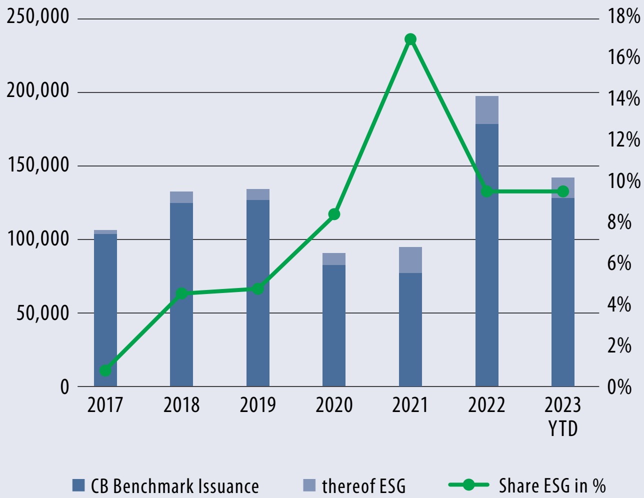
Sources: informa global markets, LBBW Research. Volume in EURm.

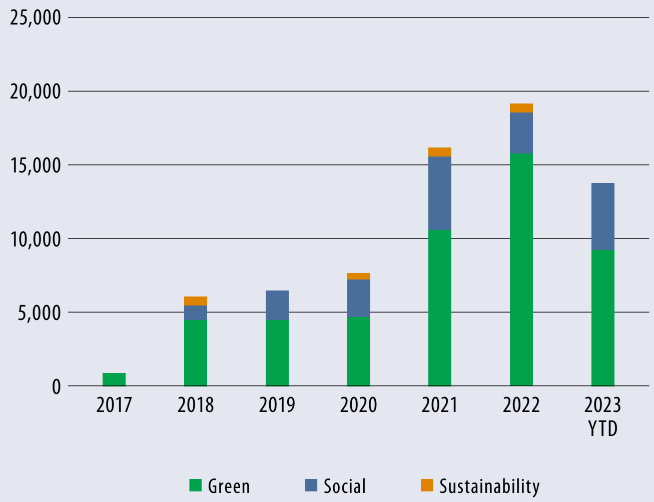
With a newly issued ESG EUR benchmark covered bond volume of EUR 13.85 billion, the current primary market year also presents itself strong. Against this backdrop, we believe it is highly likely that the record year of 2022 will be exceeded once again. In relation to the overall EUR benchmark covered bond segment, ESG covered bonds remain stable overall with a share of 10%.

ESG issuers from France and Germany contributed EUR 4.25 billion each. This was followed by institutions from South Korea (EUR 1.1 billion) and Sweden (EUR 1.0 billion). Sweden was also one of the two debut 2023 jurisdictions in the EUR ESG Benchmark segment with Stadshypotek, along with the Czech Republic (UniCredit Bank CZ SK).

The slightly higher share of social covered bonds (33%) stands out. In our view, this is probably due to the increased concentration on the focus topic of "affordable housing" already mentioned.

ESG EUR BENCHMARK CB NEW ISSUES SHARE TOTAL MARKET AND USE OF PROCEEDS





Sources: informa global markets, LBBW Research. Volume in EURm.

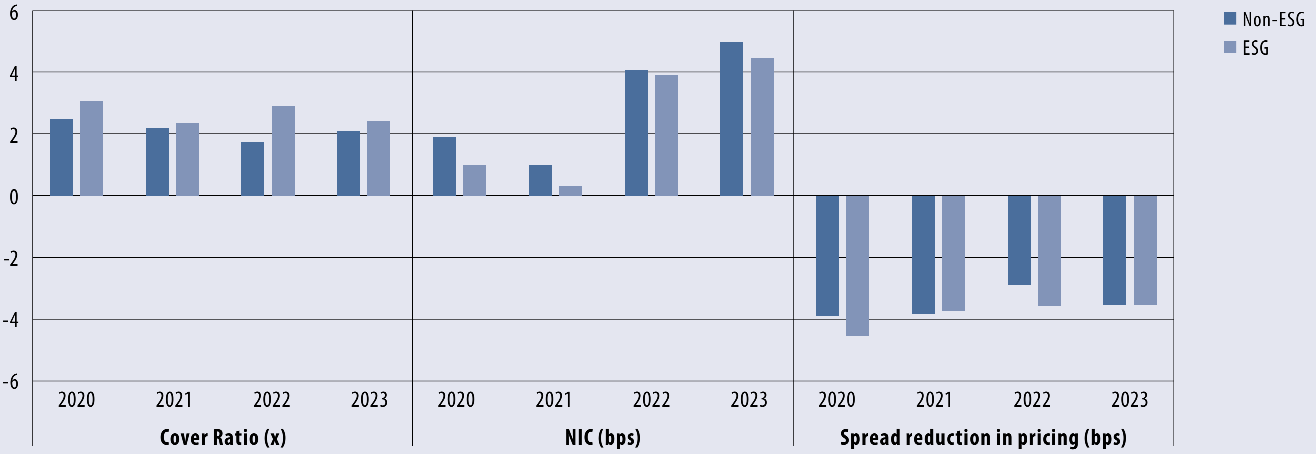
The basis for the issuance of ESG covered bonds is usually the respective ICMA process guidelines. With the EU Green Bond Standard, a new (voluntary) European standard for green bonds was finally adopted at the end of February 2023. After a regulatory implementation period, the first EU green bond issues could probably take place from fall 2024. In this context, the EU Green Bond Standard is to be the new gold standard for green bonds. The main distinguishing feature of the EU standard from the ICMA guidelines is the direct linking of the use of proceeds with taxonomy-compliant economic activities. A uniform EU standard creates more transparency for investors and issuers, which should contribute to further growth of the green covered bond market. It can already be observed that covered bond issuers are revising their green bond frameworks with regard to taxonomy compliance. However, in the absence of a critical mass of taxonomy-compliant cover pool assets, it is likely to be some time before the first EU Green Covered Bond is issued. Until then, green issues will continue to be made on the basis of existing ESG standards.

From the issuer's point of view, the issuance of ESG covered bonds could also appear interesting in view of the supposedly lower funding costs. In principle, ESG Covered Bonds do not differ from "normal" Covered Bonds with regard to the security of the investment and the risk profile, as there is no specific assignment of the sustainable cover assets to the respective ESG Covered Bond. As a result, there is unlikely to be any significant price differentiation between comparable bonds on the market. Price differences may nevertheless arise, partly due to the broader investor base of ESG covered bonds compared to their conventional counterparts. In fact, however, price differences on the market between ESG covered bonds and conventional covered bonds can hardly be observed at present. A greenium or premium for social or sustainable covered bonds is not clearly demonstrable in those cases where a comparison between the different bond types of an issuer is possible.

However, ESG covered bonds have better primary market performance. Thus, on average, sustainable covered bonds benefit from a larger book size - measured by the cover ratio - which should reduce placement risks for issuers and provide support in the secondary market. Investor demand for ESG covered bonds is in some ways more "sustainable." Regarding the new issue premium and the narrowing during the pricing process between IPT and final pricing, a slight advantage for ESG covered bonds can also be identified. However, the differences are currently minimal - just like on the secondary market.

With the exit of the ECB from its purchase programs, a stronger spread and risk differentiation can be observed again for covered bonds in recent months. Continuing interest rate uncertainties also contributed to the fact that the issuance environment appeared challenging - despite a massive primary market offering. The market temporarily changed from a seller's to a buyer's market. In this context, ESG covered bonds could increasingly make a difference, leading to a more noticeable ESG premium in the covered bond space.

ESG EUR BENCHMARK COVERED BONDS ON THE PRIMARY MARKET



Sources: informa global markets, LBBW Research

DISCLAIMER:

Please note:
This publication is addressed exclusively at recipients in the EU, Switzerland, Liechtenstein, Hong Kong, Korea, People's Republic of China, Republic China (Taiwan) and Singapore. This report is not being distributed by LBBW to any person in the United States and LBBW does not intend to solicit any person in the United States.

LBBW is under the supervision of the European Central Bank (ECB), Sonnemannstraße 22, 60314 Frankfurt/Main (Germany) and the German Federal Financial Supervisory Authority (BaFin), Graurheindorfer Str. 108, 53117 Bonn (Germany) / Marie-Curie-Str. 24-28, 60439 Frankfurt/Main (Germany).

This publication is based on generally available sources which we are not able to verify but which we believe to be reliable. Never-theless, we assume no liability for the accuracy and completeness of this publication. It conveys our non-binding opinion of the mar-ket and the products at the time of the editorial deadline, irrespective of any own holdings in these products. This publication does not replace individual advice. It serves only for informational purposes and should not be seen as an offer or request for a purchase or sale. For additional, more timely information on concrete investment options and for individual investment advice, please contact your investment advisor.

We retain the right to change the opinions expressed herein at any time and without prior notice. Moreover, we retain the right not to update this information or to stop such updates entirely without prior notice.

Past performance, simulations and forecasts shown or described in this publication do not constitute a reliable indicator of future performance.

The acceptance of provided research services by a securities services company can qualify as a benefit in supervisory law terms. In these cases LBBW assumes that the benefit is intended to improve the quality of the relevant service for the customer of the benefit recipient.

THIS DOCUMENT IS A TRANSLATION OF Blickpunkt ESG Covered Bonds, ORIGINAL PUBLICATION DATE: 09 AUG 2023 THE TRANSLATION HAS BEEN MADE FOR CONVENIENCE ONLY WITH THE GERMAN ORIGINAL ALWAYS PREVAILING IN ALL RESPECTS, ESPECIALLY IN CASE OF POTENTIAL DISCREPANCIES RESULTING FROM TRANSLATION

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

Farewell ECB, Farewell Monetary Distortions – what will life look like for covered bonds?

NORD/LB

By Julien Marchand & Frederik Kunze, Nord/LB

THE COVERED BOND MARKET AND THE ECB: ALMOST A DECADE OF MARKET DISTORTIONS!

The ECB has inevitably left its mark on the covered bond segment for a period of almost ten years. This era of market distortions, caused both on the demand side and in terms of covered bond supply, recently came to an end. As we were shown not least by the extremely dynamic issuance behaviour in the EUR benchmark segment this year, the supply-dampening effect of the favourable refinancing via the ECB is no longer noticeable. For a large number of EMU banks it was a good opportunity to draw on ECB liquidity and thus to issue fewer covered bonds. Having said that, from the issuers' point of view, covered bonds also played an important role here. After all, the banks could deposit their own issues as collateral with the Eurosystem. Covered bonds were thus “placed”, but withheld from the market and therefore from investors. In summary, it can be stated without exaggeration that the ECB has literally hijacked the covered bond segment and forced a large group of investors out of the market. At the current edge, we can now observe a very dynamic primary market again as well as positive net growth of the covered bond market. The combination of a retreating central bank and a very high issuance volume inevitably shifts the focus to the investor side. The “crowding out” effect of the ECB's monetary policy is less and less noticeable or has faded completely. Let us dare to have a look of what life for covered bonds might look like in the months to come!

THE DEMAND SIDE IN THE COVERED BOND SEGMENT IS ALREADY ON THE MOVE

In fact, immediate consequences of the ECB's new monetary policy course have been evident on the market for some time. In particular, the allocation of new issue volumes in the EUR benchmark segment can be understood as the result of the demand behaviour of investors and the allocation preferences of issuers. The basis for this market data is provided by the communications of the syndicate banks following primary market transactions. And in the aggregated view it becomes clear (cf. Figures 1 and 2) that the reduction of the Eurosystem's primary market quota resulted in a significantly lower share of the category “Central banks and official institutions”. In the respective averages for the years 2022 and 2023, the dynamics of the individual reduction steps - from 40% to 30% in March 2022, further to 20% in July 2022, to 10% in March 2023 and to 0% in April 2023 – cannot be seen in detail. However, it can be stated that the ECB's dwindling demand on the primary market was compensated by issuers and syndicates through a higher allocation to banks (and especially their treasury departments), according to the figures. Conversely, the basis for this allocation must of course have been corresponding orders from the bank side, which speaks at least for a stable, if not even more dynamic demand from this investor category. Another – quite drastic and immediate – consequence of the new ECB monetary policy is the swing of issuers to the shorter end of the curve. While extremely long maturities of up to 30 years were still a possibility to offer positive returns to investors in the context of ultra-loose monetary policy and negative interest rates, the current environment is completely different. Short maturities dominated events on the primary market not least because the negative trend of the yield curve confronted issuers with the challenge of a historically high maturity premium, which investors undoubtedly demanded in order to be compensated for the “yield discount” at the long end. In a market environment where every basis point still counts, the majority of issuers remained cautious for a long time. In this mixed situation, however, it should not be forgotten that uncertainties of a geopolitical or real economic nature as well as uncertainty regarding the ECB's future interest rate path have led to a pronounced preference for shorter maturities on average on the demand side. Thus, in the course of the shift into the interest rate hike cycle, investors have sought less duration on average - the short maturities must also be seen here as a direct consequence of investor interest. This is also underlined by the completed change from a seller's market to a buyer's market. A side effect of this “metamorphosis” on the primary market was certainly also the rising new issue premiums, which have also remained at stable levels in the course of an overall higher and steadily rising spread level.

CONSIDERATIONS ON INVESTOR HETEROGENEITY: RETURN EXPECTATIONS VS. LIQUIDITY CONSTRAINTS?

This average or generalised view is certainly important for the analysis and evaluation of the market. So, first of all, it may very well be stated that buyers have been found on the market who are closing the gap on the investor side that the ECB left behind, especially starting on the primary market. However, for a better understanding - especially with regard to the future demand for covered bonds - it is very important to understand the different motives and decision-making factors. As an interim conclusion, it should first be noted that not only the successive disappearance of the immediate distorting influences on the supply and demand side have led to a new market equilibrium. As a result of the changing interest rate level, those investors who place a clear focus on the yield of their bond investments and focus less on the spread (compared to swaps) have also returned. In addition, the individual expectations of investors play a significant role in the concrete investment decision here. If a potential "yield buyer" assumes further interest rate hikes, they could initially exercise restraint when it comes to covered bond investments.

In this context, the comparatively high spread stability of covered bonds should be considered, which underlines the direct dependence of yields on the general interest rate level and tends to hide credit risks. If, on the other hand, interest rates tend to fall, covered bonds with longer maturities offer the opportunity to secure the yield level - and again with a lower spread risk compared to unsecured asset classes. In addition to the specific interest rate expectations, the fundamental investment strategies – especially with regard to the target values for the duration of the portfolio - are also to be mentioned as influencing factors.

However, another relevant factor for at least some real money investors should not be ignored. Given the fact that the structural break in interest rates came with the element of surprise, some investors now feel the pain of a lack of liquidity and, hence, are not able to take advantage of the altered yield environment. This is for example the case for those investors who have been focusing on structured products and are now confronted with tender rights of the counterparties.

WHAT CAN WE EXPECT HERE FOR THE FUTURE?

Even if the covered bond is considered a comparatively stable investment in terms of spread volatility, the spreads in the covered bond segment are nevertheless very important. And indeed, we have been able to make a remarkable observation in this context in the recent past. The ECB's withdrawal has led to a significant repricing on the covered bond market. The central bank's more restrictive stance has finally reversed the compressions of the spread differences between the individual covered bond jurisdictions. The buzzword "relative value" – especially in comparison to rates products such as government bonds or other bonds from the public issuer/SSA segment – is gaining more relevance here. But tectonic shifts have also set in within the asset class of covered bonds. As a result, French covered bonds, for example, are trading at a notable premium over Pfandbriefe, without the occurrence of any fundamental change in one or the other subset of the covered bond market. We would rather describe this widening of spreads as a "back-to-normal" movement. For the investor side, it was, is and will be important in this context at what point the repricing is completed. For a large number of investors, Pfandbriefe, for example, now appear rather expensive compared to covered bonds issued from the other core countries of the eurozone.

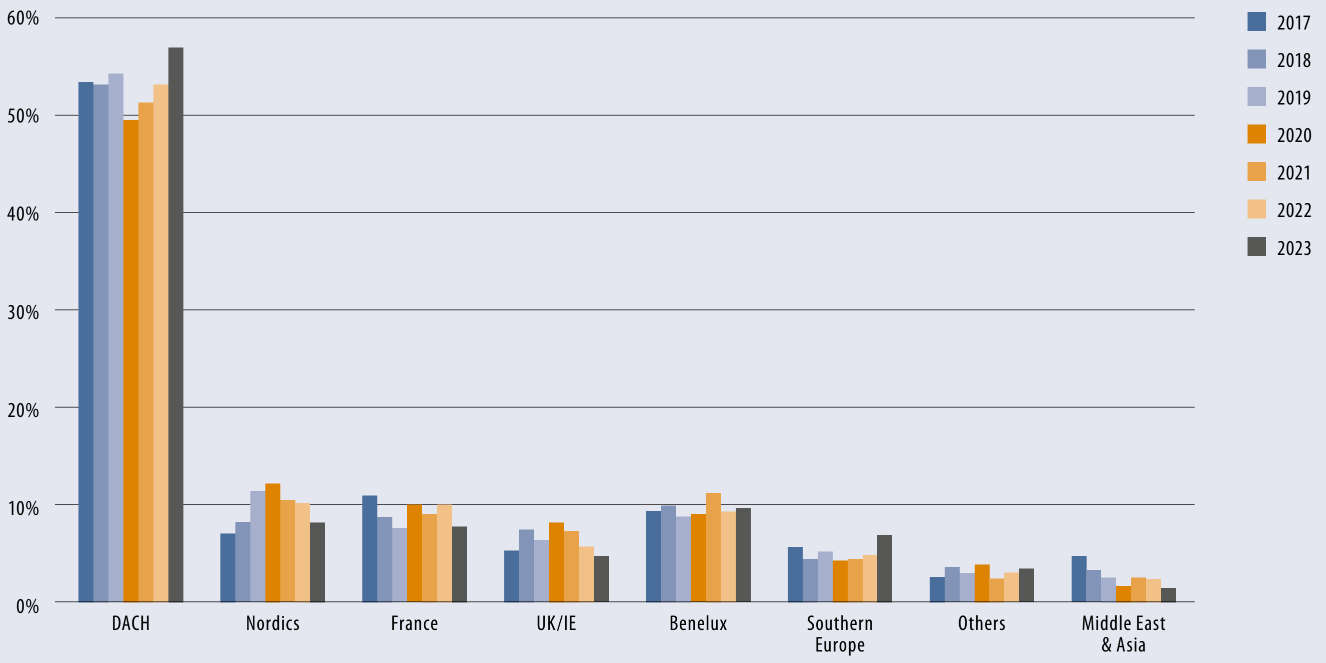
We see the repricing process as a consequence of the "quantitative tightening" as largely completed. Conversely, this also means that jurisdiction-specific factors, such as net supply, will play a greater role in the perspective of the market. For the question of how investor demand could now develop further, saturation effects or increasing line utilisation at issuer and jurisdiction level will thus also play a greater role. This can be observed not least in the tendency towards more successful deals with a previously fixed issue size (WNG = will not grow) or with an ESG background (as "new" investors are added here). Looking ahead, we can assume that the greater differentiation in spreads in terms of maturities, but also in terms of the respective jurisdictions (right down to the issuers), will also determine investor demand.

WHAT COMES AFTER REPRICING?

As already mentioned, we see the covered bond market at a very late stage of repricing. In our view, this also marks the end of the phase of an overall rather predictable spread development. This includes not only the euro area covered bonds directly affected by the ECB's monetary policy, but also other jurisdictions. We have already mentioned jurisdiction-specific net supply as a factor. But in perspective, we cannot ignore other determinants of investor demand and can also make a connection to ECB monetary policy here. Market participants are increasingly focusing on the question of the extent to which a change in the interest rate level (not only in the euro area) can affect the credit quality of covered bonds. Rapidly rising interest rates and falling real estate prices are drawing attention to potential disruptions in the cash flows of the cover pools, especially in those jurisdictions that have a high proportion of variable interest rates on mortgage loans. The fundamental negative side effects on the banking market - among other things, the exposure of credit institutions to the market for commercial real estate financing, which is not relevant for cover pools in many jurisdictions - can also have a negative impact on the credit quality of the issuing bank. We expressly do not expect a fundamental deterioration in the credit quality of covered bonds or their ratings. Nevertheless, sentiment-driven expansions cannot be ruled out that are attributable to these market observations or concerns. As a result, a temporary but significant widening of spreads could also occur for some jurisdictions as part of a "self-fulfilling prophecy".

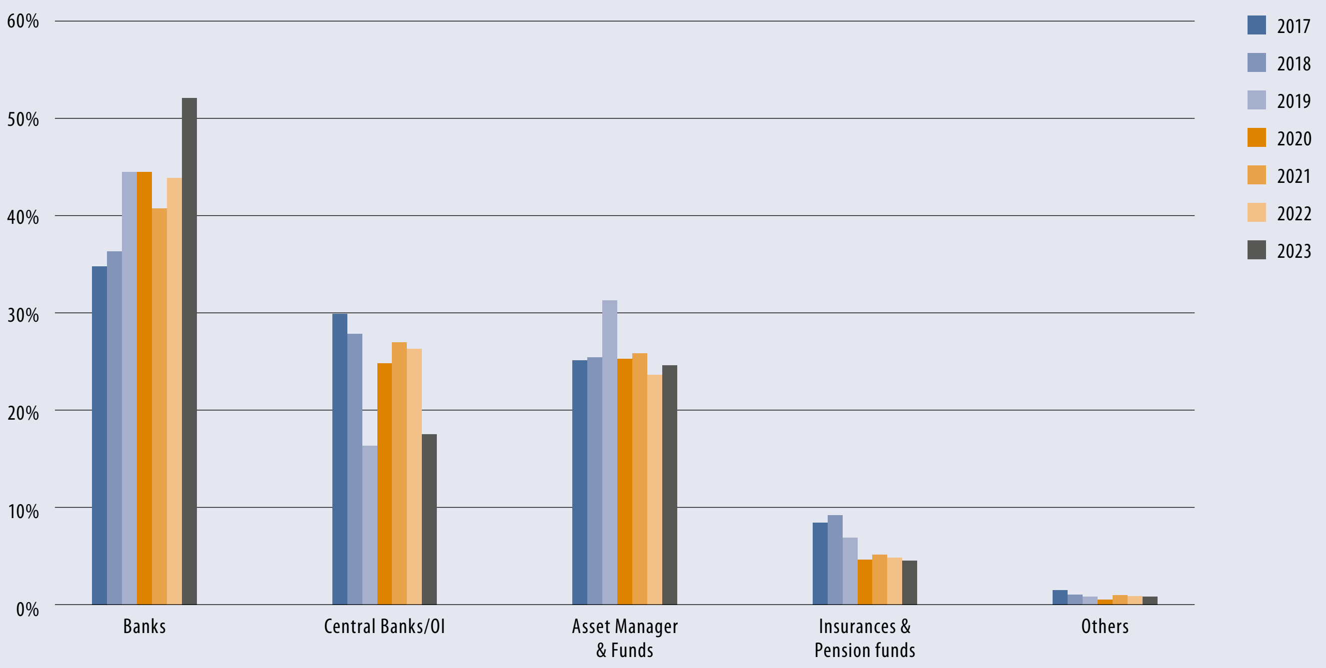
All in all, the end of the repricing cycle is to be understood as a starting point for a more heterogeneous spread development – be it the supply-demand ratio or the headline-driven sentiment. And thus investor demand plays a significant role here, again placing a high importance on investor investment criteria and benchmarks. The overall demand side is composed of a variety of investment considerations, with the crowd of investors also constantly changing. We would definitely state that the covered bond segment is still experiencing a net increase in the number of investors. This suggests that the ECB gap can be closed in the long term even if issuance remains high. From the pronounced price elasticity of overall demand as well as the different investment motives and criteria of the individual investors, we derive a more specific spread requirement. For the primary market this means that not every deal has to be "successful". We would also assume that the further advance of issuers into the sub-segment of longer maturities will produce winners and losers on both the investor and the issuer side. Thus, one or the other issuer will have to pay more dearly for its deal, while investors will also have to reckon with a lack of secondary market performance. The market will then separate the wheat from the chaff where the ECB may not have looked so closely.

FIGURE 1 — INVESTORS BY REGION



Source: NORD/LB Markets Strategy & Floor Research

FIGURE 2 — INVESTOR BY TYPE



Source: NORD/LB Markets Strategy & Floor Research

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views or positions of the EMF-ECBC.

Allianz Arena

By Herzog & de Meuron

Three themes define our architectural and urban concept for the world championship football stadium in Munich (the Allianz Arena): the presence of the stadium as an illuminated body that can change its appearance and is situated in an open landscape, the procession-like arrival of fans in a landscaped area, and the crater-like interior of the stadium itself.

Both the shell and the structural skeleton of the stadium are designed throughout to implement these three key concerns. Hence, the main stairs cascading along the outside of the shell follow the line of greatest slope, underscoring the procession-like approach of visitors to the stadium. These themes lend the project its distinctive character.

THE STADIUM AS AN ILLUMINATED BODY

As a huge luminous body, the stadium marks a new location in the open landscape to the north between the airport and downtown Munich. The skin of the luminous body consists of large, shimmering white, diamond-shaped ETFE cushions, each of which can be illuminated separately in red when FC Bayern Munich plays, in neutral white during tournaments, or in other colors for special events. The changing appearance of the stadium enhances its attraction as an urban monument even for people who are not interested in football.

THE ARRIVAL OF FANS AT THE STADIUM

An artificial landscape for the arrival and departure of the fans connects the underground station and the stadium. This landscape, covering one of Europe's biggest car parks, contains swathes of green that blend in with the vegetation of the surrounding Fröttmaning Heath. Meandering pedestrian paths determine and shape the rhythm and flow of the throngs of visitors, somewhat like a procession.

THE INTERIOR AS A CRATER

Since only football will be played in the new Munich Stadium, the seating is directly adjacent to the pitch and each of the three tiers is as close as possible to the playing field. The incline increasing from bottom to top augments this sense of density. As in Shakespeare's Globe Theatre, spectators sit right next to where the action takes place, with an intense focus on the pitch at the center.

Notes

ECBC
EUROPEAN COVERED BOND COUNCIL

33RD ECBC PLENARY MEETING
Munich, Germany | 13 September 2023