Banking Trends & Figures 2021

What does ESG mean for banks?

pwc

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Foreword

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The Banking Industry in Luxembourg has proven its incommensurable success over time, able to become a stable international hub for banks coming from Europe, America and Asia. It has also been resilient to the different waves of disruptions that we have been analysing in this series, coming from the entrance of non-bank financial players, to digitalisation and the regulatory changes. This year, it will come as no surprise that we have decided to analyse the ESG wave.

The ESG revolution has underpinned massive changes within the European financial industry. Banks, given their dual positions both as financial market participants and sources of financing, will be impacted twice as much by this paradigm shift and bear double the responsibility for taking active concrete steps towards increased sustainability. The Luxembourg banking sector has not been exempted from this shift, with various banking groups adapting accordingly to remain competitive.

Thus, the first part of this year's report takes a deep dive into the subject of ESG and what it means for banks. It assesses banks' current sustainability initiatives and highlights the urgency for a transformation approach that integrates ESG at both the organisational and products/services level. To this end, our report has identified a number of factors that are driving the growth of ESG in Luxembourg's banking industry.

An influx of local and EU-wide regulations is accelerating the rate of ESG integration within the financial services industry, requiring banks to be sustainable in their business operations but also their risk management frameworks. Also catalysing the surge of ESG is the demand from different client segments who are increasingly rallying behind ESG.

In response, banks should consider integrating ESG into their core strategy from top to bottom of the organisation, with the relevant adaptations to roles and responsibilities. There will also have to be an increased focus on ESG upskilling of current and future talents, to ensure employee readiness to address clients' concerns and demands. Finally, the extent of ESG integration must be assessed through the adoption of specific KPIs and communicated to relevant stakeholders through adapted sustainability reporting standards. Together, these elements will enable banks to achieve a true sustainable business transformation.

As in previous years, you will also find in this publication an analysis of the financial statements of the largest country segments of banks present in Luxembourg. This review aims at better understanding the dynamics within the different country segments, as well as their relative development against the overall Luxembourg banking market.

In order to ensure continuity over time, we have kept the composition of the six main country segments: German, French, Swiss, UK/North American and Chinese banks alongside Luxembourg banks, which are part of the "home segment". For each of these segments, we highlight changes compared to the previous year and discuss observed trends.

The Luxembourg banks continue to exercise a relatively diversified business model in their home market, with a focus on private, retail and corporate banking as well as asset servicing. In comparison to this, the other country segments remain focused on one or two main business areas along the themes of investment fund servicing, depositary banking, private banking, (international) loans businesses or trade financing.

The UK/North American segment remains focused on asset servicing. i.e. rendering custodian, fund administration and transfer agent services. This segment leveraged the continuing growth in the Luxembourg fund industry and institutional wealth management's move to welcome three new entrants and record the highest increase in assets from the previous year (+30.9%) across all six segments.

The group of Swiss banks in Luxembourg also have a focus on asset servicing, as well as a tradition of private banking. The Swiss banks segment showed the highest growth in annual net profits (+52.6%).

The Chinese segment, which predominantly focuses on corporate banking activities, is characterised by Chines banking groups establishing their European hub in Luxembourg, and by extension of its business activities, into the EU via an extended branch network.

The French segment follows a model of universal banking with a focus on private banking, asset servicing and lending. A decrease in loans to credit institutions, bonds and other transferable securities saw aggregate assets for this segment decrease to EUR 0.79 billion (-6.5%). Annual net profits remained relatively stable, dropping marginally by -1.4%.

The German segment, which formerly boasted the largest number of banks, saw a drop in this number following the deregistration and cessation of activities of certain banks' branches, as well as a merger between two of them. German banks continue to offer a large variety of services that range from private banking via asset services to lending businesses.

Our analysis of the 2020 annual accounts of Luxembourg banks illustrates once more the diversity in the banks' business models and their adaptation in a fast-changing financial services world.

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The ESG revolution has underpinned massive changes within the European financial industry in recent times, with societal changes and mounting pressures from stakeholders leading to a re-evaluation of industry players' priorities, and the legitimacy of firms whose businesses do not serve society being called into question.

This paradigm shift has equally revolutionalised the banking sector, prompting the need for banks to greatly consider sustainability as important as they do their financial metrics. For some, this call to action is long overdue, given the extent of banks' dual roles as market participants and key financiers, while all are in agreement that ESG will be a game changer to their business.

This report provides an overview of ESG matters within the banking industry, with a special focus on Luxembourg, and aims at stressing the necessity for banks to act now and actively pursue sustainability in all aspects of their business. To this end, we have included insights from the Ministry of Environment, from an academic expert in the field of sustainable finance, and from banks that have a significant presence in Luxembourg. The contributions from all our interviewees have helped to make this report more precise and reflective of the pulse of the banking industry in Luxembourg. They all agree that ESG represents a ground-breaking catalyst for their business, opens up many opportunities and requires a long-term transformation journey. However, they also emphasise the need for agile thinking when transitioning to ESG, as well as a client-centric approach to ensure that clients are helped in the best way possible in their own transitions.

In this report, we have first recapped six factors that are catalysing the surge of ESG within the banking industry:

REGULATION IS INSTITUTIONALISING CHANGE IN THE BANKING INDUSTRY

Several domestic and bloc-wide regulatory changes are accelerating the demand and pace of ESG integration for banks within the EU – from the EU Taxonomy to the recently proposed Corporate Sustainability Reporting Directive (CSRD). With the sharp influx of these regulations, ESG integration for banks has transitioned from being a luxury to an absolute necessity. While the implementation of these changes comes with compliance costs to banks, it also provides opportunities for banks to demonstrate staying power and gain a competitive edge over their peers.

MIFID TARGET MARKET AND SUSTAINABILITY PREFERENCES

Recently proposed changes to the MiFID II regulation by the EU could see the consideration of sustainable risks by financial market participants becoming mandatory. This calls for banks to prioritise clients' sustainability preferences very highly in designing and recommending investment products, with banks having to disclose the extent of adherence to these preferences in their transparency reports. Whatever approach banks decide on, in this context, they would have to consider their clients' level of ESG understanding and acceptance. Banks would also have to develop the right internal skills and capacities for measuring ESG risk in order to adequately prepare for these changes.

RETAIL CLIENTS ARE TAKING SUSTAINABILITY SERIOUSLY – A NEW DIMENSION FOR ADVICE

Recent societal changes have seen a surge in retail investors' concern with ESG, albeit at varying levels. While this has been observed generally across all investor demographic groups, younger investors, women and investors from Nordic countries are at the forefront of this major shift. However, attempts to amply satisfy this demand seem to be hindered by the sheer lack of suitable banking products that meet these criteria, or in some cases, products that are too complicated for less ESG-conscious clients. This highlights the need for banks to become agile, speeding up efforts to increase the availability and accessibility of more customised and tailored ESG products, without sacrificing the offering of traditional products during this transition period. The change also presents an opportunity to engage with clients on a dimension other than the financial performance, a fact that increases relevance and value creation.

HIGH-NET WORTH INDIVIDUALS ARE DRIVING THE ESG TRANSFORMATION OF PORTFOLIOS

The rising HNWI class represents a veritable opportunity for banks to rake in significant amounts of ESG assets. Europe in particular, boasting the third-highest share of HNWI wealth globally, has access to a thriving private banking sector that it could leverage to drive up its assets in ESG, with a sample of HNWIs willing to invest up to 46% of their portfolio values in ESG. For this scenario to materialise, banks have to be more proactive in their strategies for marketing sustainable finance products to their wealthy clients by emphasising the value of impact investing, thus creating valuable service propositions.

A MAJORITY OF INSTITUTIONAL INVESTORS CONSIDER ESG RISKS

Even as institutional investors become increasingly cognisant of ESG risks, our analysis showed a 63% discrepancy between institutional investors' readiness to stop investing in non-ESG products by 2022 and asset managers' willingness to stop launching such products. This represents a significant gap between long-term investment objectives and short-term liquidity needs that banks cannot overlook but must promptly address.

CORPORATE CLIENTS ARE LOOKING TO BANKS FOR GREEN FINANCING

The EU's low carbon transition agenda has prompted a growing interest in green financing solutions among corporates, led by the financial sector. Green bonds, in particular, have caught on prominently among these firms, with corporate green bonds representing about 68% of global green bond issuances as of end-2020. In Luxembourg, opportunities may also lie with financial services firms with banking needs who are increasingly incorporating ESG considerations within their strategy.

With mounting pressure from stakeholders and regulators alike, banks are increasingly realising, now more than ever, the need to pursue the total sustainability transformation of their core businesses. However, the attainment of this transformation is a long process that would require guidance. In this context, we see the following steps as relevant:

INCORPORATING ESG INTO THE BANK'S STRATEGY IS NOT YET THE STATUS QUO

The ESG integration journey used to begin with philanthropy and then move on to corporate social responsibility. This has largely been considered as the natural entry point to ESG, but true sustainability transformation requires the creation of shared value. Most firms are - at the most- at the second level and are yet to fully embrace a multidimensional sustainability approach that stimulates the convergence of all stakeholders interests. ESG is not a hard science, so its integration into a bank's strategy is compatible with a flexible and agile approach that best takes into account each bank's external and internal environment. The attainment of this third step is what is needed to drive the full transformation of banks' operations.

ORGANISATIONAL STRUCTURE COULD FACILITATE ESG INTEGRATION

After developing a core strategy, adopting the right organisational structure would be necessary. The changes begin at the top with the executive board - which defines the appropriate strategy for the bank, then trickles down respectively to the first line of business (business units and client teams), the second line (risk management and risk approval teams), and the third line (internal audit and external advisors) to ensure a smooth implementation process. This would result in a harmonisation of roles and responsibilities across the firm solely aimed at the implementation of the chosen corporate ESG strategy.

CONTINUOUS ADAPTATION IS KEY TO SUCCESSFUL CHANGE MANAGEMENT

In order to successfully implement their ESG strategy effectively, banks cannot over emphasise the role of their staff, who form part of its key stakeholders. This requires banks to increase ESG awareness and knowledge among staff, mainly through training and upskilling, while managing possible adaptation impacts on staff productivity due to the increased workload that ESG integration can involve. Another alternative would be for banks to ramp up the recruitment of staff who already have the relevant ESG knowledge and expertise to help drive its internal strategy.

PROGRESS MUST BE QUANTIFIED BY DEVELOPING KPI's AND NON-FINANCIAL REPORTS

Once the chosen ESG strategy has been implemented, banks would require a framework for evaluating and reporting their performance. The adoption of specific, measurable, and time-bound KPIs would play a key role in facilitating a holistic assessment. Moreover, reporting practices must align with existing sustainability standards such as the GRI, PAIs, TCFD and the EU Taxonomy in order to lend more weight to banks' reporting both within and outside the banking industry.

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In addition to these steps, banks must also consider what ESG means for their risk assessment and management frameworks. The current challenges faced by banks in this area are outlined below:

BANKS HAVE NOT TOTALLY EMBRACED ESG RISK ASSESSMENT PROCEDURES

While historically, related costs, as well as challenges with data collection and comparability, have hindered the integration of ESG within banks' risk management procedures, there is increasing evidence that the benefits of implementing a far more comprehensive risk assessment methodology far outweigh the costs for banks, with higher returns and lower average non-performing loan ratios. This goes to show that a vote for increased ESG risk consideration does not constitute a compromise of performance or resilience. Instead, it serves to improve risk mitigation, resilience and capital reallocation towards more sustainable investments.

ESG DATA COLLECTION AND COMPARABILITY ARE THE MAIN CHALLENGES FACING BANKS

Challenges with ESG data availability, accuracy, and comparability constitute a veritable hurdle that impacts not only banks but the financial industry as a whole. At the same time, banks are also confronted with the lack of standardisation in ESG risk assessment methodologies. This not only points to the need for more EU-wide standards but also further collaboration with third-party ESG data providers.

A COMPREHENSIVE RISK ASSESSMENT WOULD REQUIRE MORE AMBITIOUS MEASURES

The emergence of long-term sustainability risks, such as climate-related risks, makes it both insufficient and unrealistic to solely consider backward-looking risk assessment methods. This is due to their inherent physical and transition risks which constitute a major source of concern to banks. Banks would therefore need to adopt more ambitious and forward-looking risk assessment measures such as climate stress tests and sensitivity analysis, which would result in greater portfolio resilience.

Finally, we have also identified two key strategic product positioning actions that would catapult banks on their journey as they set out to carve a new path towards long-term value creation.

REINVENTING TRADITIONAL BANKING PRODUCTS

The rising ESG consciousness among banks' retail and corporate clients calls for the widescale innovation of existing products as well as the exploration of non-traditional products. While not all banks have the capacity to abruptly end their non-ESG offerings, there is a need for all banks to incrementally expand their ESG product and service offerings such as mandates, funds and loans – in tandem with client's increasing ESG awareness and subsequently, ESG demand. Already some banks are revamping their credit facilities and deposit accounts – making them greener.

LUXEMBOURG BANKS CAN GRASP THE BENEFITS OF THE ESG AWM REVOLUTION

The capital market and asset management landscape, where ESG has already taken a massive foothold, holds immense benefits for banks' sustainable finance efforts by allowing them to identify ESG product trends and assess market demand in these areas. Luxembourg's primary role within the global AWM sector also points out an opportunity for banks to provide the right kind of support to industry players, mainly in the area of asset servicing but also in the broader promotion of Luxembourg as a viable centre for the listing of ESG equity and bond products, as well as the development of ESG alternative assets. Strategic partnerships with data and tech firms would also be highly beneficial to banks, given that these firms are already making headways in managing the ESG data challenge.

1 Introduction

The emergence of the theme of sustainability – bolstered by the UN's adoption of Sustainable Development Goals and the Paris Agreement on Climate Change in 2015 – appears to have sparked a change in mindset marked by the increasing realisation that the only way to save the planet is to take collective action. This has seen a convergence among various groups, such as governments, companies, investors, and consumers and led to the rise of an indomitable force willing to take remedial measures against the damaging impacts of their actions on the planet.

The shift in societal values have also brought about a major change in companies' perspectives, as they find themselves facing a crisis of legitimacy. With stakeholders arguing that their purposes do not align with the evolving needs of the communities in which they were established to support, businesses that spent years focused on their top and bottom lines are now having to lend as much importance to social and environmental concerns as they did to financial metrics.

Banks, given their dual positions both as financial market participants and as sources of financing, will be impacted twice as much by this paradigm shift and bear twice the responsibility for taking active concrete steps towards increased sustainability. On one hand, banks' direct exposure to ESG/climate-related risks makes it imperative for them to mitigate liability and investment risks arising from climate and ESG matters. Estimates by the Bank of England, showing that as much as USD 20tn of assets could be at risk from climate-related changes, underscore this point. On the other hand, as a major source of financing, banks have an even greater responsibility to reorient capital flows towards tackling collective problems. This would allow them to assist investors and companies in their investment efforts, foster the transition to cleaner technologies and activities and support other sectors to align better with the UN Sustainable Development Goals.

At the same time, the past years have seen a convergence of push and pull factors – such as increasing client demand for a variety of ESG products, the pervasiveness of sustainability risks, and the regulatory push driven by the EU – that are creating momentum for banks to transform their corporate business, and success would depend in no small measure on banks' internalisation of ESG. Luxembourg already seems to be well-positioned within the ESG asset management space, accounting for about 21.4% of European ESG mutual funds; which further emphasises the necessity for banks to adapt as well.

Against this backdrop, the objective of this report is to investigate the impact of ESG on banks. Taking a deep dive into the different drivers for banks' ESG adoption, we identify the potential gaps in banks' sustainability transformation and outline a path to change, which begins with developing a coherent ESG strategy. We also delve into the emerging trend of ESG risks, showing how the integration of these new ESG risks into banks' activities is necessary to avoid its knock-on effects on other aspects of their business. Finally, we point out the formidable source of value creation represented by ESG, in light of the long-term restructuring challenges they face amid a persistently low-interest-rate environment and increasing regulatory pressure.

Given the Grand Duchy's long history of serving private, corporate clients and the global financial industry, its banks are undoubtedly at the nexus of the ESG revolution. This report, therefore, aims to prove how ESG provides a unique opportunity for banks to embark on the path towards total business transformation, especially as this transformation stands to impact every single aspect of banks' business and plays a key role in ensuring their long-term viability.

2

The ESG wave

Arguably, regulation – being the most effective driver of the large-scale transition towards sustainability – presents banks with increased compliance costs. At the same time, different client segments - millennials, high-net-worth individuals, corporate clients, and institutional investors – are increasingly rallying behind ESG. This convergence of forces creates momentum for banks to embark on their sustainability transformation and is also an opportunity for banks to differentiate themselves, engage with clients and investors on a different level and accrue first-mover advantages in this evolving banking era. With Luxembourg having already established a structure conducive to furthering the sustainable finance agenda, banks are now in a position to respond to this ESG storm.

> There are three components – supply, demand and regulatory push – each is reinforcing but the first driver is demand, being the end-investors and consumers asking for more information about ESG products. There has been a response from the supply (i.e. banks) and the regulators. […] It's much healthier when it is demand-driven, as the products developed respond to an actual need from investors. Regulatory and supply-side initiatives can then support the positive trend, which is more efficient.
>
> **François Koulischer,** *Professor in Sustainable Finance, University of Luxembourg*

2.1 Regulation is institutionalising change in the banking industry

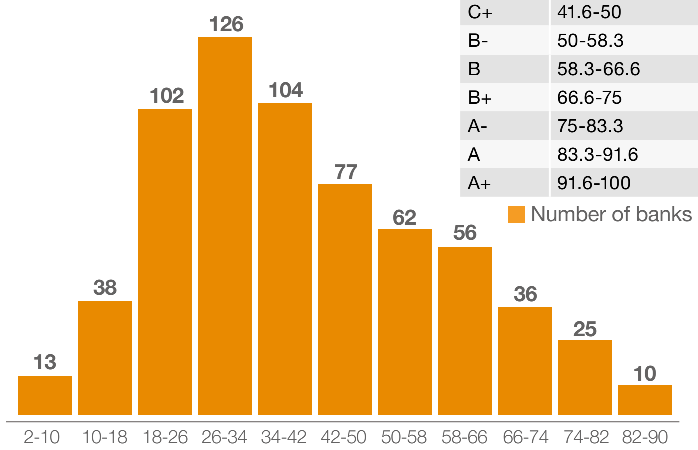
The banking industry within the EU has undergone some truly significant changes in recent decades. Today, EU banks are not only confronted with an increasingly challenging business environment characterised by a barrage of fast-paced product, but also with technological and skill-related changes. The European Union is also keenly pushing its sustainable finance agenda within the banking industry, with the implementation of a wide array of regulations aimed at putting ESG integration at the heart of banks' governance and business procedures.

In 2019, the ECB included climate change-related risks as one of eleven key risk drivers in its Single Supervisory Mechanism Risk Map[1]– highlighting the long-term direct and indirect impacts on banks' business continuity and assets' risk profiles. Subsequently, the central bank introduced guidelines for banks to integrate climate change-related risks within their corporate and organisational strategy, governance structures and risk management framework[2], and required banks to submit proposed strategies for doing so as of February 2021. This is expected to be followed up in 2022 with a full-scale review of banks' adopted practices, with recommendations for improving these practices where necessary. In the interim, gap analysis and further engagements with banks on how they can strengthen their climate-related disclosures continue at pace, with a recent ECB communication urging banks to ramp up efforts in this direction[3].

Beyond that, there have also been updates from the European Banking Authority outlining the implications of the EU's ESG Taxonomy on banks' capital requirements and regulatory disclosures and encouraging banks to set out their risk appetite levels as well as policies and procedures for managing said risk[4]. Already, European banks are obliged to disclose non-financial reports, in compliance with the existing Non-Financial Reporting Directive and subject to the future Corporate Sustainability Reporting Directive ("CSRD"). This not only enhances transparency with stakeholders and regulators – who need to be assured of an alignment between the banks' policies and their ESG impact goals – but also makes it easier for independent third parties to accurately determine and provide the ESG scores of these banks to the public. Current third-party data paints a somewhat bleak picture of banks, with 63.9% of banks in a TR Refinitiv study[5] obtaining ESG combined scores of less than 50 (out of 100). These less-than-impressive scores underscore the sheer inadequacy of present efforts by the banking sector in this area as they translate into a B- rating at best and in the worst case, a C+ rating (c.f. Exhibit 1).

Exhibit 1: Banks ESG Combined Score

Grade	ESG Combined Scores
D-	0-8.3
D	8.3-16.6
D+	16.6-25
C-	25-33.3
C	33.3-41.6
C+	41.6-50
B-	50-58.3
B	58.3-66.6
B+	66.6-75
A-	75-83.3
A	83.3-91.6
A+	91.6-100



Source: PwC Market Research Centre, Thomson Reuters Refinitiv

1. ECB (*ECB Banking Supervision: Risk Assessment for 2020*, 2019)
2. ECB (*Guide on climate-related and environmental risks, 2020*)
3. ECB ("The clock is ticking for banks to manage climate and environmental risks", 2021)
4. EBA (*Discussion Paper on Management and Supervision of ESG risks, 2020*)
5. The TR Refinitiv ESG methodology uses verifiable public data to calculate more than 450 company related ESG metrics based on comparability, impact, data availability and industry relevance, which are then classified into 186 comparable and sector specific measures for company assessments and scoring. They are then grouped into 10 categories under three pillars (Environmental, Social and Governance) to provide the final ESG score for the company. (Source: Environmental, Social and Governance (ESG) Scores from Refinitiv, 2021)

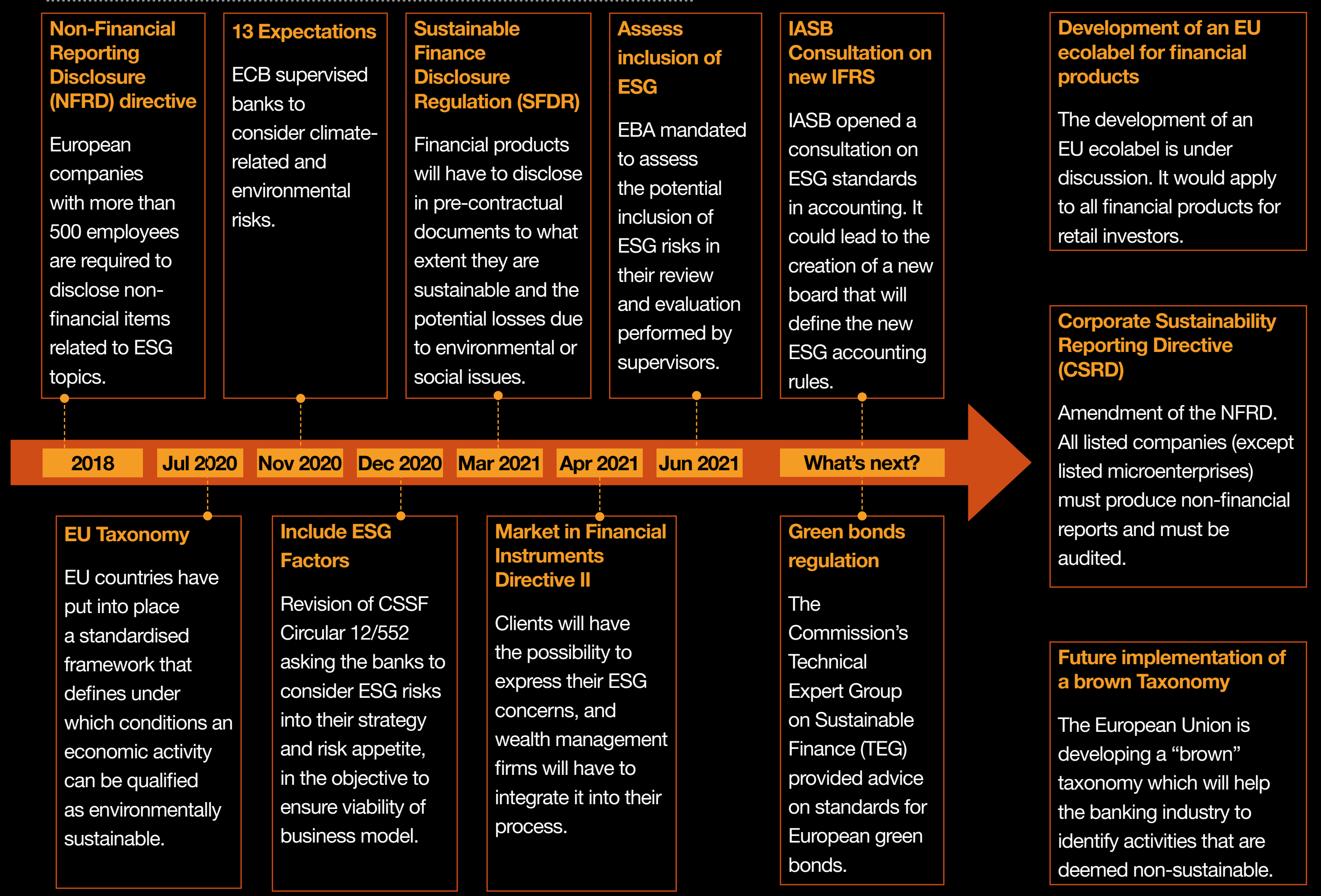
Furthermore, the new Corporate Sustainability Reporting Directive[6], proposed by the European Commission in April 2021 and currently under review by the European Council[7], intended to close gaps in the existing NFRD. If approved, the directive would expand the coverage of applicable companies under the NFRD to include all large companies as well as listed SME companies on all regulated markets. It would also introduce audit requirements to ensure the credibility and reliability of companies' reported sustainability information. Further, the implementation of this directive will align with other EU sustainable finance initiatives, such as the Taxonomy regulation, helping to reduce the complexity associated with multiple reporting standards.

Within the domestic landscape, the CSSF has also been seen to reiterate the need for ESG integration within banks' risk management frameworks, revamping its internal governance regulations to require banks to actively include ESG-related risks within the scope of their corporate strategy and pre-determined risk appetite. Even as recently as June 2021, it also released a circular that requires credit institutions, as part of their overall risk management framework, to begin considering and managing physical and transition risks stemming from climate-related and environmental risks.

On one hand, the influx of these directives could be viewed by banks as regulatory and cost burdens; given the effort and resources required for successful implementation as well as the uncertainties prompted by the absence of clear timelines for some of these regulations. In fact, some of our interviewees shared this view, hinting that while regulation-driven product innovation was a welcome change, the related time and resource costs constituted a major impediment, However, the financial benefits and opportunities that stand to be gained – especially as demand by stakeholders for increased sustainability efforts continues to grow – far outweigh these costs. Thus, a more profitable approach would be for them to leverage the opportunity to catch up with their clients – who are increasingly defaulting towards sustainability. With the ESG train already on its way, banks simply cannot afford to lag but would have to go above and even beyond regulatory requirements if they have any hopes of distinguishing themselves from their competitors and bolstering not only their compliance efforts but their reputations.

6. Corporate Sustainability Reporting Directive proposal
7. Elvinger Hoss ("ESG update", 2021)

Exhibit 2: A timeline of ESG regulation for banks



Source: PwC Market Research Centre

2.2 MiFID target market and sustainability preferences

The implementation of the MiFID II regulation in 2018 sought among other things, to enhance transparency through additional reporting and data disclosure requirements and tests. In April 2020, the EU proposed changes to the MiFID II regulation. These changes, influenced largely by the European green wave and aimed at pushing capital flows into more sustainable investments, are expected to accelerate the pace of the EU's 2050 carbon-neutral agenda.

While these changes focus largely on three key areas namely, the EU Taxonomy, the Corporate Sustainable Reporting Directive, and the Sustainability preferences, the compulsory consideration of sustainable risks in addition to financial ones under the sustainability preferences, stands to have the most significance for the banking sector – in their roles both as discretionary or advisory portfolio managers and as product distributors. Under this proposed amendment, banks offering portfolio management services would be obliged to find out and consider clients' "sustainability preferences" in assessing and determining the suitability of investment products for their clients, as well as issue reports to retail clients that demonstrate adherence to their preferences. Then, in their role as product distributors, they would also have to integrate these ESG factors within their Target Market framework for the designing and distribution of products.

This requirement highlights the need not only for banks to have the right products that meet clients' criteria but adequate means of assessing and incorporating their clients' sustainability preferences within their investment strategy. A one-size-fits-all approach would not be fitting, in this context, as not all investors are equally ready for or interested in looking beyond performance. From a governance perspective, the new requirements would also help to align banks' investment strategies with the investment needs of their clients as well as require banks to develop the proper internal capacities for measuring and mitigating related sustainability risks.

That being said, these additional requirements point to a duality in the banking sector. On the one hand, banks have a fiduciary duty that requires them to make decisions solely in the best financial interests of their clients. On the other hand, these regulatory restrictions prevent them from making non-ESG investment proposals that could potentially improve their clients' risk-return profiles. To navigate this duality, banks' target market analysis must include sustainability factors that will allow clients to outline any sustainability preferences they may have. This will be useful for banks both in the designing of products and services and in the recommendation or distribution of products and services.

2.3 Retail clients are taking sustainability seriously - a new dimension for advice

Mounting pressure from clients is increasingly drawing banks towards new sustainable products and services. The levels of this pressure, however, varies among different client segments, based on factors like age, gender and geographical location. Of the many social and environmental-related issues that have come to the fore in recent times, climate change seems to be at the top, with at least two-thirds of residents in every EU country perceiving it as a very serious global threat.

Accordingly, we have seen a surging interest in ESG investing among younger investors, especially millennials, who are attempting to reduce their environmental footprint, and increasing their demand for financing options that accommodate their changing consumption patterns. This demand is also reflected in the increasing concern by millennials about the impact of their investments. A Morgan Stanley survey of US individual investors demonstrates this, showing that the portion of millennials considered as "very interested" in ESG investing has increased from 28% in 2015 to 70% in 2019, outpacing the general population by more than 20% in the same year (c.f. Exhibit 3). Not only millennials are increasingly turning towards ESG investing, but female investors too, with an RBC Wealth Management Study showing that 74% of US female investors were more interested in increasing their share of ESG investments compared to 53% of male investors[8]. Further, there appears to be more demand for ESG products and compliance from investors from Northern European countries - where ESG is a far advanced trend.

> **The fight against climate change is probably the greatest challenge we have ever faced - for humanity, governments and societies and also businesses, banks and individuals.**
>
> **Frank Rückbrodt,** *CEO, Deutsche Bank Luxembourg S.A.*

8. RBC ("Women are leading the charge for Environmental, Social and Governance (ESG) investing in the U.S.", 2021)

> **It is our task as a global bank to help shape the transformation to a climate-friendly economy and to drive it forward together with our customers. Deutsche Bank wants to be both a role model and a catalyst in fighting climate change. After all, our customers are also faced with the challenge of changing their business models and processes in the direction of sustainable business. We will not leave them to do this alone.**
>
> **Frank Rückbrodt,** *CEO, Deutsche Bank Luxembourg S.A.*

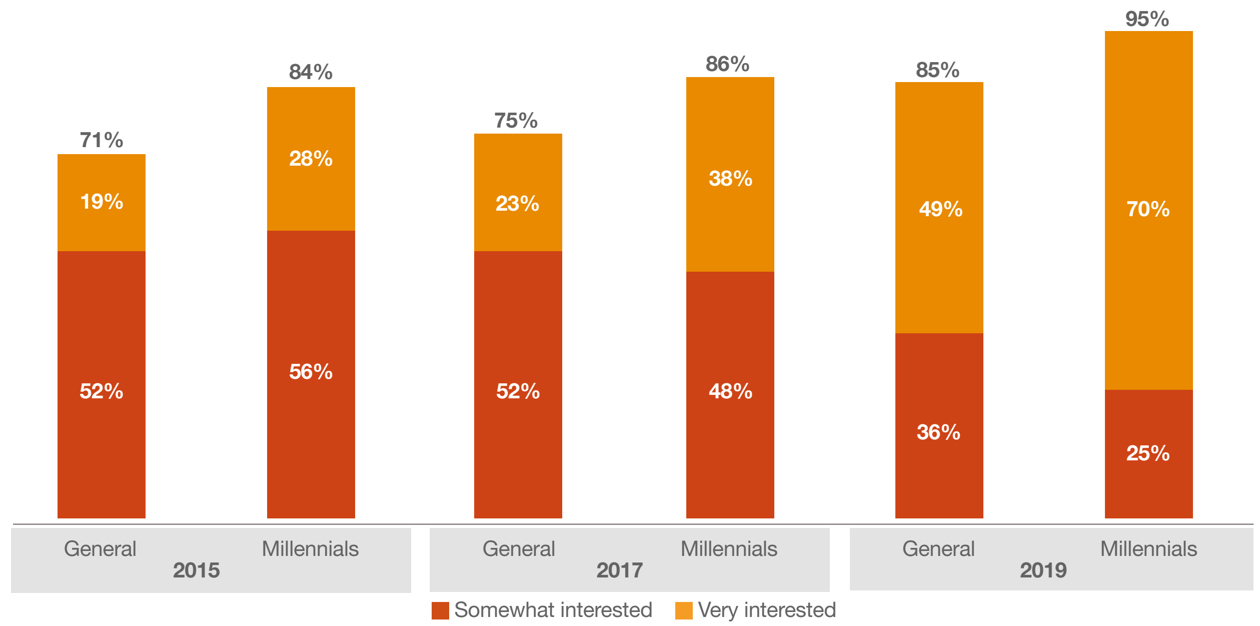
This consensus among this emerging investor segment that sustainable investing represents the future provides further evidences that, as ESG investing enters the mainstreaming phase, banks that fail to integrate ESG into their retail offering risk missing out on a new potential revenue stream. This is important to emphasise as 73% of millennials sampled (65% in the general population) cited the sheer lack of suitable financial products as the main barrier to increased ESG investing. In this context, ESG integration in retail banking is also a way for banks to sustain their institutional legitimacy, given the increased scrutiny they face in the near future, and the reluctance of more and more retail clients to do business with non-ESG compliant banks.

Considering that customised and packaged investments are becoming more prominent among retail investors, banks need to prioritise increasing the availability and accessibility of tailor-made ESG products or risk getting left behind in this generational shift. In this context, the varying levels of interest and demand mentioned above is a useful indicator of how banks can and should approach their ESG product designing and marketing, requiring thorough KYC procedures to ensure that product releases are paced to align with clients' level of ESG understanding and acceptance.

2.4 High-net-worth individuals are driving the ESG transformation of portfolios

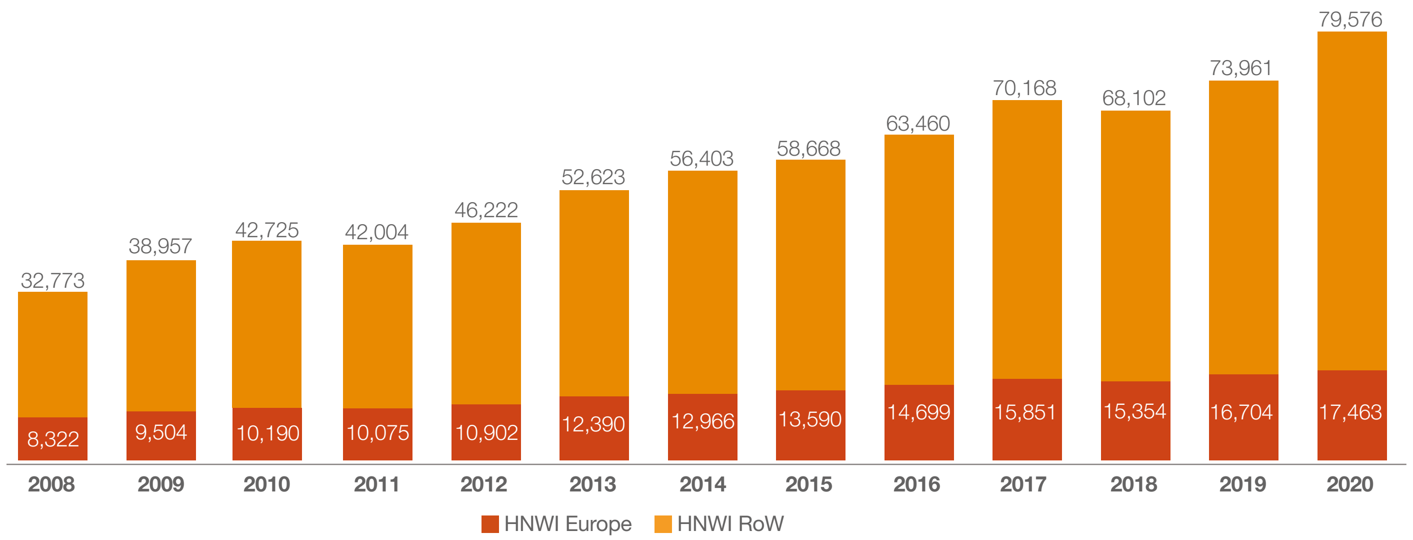
Globally, there is evidence to suggest that high-net-worth individuals (HNWIs) have the potential to drive the ESG transformation of portfolios. With the means to transform their interests into concrete action, the HNWIs sampled indicated willingness and readiness to allocate 46% of their portfolio to ESG-compliant businesses by the end of 2021, conditional on obtaining information on the expected financial returns, the ESG products offered, and their subsequent impact on ESG-related matters. Europe, in particular, represents a sizable market for private banks: the region in 2020 accounted for 22% of the global HNWI wealth (c.f. Exhibit 4) and boasted the third-highest share of HNWIs.

Exhibit 3: General population vs. millennials interested in sustainable investing



Source: PwC Market Research Centre, Morgan Stanley (*Sustainable Signals, 2019*)

Exhibit 4: The evolution of HNWI wealth (USD bn)



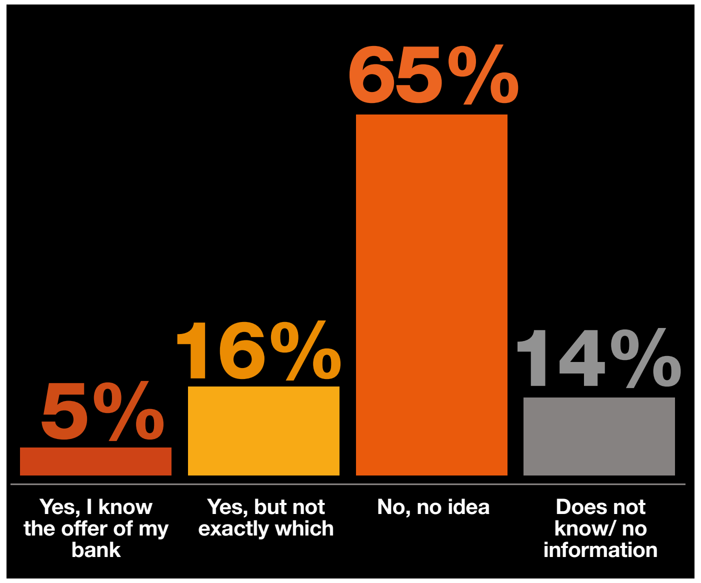
Source: PwC Market Research Centre, Capgemini (*World Wealth Report*, 2021)

While this figure is somewhat significant, it is also indicative of the disparities in clients' understanding and acceptance of ESG. As of now, some HNWI clients are not entirely convinced that ESG investments hold any financial merits, while others are unaware or simply not interested. Indeed, a PwC private banking client study focused on the penetration of sustainable finance in Germany revealed that more than 50% do not know the term "sustainable financial products" and only one in six participants has a good or very good idea of what the term means. Even more worrying is the fact that 65% of the private customers surveyed have no idea of the sustainable financial products offered by their banks; and while 16% have some awareness, they had little information on the details of those products (c.f. Exhibit 5).

These results underscore the potential for sustainable products to become mainstream if private banking clients are well-informed and properly advised on how to take advantage of the ESG opportunities at their disposal. With access to large asset pools that could potentially move the ESG investments needle, HNWI clients would be better placed to co-operate with banks on this front once they have been rightly educated on the value-add of sustainability considerations.

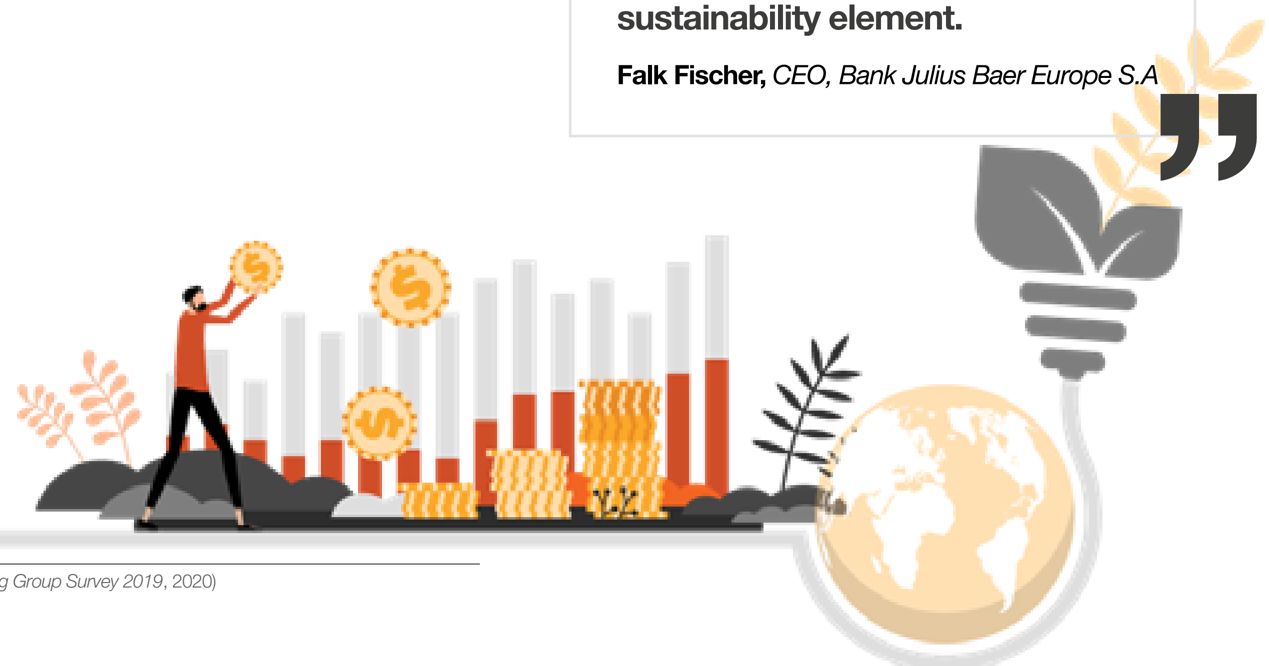
Banks would therefore have to be more proactive about reaching out to existing and potential customers about their sustainable financial products via differentiated sales approaches. They would also have to consider drawing more attention to these products in their advisory services, especially considering that the market share of ultra-high net worth clients in Luxembourg (with over 20 million euros) represented 58% of total assets under management at year-end 2019[9].

Exhibit 5: Do you know if your bank offers "sustainable financial products"?



Source: PwC (*Private Client Study: Sustainable Finance*, September 2020)

> **We need to offer clients a balanced approach to sustainable investing. To create positive impact, we should further increase our focus on combining economic gains and performance with a strong sustainability element.**
>
> **Falk Fischer,** *CEO, Bank Julius Baer Europe S.A*



2.5 A majority of institutional investors consider ESG risks

Institutional investors, such as insurance companies and pension funds, are increasingly taking ESG risks into account when investing. For the banks that serve as investment managers, asset servicers, and distributors for these investors, this has shed light on the necessity to align their fund offerings with their clients' newfound preference for ESG policies and principles.

> **The client is part of society and is impacted by the issues in society regardless of their economic status. Clients are driving this whole change towards sustainability, so let us create added value as we work together with them.**
>
> **Falk Fischer,** *CEO, Bank Julius Baer Europe S.A*

The relevance of ESG among European insurers has become increasingly apparent over the years. In fact, in just three years, the percentage of insurers in the EMEA region disregarding ESG completely as an investment consideration decreased from 55% in 2017 to just 1% in 2020. At the same time, ESG rapidly became one of several considerations for 80% of the sampled population, and for 19%, a primary consideration[10].

Similarly, the number of pension funds considering ESG factors in their investment policy is increasing rapidly, with 89% of the interrogated European funds in 2020 reporting that ESG risks could influence their decisions, which is a significant increase from 55% in 2019[11]. In fact, the belief that ESG risks can very well influence financial assets' returns is now well entrenched within Europe's insurance and pension fund industries, reinforcing the need for banks to accelerate their pace of ESG adoption.

The prevalent inadequacy of relevant financial products that align with the growing interest of institutional investors in ESG is also highlighted by the fact that while 77% of institutional investors in PwC's 2020 ESG survey stated that they were ready to stop investing in non-ESG products by 2022, only 14% of asset managers planned to stop launching these products by the same period (c.f. Exhibit 6). This reflects a disconnect between long-term investment views and short-term liquidity needs which players in the financial sector, including banks, need to address.

Exhibit 6: : The disconnect between asset managers and institutional investors

Do you intend to stop **investing** in non-ESG products within the next 24 months?	Do you intend to stop **launching** non-ESG European funds within the near future?

Source: PwC (2022: *The growth opportunity of the century*, 2020)

9. ABBL (*Private Banking Group Survey 2019*, 2020)

10. GSAM Insurance Report 2020

11. Mercer (*European asset allocation insights*, 2020)

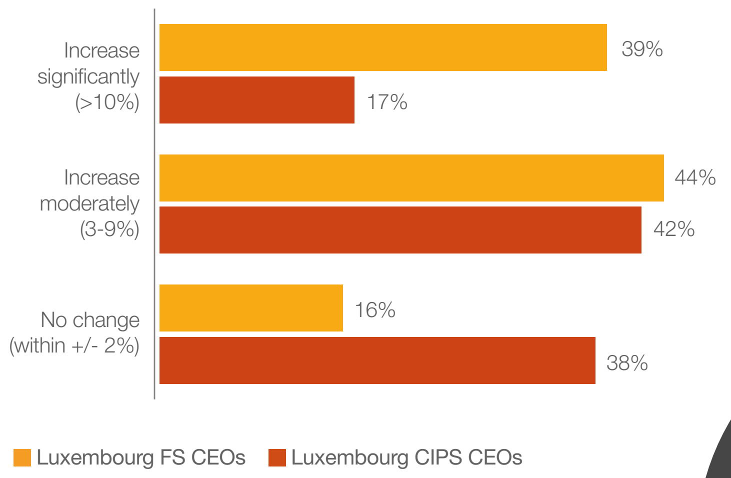
2.6 Corporate clients are looking to banks for green financing

The risk associated with climate change has risen atop CEOs' agendas in recent times, with 33% of CEOs in Luxembourg expressing extreme concern over climate change, slightly above the global average (30%), according to PwC's 24th Annual Global CEO Survey, and representing a 25% point increase from the 2019 figure.

In fact, a growing number of corporates seek to play key roles in the low carbon transition agenda of EU countries. Though the financial sector is leading the way, PwC's CEO survey highlights the fact that 59% of CEOs from real economy businesses (Consumer, Industry Products and Services) are ready to increase their long-term investments in sustainability and ESG initiatives (c.f. Exhibit 7). This represents both a challenge and a significant market opportunity for banks, as many of these corporate clients would be looking to banks to meet various 'green' financing needs, however often, at preferred conditions compared to non-ESG financing.

Exhibit 7: Corporates are increasing long-term investments in sustainability

How do you plan to change your **long-term investments in sustainability and ESG initiatives** over the next three years, as a result of the COVID-19 crisis?



Source: PwC (*24th Annual Global CEO Survey – Luxembourg Findings*, 2021)

That being said, there is currently a EUR 4 trillion discrepancy between the capital that EU banks plan to allocate towards meeting targets of the Paris Agreement and the demand for such financing; given that only under 10% of European companies have set targets well below a 2°C rise, according to the Carbon Disclosure Project's sample data[12]. Thus, commercial banks will have to boost the attractiveness of green financing solutions and dedicate part of their advisory services to informing their clients about the credit risk associated with engaging in projects that deviate from the internationally agreed-upon climate change goals.

Already, companies are increasingly finding a veritable opportunity in the green bond market, evidenced by the rising number of global corporate green bond issuances in recent times. In fact, of the USD 3577bn issued in green bonds as of end-2020, corporate bonds represented approximately 68%.[13] Thus, banks have an opportunity to create new routes and improve existing access to financing via capital markets for sustainable energy infrastructure, green transport projects, and large-scale green commercial developments. Moreover, as the European Green Deal pushes the EIB to develop its intermediated lending facilities, potential partnerships could arise in this space for local banks to use debt financing and equity products in order to ease the access of SMEs and mid-caps to green finance.

12. CDP (*Running Hot: Accelerating Europe's Path to Paris*, 2021)
13. Refinitiv data

3

Embarking on your ESG transformation journey

It has become all too clear that the shifts in the regulatory landscape, as well as the increase in client demand for ESG products, have led to a watershed moment for banks – intensifying the urgency for them to accelerate the pace of their journey towards a full and comprehensive sustainability transformation. It has also brought about opportunities for them to validate their institutional legitimacy by conducting business in a manner that both ensures long-term profitability and aligns with the interests of the larger society and the environment. The path toward transformation begins with the development of a coherent ESG strategy that will drive change from internal practices to employee engagement, increased transparency and product innovation across the bank.

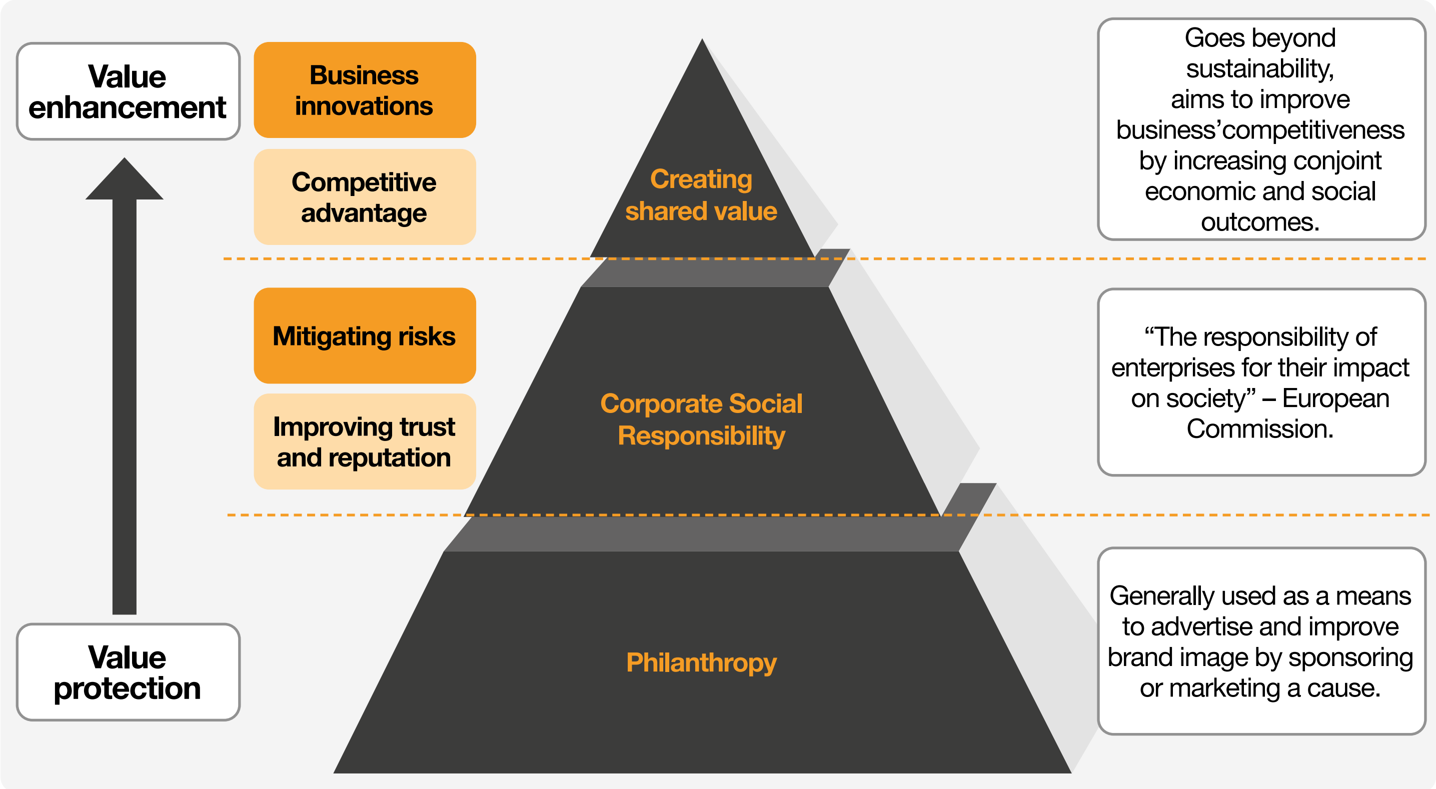
> As a bank you have to prove to your clients and the outside world that you walk the talk, not only with temporary actions but on a daily basis throughout your organisation. We are working on it step- by-step, through a myriad of initiatives and of course we have still a long way to go.
>
> **Michael Savenay,** *CEO, Quintet Luxembourg*

3.1 Incorporating ESG into the bank's strategy is not yet the status quo

While initial efforts by companies to align with the ESG paradigm shift have been observed through initiatives, such as volunteering or donating, these are simply not enough – particularly for companies in the European Union, where regulations are increasingly being ramped up. This is represented by the bottom part of the pyramid (c.f. Exhibit 8). This type of strategy aims at protecting the way banks do business, but this does not ensure the long-term viability of their business.

The second step is to move forward into corporate responsibility and adapt to new regulatory standards and changing market expectations – the middle part of the pyramid. By doing this, banks are being required to demonstrate the full extent of their commitment to sustainability. Concrete steps encompass (1) the creation of a sustainability reporting framework, (2) the development of internal initiatives (i.e. energy efficiency measures, social inclusion), (3) an increased focus on the employee's wellbeing and (4) efforts to support local businesses and the wider community. This trend also includes expanding existing products and services and adapting them to customers' preferences. Still, this is not transformative, and most banks have yet to achieve a true transformative stage.

Exhibit 8: The business transformation pyramid



Source: PwC Market Research Centre

> **ESG is the central pillar of our bank's Sustainability Strategy, which encompasses financial education, loan policy, risk management and investment strategy. With this Strategy, we have a dual objective to create impact and enable the ESG transition of both our bank and clients.**
>
> **Françoise Thoma,** *CEO, Banque et Caisse d'Épargne de l'État*

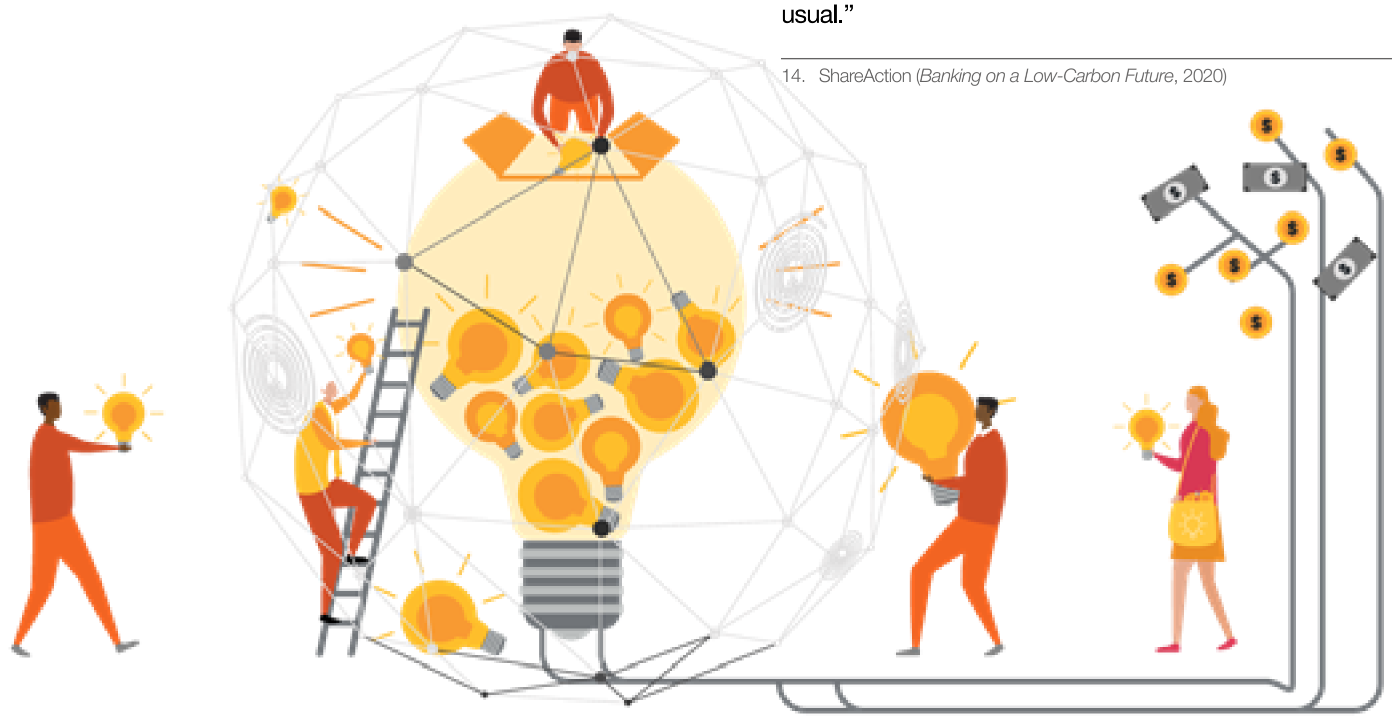
Indeed, this is evidenced by the fact that only 35% of banks in Europe have aligned their strategy with the goals of the 2016 Paris Agreement as of end-2019[14]. This disconnects vastly from the fast pace at which client and regulatory demand for ESG is growing for banks to adopt sustainable products and practices. A PwC study of private banking clients in Germany attests to this, with 81% of respondents requiring their banks to not only offer sustainable products but also pursue this objective within their strategy.

The third step allows banks to fully embrace a multidimensional approach to sustainability, going beyond regulatory requirements to converge stakeholders' economic, social and environmental interests and create shared value (top of the pyramid). The development of this ESG strategy needs to drive the transformation of the bank's operations – namely its investment and lending activities – reinforcing its legitimacy as a source of financing that contributes to the economy's wider sustainability goals. Only once the strategy is aligned at all levels can the bank start implementing the right key performance indicators to effectively measure progress in this direction, and based on the results, communicate their ESG impact to stakeholders through non-financial reports.

Developing an overarching strategy will enable banks to position themselves in this new sustainable finance era, balancing short-term financial needs with long-term opportunities. Banks that successfully embark on an ESG strategic transformation journey will gain a competitive advantage, increase innovation in existing business segments, and develop new revenue streams.

In Luxembourg, we are starting to see signs of progress, with 73% of local banks' CEOs indicating a willingness to invest more in the green transition of the banking sector – according to findings from the 2021 PwC CEO survey. This development reveals that local banks are starting to see the need to boost their sustainability efforts, no longer satisfied with merely complying with increasing regulations and doing "business as usual."

14. ShareAction (*Banking on a Low-Carbon Future*, 2020)



3.2 Organisational structure could facilitate ESG integration

While developing a core strategy is the first step to banks becoming internally sustainable, the implementation of that strategy is just as important, as its impacts are highly material to banks' long-term value creation potential.

As such, this prompts the need to adopt an organisational structure capable of supporting such a large-scale transformation of traditional business functions. Only then, can ESG become a palpable reality in banks' daily operations. The figure below proposed by WWF in its report ESG "*Integration for Banks: A Guide to Starting Implementation*" illustrates the variety of actors involved in the transformation journey (c.f. Exhibit 9).

Exhibit 9: The organisational impact of an ESG transition

Source: PwC Market Research Centre, adaptation from WWF (ESG Integration for Banks: A Guide to Starting Implementation, 2014)

The implementation of the ESG integration process starts at the top with the executive board. This is crucial because it is easier for lower-level management and employees to adapt to changes once leaders first exemplify these changes. Additionally, it is only when leadership at this level fully embraces ESG that a top-down ESG revolution can truly take place within banks. This, in turn, will ensure the successful alignment of the strategy with internal business objectives and external regulatory requirements. A vital step is for the board to set up governance measures to ensure oversight of the overall execution of the strategy. This would involve ESG-focused board and management-level committees that steer the agenda through the bank and assign clear roles and responsibilities throughout the different departments.

The multidimensionality of ESG will require banks to create new business functions or positions that further the ESG transformation at both corporate- and business-line levels, which in certain cases may be temporary to facilitate the transition. In this context, the creation of a sustainability department – a dedicated team of experts whose sole purpose is to manage the sustainability transformation of the bank – would be necessary for developing and monitoring the general sustainability policies of the bank, the internal and external sustainability reporting, stakeholder engagement, and communication, as well as ESG initiatives such as training or capacity building.

The process does not end there but trickles down to the first line of business (business units, client teams), where ESG is then integrated into activities, such as the initial screening of risks, client due diligence processes, and product and service development. Legal teams of banks would also be required to adapt in order to be compliant with upcoming EU regulatory requirements.

Going further down the chain, banks looking to embed ESG within the second line of business (risk management department, risk approval authorities) would have to appoint ESG specialists with the necessary capabilities and expertise in risk management. This is a significant step to ensure that the second line is not only able to monitor and mitigate first-line risks but is also able to identify emerging risks and develop effective risk control procedures across the bank. The third line of business (internal audit department, external advisers) serves to monitor the compliance and effectiveness of the ESG risk control framework as well as provide specialist support for specific tasks and third-party verification.

Collectively, the various business lines constitute a sound organisational structure, with each department having assigned roles and responsibilities, while at the same time working in unison to drive the implementation of the corporate ESG strategy.

> **ESG has to be homogeneous along all lines of business, from loans to risk management and across our own portfolios.**
>
> **Françoise Thoma,** *CEO, Banque et Caisse d'Épargne de l'État*

3.3 Continuous adaptation is key to successful change management

Banks cannot hope to fully implement whatever ESG strategy they choose without the efforts and support of their staff. The employees represent a major stakeholder in the journey and on the other hand, are also key success factors. This view is shared by our interviewees, who believe that having the right people is a necessary step in banks' transformation, even in cases where the bank does not intend to fully transition its entire business model. This makes it imperative to ensure that at every level of the business, employees are adequately consulted for ESG views and equipped with the necessary knowledge, skills and tools to fully commit to the bank's sustainable transformation.

> **In our view, the most critical element is getting highly qualified people. Technology platforms and regulatory frameworks are likewise important, but can be more easily managed.**
>
> **Falk Fischer,** *CEO, Bank Julius Baer Europe S.A.*

In light of this, banks need to raise firm-wide ESG awareness, from the executive board to junior-level staff. This would, in turn, enhance the rate of staff adaptability to ESG-induced organisational changes. Also, banks would be better placed to develop ESG-compliant products and services as employees would have the required skills to apply this knowledge to product and process innovations. Implementing a compensatory scheme as a way of incentivising staff members to apply the firm's ESG policies is a strategy banks should consider. For this to be effective, key performance indicators would have to be set and agreed on.

At the same time, banks would need to consider ways of managing the administrative burden of ESG regulation on staff as well as its impacts on their relationships with clients. Achieving this balance would effectively transform the advisory role of banking staff; allowing them to provide the right solutions to ease the transition journey of their clients while increasing the opportunities and decreasing the risks for both parties - a win-win situation.

Beyond staff sensitisation on ESG issues, the education and upskilling of the current workforce represent a major way in which banks could access much-needed ESG talent internally. Training could cover themes, such as ESG data analytics, risk and impact analysis, and policy monitoring, but as pointed out by the Climate Financial Risk Forum, training on climate financial risk management should be taken as seriously as the one regarding anti-money laundering[15].

Taking responsibility for staff upskilling would also allow banks to guarantee that everyone is brought up to speed and that no one gets left behind, fostering an inclusive environment in line with the social aspect of banks' ESG responsibilities. Bank CEOs in Luxembourg seem to agree with this approach – according to PwC's CEO survey – given that 77% of them already consider the need for a skilled workforce as a priority for both the government and companies. This comes as no surprise, seeing that the country is well-known in the financial sector for its diverse competencies.

Finally, a complementary alternative for banks would be to look out for people who already possess the necessary ESG skills and experience. At the moment, some banks resort to ad hoc hiring of ESG/Climate/Environmental experts to meet ESG competency needs. With the surge in sustainable programmes, and the focus on sustainable finance and investing at the top 25 global business schools in the past five years[16], banks would soon be able to access a pool of finance and equally ESG-skilled talent. Additionally, online courses on sustainable finance are becoming readily accessible to professionals, boosting their attractiveness to large financial groups looking to satisfy their demand for ESG expertise. Talent attraction in this way could be an easier route, given the high value that upcoming generations place on firms that show an active commitment to ESG-related issues. In this context, having the right human resources and brand marketing policies that emphasise the banks' commitment to sustainability in their messaging would play a key role.

> **We apply a Diversity and Inclusion (D&I) lens at all levels of the organisation to review any unwanted biases we may have, not just in terms of race, ethnicity and sexual orientation, but also culture and way of thinking. Ensuring a diverse and inclusive workforce prevents group think, attracts talent, and allows our people can be at their best.**
>
> **Niccolo Polli,** *CEO, HSBC Luxembourg*

15. Climate Finance Risk Forum Guide 2020
16. Wall Street Journal ("Sustainable Finance Goes to Business School", 2019)

3.4 Progress must be quantified by developing KPIs and non-financial reports

Reporting is the third component of the sustainable transformation of banks. In this context, key performance indicators (KPIs) hold the bank accountable for the implementation of the ESG strategy. While these KPIs establish an internal baseline for the bank's ESG performance, it is still very necessary that the results from monitoring this progress are shared externally. This allows banks to transparently report their sustainability story, thus reinforcing their credibility and fostering trust with stakeholders.

Building key performance indicators (KPIs) requires banks to first pool together all ESG-related issues and opportunities applicable to various industries while keeping the stakeholder universe (customer, employee, governance, supply chain, community, and environment) in reference. The Global Reporting Initiative (GRI) - 200, 300, and 400 standards - provide a good starting point for banks in disclosing relevant information to stakeholders on their economic, environmental and social performance. It should be noted, however, that these standards remain very broad, thus allowing only a high-level intersectoral comparison that extends beyond the financial industry.

For this reason, banks also need to develop industry-specific KPIs from a list of material sustainability-related business issues. The Sustainability Accounting Standards Board (SASB) has already facilitated the process for companies – narrowing down the scope to standards that apply to their subsector activity(ies). Although it is a voluntary measure, this closely defined set of industry-specific disclosures complements the GRI standards, and at the same time, allows for a more granular comparison between banks and other financial institutions engaged in these selected activities. A similar, more mandatory measure would be the Principal Adverse Impact Statement (PAIS) requirement, recently added under the SFDR. This new measure expects financial firms to fully disclose the potential impacts of their investments on sustainability factors such as environmental, social, employee and human rights, anti-corruption, and anti-bribery topics. In order to harmonise the metrics considered in these PAIs, the European Supervisory Authority (ESA) has provided a draft of 32 indicators that financial players must measure and report accordingly.

To further assess the financial implications of climate change, banks are recommended to follow guidelines from the Task Force on Climate-related Disclosures (TCFD). These are particularly useful for industry players looking to better understand (1) the role of bank boards and management in overseeing climate-related issues, (2) the impact of such issues on banks' business strategy; and financial planning over the short to long term, (3) the identification, assessment, and management of climate-related risks and opportunities, and (4) the metrics and targets for assessing this process. At the moment, results from TCFD's annual status report demonstrate that the banking industry is relatively behind in the implementation of the aforementioned KPIs, with less than a third of banks sampled following the TCFD's recommendations in any category (c.f. Exhibit 10). This notwithstanding, banks are increasingly disclosing their processes for managing climate-related risks as well as the climate-related metrics they use, most likely because these are the two of the most highly requested indicators from stakeholders.

Banks that are able to go one step further, and proactively anticipate the regulatory requirements from the EU Taxonomy will face less costs adapting their reporting framework and may even gain a competitive advantage. Banks should already be turning their attention to the EBA's consultation for the EU Commission on KPIs that would allow credit institutions and investment firms to disclose how and to what extent their activities are considered environmentally sustainable. The focus has particularly been on the green asset ratio, a measure that would show the proportion of the credit portfolio allocated to taxonomy-compliant economic activities as a share of total eligible assets. As the EU regulatory and supervisory authorities look for more clarity on how financial institutions will comply with the upcoming requirements, banks would need to reconcile the regulatory requirements that apply to them not only as companies but also as financial market participants, in addition to the aforementioned voluntary disclosures that are necessary to build trust with stakeholders.

Regardless of the level of the disclosure chosen by banks in their sustainability reports, the first takeaway is that they need to move away from cherry-picking which ESG metrics make them look good and be fully transparent about how they are bringing value to the community, fighting climate change, etc., and also about any activities they may be engaged in that harm their external environment or society in general. For this reason, KPIs must be specific, measurable, and time-bound to give a comprehensive and complete picture of the bank's objectives and progress in creating impact around relevant ESG issues. The second takeaway is that there needs to be a convergence of banks' reporting practices, aligning as much as possible with existing sustainability reporting frameworks, such as the GRI, SASB, and TCFD guidelines, but also anticipating upcoming EU reporting regulatory standards. Only then will banks be able to compare and benchmark their ESG performance within and beyond the banking industry.

Exhibit 10: Percentage of Banks following TCFD Recommended Disclosures in 2019

Recommendation	Recommended Disclosure	Percentage of banks		
		2017	2018	2019
Governance	Board Oversight	17%	21%	23%
	Management's Role	19%	23%	24%
Strategy	Risks and Opportunities	23%	23%	32%
	Impact on Organisation	21%	25%	27%
	Resilience of Strategy	5%	9%	12%
Risk Management	Risk ID and Assessment Process	15%	21%	25%
	Risk Management Processes	13%	17%	23%
	Integration into Overall Risk Management	9%	12%	19%
Metrics and Targets	Climate-Related Metrics	16%	20%	27%
	Scope 1,2, 3 GHG Emissions	13%	16%	21%
	Climate-Related Targets	12%	15%	19%

4

Revamping the banks' risk management frameworks

While it may be challenging to identify risks that are material to your business, the consequences of not considering ESG risks in banks' investment or lending processes could be far more costly. This is even more so given the predominance of climate-related issues in recent times – not only as an emerging source of risk but also as an opportunity for banks to benefit from low capital costs and reduced non-performing loans (NPL) rates. Risk management, therefore, plays an increasingly important role in the implementation of the bank's ESG strategy. There currently exist multiple ESG risk evaluation methods but issues with data availability, accuracy and comparability are at the top of banks' concerns. The severity of the task at hand was underlined by some of our interviewees, who stressed that risk measurement would require complex economic models, precise data and difficult advanced competencies, adding that banks' business models would heavily impact their ability to adapt.

> In this transition period, it is a challenge to adapt all management, risk, and portfolio assessment processes. On the negative side, we also have to take into account the reputational risk if you don't deliver on it.
>
> **Michael Savenay,** *CEO, Quintet Luxembourg*

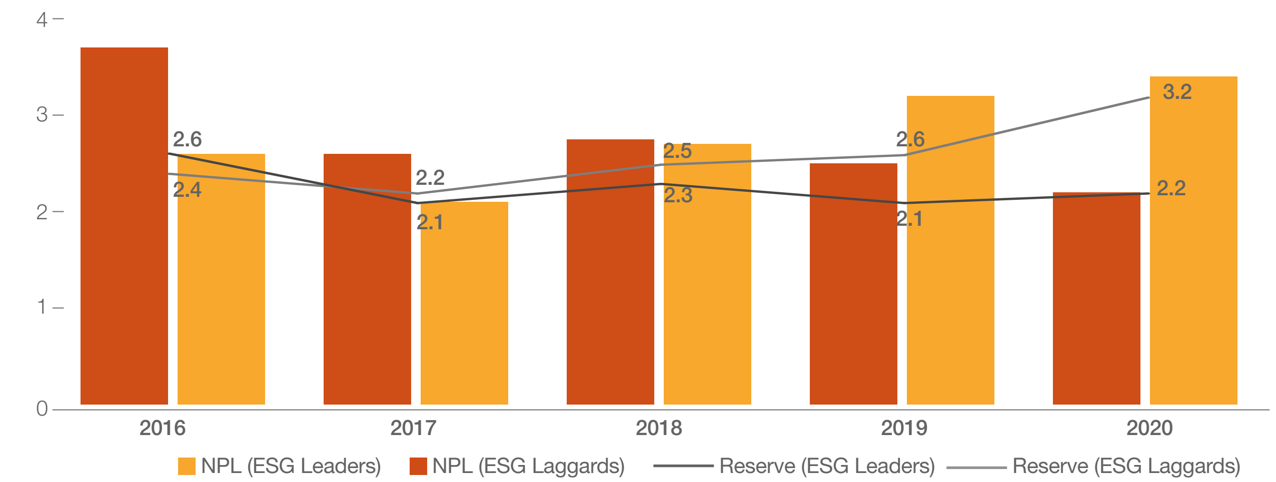
4.1 Banks have not totally embraced ESG risk assessment procedures

While efforts to implement ESG within the bank's operations and risk management framework are sure to drive up costs for banks, it is not without commensurate benefits. There is, indeed, evidence to show that banks that place a stronger focus on ESG face fewer risks than their peers. Furthermore, banks with highly rated ESG companies within their portfolios have been seen to perform better than those who do not. In fact, a 10-year study by Lyxor revealed that excluding 50% of the firms in the MSCI Europe Index with the lowest ESG ratings increased index returns by about 0.8% while reducing index volatility by about 0.7%[17].

Another study by the MSCI shows that banks that qualified as "ESG Leaders" (the top-ESG-rated banks) recorded slightly lower average non-performing loan (NPL) ratios during the pandemic compared to the same period a year earlier. Similarly, these ESG leaders recorded relatively stable loan-loss reserves of 2.2% between 2019 and 2020. For "ESG Laggards", loan-loss reserves went up by 60 bps to 3.2% of gross loans in the same period, implying that they needed more provisions as their loans presented a greater-than-normal risk of loss (c.f. Exhibit 11)[18]. These two examples illustrate that banks that consider ESG risks do not have to compromise on performance and can be more resilient in times of crisis.

17. Lyxor/Dauphine Research Academy ("Why using ESG helps you build better portfolios", 2019)
18. MSCI (*Banks, ESG and Nonperforming Loans During COVID-19*, 2020)

Exhibit 11: Loan-loss reserves (represented in % of gross loans)



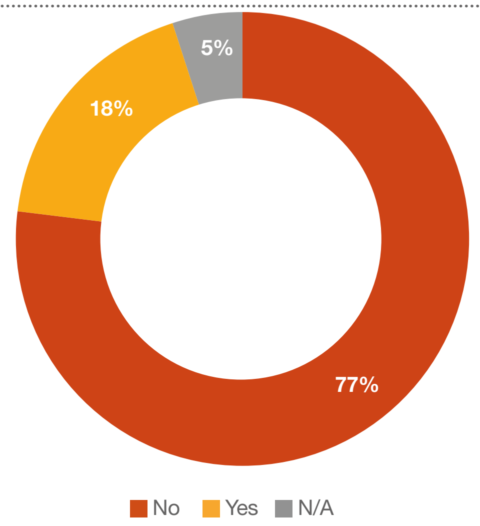
Source: MSCI (*Banks, ESG and Nonperforming Loans During COVID-19*, 2020)

> At the end of the day, banks have a responsibility to partner with their clients, understanding and working through their challenges so that these clients can successfully transition to ESG. Fully ESG conscious clients, would, in turn, result in reduced ESG risks for banks.
>
> **Françoise Thoma, CEO,** *Banque et Caisse d'Épargne de l'État*

As pressure mounts internally to reduce portfolio risks as well as externally from regulatory and supervisory authorities (ECB, EBA, CSSF), banks are becoming increasingly aware of the urgency of implementing ESG within their risk assessment procedures. Particular attention has been drawn to the growing threat of climate-related risk and its diverse impacts on banks' operations. That being said, there is still massive room for further integration, with a survey from the EBA showing that fewer than one in five banks have already implanted specific ESG risk management processes as of 2020[19] (c.f. Exhibit 12). This is a clear indicator of the need for banks to adapt their risk assessment processes in order to accelerate the pace of their ESG transition. Though it is early days, HSBC has started implementing risk protection procedures to private bank lending.

> Where we used to have a portfolio of assets that are clearly exposed to ESG risks because, for example, they are oil and gas linked, we're looking at "notching" the risk-rating down a grade which impacts Loan-to-Value (LTV). This both protects the bank, and incentivises the client to think about shifting their portfolio to more sustainable investments if they want access to greater funding at better rates. That is one way we are considering to account for the ESG risks in clients' portfolios.
>
> **Niccolo Polli,** *CEO, HSBC Luxembourg*

Exhibit 12: Do you have in place specific risk management processes with regard to climate-related risks?

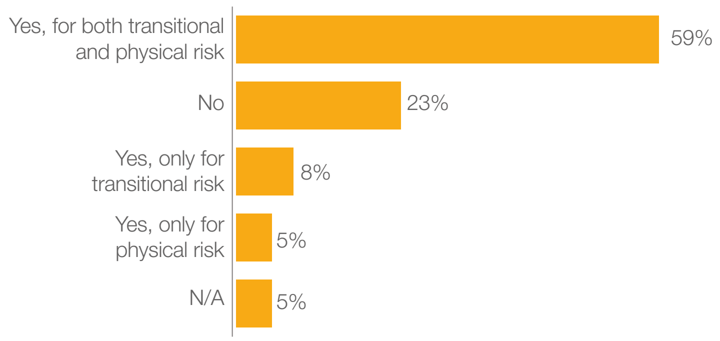


Source: EBA (*Sustainable Finance Market Practices*, 2020)

The increased focus by banks on climate-related risk management is not without reason. In a recent EBA survey, 59% of participants identified both physical risks (from severe disasters, weather events, gradual climate changes) and transition risks (from making adjustments towards a low-carbon economy) as having material impacts on their firms (c.f. Exhibit 13). For banks with portfolio exposures to high-carbon emitting industries, such as basic resources, utilities, and oil and gas, there are also threats of liability and investment risks stemming from climate and ESG-related risks that could impact firms' asset values. According to Schroders's physical risk assessment, the potential costs associated with insuring those companies' assets against the impact of climate change could be equivalent to more than 4% of their market values[20]. All of these point to the need for banks to look into, design, and implement a more comprehensive and ESG-inclusive risk approach.

Implementing a sustainable risk management approach would result in more efficient risk mitigation for banks and enable them to reallocate capital towards more sustainable factors while still meeting their financial performance and other commercial objectives.

Exhibit 13: Do you see climate-related risks as deserving a comprehensive risk management approach?



Source: EBA (*Sustainable Finance Market Practices*, 2020)

19. EBA (*Sustainable Finance Market Practices*, 2020)
20. Schroders (*Climate change: the forgotten physical risks*, 2018)

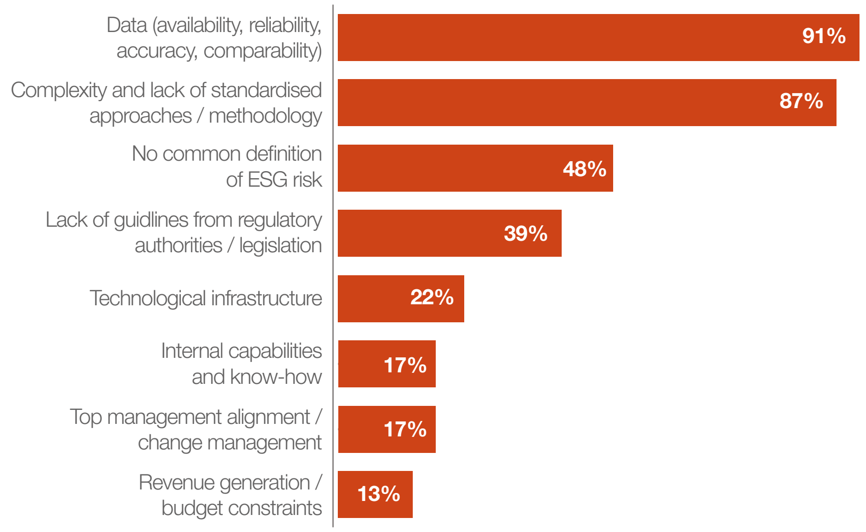
4.2 ESG data collection and comparability are the main challenges facing banks

The most common challenge in identifying, assessing, and managing ESG risks related to client portfolios mainly concerns data availability, reliability, accuracy, and comparability. This problem is not solely unique to banks but extends to the asset management industry as well, with 73% of asset managers in a PwC survey citing the lack of data as their most significant challenge in monitoring, evaluating, and reporting ESG performance and related risks. For banks, the figure goes up to a staggering 91%[21] (c.f. Exhibit 14) – highlighting the sheer scale of what is collectively known as "the ESG data challenge".

This presents an opportunity for data providers to compete in a fast-growing market (c.f. Exhibit 15) to supply the best ESG-related data services (extracting non-financial data on companies and providing indices to benchmark their ESG performance). Annual spending on ESG content and ESG indices has already increased by 20% and 35%, respectively, between 2019 and 2020. In particular, 75% of banks from EU and non-EU jurisdictions currently use external data sourced from third parties to complement their internal client data[22]. With the upcoming regulatory requirements for financial institutions, Europe is set to be the primary target for this data market. Already, it represents 60% of the ESG data spending market – outranking North America, which accounts for one-third[23].

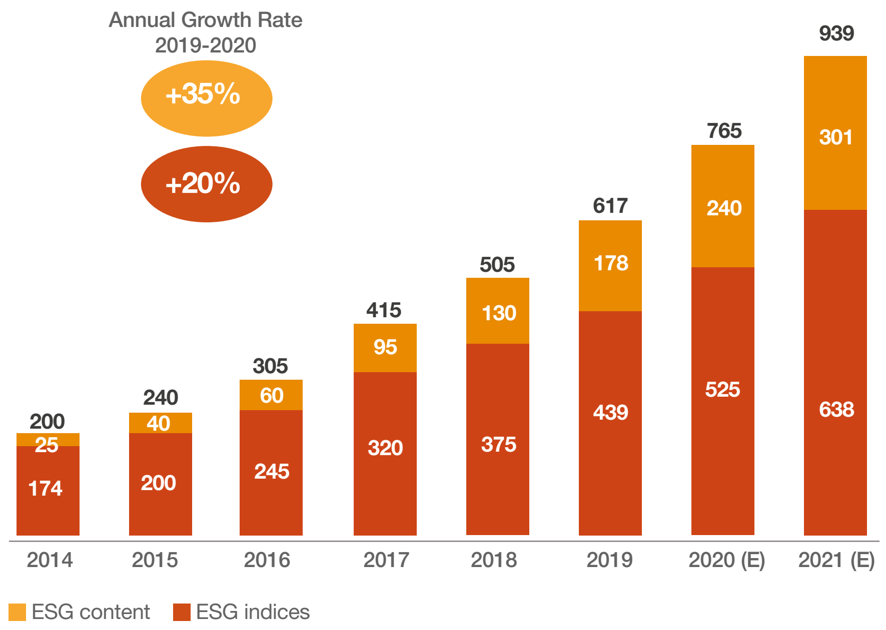
The second challenge relates to the complexity and lack of a standardised methodology for assessing ESG risks. The European Banking Authority (EBA), in an attempt to aid banks, discusses four common methodologies for evaluating the exposures of banks' investment/lending commitments to specific ESG attributes (c.f. Exhibit 16) but the inconsistencies in ESG calculation models and assessment metrics within and between these methods often lead to significantly different outcomes - further highlighting the problem of data comparability.

Exhibit 14: Challenges for defining, identifying, assessing and managing ESG risks



Source: BlackRock FMA Analysis via European Commission (May 2021)

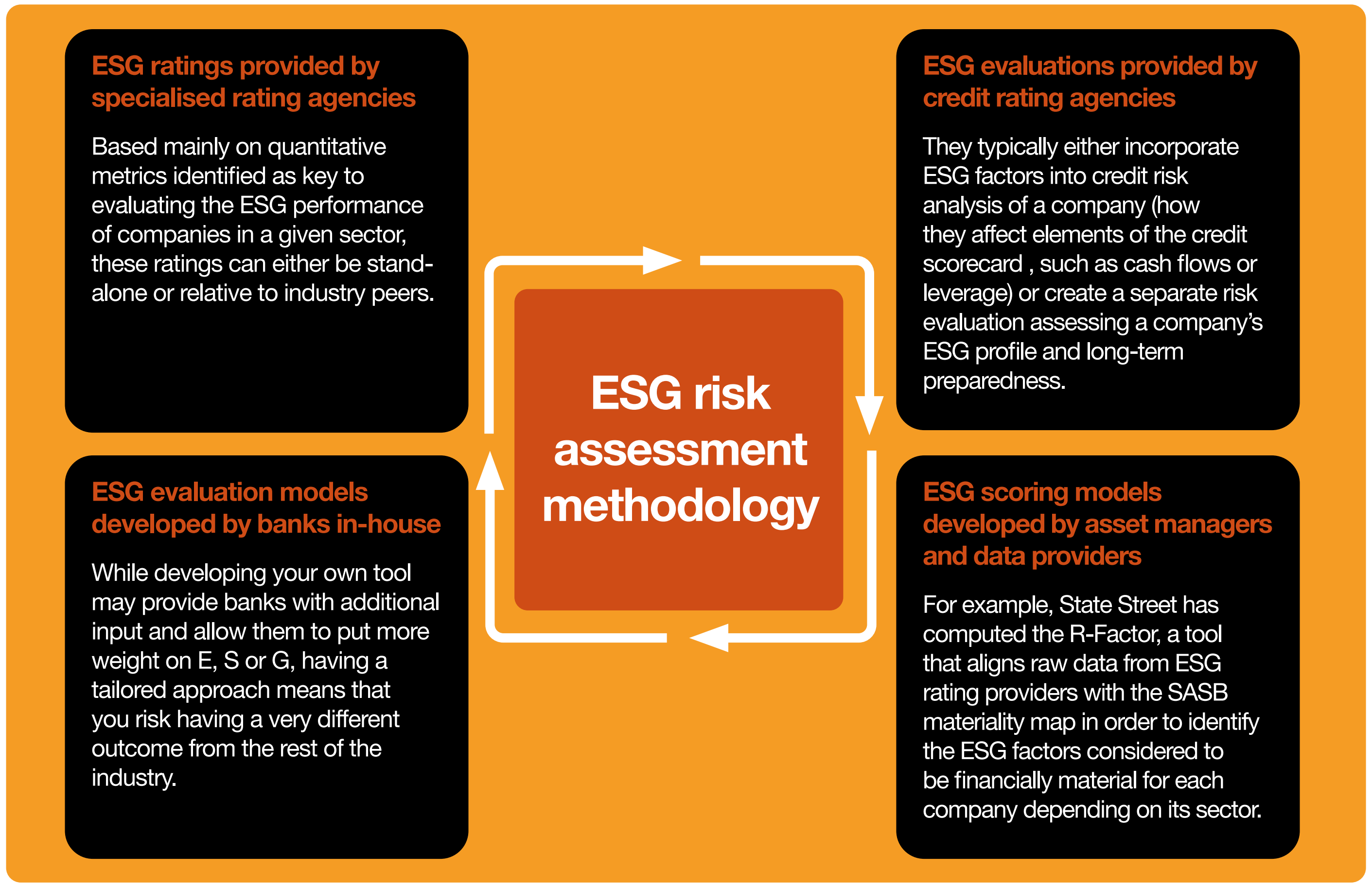
Exhibit 15: ESG data market size (Annual spending in USD mn)



Source: Opimas (*ESG Data Market: No Stopping Its Rise Now*, 2020)

21. BlackRock FMA Analysis via European Commission (May 2021)
22. BlackRock FMA Analysis via European Commission (May 2021)
23. Opimas (*ESG Data Market: No Stopping Its Rise Now*, 2020)

Exhibit 16: Four risk exposure methods



Source: PwC Market Research Centre, adaptation from European Banking Authority (*Discussion paper: On management and supervision of ESG risks for credit institutions and investment firms, 2020)*

To illustrate the effect of this lack of consistent metrics, some of our interviewees referenced a disconnect between the environmental and social dimensions of ESG when it comes to mortgages.

On one hand, mortgages for A-rated houses could benefit from better financing conditions than those rated E; which satisfies the "E" dimension of ESG. Meanwhile, only families with above-average incomes are likely to benefit from this financing conditions-given the disparities in income levels, which is not compliant with the "S" dimension. In a reverse scenario, a bank may grant the mortgage for an energy-intensive house to a less wealthy family to fulfill its social role at the expense of the environmental criterion. And while some banks have resorted to guiding their clients to optimise state subsidies to improve the energy score of their housing units, this clearly highlights how the lack of a mandatory EU-level framework for conducting sustainability risk assessments creates confusion among financial players and underscores the need for standardisation in the risk assessment methodology.

In this way, the EU Taxonomy is establishing a common set of ESG parameters across all sectors, and the SFDR will require financial market participants to be more transparent about their methodology for integrating sustainability risks into their internal procedures. If material exposures to sustainability factors are identified, banks can then start taking action to mitigate these risks. Though not legally binding, shareholder resolutions can be an effective way of pressuring companies to take accountability for creating negative social and environmental externalities. If the company fails to show improvement on the identified ESG risks, possible divestment might be the bank's last recourse. As highlighted by our interviewees, integrating ESG risk into all aspects of the banks operations will ultimately result in increased resilience for clients and for the banks themselves.

4.3 A comprehensive risk assessment would require more ambitious measures

Even though a general assessment of ESG risks relies solely on backward-looking methods based on historical non-financial data, the long-term nature of climate-related risks – which currently pose the most significant ESG risk to banks – makes forward-looking methods, such as climate stress tests and sensitivity analysis more useful in helping banks model climate risk impacts (c.f. Exhibit 17). It is important to note, however, that these methods are still at an early stage of development due to their complexity and high level of uncertainty[24].

24. EBA (Discussion paper: On management and supervision of ESG risks for credit institutions and investment firms, 2020
25. European Central Bank ("Shining a light on climate risks: the ECB's economy-wide climate stress test", 2021)
26. NGFS (*Climate Scenarios for central banks and supervisors*, 2020)
27. Katowice Banks (*Credit Portfolio Alignment*, 2020)

Exhibit 17: Two climate risk assessment methods

Source: PwC Market Research Centre, adaptation from European Banking Authority (*Discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*, 2020)

To provide banks with a balanced long-term view of climate risks, the European Central Bank (ECB) is ambitiously leading an economy-wide climate stress test over a 30-year horizon. Preliminary results from an analysis of four million firms worldwide and 2,000 consolidated banks, provide strong evidence that climate change represents a source of systemic risk, especially for banks in high-emitting sectors or countries, as increased costs from physical and transition variables raise companies' default probabilities[25]. As the ECB Banking Supervision plans to conduct further climate stress tests of individual banks from 2022, banks should already start proactively aligning their credit and/or investment portfolios to the ECB's two adverse climate scenarios modelled by the Network for Greening the Financial System (NGFS)[26].

In parallel, industry players are setting the pace for the adoption of these forward-looking methods, with a coalition of 17 global banks recently publishing the Paris Agreement Capital Transition Assessment (PACTA) methodology, a climate scenario analysis toolkit that measures the alignment of banks' corporate lending portfolios with climate scenarios across key climate-relevant sectors. As demonstrated by the work of five international banks – BBVA, BNP Paribas, ING, Société Générale, and Standard Chartered – this method aims to develop indicators that will enable banks to make portfolio reallocation decisions[27], especially regarding the automotive, power, and fossil fuels sectors, which typically carry the bulk of a credit portfolio's carbon emissions. Banks can then use these indicators to monitor their clients' progress towards carbon reduction and keep track of their own portfolio realignment efforts.

Given that forecasts relying solely on financial variables will no longer be sufficient to ensure a bank's financial stability, integrating physical and transition variables into the risk management process is becoming a necessity for banks to increase their resilience to climate impacts. As such, by implementing one or a combination of these forward-looking climate risk measurement methods, banks would be better able to proactively identify opportunities to align their credit and/or investment portfolios with the most ambitious carbon-reduction scenario. At the moment, ESG risk assessments are not yet standardised among banks, but it is an area of focus for all Luxembourg banks. Most of them consider it as a mean or a necessary step towards the improvement of the activity. But the end goal of the Luxembourg banks is to satisfy the multiplicity of the client needs in this very demanding environment.

> I see two main challenges for identifying, assessing and managing ESG risks - both actually linked : availability of adequate data, and capacity to design fully comprehensive models to evaluate the impact of strategies addressing ESG risks. As the emergency is there, we must accept to act despite those imperfections – and progress down the road. As an example, SG Luxembourg has decided to start this year already measuring through the PACTA methodology the alignment of its financial portfolios with climate scenarios consistent with the Paris Agreement, even if such approach is only partial at this stage.
>
> **Arnaud Jacquemin,** *CEO, Société Générale Luxembourg*

5

A new path toward banks' value creation

In seeking to steer themselves in the right direction towards long-term value creation, banks are increasingly expanding their menu of ESG products and services across a range of banking activities; from retail, commercial and private banking to asset management and asset servicing.

Some established sustainable products, such as green bonds are growing in popularity, while others, such as social bonds have started to gain ground – largely on the back of the COVID-19 pandemic. Further, opportunities are developing in ESG loans and deposits while niche products that have potential are increasingly being proposed and explored by Luxembourg banks. Beyond this, efforts to bolster their sustainability transformation have led to an increased number of partnerships between banks and other service providers, such as fintech companies and data collection companies, to expand their product and service offerings.

> "There's a new efficient frontier. It used to be risk reward. Now it's risk-reward-impact."
>
> **Niccolo Polli,** *CEO, HSBC Luxembourg*

5.1 Reinventing traditional banking products

The rising ESG awareness among companies and individuals provides banks with an opportunity to innovate and design non-traditional products and services that meet clients' demand for increased sustainable finance products. Already, we are seeing a number of banks leading the charge, revamping aspects of their existing offerings in this direction.

> "For the financial marketplace in Luxembourg, sustainability transformation is of utmost strategic importance. Luxembourg is uniquely positioned with its comprehensive sustainability financial initiatives to further strengthen its role in the global financial industry, connecting the financial needs of corporate and private clients across Europe."
>
> **Frank Rückbrodt,** *CEO, Deutsche Bank Luxembourg S.A.*

Exhibit 18: Mapping the top ESG Instruments

ESG Instruments Universe	
Instruments	**Examples**
Mandates Funds	ESG-embedded Discretionary and Advisory mandates, ESG mutual funds, ESG ETF
Bonds / Equities	Green bonds, Social bonds
Other types of security	Carbon derivatives, ESG-linked derivatives
Loans	Green loans, Green mortgages, Electric car loans
Deposits	Green deposit accounts
Other	Sustainable credit cars, Credit guarantees

Source: PwC Market Research Centre

Discretionary and Advisory Mandates

Given their widespread popularity as the primary product offering - especially within the private banking segment - discretionary and advisory mandates are extremely suited to banks' efforts to reinvent existing products. As of end-2020, European discretionary mandate AuM was estimated to stand at EUR 1.3tn and made up 45.4% of total European AuM, according to EFAMA. Factors such as use by institutional investors as well as the extent of local fund managers' expertise in managing such mandates accounted largely for their prominence. Meanwhile, the confidentiality of advisory mandate data limits access to assets in this segment even though banks report on their advisory mandate strategies. That being said, irrespective of the chosen mandate, banks have an opportunity to guide their clients towards more sustainable investment offerings through progressive ESG sensitisation, taking into consideration the ESG preferences of these clients.

Banks like Deutsche Bank are already taking active steps to make ESG considerations a significant part of their client advisory segment. In line with their expectations that up to 95% of investments will incorporate ESG factors within 10 years, the bank has set up an ESG team to open up further dialogue with clients on ways to increasingly include ESG considerations within their investment decisions[28]. For banks that offer discretionary mandates, which place them in a fiduciary role to make investment decisions on behalf of their clients, ESG integration is equally viable. Increasingly, a number of these banks in Luxembourg have been seen to offer wholly sustainable discretionary portfolios or include ESG as an investment criterion. Such banks include Nordea Bank, whose asset management subsidiary, Nordea Asset Management[29], has included ESG criteria in its investment process for clients who subscribe to a discretionary mandate. Through the use of an internal ESG rating methodology complemented by exclusion and active ownership policies, the bank integrates sustainability criteria into the investment process. BGL BNP Paribas also operates a Discretionary Portfolio Management (DPM) system that relies on an in-house ESG rating methodology from the banks' Wealth Management segment in its product classification[30]. This allows it to prioritise ESG as the topmost selection criteria in its portfolio management practices. Not only that, but the Bank of Luxembourg also offers a range of discretionary mandate offerings that embed ESG within its investment criteria at varying levels to meet varying client preferences[31].

Luxembourg's expertise in the private banking sector puts it in a unique position to capitalise on this approach and replicate it on a large scale. Having witnessed a 6.8% CAGR growth in assets between 2008 and 2019[32], prospects for the Luxembourg private banking sector remain very favourable in the coming years, thus setting the scene for banks to amplify their ESG integration approach if they hope to benefit immensely from this expected growth. In this context, the industry could draw greatly from existing guidelines such as the recently published Swiss Banking Association[33] guidance showing how banks could add value and facilitate informed decision making for interested clients by streamlining ESG within their discretionary and advisory mandates. These guidelines encompass determining client's ESG preferences and expectations, providing adequate information on the range and characteristics of available ESG products, and then implementing solutions in line with clients' chosen strategy.

> "I am impressed to see how prominent the ESG dimension has become over the past three years in the wealth management space for instance. Back in 2018, at the time we outlined our strategy regarding ESG investment solutions, ESG was far from being a must; we are now heading to a fully ESG-compliant offer by 2023."
>
> **Arnaud Jacquemin,** *CEO, Société Générale Luxembourg*

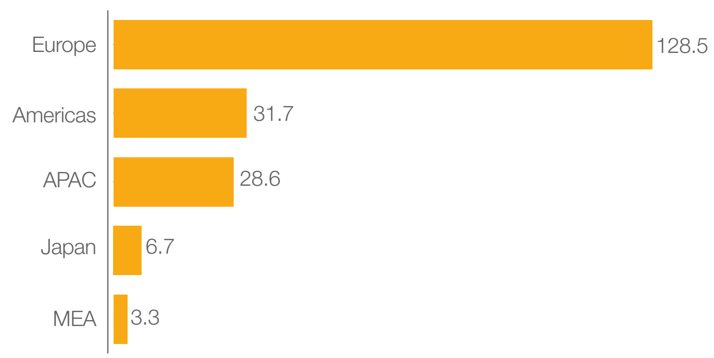
28. Deutsche Bank ("We're here to help position Deutsche Bank as an expert on ESG", 2020)
29. Nordea Asset Management (*Responsible Investment Policy*, 2021)
30. BGL BNP Paribas ("Overview of Financial Products and Inherent Risks", 2021)
31. Banque du Luxembourg ("How do we incorporate ESG factors into our portfolios?", 2021)
32. ABBL (*Luxembourg Private Banking Survey*, 2020)
33. SBA (*Guideline for the integration of ESG considerations into the advisory process for private clients*, 2020)

Sustainable Loans

With sustainability considerations becoming largely embedded within credit risk analysis, banks are increasingly issuing green loans not only to reduce related risks but also to make their portfolios greener. A typical example of this would be the Green Loan Principles introduced by the Loan Market Association[34] which requires green loans to be used solely to finance projects that meet internationally accepted standards as green.

With its regulatory framework driving the banking industry towards ESG, the EU appears to be leading the way in this new way of funding. Seven of the top ten sustainable loan deals take place in European nations, and with a total value of USD128.5bn, the region accounts for approximately 65% of all the sustainable loans issued in 2020 – four times the amount issued in America (c.f. Exhibit 19).

Exhibit 19: Sustainable Loans by Region (USD bn)



Source: : PwC Market Research Centre, Thomson Reuters Refinitiv (Data for 2020)

In Luxembourg, this new way of lending has already taken off, with local banks providing green loans to both corporate and retail borrowers. Banks like BGL BNP Paribas Luxembourg are offering eco-friendly loans[35] to local companies engaged in projects related to energy transition or climate change. The Grand Duchy further promotes these funding solutions by offering subsidies and tax reductions to corporates and SMEs taking steps to improve their energy efficiency or invest in green projects[36]. Green loans are also used by banks as a way of promoting sustainable building projects in Luxembourg. ING Luxembourg with its "Eco Loans", for instance, provides loans at reduced interest rates to retail clients looking to invest in greener homes.

Another emerging trend, in line with Europe's low-carbon transition, is the prominence of electric cars. Between 2014 to 2020, the sales volume of these cars increased by 35% annually to reach 237,000 as of Q1-2020, indicating the rapid pace at which demand for such cars is increasing[37]. While there have been other contributory factors to this growth, banks have played a significant role in furthering it – from financing production plans and the construction of reloading facilities to providing credit solutions to retail clients looking to purchase them. Banque et Caisse d'Epargne de l'Etat in Luxembourg is one such bank, with credit solutions that allow buyers of the Ecoprêt electric car to benefit from lower interest rates than clients applying for loans to purchase fossil fuel cars.

With the influx of state incentives such as tax reductions, recourse to green credit solutions is expected to ramp up in Luxembourg. Moreover, as European corporates accelerate efforts to align their businesses with the Paris Agreement, the search for more sustainable funding options is expected to intensify. This provides an opportunity for banks in Luxembourg to play an active role both locally and internationally, using their green credit products as a key tool to push more corporates towards sustainability.

34. Loan Market Association (*Green Loan Principles Supporting environmentally sustainable economic activity*, 2018)
35. BGL BNP Paribas ("Green Financing: eco-friendly loans", 2021)
36. Myenergy Luxembourg ("Aides économies d'énergies pour les entreprises", 2021)
37. EV-Volumes Data Center

Green Savings Accounts

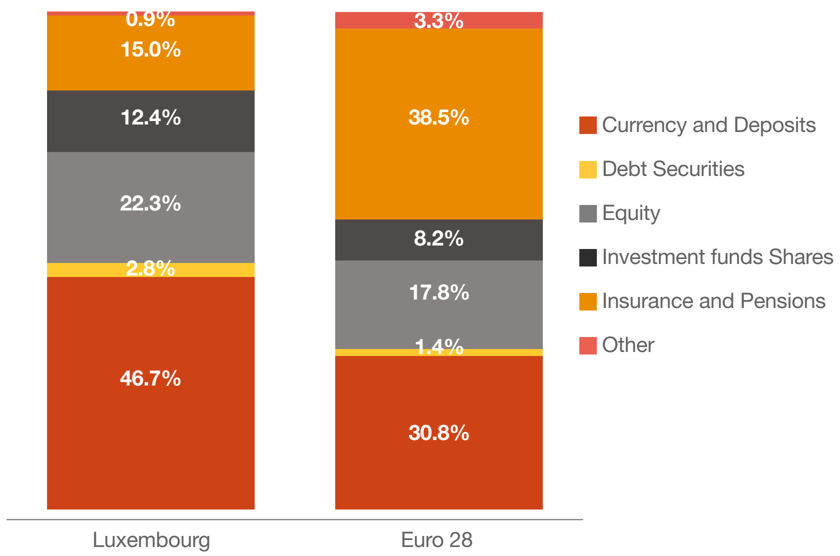
With approximately USD 63.1bn – representing 46.7% of households' financial wealth – held in deposits and currency (c.f. Exhibit 20)[38] Luxembourg has a fairly high savings rate compared to the European average of 30.8%. This access to capital gives banks an opportunity to redirect available capital flows into sustainable projects through green savings accounts.

Already, the Banque et Caisse d'Epargne de l'Etat has developed an Alternative Saving Account that allows account holders to contribute part of their savings returns towards sustainable and ethically sound projects. Since its rollout in 1997, the scheme has been met with considerable success as the banks currently boast 1130 client accounts in this category as of 2018 – representing EUR 55.7mn in deposits[39]. To ensure transparency, clients are provided with details of how the funds raised are used, which is also something that HSBC, which introduced Green Deposits in 2021 in the UK, has started off.

As demand for similar products surges among retail clients, other banks in Luxembourg have an opportunity to explore the potential within this segment.

> Some people want to make sure their deposits go towards funding green investments. So, in the UK for example, we created a pool of 'green deposits' with the guarantee that they will only be used to fund green projects. We are looking to bring something similar to Europe.
>
> **Niccolo Polli,** *CEO, HSBC Luxembourg*

Exhibit 20: Household Financial Wealth



Source: Eurostat (Household Financial Wealth Quarterly Data, Q4 2020)

Sustainable Payment Cards

While overall, non-cash payments rose by 8.1% in 2019, ranking up a total value of EUR 162.1bn, card payments remain the most used means for these transactions as they are used 48% of the time. In the same period, the Euro area saw 572 million payment cards, representing a ratio of 1.7 payment cards per inhabitant[40].

Given its widespread use in Europe, transforming this payments market could turn out to be difficult. That being said, some banks are already trying to make this traditional means of payment greener. Santander Bank, for instance, is working towards issuing debit, credit and prepaid cards made only of sustainable materials by 2025. By doing this, the Spanish bank expects to save 1,000 tonnes of CO2 every year and reduce the use of plastic by 60 tonnes[41]. Other banks, like the Bank of America, have committed to making donations of certain amounts to charities chosen by clients when purchases are made by payment card[42].

Credit Guarantees

Credit guarantees represent a way to share default risk with investors who commit to large-scale projects. The state of Luxembourg provides these credit guarantees in order to support banks' lending efforts. Eligible projects are many, but to limit the impact of the pandemic on the local economy, the state has increased access to this option by guaranteeing new loans offered by banks to companies[43]. Should the state choose to develop this method, credit guarantees could be allocated to sustainable projects and new loans issued by banks could then be pointed in this direction. Banque International à Luxembourg (BIL) for example, cooperates with the European Investment Fund – within the framework of the InnovFin agreement – to provide credit guarantees for innovative Luxembourg SMEs[44]. This would ensure that the bank benefits from European credit guarantees covering potential loss in case of default.

> Luxembourg has a huge unique selling proposition. Apart from the tax stability, cross-border expertise and other competencies, ESG could represent one the pillars of the future of Luxembourg's strategic positioning in the financial services sector. This is something we (all financial actors) should definitely push for.
>
> **Michael Savenay,** *CEO, Quintet Luxembourg*

38. Eurostat (Household Financial Wealth Quarterly Data, Q4 2020)
39. BCEE (Corporate Social Responsibility Report, 2018)
40. ECB ("Payment Statistics: 2019", 2020)
41. Santander Press Release, March 2021
42. Bank of America, Defender of Wildlife Customized Cash Rewards Credit Card
43. Le Gouvernement du Grand-Duché de Luxembourg, State Guarantee Scheme, March 2020
44. BIL (*Plan d'Investissement pour l'Europe*, April 2019)

5.2 Luxembourg banks can grasp the benefits of the ESG AWM Revolution

Banks should also capitalise on the ESG paradigm shift that is taking place in the capital markets and asset management landscape, monitoring investor trends and public sector incentives to identify the products that are performing best and hold the most promise. As part of this broader financial ecosystem, banks must move in unison with other players, finding the right products and services that will permit the industry to move towards a more sustainable future. At the same time, they need to ensure that client engagement on ESG matters is on an ongoing basis. This would enable them to recognise shifts in clients' ESG preferences over time, and thus allow them to respond with the right products and services.

Green Bonds

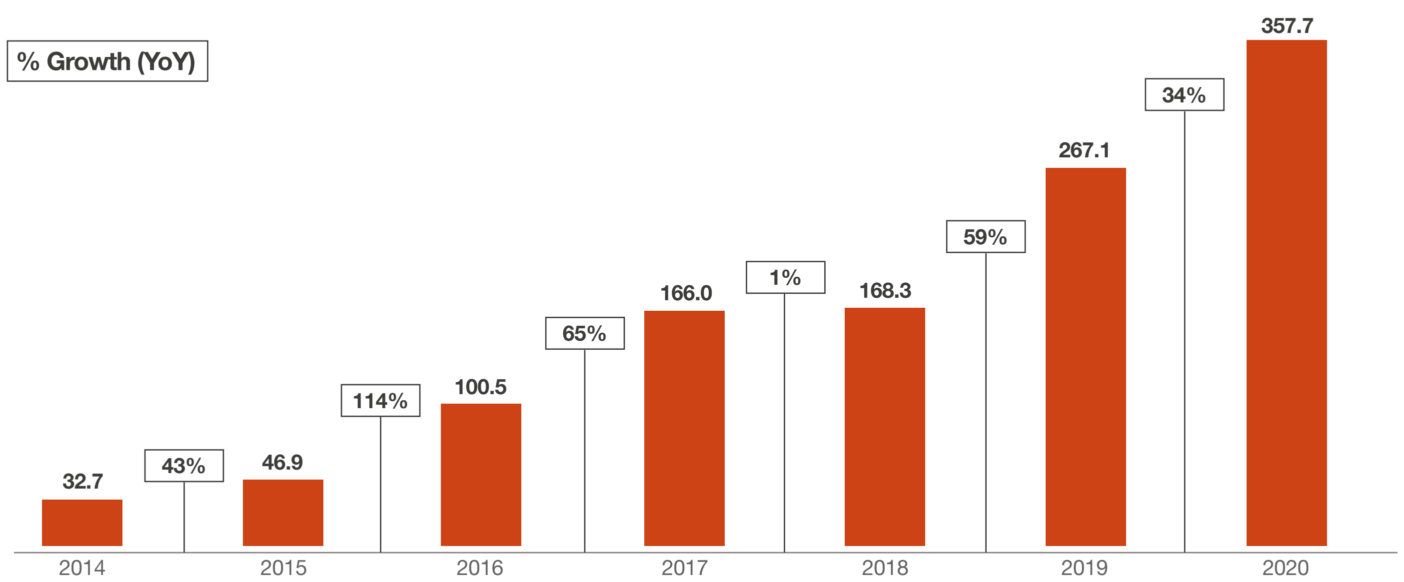
As the push for companies to be more sustainable continues to galvanise the search for alternative financing sources, green bonds present a veritable option for firms, with advantages both for meeting investor ESG specifications and lowering investor risk. Following an initial period of being considered solely by development banks, the market for green bonds has rapidly expanded in recent times across the debt market, attracting corporate and sovereign issuers, as well as private debt issuers from developed and emerging markets[45]. On the tailwind of two impressive years of growth, global green bond issuance stands at USD 357.7bn as of end-2020 (Exhibit 21).

Europe's green bond market remains a major contributor to this massive proliferation, accounting for 48%[46] of total green bond volume globally. This comes as no surprise, given the key role green bond financing plays in Europe's low-carbon transition plan. With the launch of the first Climate Awareness Bond by the European Investment Bank in 2007[47] as well as an influx of initiatives such as the EU Sustainable finance Plan and the EU Taxonomy, the EU hopes to consolidate its position as a global sustainable finance leader and fully limit the impact of brown sectors on its economy.

In the coming years, growth in the European green bond market is expected to continue as investor demand ramps up, plans for more harmonised labelling systems kick off, and sustainability becomes mainstream within financial market instruments – a shift that is further highlighted by proposed plans for an EU Green Bond Standard. Even though a significant amount of evidence shows that green bonds are outperformed by traditional bonds in terms of yields, demand is also likely to be bolstered by the lower risk that green bonds present over their traditional counterparts. This represents a significant opportunity for banks to create access to financing via capital markets for sustainable energy infrastructure, green transport projects, large-scale green commercial developments.

Luxembourg – in particular – is already well-positioned on this market, with a PwC Report describing its stock exchange as a prime location for listing green bonds[48]. This is highlighted by the fact that almost 50% of worldwide sustainable bonds are listed on the Luxembourg Green Exchange (LGX). For instance, Germany-headquartered KfW bank – with its focus on renewable energy and green buildings – has 16 listed green bonds on the LGX. Other foreign banks such as the Bank of China, HSBC, and BNP Paribas; which ranks as the world's leading issuer of green bonds as of 2018, have also made substantial inroads within the European green bond market via the LGX. This attests to the country's structural robustness and adaptability regarding sustainable financing options.

Exhibit 21: Global Green Bond Issuance 2014-2020 (USD bn)



Source: PwC Market Research Centre, Thomson Reuters Refinitiv

Apart from its role in enhancing the growth of the green bond market, Luxembourg has also been instrumental in the issuance of the EU's first social bond, another debt instrument focused on delivering positive outcomes to specific demographics. Leveraged massively by governments during the pandemic as a tool for economic recovery, social bonds under the EU SURE Programme aimed to raise about EUR 100bn from capital markets across the EU[49]. Of this figure, EUR 17bn was raised from social bonds listed on the LuxSE alone as of October 2020. This is not only a significant indicator of the potential of this asset class in improving social and economic outcomes but also the viability of the Luxembourg financial centre in furthering its growth and expansion.

Given the discourse surrounding the launch of various green and social bonds as part of the EU Recovery Plan, it is clear that Luxembourg – with its advanced and exemplary sustainable finance framework – is well placed to support the increasing demand for both green and social bonds, especially if the current pace of bond issuances continues. As both European regulatory structures and local policies act as tailwinds for a more sustainable financial sector, it is imperative for local banks who have not yet adapted to this green-oriented business environment to do so to be able to seize and benefit from all the opportunities offered by the green transition.

Sustainable funds

Europe is diverting more money into sustainable fund products than any other region in the world. Already in the first quarter of 2021, Europe captured 79% of global sustainable fund flows and 82% of assets[50]. The convergence between ESG and non-ESG products is materialising in the European fund industry at a rapidly increasing pace – for the second quarter in the past year, sustainable funds have attracted more net inflows than traditional funds and the best-selling funds have been those with an environmental or climate theme. Product development shows no signs of slowing down with 2020 setting a record for 532 new sustainable offerings in Europe and the first quarter of 2021 starting strong with 111 new fund launches.

A PwC analysis into the responsible and sustainable fund offerings of European banks, reveals that approximately 23% originate from banks headquartered in Luxembourg (in a sample of 31 products). A standout has been the Banque et Caisse d'Epargne de l'Etat with its "Forestry and Climate Change Fund" and "Luxembourg Microfinance and Development Fund", but more recently, Banque et Caisse d'Epargne de l'Etat has launched a taxonomy-aligned fund "Lux-Equity Green", already recording EUR 29.2 million in net assets in its first year[51]. Luxembourg's private banking sector has also rallied around ESG investing, with Banque de Luxembourg (BDL), Banque Internationale à Luxembourg (BIL), Banque Raiffeisen and Quintet Private Bank, all adopting at least one ESG strategy (exclusionary screening, positive screening, ESG integration, impact investing or active ownership). With 21.2% of global ESG AuM already domiciled in Luxembourg as of end-2019 (roughly the same amount as in North America 20.9%), private banks have the opportunity to give their high-net-worth clients – who are eager to reallocate their portfolio towards ESG investments – access to a wide range of sustainable fund offerings, and in parallel, build a dedicated advisory team that will guide them towards products that best fit their needs.

> "For private banking clients seeking 'green' products, we can offer a range of traditional funds, but also dedicated PE funds and even special situations for those seeking more direct exposure. Where we are heading is to be able to determine the impact any given client wants to make (using for example, the UN's 17 SDG goals) and evaluate their portfolio against this and propose ways to improve the impact maintaining a similar risk-reward profile. But we are not at this level of granularity yet."
>
> **Niccolo Polli,** *CEO, HSBC Luxembourg*

45. European Commission (*TEG Report on EU Green Bond Standard*, 2019)
46. CBI (*Sustainable Debt Global State of the Market*, 2020)
47. EIB Climate Strategy, 2020
48. PwC (*The Luxembourg Stock Exchange: A prime location for listing*, 2014)
49. European Commission, ("EUR 17 billion EU SURE social bond listed on LuxSE", 2020)
50. Morningstar (*Global Sustainable Fund Flows: Q1 2021 in Review*, April 2021)
51. Spuerkeess (*Sustainability Report*, 2020)

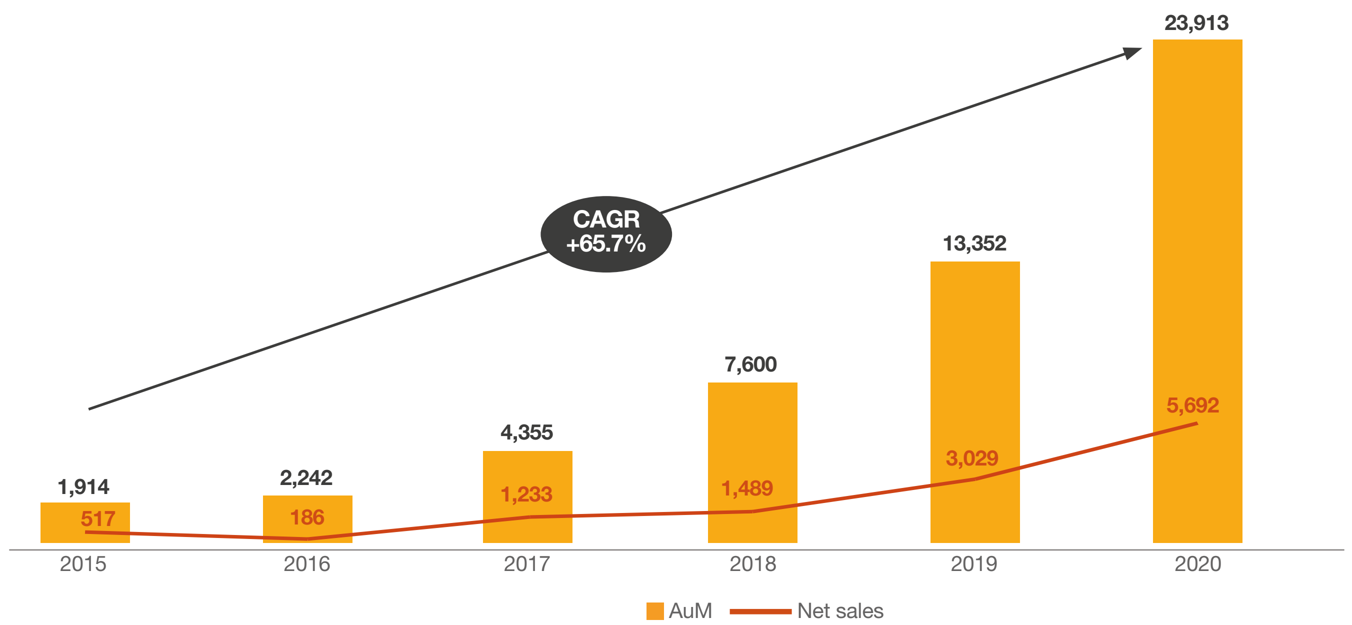
Considering the recent surge in demand for exchange-traded funds (index funds and ETFs accounted for 30% of European sustainable fund flows in Q1 2021), Luxembourg banks also have the opportunity to capitalise on the sustainable passive asset boom (illustrated by a CAGR of 65.7% for the period of 2015 to 2020). In just the last year, Luxembourg-domiciled ESG ETF sales and AuM increased by 88% and 79%, respectively, on COVID-19 tailwinds (c.f. Exhibit 22). More than any other asset manager, Lyxor – a Luxembourg pioneer of the ETF market – launched 18 sustainable ETFs in Europe in 2020 alone[52]. Indeed, with this wide supply of ETFs, Luxembourg banks are again well-positioned to meet the increased demand from investors to adopt more ESG ETFs into their portfolios. In fact, Brown Brothers Harriman's 2021 Global ETF Survey lends evidence to this as 44% of European investors are prepared to allocate 6-10% of their portfolio towards ESG ETFs in the next five years and 23% are even ready to commit 11-20%. At the same time, Lyxor's new range of climate-related ETFs, which track the MSCI's Climate Change Indices, allows banks to align their offering with the Paris Agreement climate targets, thus satisfying both investor demand and internal objectives to greenify their portfolios. Already, we are seeing banks, such as BNP Paribas and UBS, adding ESG ETFs into their product range and Luxembourg banks should quickly follow suit.

With sustainability penetrating every facet of the Europe's bond and equity markets, the alternative assets market has not been left behind. Luxembourg is already positioned as the jurisdiction of choice for alternative asset managers, having the right ecosystem and expertise to service their needs, and as these managers increasingly inch towards sustainability, we can expect to see demand for more ESG-related products and services from the corporate banks that they work with.

Servicing ESG needs

As emphasised by some of our interviewees, Luxembourg banks serve the financial center as a whole, and not only local markets like banks in other countries, but also the global asset management industry and international corporations. Though this constitutes one of Luxembourg's major strengths, the sheer magnitude of interlinkages to be assessed represents an additional challenge. That being said, there is a considerable opportunity to develop the right products that will gain international recognition from financial markets. Therefore, Luxembourg banks must act now to upgrade their asset servicing offer.

Exhibit 22: Luxembourg-domiciled ESG ETFs (USD mn)



Source: PwC Market Research Centre, Lipper

52. Financial Times ("European asset managers ramp up provision of sustainable ETFs", 2021)

For banks that act as asset service providers, they have a unique opportunity to serve the emerging ESG data collection, benchmarking and reporting needs of their clients in the asset management industry. Indeed, there is a growing demand from asset managers to obtain verifiable and quantitative data from the companies in their portfolio as they look to push ESG into their investment and risk management processes. However, as these tasks are resource-intensive, banks that are lacking ESG expertise and data capabilities to deliver on this new line of services must look for strategic partnerships.

A first option would be for banks to partner with data science and tech companies, as BNP Paribas Security Services did with Clarity AI, using the vast universe of sustainability data in its existing platform "Manaos", to provide insights to their clients on the ESG impact of their investments. A second option lies with ESG rating agencies, which is what the Apex Group did with RepRisk, using their qualitative research and proprietary metrics on more than 150,000 public and private companies to develop its own platform, as part of their ESG Ratings and Advisory service, to provide a single source ESG solution to their clients. Similarly, Pictet Asset Services has assembled the expertise of three rating providers – Sustainalytics, Institutional Shareholder Services (ISS) and Trucost – for their clients to integrate ESG criteria into their investments.

However, for asset managers to not partner directly with these data providers, banks will have to leverage their client base and create a suite of ESG services that are tailored to their needs. Indeed, it will be an arms race between asset service providers to develop convenient, user-friendly and value adding ESG services that satisfy client demand and align with upcoming regulatory requirements. They have an essential role to play in the ecosystem – aggregating and analysing data for asset managers to then integrate into their investment decision-making, utilise in their sustainability disclosures and support their proxy voting process.

The top asset service providers in Luxembourg (c.f. Exhibit 23) are uniquely well-positioned to embrace this new role and reinvent their value propositions to thrive in this new ESG era. Leveraging their large client base and ample amounts of data, those that can make sustainability part of their custodian duties – conducting routine sustainability assessment of portfolios just as they do the day-to-day calculation of NAV – stand to benefit from potential market share gains and a strong foothold in this emerging market, whose growth will be driven by investor demand and regulatory requirements.

Facing a low-interest-rate environment and increasing regulatory pressure, sustainable products are an opportunity for banks to seek organic growth, converting demand into a new source of profits. However, developing a sustainable product or service offering is not a one-size-fits-all approach. Choosing the right products and services will naturally derive from the bank's ESG strategy, which has to be aligned with the bank's client needs, cost structure and organisational capabilities amongst other factors, and the sooner the bank implements this top to bottom transformation, the better it will perform in this new era of banking.

Exhibit 23: Ranking of Asset Service Providers in Luxembourg (USD bn)

Top Asset Service Providers	Assets under Administration	Assets under Custody
State Street Bank International GmbH, Luxembourg Branch	844.4	1,177.4
J.P. Morgan Bank Luxembourg S.A.	828.8	1,152.3
The Bank of New York Mellon SA/NV, Luxembourg Branch	422.3	373.8
CACEIS Bank, Luxembourg Branch	374.4	430.4
Brown Brothers Harriman (Luxembourg) S.C.A.	298.5	477.0
BNP Paribas Securities Services-Luxembourg Branch	290.4	426.0
RBC Investor Services Bank S.A.	216.7	234.4

Source: PwC Market Research Centre based on Fundsquare data (March 2021)

Luxembourg has facilitated the transition towards sustainable finance

Luxembourg stands out from other European countries as a country that has created a very conducive environment for financial players, including banks, to take advantage of opportunities in sustainable finance (c.f. Exhibit 25). The objective of the government to help actors in Luxembourg be as efficient as possible and complementary to each other was emphasised by one of our interviewees, from the Ministry of the Environment, Climate and Sustainable Development.

> Luxembourg's strength lies in the ability of its government to act **jointly,** converging environmental and financial goals redirect funds in a way that complies with ESG initiatives occurring at both national and European levels.
>
> **André Weidenhaupt,** *Director, Luxembourg Ministry of the Environment, Climate and Sustainable Development*

Exhibit 25: Luxembourg - a succession of sustainable finance initiatives

- **2006** – Launch of **LuxFlag,** an association which supports sustainable finance.
- **2007** – Issuance of the **world's first green bond** in the Luxembourg Stock Exchange.
- **2008** – Creation of the **European Microfinance Platform** headquarter in Luxembourg.
- **2011** – LuxFlag developed its first **green label.**
- **2015** – Local government launched the **Climate Finance Task Force (CFTF)** to cooperate with the private sector in greening the economy.
- **2016** – Development of the **Luxembourg-EIB Climate Finance Platform** which aims to finance sustainable projects.
- **2016** – **Luxembourg Green Exchange** is the world's first platform dedicated only to green financial assets.
- **2018** – The government adopted the **Sustainable Finance Roadmap** in order to integrate green finance into its financial centres.
- **2018** – Agreement between the government and local universities to develop **green finance educational programs.**
- **2019** – The Association des Banques et Banquiers de Luxembourg **(ABBL) adopted UNEP FI Principles** about responsible banking.
- **2020** – Luxembourg issued the first **sovereign sustainability bond** in Europe.
- **2020** – The Grand Duchy became the first state in Europe to have launched **a framework for sustainability bonds.**
- **2021** – **Reduction of the "Taxe d'Abonnement"** for investment funds which invest in sustainable activities.

Source: PwC Market Research Centre

> The role of Authorities and regulators is essential to drive this dynamic of change. A clear set of rules, a common and comprehensive taxonomy are definitively key to support stakeholders in this transformation - so are carefully designed incentives or disincentives. For instance, raising the Luxembourg tax credit level for investments in green assets and reducing in parallel tax credit level for other investments would be a way to concretely favor sustainable investments by the private sector in Luxembourg
>
> **Arnaud Jacquemin,** *CEO, Société Générale Luxembourg*

The Luxembourg government has demonstrated a strong commitment to spearheading the sustainable finance agenda through the public sector, already delivering on some of the priorities set out in the Sustainable Finance Roadmap initiated in 2018. To promote the development of expertise, the Luxembourg government has partnered with the University of Luxembourg to launch a sustainable finance-focused master's programme and enhance in-house research capabilities. The government has also started employing fiscal incentives, reducing the subscription tax for sustainable funds in proportion to the ESG assets investment funds manage. Still recognising the importance of public financing, it adopted a framework for sustainable bonds and issued the first sovereign sustainability bond in Europe complying with that framework.

Luxembourg's flourishing sustainable finance landscape has also been the result of public-private initiatives, such as the Luxembourg Finance Labelling Agency (LuxFLAG), the International Climate Finance Accelerator (ICFA) and the Luxembourg-European Investment Bank Climate Finance Platform, all of which have contributed to embedding sustainability into the country's core financial system. Public sector mobilisation has been equally as important, with the Luxembourg Green Exchange (LGX) strengthening the country's position as the preferred domicile for the listing of ESG bonds and other instruments.

Banks stand to benefit not only from further regulatory, legislative, and fiscal incentives but also stronger industry participation. Actors, such as the Luxembourg Sustainable Finance Initiative (LSFI) or the Association des Banques et Banquiers de Luxembourg (ABBL), could spearhead the integration of sustainable finance into education and professional training, the compilation of industry standards and best practices, regulation monitoring, and implementation guidance[53].

Overall, Luxembourg's ability to emerge as an ESG leader depends on its capacity to scale up products and services globally. There are big opportunities for Luxembourg to grasp, but these require even bigger investments. Key factors of success include:

- **A general strategy**
  The Sustainable Finance Roadmap is being institutionalised within the Luxembourg Sustainable Finance Initiative. This provides the right entrance to direct ESG newcomers towards the dense network of actors that is growing in Luxembourg.
- **Visibility**
  Luxembourg will need to acquire more visibility, and this requires all actors (banks, asset managers, asset servicers, audit companies, insurance companies, universities, etc.) to come together to showcase what the country has to offer.
- **Education**
  Luxembourg needs the right resources to meet the rising demand and become a player on the global stage. Sustainable finance is a burgeoning area in academia but, in the long term, Luxembourg needs to continue moving up the investment value chain and this will require an innovation and investment push.

53. Luxembourg Sustainable Finance Initiative (*Luxembourg Sustainable Finance Strategy*, 2021)

6

Conclusion

The banking sector has already adapted to major disruptions; from the rise of fintech and the emergence of digital currencies to the blurred lines between banking and non-banking products, extensive digital transformation of banking operations, and the increasing degree of regulatory supervision. The ESG wave that has finally washed up on the shores of the banking sector is no different, and its impacts are likely to raise compliance costs for banks.

As a way to address this, banks would have to enhance collaboration with policymakers who can provide guidance on the implementation of new regulations, ensuring that any potential inconsistencies or conflicts with existing regulations are fully resolved. Further, they should consider ways in which EU-specific regulations can be aligned, to the extent possible, with non-EU regulations. This alignment would ensure the applicability of ESG standards and the collection of relevant ESG data across both EU and non-EU borders. At the same time, banks must extensively analyse the demand for sustainable finance products and services– a process that hinges largely on choosing and implementing the right strategy.

For this strategy to be successful, banks need to move away from simply partaking in social impact initiatives to demonstrating the full extent of their commitment to the cause of sustainability. They would have to determine a sustainability strategy that takes into account their unique circumstances and aligns perfectly with their long-term vision. They would then have to be entirely transparent to all relevant stakeholders about their progress from top-to-bottom and across the board. Continuously upgrading their personnel will also better prepare banks to face the challenges associated with business transformations. Banks must also adopt industry-specific key performance indicators that align with widely accepted ESG reporting and disclosure standards.

Another core aspect of banks' sustainability journey has to do with their risk management approach. The materiality of ESG risks has revolutionised banks' daily operations and overlooking them has been shown to hold dire consequences for business performance. This makes it imperative to incorporate ESG risks within their investment portfolio management and their organisational structures. Achieving this requires banks to find ways to overcome the data challenge either through partnerships with external actors or the development of their own tools. Regardless of the approach chosen, proper ESG risk integration holds significant benefits for banks that not only far outweigh the costs of implementation but would ensure long-term efficiency and viability.

Finally, the value creation resulting from banks' sustainability transformation requires a rethink of their value proposition. They will have to step up engagement efforts with their clients and also take their expectations into account. In this context, banks are looking at repurposing existing products or expanding their product offering to include more sustainable finance products that serve the financing and investment needs of their client that are expected to soar in the coming years. They can also leverage opportunities within the already vibrant AWM ESG market to identify product trends and fill existing demand gaps through various product and service innovations.

For banks in Luxembourg, the necessity for total sustainability transformation is exacerbated by the strategic role it plays within the global financial services industry – highlighting the need to push for the promotion of Luxembourg as a sustainable hub in banking. The ESG revolution is set to be the new normal, and banks that are already taking active steps to harmonise their businesses accordingly not only stand to favourably position themselves for long-term viability in the coming months but also to trigger immense knock-on value-creation benefits for their stakeholders and society as a whole.

7

Overview of the Luxembourg banking sector's evolution

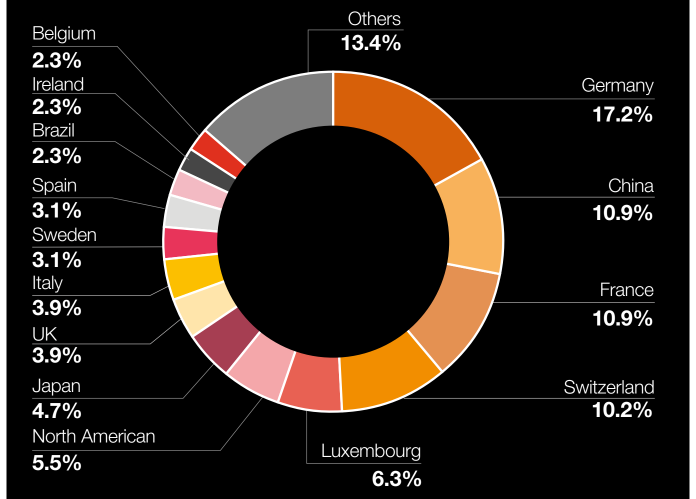
Key takeaways – Overview of the Luxembourg banking sector's evolution[1]

- With 128 authorised banks at the end of the financial year 2020, the number of banks rose by one.
- Regarding the legal status, 85 banks are under Luxembourg law, 30 are branches of banks from EU Member States or a country considered on equal terms and 13 are branches of banks from non-EU Member States.
- In terms of geographical representation in the Luxembourg financial centre, German banks still make up the largest group at 17.2%, followed by Chinese banks and French banks, both with 10.9% and Swiss banks with 10.2%.
- The following banks have started operations during 2020:
  - Skandinaviska Enskilda Banken AB Luxembourg Branch
  - CaixaBank Wealth Management Luxembourg S.A.
  - CIBC Capital Markets (Europe) SA
  - Alpha Bank A.E., Luxembourg Branch
  - Elavon Financial Services DAC Luxembourg Branch
  - Goldman Sachs Bank Europe SE, Luxembourg Branch
- The following banks were deregistered in 2020:
  - Skandinaviska Enskilda Banken S.A.
  - DekaBank Deutsche Girozentrale Luxembourg S.A.
  - Caixa Geral de Depósitos S.A., Lisboa (Portugal), succursale de Luxembourg
  - Postbank Luxemburg – eine Niederlassung der DB Privat –und Firmenkundenbank AG
  - Bausparkasse Schwäbisch Hall A.G., Schwäbisch Hall (Allemagne), succursale de Luxembourg

Number of banks

Number of banks	2020	2019
Subsidiaries	85	85
Branches	43	42
Total	128	127

Countries of origin of banks established in Luxembourg



* Classification as per CSSF

Headcount

2020
26,106

2019
26,337

- In 2020, the headcount in the banking sector decreased by 231 staff compared to the prior year.
- Employment increased for 48.1% of banks, whereas it decreased for 39.8% of them.
- The gender diversity remains almost unchanged with 44.7% women and 55.3% men.

Balance sheet total (in EUR million)

2020
863,368

2019
821,723

- In 2020, the balance sheet total increased by EUR 41.6 billion (+5.1%), confirming an upward trend observed since 2017. The COVID-19 pandemic caused an increase of the aggregated balance sheet since investment funds reallocated the funds' assets in more safe reinvestments. 56% of banks saw a growth of their balance sheet, notably the largest banks of the financial centre as well as the banks active in asset management on behalf of private and institutional customers.
- On the asset side, the growth was principally driven by the increase in loans and advances to central banks and central governments (+43.5%), offset by a decrease in loans and advances to credit institutions (-5.1%) and loans and advances to customers (-2.5%). The increase in loans and advances to central banks and central governments can be explained by the drop in intra-group transactions of some major players which now invest part of their banking group's liquidity in the Eurosystem via their Luxembourg entities.
- On the liabilities side, the banking sector was characterised by an increase in both the amounts owed to credit institutions, which saw an increase of 2.3 billion (+0.9%), and the amounts owed to customers with an increase of EUR 42.3 billion (+10.2%).

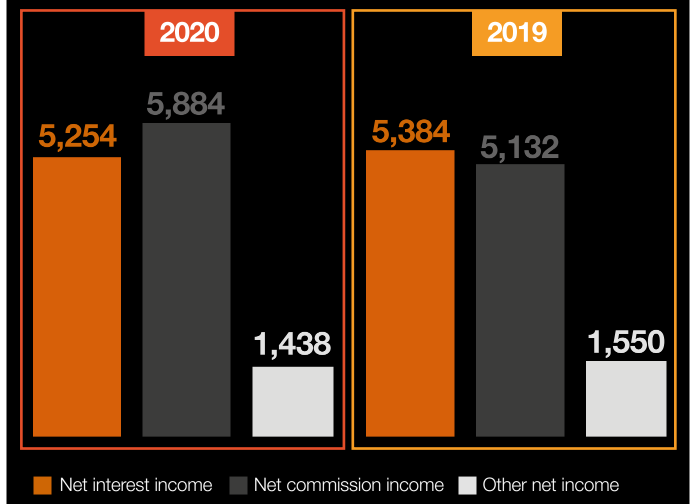
- Net profits decreased by EUR 671 million (-18.2%), with 76% of banks having positive results in 2020, slightly down from 80% in prior year.
- General expenses continued their upward trend with an increase of 7.8%. This growth in general expenses, which concerns both general administrative expenses (+9.7%) and staff costs (+5.6%), was registered by the majority of players.
- Net provisions increased by 136.3%, mainly related to credit risk in the context of the COVID-19 pandemic and largely affected universal banks and banks specialised in corporate financing.

Annual net profit or loss (in EUR million)

2020
3,031

2019
3,702

Banking income (in EUR million)



- In 2020, the net interest income decreased by 2.4%, mainly due to the decline of interbank lending margins.
- Net commission income grew by 14.6%; the rise being shared by 65% of banks. This was linked to the high volatility in the markets in 2020 leading to a risk in the commission on custody of assets and on security transactions of customers.
- Other net income decreased by 7.2% due to strong volatility as well and dominated by non-recurring results for a limited number of banks as well as a decline in dividend income in 2020.

1. Source: CSSF Annual Report 2020

Solvency ratio

2020	24.6%
2019	22.7%

- The solvency ratio increased to 24.6%, driven by rise in own funds in the form of retained earnings in the context of regulatory restrictions to distribute dividends implemented during the pandemic.
- Moreover, the Luxembourg banks continue to have a high capitalisation rate, well above the 8.0% required by Basel IV (9.93% including capital buffer).

Return on assets

2020	2019
0.35%	0.45%

Return on equity

2020	2019
5.00%	6.18%

- Both ratios decreased slightly, as the annual net profits decreased, whereas total assets grew by 5.1%, as a result of the increase of the loans and advances to central banks and central governments. Own funds grew by 10.6%, driven by increased retained earnings, as well as capital increases at some banks.

Cost-income ratio

- Despite the increase in banking income (+4.2%), the cost-income ratio increased due to the growth of net provisions (+136.3%) and the general expenses (+7.8%).
- During the year, the majority of banks saw their cost-income ratios increase, mainly driven by costs linked to the business growth, but also due to transformation projects

$$\text{CIR} = \frac{\text{staff costs+administrative costs (incl.depreciation)}}{\text{net interest and commission income +net result on financial operations+other operating result+risk provisioning}}$$

North American/ UK segment | Chinese segment | French segment | Swiss segment | German segment | Luxembourgish segment

8

Overview of developments in each segment

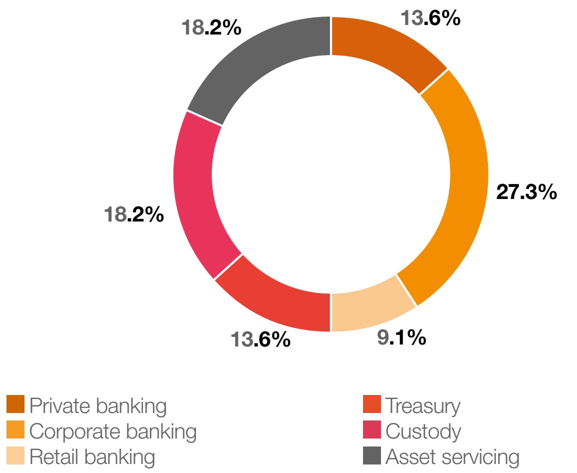
Key takeaways – North American/UK segment

- Three new banks entered into the Luxembourg market during 2020: CIBC Capital Markets (Europe) S.A. which obtained the banking license on the 18th of May 2020, as well as two branches; Elavon Financial Services DAC, Luxembourg Branch and Goldman Sachs Bank Europe SE, Luxembourg Branch. In addition, HSBC France, Luxembourg Branch changed its name to HSBC Continental Europe, Luxembourg.
- The aggregate balance sheet of the UK/North American segment increased by EUR 27.7 billion (+30.9%). Similar to the prior year, this was mainly driven by J.P. Morgan Bank Luxembourg S.A. ("JPMBL") which increased its balance sheet by EUR 23.6 billion (+47.6%) supported by an increase in loans and advances to credit institutions by EUR 21.6 billion (+58.6%). The reason behind the bank's balance sheet growth is the higher demand from banking clients in wholesale payments, securities services and commercial banking. Whereas JPMBL represents 85.1% of the segment's aggregate balance sheet growth, there were also notable movements at PayPal (Europe) S.à r.l. et Cie, S.C.A. (EUR +2.9 billion; +39.4%) and Northern Trust Global Services SE (EUR +1.6 billion; +30.9%) which is partially offset by the decrease at HSBC Private Bank (Luxembourg) (EUR -1.8 billion; -26.0%).
- On the liabilities side, the segment was characterised by a further shift from amounts owed to credit institutions, which saw a decrease of 0.6 billion (-8.6%), towards amounts owed to customers with an increase of EUR 23.7 billion (+33.3%). Again, the key driver was JPMBL, increasing its amounts owed to customers by EUR 19.7 billion (+45.8%), primarily due to higher client deposits following the transfer of activities from UK to Luxembourg and the organic growth in the private banking business.
- The UK/North American segment is characterized mainly by asset servicing activities, thus net commission income is a key driver, showing a 3.5% increase compared to prior year. The net commission income for the segment mainly stems from J.P. Morgan that saw an increase of 6.3%.
- Overall, eight out of nine banks were profitable this year, with JPMBL contributing the most with EUR 224.9 million, followed by PayPal (Europe) S.à r.l. et Cie, S.C.A. with EUR 98.6 million.
- The segment's headcount has slightly increased by 61 FTE (+1.6%), driven by JPMBL (+190 FTE) and Northern Trust Global Services SE (+40 FTE), primarily offset by RBC Investor Services Bank S.A. (-162 FTE). Nonetheless, the staff costs of the segment decreased by EUR 46.6 million (-7.7%), mainly due to costs for restructuring programs approved in 2019 making the business more competitive.

Number of banks

Number of banks	2020	2019
Subsidiaries	9	8
Branches	9	7
Total	18	15

Business areas



Annual net profit or loss (in EUR million)

2020	2019
552	602

Headcount

2020	2019
3,861	3,800

Cost-income ratio

Balance sheet total (in EUR million)

2020
117,306

2019
89,591

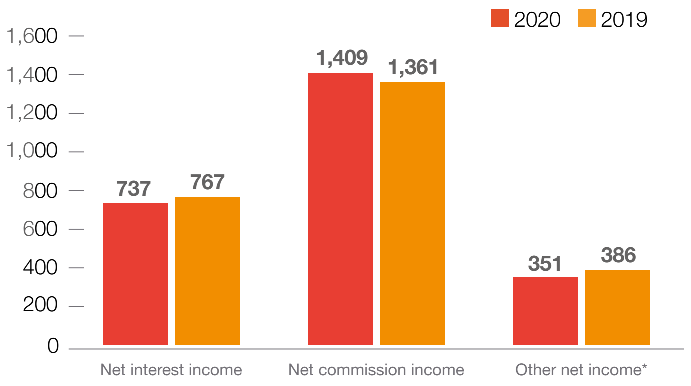
Return on equity

2020	2019
6.14%	7.70%

Return on assets

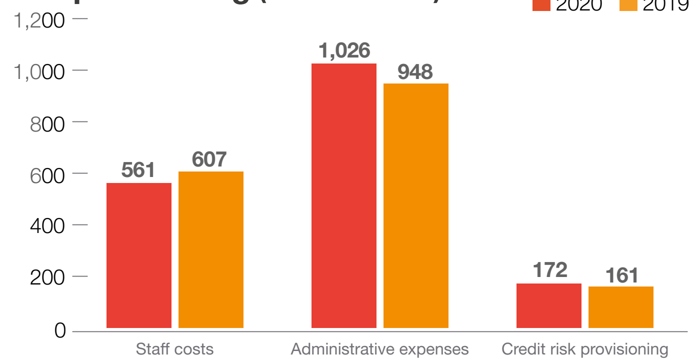
2020	2019
0.47%	0.67%

Banking income (in EUR million)

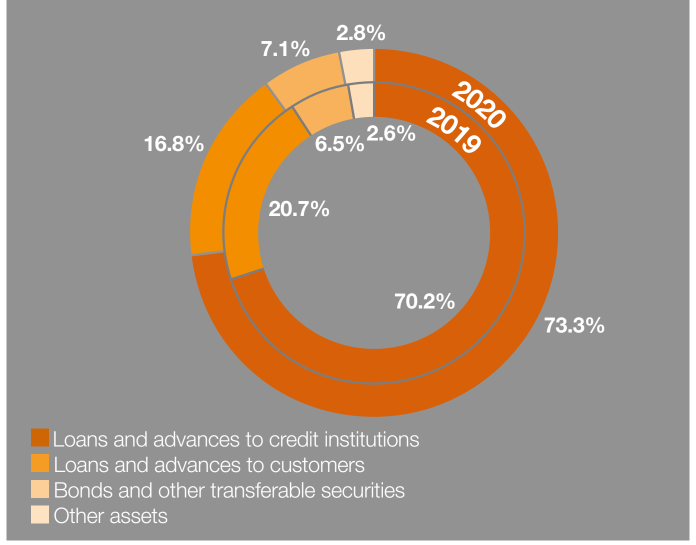


*Other net income includes: net profit/loss on financial operations (including gains/losses on derivatives & revaluation gains/losses), other net operating income and dividend income

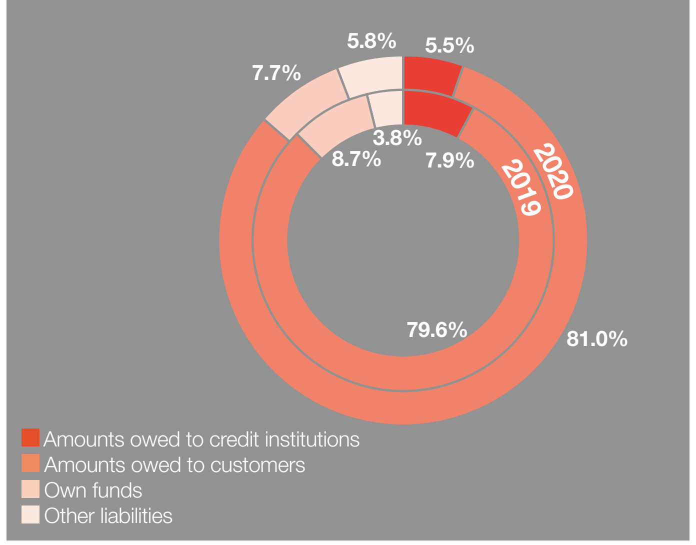
Staff costs, administrative expenses and credit risk provisioning (in EUR million)



Breakdown of assets



Breakdown of liabilities



Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	J.P. Morgan Bank Luxembourg S.A.	73,113	49,528	47.6%	=
2	RBC Investor Services Bank S.A.*	18,582	17,697	5.0%	=
3	PayPal (Europe) S.à r.l. et Cie, S.C.A.	10,382	7,447	39.4%	=
4	Northern Trust Global Services SE	6,859	5,240	30.9%	▲ +1
5	HSBC Private Bank (Luxembourg) S.A.	5,184	7,009	-26.0%	▼ -1
6	John Deere Bank S.A.*	2,575	2,558	0.7%	=
7	CIBC CAPITAL MARKETS (EUROPE) S.A.	507	-	-	NEW
8	Brown Brothers Harriman (Luxembourg) S.C.A.	90	99	-9.1%	▼ -1
9	RBS International Depositary Services S.A.	15	13	12.8%	▼ -1
	TOTAL	117,306	89,591	30.9%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	J.P. Morgan Bank Luxembourg S.A.	224.9	298.6	-24.7%	=
2	PayPal (Europe) S.à r.l. et Cie, S.C.A.	98.6	125.8	-21.6%	=
3	Northern Trust Global Services SE	85.4	60.3	41.6%	=
4	RBC Investor Services Bank S.A. *	53.2	38.8	37.1%	▲ +1
5	Brown Brothers Harriman (Luxembourg) S.C.A.	48.9	43.9	11.4%	▼ -1
6	John Deere Bank S.A. *	38.6	35.6	8.4%	=
7	HSBC Private Bank (Luxembourg) S.A.	2.9	-0.7	514.3%	▲ +2
8	RBS International Depositary Services S.A.	0.6	0.1	500.0%	▼ -1
9	CIBC CAPITAL MARKETS (EUROPE) S.A.**	-1.3	-	-	NEW
	TOTAL	551.8	602.4	-8.4%	

* Please note that the bank's Financial Statements closing date is 31 October 2020.
** Please note that the bank's Financial Statements refer to the period from 3 July 2019 (date of incorporation) to 31 October 2020.

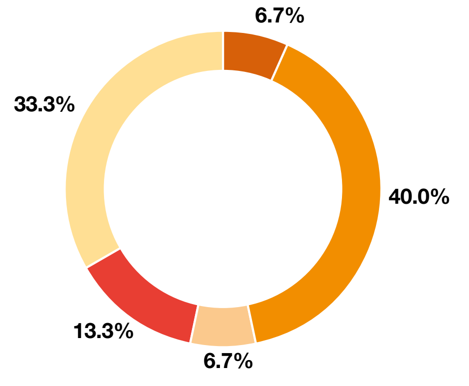
Key takeaways – Chinese segment

- The Chinese banks operate predominantly in corporate banking (trade finance, project finance, bilateral and syndicated loans). Consequently, the net interest result represents 68.3% of the net total banking income of the Chinese segment. Chinese banks in Luxembourg have a total of 19 branches in nine European countries, which is flat compared to the previous year.
- The aggregate balance sheet of the Chinese segment increased by EUR 1.0 billion (+7.3%), mainly due to an increase in loans and advances to credit institutions by EUR 1.1 billion (+28.5%). The increase in loans and advances to credit institutions mainly stems from Bank of China (Luxembourg) S.A. ("BoC") (EUR +0.6 billion, +26.0%) and Industrial and Commercial Bank of China (Europe) S.A. ("ICBC") (EUR +0.4 billion, +38.5%) due to an overall increase in the banks' loan business.
- On the liability side, following the same trend as last year, there was a further shift from amounts owed to credit institutions (EUR -1.2 billion, -24.0%) to amounts owed to customers (EUR +1.3 billion, +23.7%); as a consequence funding via customers became the main source of financing for Chinese banking groups. The key driver for this shift is ICBC, which reduced its amounts owed to credit institutions by EUR 0.9 billion (-42.1%) and increased the amounts owed to customers by EUR 1.0 billion (+36.5%).
- Both net commission and interest income decreased slightly by 2.0% (EUR +59.0 million) and 7.4% (EUR +134.4 million) respectively, with the drop being mostly linked to the decrease in the net interest and commission result of BoC (EUR -7.1 million, -8.3%). This result is partially offset by a notable decrease in overall credit risk provisioning by EUR -5.5 million (-14.0%), mainly due to fewer value adjustments in respect of loans and advances and provisions for contingent liabilities and commitments.
- On the human capital side, there was a notable increase in staff with a growth of 39 FTE, chiefly at ICBC (+18 FTE) and BoC (+10 FTE). This resulted in the banks' increased staff costs (EUR +4.5 million) which translates into a +3.7% variation. Overall, the Chinese segment's cost-income ratio increased by 6.5% compared to the previous year as a result of decreasing operating income (EUR -19.0 million, -9.1%) while the operating expenses decreased only by 5.0% year-on-year (EUR -10.0 million).

Number of banks

Number of banks	2020	2019
Subsidiaries	6	6
Branches	7	7
Total	13	13

Business areas



Annual net profit or loss (in EUR million)

2020	2019
-34	-23

Headcount

2020	2019
890	851

Cost-income ratio

2020	113.8%
2019	107.2%

Balance sheet total (in EUR million)

2020: 14,203

2019: 13,237

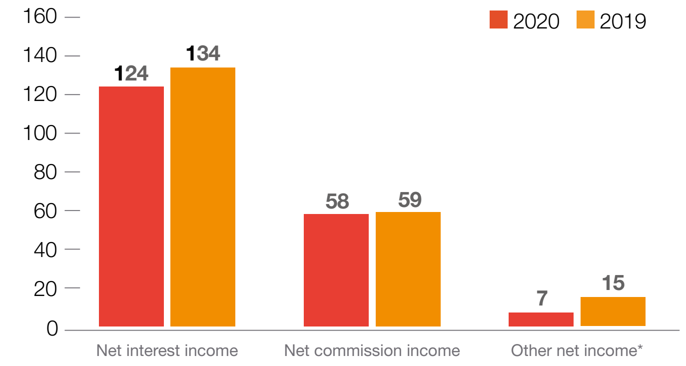
Return on equity

2020	2019
-1.78%	-1.70%

Return on assets

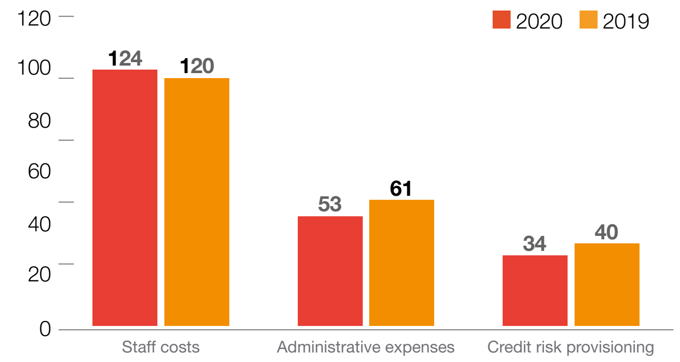
2020	2019
-0.24%	-0.17%

Banking income (in EUR million)

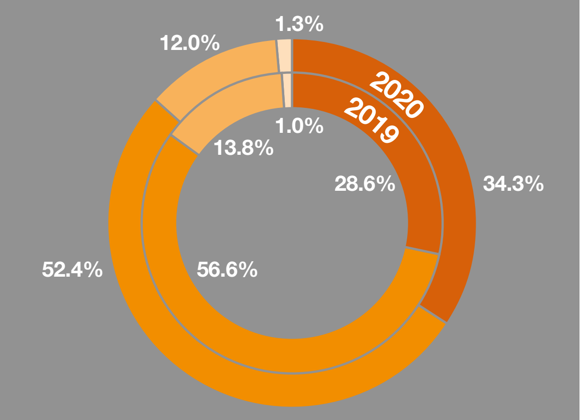


*Other net income includes: net profit/loss on financial operations (including gains/losses on derivatives & revaluation gains/losses), other net operating income and dividend income

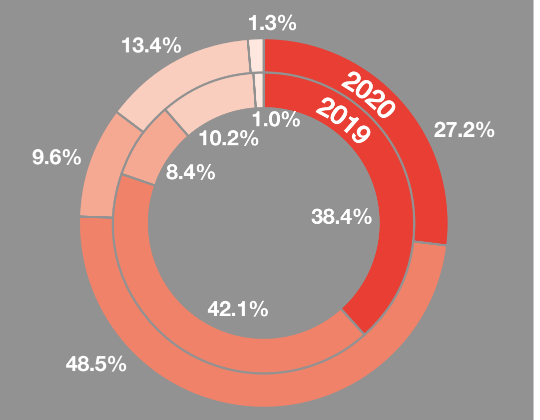
Staff costs, administrative expenses and credit risk provisioning (in EUR million)



Breakdown of assets



Breakdown of liabilities



Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Bank of China (Luxembourg) S.A.	6,513	6,062	7.4%	=
2	Industrial and Commercial Bank of China (Europe) S.A.	5,460	5,436	0.4%	=
3	China Construction Bank (Europe) S.A.	1,676	1,310	27.9%	=
4	Bank of Communications (Luxembourg) S.A.	495	372	33.1%	=
5	China Everbright Bank (Europe) S.A.	36	35	2.9%	=
6	Agricultural Bank of China (Luxembourg) S.A.	23	22	4.5%	=
	TOTAL	14,203	13,237	7.3%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Agricultural Bank of China (Luxembourg) S.A.	0.7	0.0	>1,000	+1
2	Bank of China (Luxembourg) S.A.	0.0	19.8	100.0%	-1
3	China Everbright Bank (Europe) S.A.	-1.2	-0.8	50.0%	=
4	China Construction Bank (Europe) S.A.	-9.9	-3.1	219.4%	=
5	Bank of Communications (Luxembourg) S.A.	-11.8	-11.0	-7.3%	=
6	Industrial and Commercial Bank of China (Europe) S.A.	-11.8	-27.7	-57.4%	=
	TOTAL	-34.0	-22.8	49.1%	

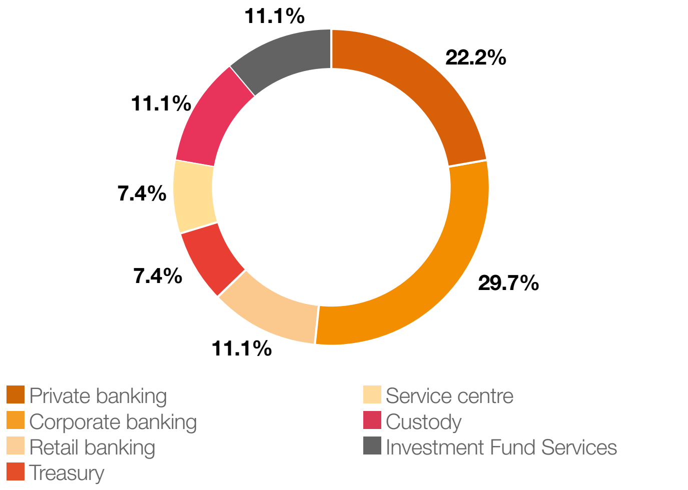
Key takeaways – French segment

- The aggregate balance sheet of the French segment decreased by EUR 5.5 billion (-6.5%), mainly driven by a drop in loans and advances to credit institutions (EUR -3.2 billion; -7.3%) and bonds and other transferable securities (EUR -1.9 billion; -17.4%). This was mostly due to Société Générale Luxembourg S.A. ("SGL") and Natixis Wealth Management Luxembourg S.A. ("Natixis") which decreased the loans and advances to credit institutions by EUR 1.2 billion and EUR 1.3 billion respectively, along with bonds and other transferable securities for both decreasing by EUR 0.9 billion.
- On the liability side, there was a decrease of the amounts owed to credit institutions (EUR -2.9 billion; -8.4%) as well as of the deposits by customers (EUR -2.9 billion; -6.7%), again primarily driven by SGL and Natixis.
- Core banking income remained stable overall, with the balance shifting more towards net commission income that grew by 6.1% (EUR +22.6 million), whereas net interest income remained flat. Other net income decreased only slightly by 2.2%, as Banque de Luxembourg S.A. ("BDL") and SGL continued to receive high dividend income (EUR 233.9 million) from their affiliated undertakings. On the cost side, there were notable decreases in staff costs (EUR -21.7 million; -6.2%) and administrative expenses (EUR -31.7 million; -10.3%). Credit risk provisioning increased significantly in 2020 (EUR +89.1 million; +931.2%), mainly driven by BDL and SGL due to lump-sum provisions for risky assets.
- The headcount decreased by 165 FTE (-5.5%), contributing to a decrease in staff costs as described above. The most notable reductions were at SGL (-124 FTE; -9.7%) and CA Indosuez Wealth (Europe) S.A. (-27 FTE; -5.3%). Six out of nine banks were able to reduce their administrative expenses (EUR -31.7 million; -10.3%) again driven by BDL and SGL, thanks to strict cost steering and first visible results of the accelerated, holistic transformation launched at the end of 2018. However, these cost savings were offset by the large increase in credit risk provisioning, meaning the cost-income ratio decreased only slightly by 0.3%.

Number of banks

Number of banks	2020	2019
Subsidiaries	9	9
Branches	3	3
Total	12	12

Business areas



Annual net profit or loss (in EUR million)

2020	2019
281	285

Headcount

2020	2019
2,848	3,013

Cost-income ratio

Balance sheet total (in EUR million)

2020	2019
79,491	84,993

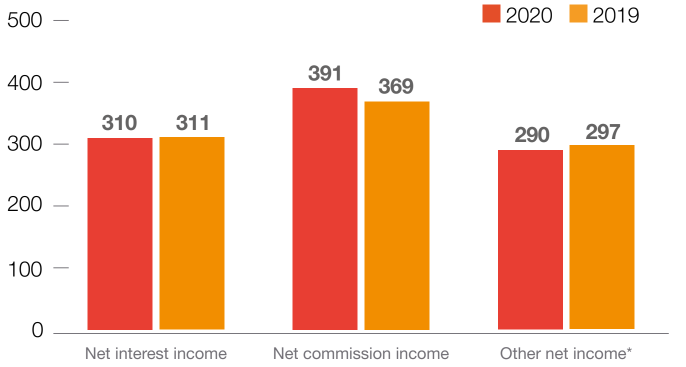
Return on equity

2020	2019
5.68%	5.90%

Return on assets

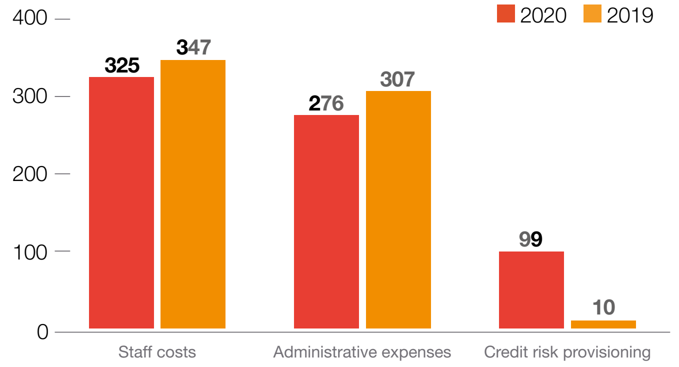
2020	2019
0.35%	0.34%

Banking income (in EUR million)

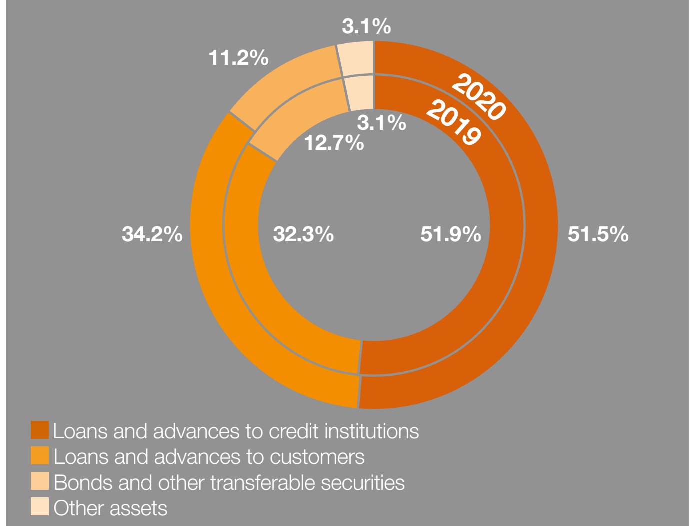


*Other net income includes: net profit/loss on financial operations (including gains/losses on derivatives & revaluation gains/losses), other net operating income and dividend income

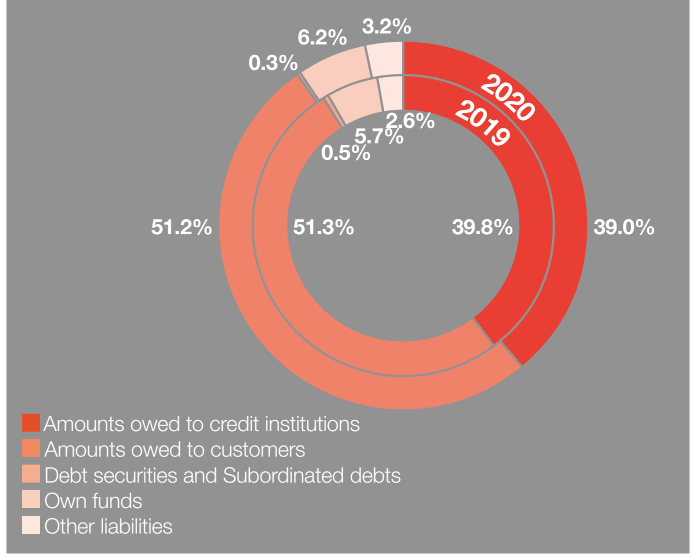
Staff costs, administrative expenses and credit risk provisioning (in EUR million)



Breakdown of assets



Breakdown of liabilities



Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Société Générale Luxembourg S.A.	43,121	45,337	-4.9%	=
2	Banque de Luxembourg S.A.	13,717	14,255	-3.8%	=
3	Société Générale Capital Market Finance S.A.	9,262	9,488	-2.4%	=
4	CA Indosuez Wealth (Europe) S.A.	7,700	8,040	-4.2%	=
5	Natixis Wealth Management Luxembourg S.A.	3,952	6,331	-37.6%	=
6	Banque BCP S.A.	747	668	11.8%	=
7	Banque Transatlantique Luxembourg S.A.	605	569	6.3%	=
8	Keytrade Bank Luxembourg S.A.	297	282	5.2%	=
9	Société Générale Financing and Distribution S.A.	90	23	291.3%	=
	TOTAL	79,491	84,993	-6.5%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Société Générale Luxembourg S.A.	224.1	235.1	-4.7%	=
2	Banque de Luxembourg S.A.	59.3	58.5	1.4%	=
3	Natixis Wealth Management Luxembourg S.A.	5.2	4.9	6.1%	=
4	Banque Transatlantique Luxembourg S.A.	2.3	1.0	130.0%	▲ +1
5	Société Générale Financing and Distribution S.A.	2.2	1.0	120.0%	▼ -1
6	Keytrade Bank Luxembourg S.A.	1.2	0.3	300.0%	▲ +1
7	Banque BCP S.A.	0.9	0.8	12.5%	▼ -1
8	Société Générale Capital Market Finance S.A.	0.0	0.1	-100.0%	=
9	CA Indosuez Wealth (Europe) S.A.	-14.4	-16.3	11.7%	=
	TOTAL	280.8	285.4	-1.6%	

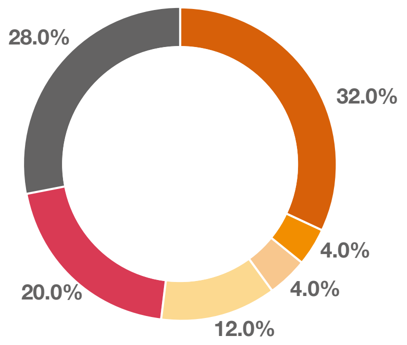
Key takeaways – Swiss segment

- The number of banks in the Swiss segment remained constant in 2020, with the key business areas remaining private banking and asset servicing.
- The aggregate balance sheet total in the Swiss segment was rather stable (EUR +0.4 billion; +1.3%). The growth in bonds and other transferable securities (EUR +1.1 billion; +35.4%) and in the loans and advances to customers (EUR +0.2 billion; +2.5%) was partially compensated by the decrease in loans and advances to credit institutions (EUR -1.0 billion; -5.2%). The growth in bonds and other transferable securities was mostly due to Pictet & Cie (Europe) S.A. ("Pictet") (EUR +0.9 billion; +34.7%) and Union Bancaire Privée (Europe) S.A. (EUR +0.2 billion; +150.2%), increasing its holdings of securities issued by public bodies in order to strengthen the Liquidity Coverage Ratio. On the liability side, there was a further slight shift from amounts owed to credit institutions to amounts owed to customers that now correspond to 84.6% of total liabilities.
- The net banking income continued to show an overall positive trend (EUR +48.0 million; +5.9%). This was despite a significant decrease of the net interest income by EUR 61.1 million (-36.4%), as many banks were impacted by the cuts of USD and GBP interest rates. On the positive side, eight out of nine banks were able to grow their net commission income by a total of EUR 54.2 million (+10.6%), which clearly remains the key driver for the Swiss segment. The most significant increases were at Pictet (EUR +15.5 million; + 7.4%) linked to the strong growth of Assets Under Management (+14%) and Credit Suisse (Luxembourg) S.A. (EUR +12.8 million; +14.2%), due to an increase in the level of transactions performed on behalf of clients and brokerage fees. The growth in other net income of (EUR +54.9 million; +38.2%) was mainly due to intra group transactions and a partial reversal of a provision at Pictet, as well as Bank Julius Baer Europe S.A.'s income resulting from intra group cost allocation.
- Expenses remained flat in 2020, the slight increase in staff costs (EUR +10.0 million; +2.3%) was balanced by the decrease in the administrative expenses (EUR -6.7 million; -2.4%). The overall headcount grew by 86 FTE (+3.8%), chiefly at Pictet (+66 FTE; +10.5%), contributing to the increase in staff costs as a result of the increase in activities, such as the opening of a new branch in Monaco that has started to operate beginning of 2020 and the commitment to develop its other core markets. Five out of nine banks were able to lower their administrative expenses, primarily Edmond de Rothschild (Europe) S.A. (EUR -7.7 million; -12.3%) and Credit Suisse (Luxembourg) S.A. (EUR -4.6 million; -11.1%), due to efficient cost management.

Number of banks

Number of banks	2020	2019
Subsidiaries	9	9
Branches	3	3
Total	12	12

Business areas



Annual net profit or loss (in EUR million)

2020: 116

2019: 76

Headcount

2020: 2,357

2019: 2,271

Cost-income ratio

Balance sheet total (in EUR million)

2020: 32,552

2019: 32,142

Return on equity

6.89% (2020)

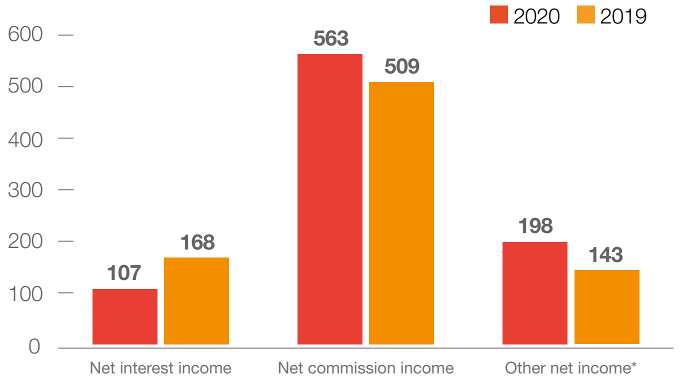
4.83% (2019)

Return on assets

0.36% (2020)

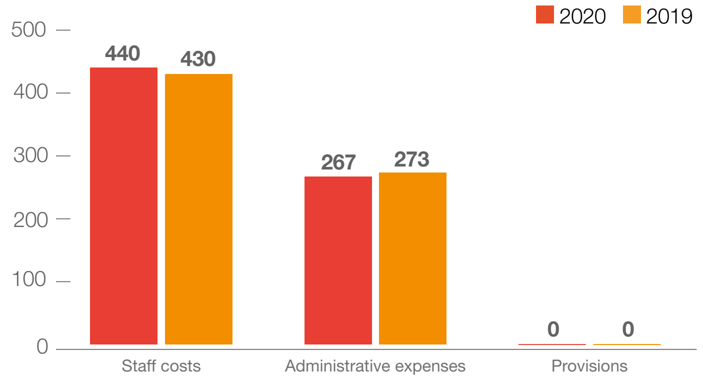
0.24% (2019)

Banking income (in EUR million)

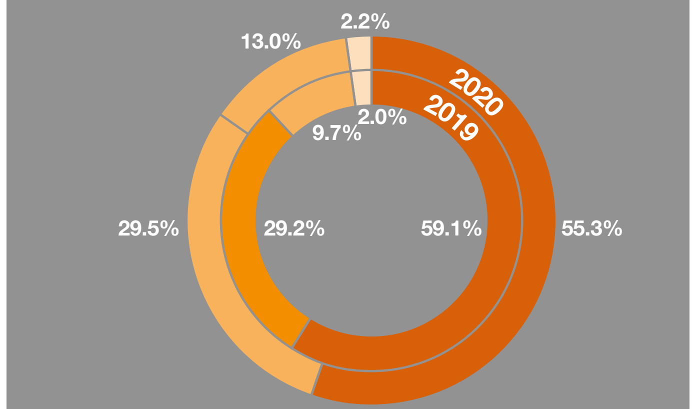


*other net income includes: net profit/loss on financial operations (including gains/losses on derivatives & revaluation gains/losses), other net operating income and dividend income

Staff costs, administrative expenses and credit risk provisioning (in EUR million)

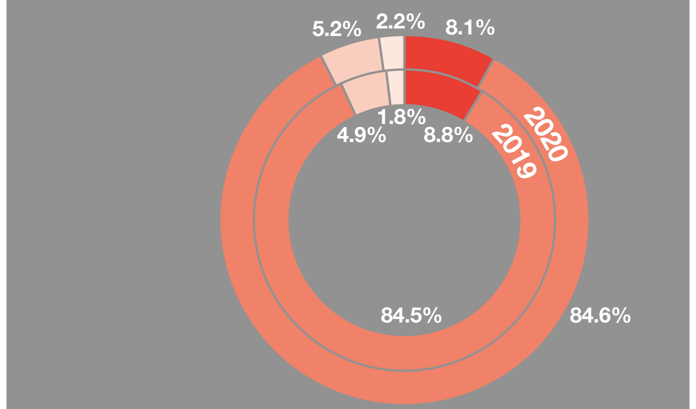


Breakdown of assets



- Loans and advances to credit institutions
- Loans and advances to customers
- Bonds and other transferable securities
- Fixed assets and ther assets

Breakdown of liabilities



- Amounts owed to credit institutions
- Amounts owed to customers
- Own funds
- Other liabilities

Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Pictet & Cie (Europe) S.A.	9,620	9,478	1.5%	=
2	Credit Suisse (Luxembourg) S.A.	8,219	7,886	4.2%	=
3	Edmond de Rothschild (Europe) S.A.	4,564	4,841	-5.7%	=
4	EFG Bank (Luxembourg) S.A.	2,965	2,838	4.5%	+1
5	Bank Julius Baer Europe S.A.	2,739	2,876	-4.8%	▼ -1
6	Union Bancaire Privée (Europe) S.A.	1,872	1,546	21.1%	+1
7	Lombard Odier (Europe) S.A.	1,589	1,677	-5.2%	▼ -1
8	Mirabaud & Cie (Europe) S.A.	549	551	-0.4%	=
9	Swissquote Bank Europe S.A.	435	450	-3.3%	=
	TOTAL	32,552	32,143	1.3%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Pictet & Cie (Europe) S.A.	72.4	54.5	32.8%	=
2	Credit Suisse (Luxembourg) S.A.	31.5	32.9	-4.3%	=
3	Edmond de Rothschild (Europe) S.A.	13.3	15.1	-11.9%	=
4	Bank Julius Baer Europe S.A.	7.8	-4.3	281.4%	+4
5	Swissquote Bank Europe S.A.	3.8	2.2	72.7%	▼ -1
6	Mirabaud & Cie (Europe) S.A.	-1.1	0.5	-320.0%	▼ -1
7	EFG Bank (Luxembourg) S.A.	-1.3	-3.8	65.8%	=
8	Union Bancaire Privée (Europe) S.A.	-2.2	-0.1	< - 1,000%	▼ -2
9	Lombard Odier (Europe) S.A.	-8.5	-20.7	58.9%	=
	TOTAL	115.7	76.3	51.6%	

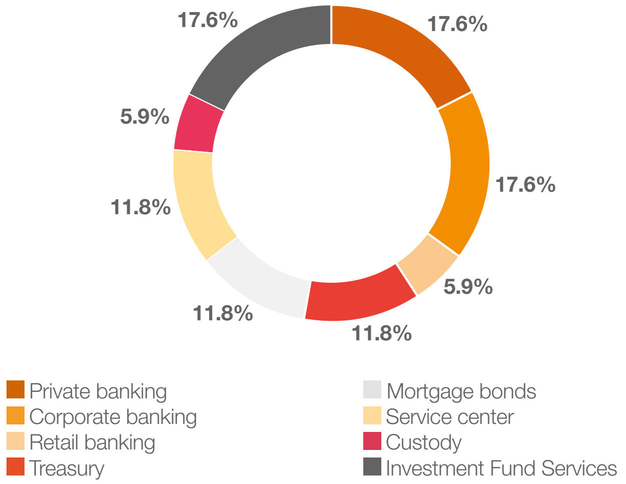
Key takeaways – German segment

- In 2020, DekaBank Deutsche Girozentrale Luxembourg S.A. deregistered following the transfer of its activities to its branch in Luxembourg. The bank's 2019 figures have thus been excluded for better comparability. The number of branches decreased following the merger of Postbank Luxemburg - eine Niederlassung der DB Privat- und Firmenkundenbank AG with Deutsche Bank AG, Luxembourg Branch and the cessation of activities of Bausparkasse Schwäbisch Hall A.G., Luxembourg Branch.
- The aggregate balance sheet of the German segment has decreased by EUR 10.1 billion (-13.5%), principally driven by the decrease in loans and advances to credit institutions of EUR 8.3 billion (-29.9%) at five out of six banks and foremost at Deutsche Bank Luxembourg S.A. ("DBL") with (EUR -4.9 billion; -45.2%) due to ongoing optimization of inter-group lending activities and the maturity of some advances during the latter part of 2020. On the liability side, this was mirrored by a significant decrease in amounts owed to credit institutions of EUR 8.1 billion (-25.6%).
- The net interest income increased strongly by EUR 151.1 million (+42.2%), clearly remaining the key revenue stream in the German segment, as the lending activity is core for all the banks belonging to the German segment. This was mostly led by DBL, with an increase of EUR 129.3 million, due to the growth in loans to customers and interest rate development during 2020 and the reduction in funding from group entities. On the other hand, most banks saw their net commission income decrease by a total of EUR 20.5 million (-47.1%). Other net income declined sharply (EUR -86.3 million; -69.8%), largely due to a negative net result from financial operations at DBL linked to hedging costs of debt securities.
- On the cost side, there were increases for staff costs (EUR +9.1 million; +5.4%), largely due to DZ PRIVATBANK S.A. in relation to additional payments to the pension scheme, and administrative expenses (EUR +11.4 million; +5.5%), largely due to increased intercompany costs at DBL. Moreover, there was a significant increase in overall credit risk provisioning (EUR +34.0 million; +164.2%), the key driver being DBL with an increase of EUR 33.0 million (+53.2%). Thus, the aggregate annual net profit is EUR 29.7 million (-27.5%) than in the previous year, impacting the ratios negatively.

Number of banks

Number of banks	2020	2019
Subsidiaries	6	7
Branches	11	13
Total	17	20

Business areas



Annual net profit or loss (in EUR million)

2020: 78.2
2019: 107.9

Headcount

2020: 1,460
2019: 1,458

Cost-income ratio

Balance sheet total (in EUR million)

2020: 64,769
2019: 74,885

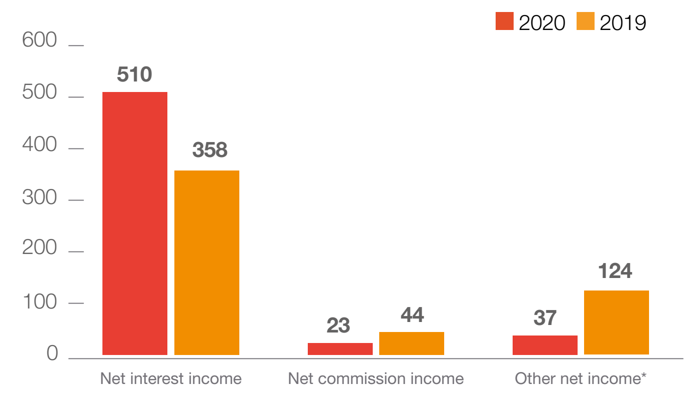
Return on equity

1.01% (2020)
1.41% (2019)

Return on assets

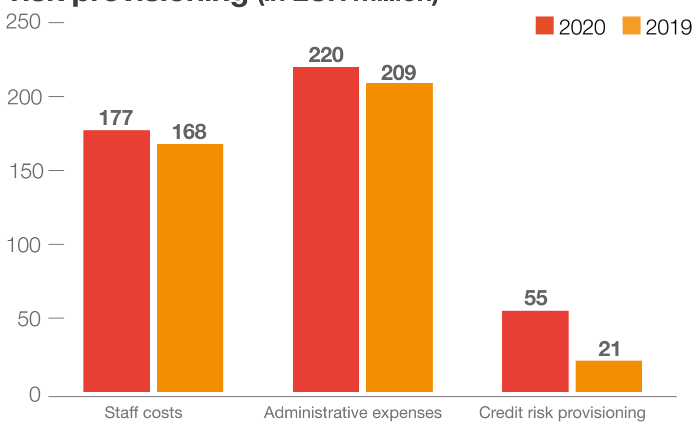
0.12% (2020)
0.14% (2019)

Banking income (in EUR million)

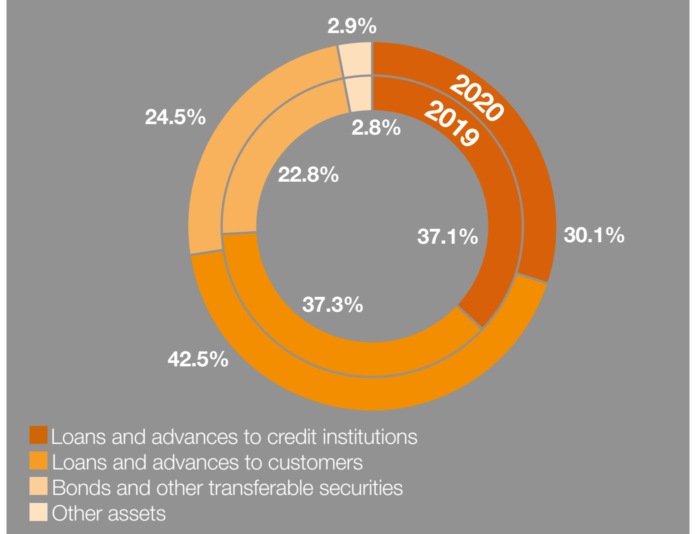


*Other net income includes: net profit/loss on financial operations (including gains/losses on derivatives & revaluation gains/losses), other net operating income and dividend income

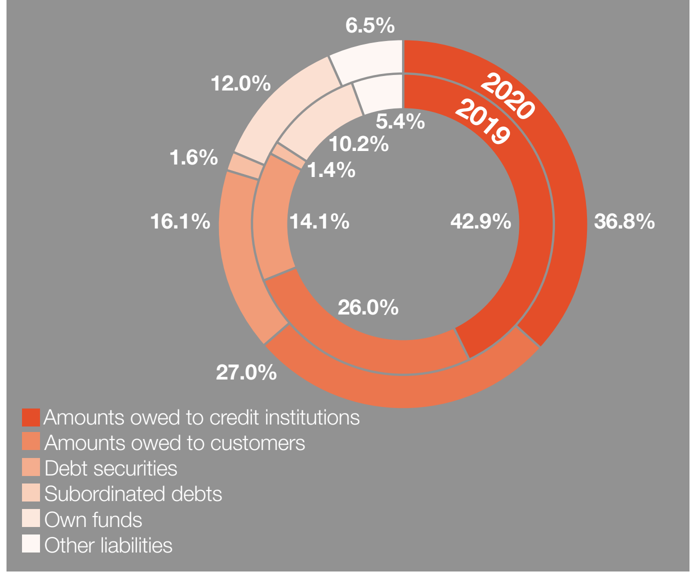
Staff costs, administrative expenses and credit risk provisioning (in EUR million)



Breakdown of assets



Breakdown of liabilities



Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Deutsche Bank Luxembourg S.A.	25,699	30,141	-14.7%	=
2	DZ PRIVATBANK S.A.	17,046	18,698	-8.8%	=
3	NORD/LB Luxemburg S.A. Covered Bond Bank	12,734	15,562	-18.2%	=
4	Commerzbank Finance & Covered Bond S.A.	8,616	9,716	-11.3%	=
5	HCOB Securities S.A.	623	728	-14.5%	=
7	Freie Internationale Sparkasse S.A.	51	40	28.7%	=
	TOTAL	64,769	74,885	-13.5%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Deutsche Bank Luxembourg S.A.	91.0	87.8	3.6%	=
2	DZ PRIVATBANK S.A.	29.2	11.3	158.4%	▲ +1
3	HCOB Securities S.A.	1.8	6.6	-72.7%	▲ +1
4	Freie Internationale Sparkasse S.A.	-0.1	0.1	-200.0%	▲ +1
5	NORD/LB Luxemburg S.A. Covered Bond Bank	-8.8	18.5	-147.6%	▼ -3
7	Commerzbank Finance & Covered Bond S.A.	-34.9	-16.4	112.8%	=
	TOTAL	78.2	107.9	-27.5%	

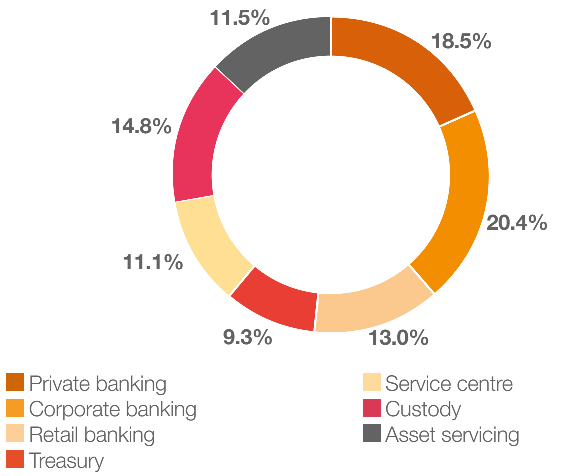
Key takeaways – Luxembourgish segment

- The Luxembourg segment is dominated by three banks – Banque et Caisse d'Epargne de l'Etat ("BCEE"), BGL BNP Paribas S.A. ("BGL") and Banque Internationale à Luxembourg S.A. ("BIL") – which in 2020 make up 80.6% of the aggregated balance sheet with a stable and significant annual net profit and 66.4% of the total staff count.
- The aggregated balance sheet showed another year of relevant growth, increasing by EUR 10.5 billion (+7.2%) and mainly stems from Quintet Private Bank (Europe) S.A. ("QPB") (EUR +3.5 billion, +40.5%) due to the merger of its German, Dutch and Belgian subsidiaries that became branches of the Bank. Consequently, Loans and advances to customers grew by EUR 7.6 billion (+11.2%), primarily driven by Quintet Private Bank (Europe) S.A. ("QPB") EUR 2.5 billion (+243.0%) and BGL (EUR 2.5 billion; + 11.8%). In the case of BGL, the increase was largely due to additional loans granted to other group entities for EUR 1.8 billion.
- On the liability side, there was a notable increase in amounts owed to customers by EUR 9.2 billion (+9.1%) driven largely by QPB (EUR +4.7 billion, +121.3%) following the merger, and by BCEE with an increase of EUR 1.2 billion (+3.6%) mainly lead by the dynamic collection of deposits of entities and individual clients.
- Compared to the figures of December 2019, the Luxembourg segment showed a decrease in aggregated net profits by EUR 349.8 million (-57.1%), largely due to the increase in risk provisioning. In 2020 the Luxembourgish segment recorded an increase in the net interest income by EUR 90.1 million (+7.0%) remaining the key driver in banking income. Net commission income increased by EUR 192.2 million (+32.4%), driven by QPB (EUR +164.3 million, +405.8%) due to positive market conditions for asset management and loan fees in line with the growth of customer loans. Other net income decreased compared to 2019 (EUR -230.4 million, -40.7%) mainly due to a sale and leaseback transaction which resulted in a disposal gain in the amount of EUR 98 million occurred at QPB in 2019.
- On the cost side, staff costs increased by EUR 126.0 million (+13.7%), whereas administrative expenses increased by EUR 117.4 million (+20.0%). There was a significant increase in credit risk provisioning EUR 193.4 million (+108.0%), which stems mainly from BIL (EUR +55.8 million; +363.0%), mainly due to impairment of a participation, followed by BGL (EUR +33.0 million; +22.6%) due to an increase in the provision for general banking risks.
- The segment's headcount significantly grew by 793 FTE (+10.1%), driven by QPB (+844 FTE) following the merger. As a result of growth of general administrative expenses, the cost-income ratio increased significantly from 66.7% in 2019 to 82.6% in 2020.

Number of banks

Number of banks	2020	2019
Subsidiaries	13	13
Branches	0	0
Total	13	13

Business areas



Annual net profit or loss (in EUR million)

2020: 263

2019: 613

Headcount

2020: 8,619

2019: 7,826

Cost-income ratio

Balance sheet total (in EUR million)

2020: 157,247

2019: 146,744

Return on equity

1.73% (2020)

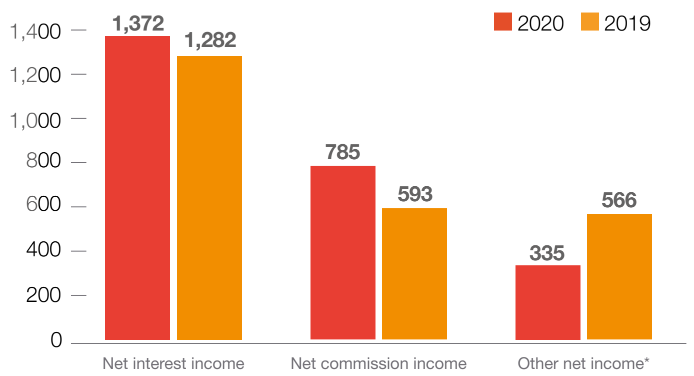
4.16% (2019)

Return on assets

0.17% (2020)

0.42% (2019)

Banking income (in EUR million)



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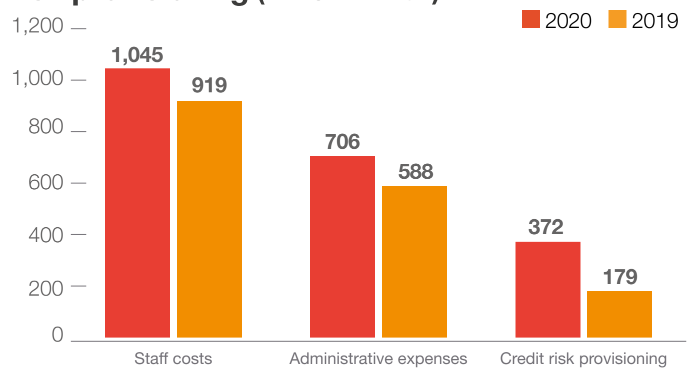
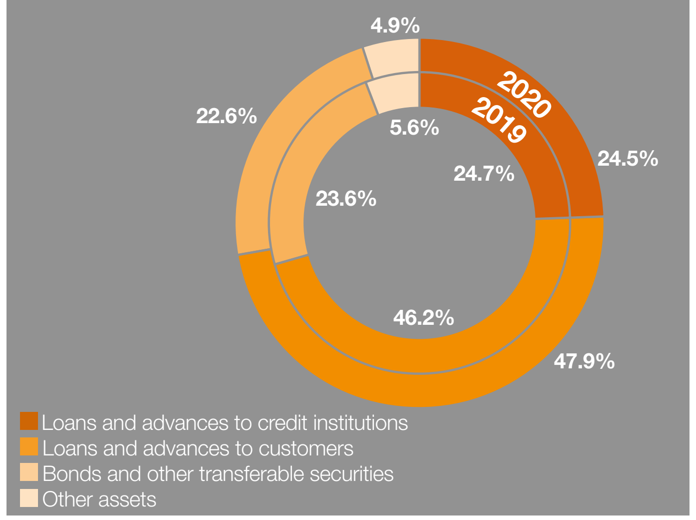
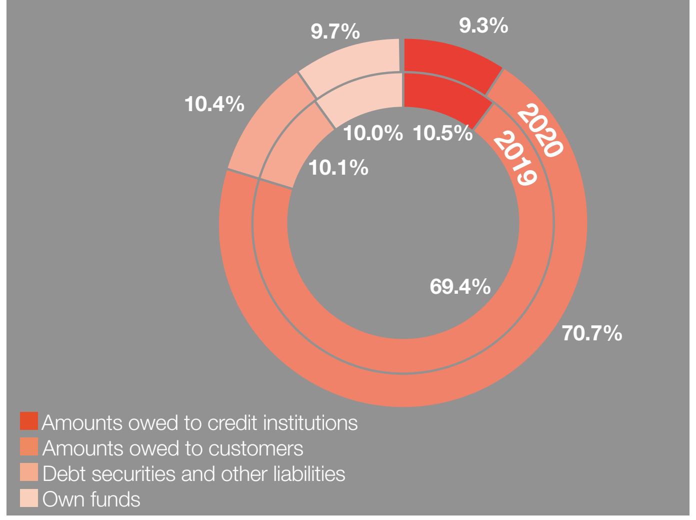
Staff costs, administrative expenses and credit risk provisioning (in EUR million)



Breakdown of assets



Breakdown of liabilities



Ranking of balance sheet totals (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	Banque et Caisse d'Epargne de l'Etat, Luxembourg	50.436	48.063	4,9%	=
2	BGL BNP Paribas S.A.	46.642	45.547	2,4%	=
3	Banque Internationale à Luxembourg S.A.	29.666	27.362	8,4%	=
4	Quintet Private Bank (Europe) S.A.	12.229	8.706	40,5%	+1
5	Banque Raiffeisen S.C.	9.641	8.912	8,2%	-1
6	European Depositary Bank S.A.	2.111	1.733	21,8%	+1
7	Compagnie de Banque Privée Quilvest S.A.	1.742	1.840	-5,3%	-1
8	Banking Circle S.A	1.586	1.125	41,0%	+2
9	Société Nationale de Crédit et d'Investissement	1.488	1.510	-1,4%	-1
10	Banque Havilland S.A.	997	1.218	NEW	NEW
11	Bemo Europe - Banque Privée S.A.	329	385	-14,7%	=
12	Fortuna Banque S.C.	252	261	-3,7%	=
13	RiverBank S.A.	128	82	57,1%	=
	TOTAL	157.247	146.744	7,2%	

Ranking of annual net profit or loss (in EUR million)

Ranking	Bank	2020	2019	Shift	Change in rank
1	BGL BNP Paribas S.A.	178,1	148,6	19,9%	+2
2	Banque et Caisse d'Epargne de l'Etat, Luxembourg	135,4	183,9	-26,4%	-1
3	Banque Internationale à Luxembourg S.A.	57,8	172,5	-66,5%	-1
4	Banque Raiffeisen S.C.	18,8	17,4	8,0%	+2
5	European Depositary Bank S.A.	9,3	17,3	-46,2%	+2
6	Compagnie de Banque Privée Quilvest S.A.	6,8	7,4	-8,1%	+2
7	Fortuna Banque S.C.	-0,7	-1,6	56,3%	+2
8	Banque Havilland S.A.	-1,1	-3,6	69,4%	+3
9	Bemo Europe - Banque Privée S.A.	-2,1	-2,2	4,5%	+1
10	RiverBank S.A.	-5,3	-4,8	-10,4%	+2
11	Banking Circle S.A	-12,7	-10,3	-23,3%	+2
12	Société Nationale de Crédit et d'Investissement	-22,8	28,3	-180,6%	-7
13	Quintet Private Bank (Europe) S.A.	-98,3	60	NEW	NEW
	TOTAL	263,2	613,2	-57,1%	

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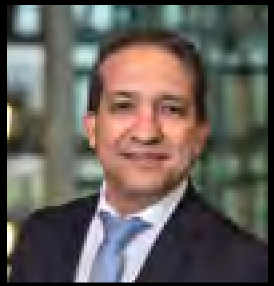

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