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# Drift in Business Models and Emerging Market Risks for the Banking Sector

*Amongst the recent strategic developments in the Belgian banking industry, their ongoing efforts to shift their business model from classical financial intermediation towards fee-based asset management activities, with a clear ESG focus, have witnessed a boost with the advent of the COVID-19 crisis. With such a fast speed of the strategic shift, we might lack the necessary hindsight to ascertain its implication in terms of the associated risks. In this paper, we focus on a classical dimension: market risk. The increasing dependence of bank income on the fluctuations of stock markets creates a significant equity risk, reinforced by the countercyclical behavior of individual investors. Furthermore, the overwhelming shift of flows to sustainable funds and companies might create some unanticipated problems, such as the incoherence of ratings or a potential overvaluation issue, for which we do not have decisive answers yet. The banking world should reinforce their level of maturity on these issues in order to design risk management systems that would match the quality of their interest risk management solutions.*

## 1. Introduction

Historically, the primary function of a bank is to serve as a financial intermediary between economic agents with heterogeneous investment and consumption needs. By collecting deposits and granting loans, the bank internalizes credit, interest rate and liquidity risks and allocates financial resources in the economy. In exchange, the bank collects two margins: one on the interest payments made to the depositors (which are supposed to be lower than the market reference interest rate for similar maturities), and one on the interest charged to the borrowers. Globally, the sum of this deposit margin and lending margin, which constitutes the net interest margin (NIM), is supposed to compensate the bank for the risk taken and to leave a positive profit after deduction of all costs and provisions. This residual income is the core of the profitability of its so-called “on-balance sheet” activities, because it hinges on the amount of deposits and loans granted by the bank, which correspond to the bulk of its liabilities and assets, respectively, and requires significant equity capital to pursue these activities.

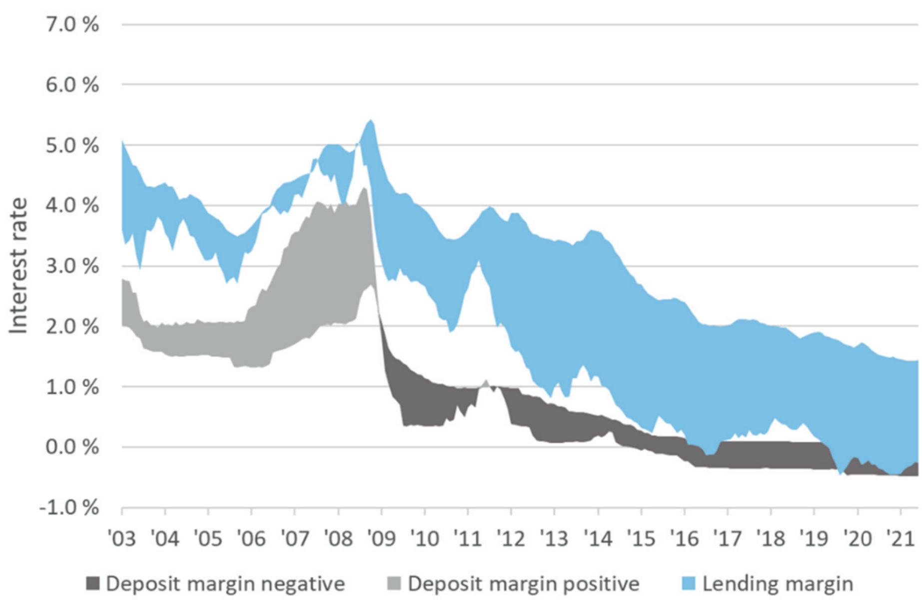
Besides, because of its particular position and competencies, the bank also endorses a number of functions in the economy. The main two such functions are the payments and asset management activities. Even though they require a heavy infrastructure, these activities are mainly driven by flows (for payments) and segregated assets (for asset management). The management of customers’ assets (and associated advisory services), in particular, is much less “balance sheet intensive” than pure financial intermediation, and in particular requires much less shareholder’s equity. This is the reason why it is often termed an “off-balance sheet” activity.

In this paper, we discuss how the evolution of the mix between on- and off-balance sheet activities is likely to lead to the surge of new types of market risks, that can become material, and for which banks should be actively preparing themselves. We deliberately leave out a variety of emerging risks, such as the ones related to digitalization, cybersecurity, sustainability, compliance or other non-financial risks that are currently widely discussed at all levels, from the regulatory authorities to the banks' management boards. Rather, we try to associate the functioning of financial markets to behavioral traits and figure out how this may affect the generation of banking income and profits in a sizeable way.

## 2. The acceleration of shift in business models with the pandemic

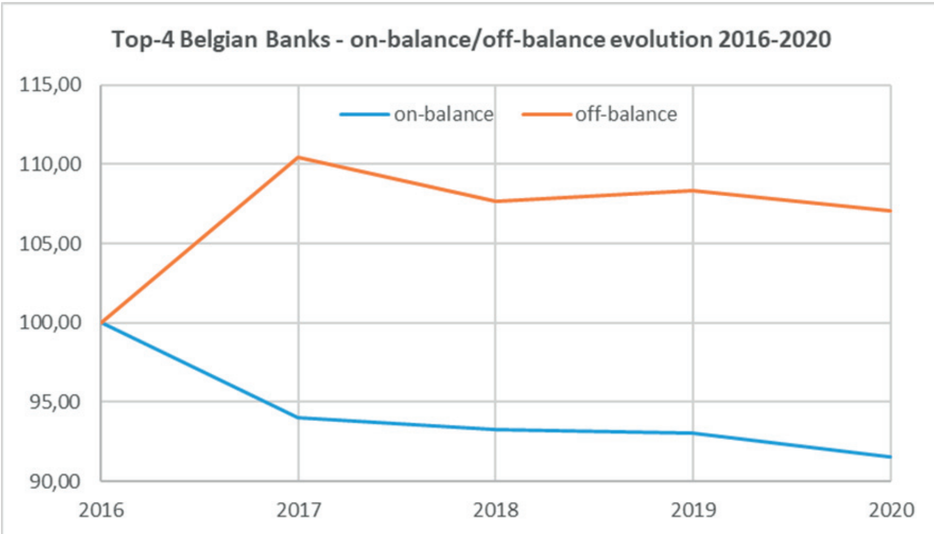
Even though the economic landscape is globally favorable to corporate activities, the low interest rate environment, mostly driven by the monetary policy of the European Central Bank (ECB), is much less appealing to banks. For the last twenty years, but especially since the burst of the sovereign crisis, the profitability of intermediations activities has gradually, but consistently shrunk over time. Figure 1 shows the evolution over time of proxies for the two components of the net interest margin in the Eurozone since 2003. In gray, we report the evolution of the margin on deposits, represented by the difference between the short term interest rate minus the average bank deposit rate. It started at a positive level (light gray), but shrunk and entered a (deeper and deeper) negative territory after the global financial crisis (dark gray). Thus, banks have been consistently losing money on their customers' deposits for more than ten years. In blue, the margin on loans (average bank lending rate minus the long term market interest rate) increased until the sovereign crisis, thereby partly compensating the losses in deposits, then remained stable. Overall, we can consider that (i) the net interest margin has progressively decreased over time, (ii) the loss on the deposit margin has been partly compensated by an increase on the margin on loans, but (iii) this offsetting effect appears to have reached its limits. This statement is indeed largely accepted and shared by commercial banks and all their stakeholders altogether.

**Figure 1. Evolution of the components of the net interest margin over time** ***(source: ECB Datawarehouse)***




For a couple of years, the signals sent by the monetary authority, namely the ECB in the Eurozone, has been largely unambiguous: interest rates are there to stay low for long, both on the short end of the yield curve, which is directly linked to the key rates set by the ECB, and on the long end, whose behavior is influenced by the nonconventional asset purchasing policy of the same ECB. Thus, for the banking sector, there is no hope that the situation will improve soon. Furthermore, the reinforcement of regulatory and supervisory constraints on the capital and liquidity requirements of financial institutions will further erode the profitability of the intermediation activity. The ECB itself recognizes that banks, by pursuing their activities in the same way as before, would consistently fail to generate a return on equity (ROE) that matches of exceeds their cost of capital (COE). Financial intermediation becomes structurally unprofitable, and "classical" banks have to react: they must drastically change their business models. From a dominance of on-balance sheet activities, many of them – including the leading Belgian banks – have been trying to progressively shift towards off-balance sheet products and services. This tendency is shown in Figure 2, that summarizes the evolution of the mix of net interest income and fees & commissions income as proxies for revenues generated by on-balance and off-balance sheet activities, respectively, for the four largest Belgian banks from 2016 to 2020.

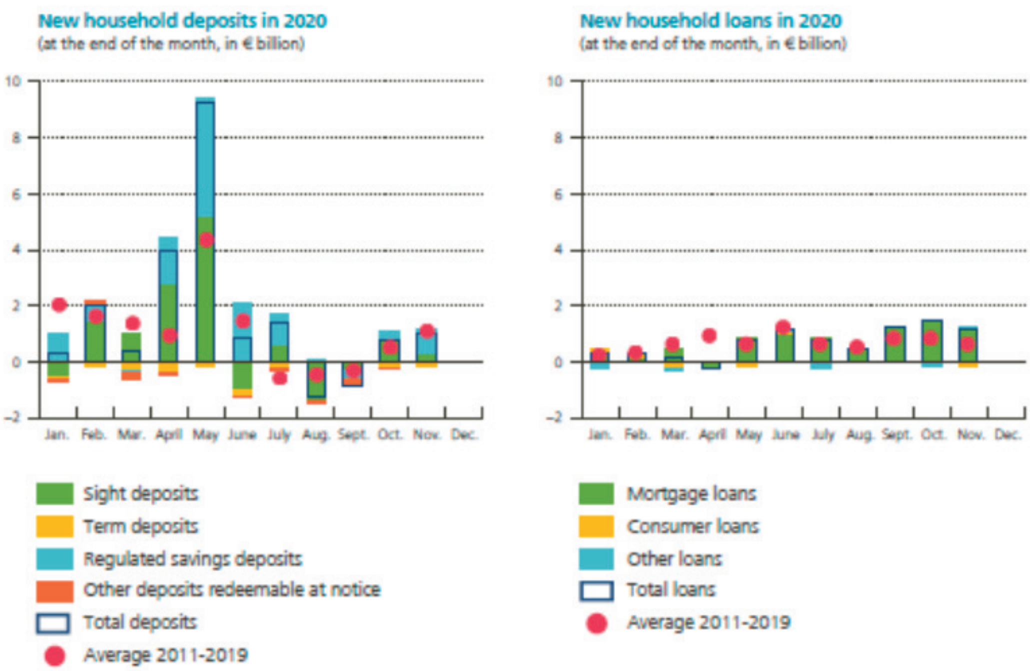
**Figure 2. Evolution of the mix between on- and off-balance sheet income of the 4 largest Belgian banks**




Source: Annual Reports of BNPP-Fortis, KBC (for KBC Belgium), Belfius, ING Belgium

In this context of changing business models, the COVID-19 crisis has played a role of an accelerator, if not a booster. In spite of the ongoing efforts of many banks to turn "savers" into "investors", the sudden burst of the crisis and the associated lockdowns – with the hindrances on consumption possibilities – triggered a massive surge of non-maturing (sight and savings) deposits. In the meantime, the demand for loans also increased, mostly in two areas: loans to enterprises and independent workers to support the economy, and mortgage loans. Nevertheless, this increase in demand of funds remained far below the one on deposits, as shown in Figure 3, thus aggravating the intermediation margin issue.

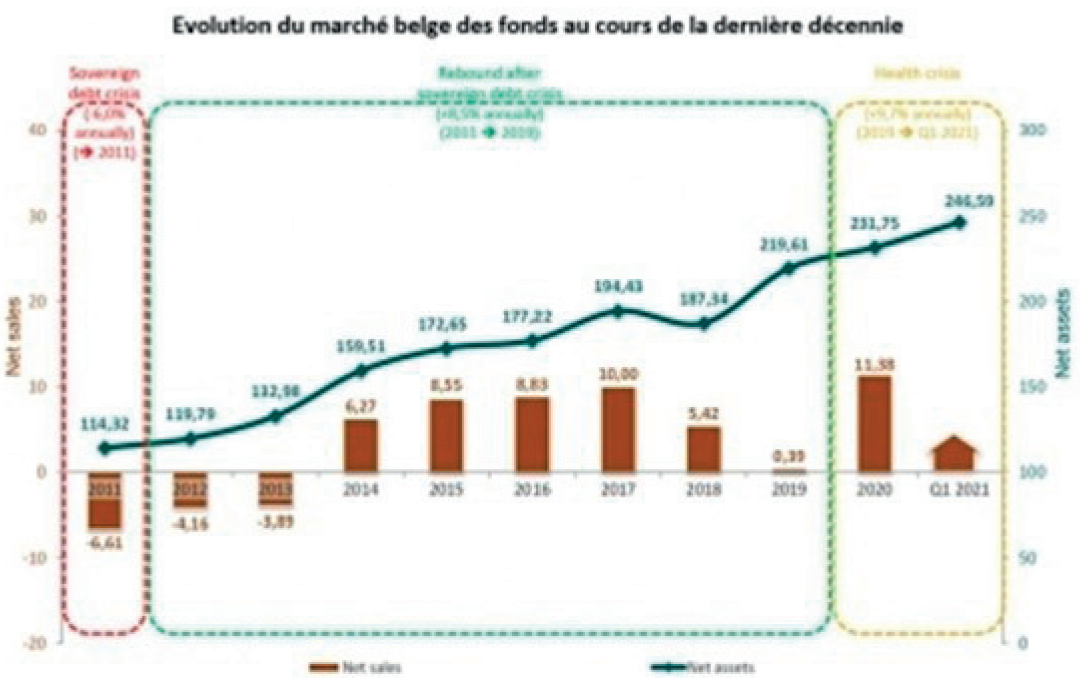
**Figure 3. Growth of Belgian household deposits and new mortgage loans in 2020**




Source: NBB annual report 2020.

Confronted with this aggravating imbalance and drowning under unused liquidity inflows, the most dynamic financial institutions literally doubled their efforts in order to distract idle funds from savings accounts and to convince people that their interest was to diversify their financial assets and increase their holdings of financial securities. Thanks to the big drop of equity financial markets in March 2020, there was clearly an interesting entry point on stock markets, and this strategy – which used to be very slow and difficult to implement before 2020 – proved to be to a large extent successful. Indeed, a growing number of bank customers seized the opportunity of a larger amount of financial resources and the recognition that too many savings were uselessly eroding their purchasing power: the access of Belgian investors to financial markets – mostly equities – through the banking channel and trading platforms has probably been unprecedented in Belgian history. This is reflected in the evolution of the Belgian fund market in 2020 and Q1 2021, that shows the translation of this enthusiasm for asset management products in the growth of asset management.

**Figure 4. Evolution of the Belgian fund market 2011–2021**




Source: Febelfin, figures from BEAMA.

An interesting feature of Figure 4 is the distinction between fund flows (brown bars) and market value (blue line). The total outstanding value of funds under management indeed represents the sum of the net investment amounts and the so-called "market effect". When financial markets experience positive returns, the value of assets under management (AUM) and the associated management fees, which are proportional to the AUM, mechanically grow, without any commercial effort. This can prove to be important for risk management issues, as will be seen in the next section.

## 3. New equity risks and the necessary evolution of market risk management

### 3.1. Stock market vs. interest rate risks: contrasts in risk management maturity

Because intermediation is at the core of their activities, commercial banks – such as the quartet of those that dominate the Belgian market, *i.e.* BNPParibas Fortis, KBC, Belfius and ING Belgium – are at the same time well equipped and closely monitored regarding the management of the associated risks. Interest rate risk, in particular, is dealt with through very sophisticated asset & liabilities management (ALM) techniques, surrounded by a mature regulatory and supervisory environment, and framed with consistent accounting standards through the IFRS norms. The latter dimension is very important, because it sets the principles of how the financial statements are to be generated. In particular, it determines the rules under which hedging techniques are eligible in order to reduce the volatility of the Profit and Loss (P&L) statement. For interest rate risk, the principles of "hedge accounting" entail that a large perimeter of risk mitigation activities with financial instruments, mostly swaps, is eligible in order to neutralize the mark-to-market valuation of fixed income instruments, like loans, bonds or deposits. Consequently, banks are relatively flexible in order to design micro- or even macro-hedging strategies for the active management of valuation risk (impact of interest rates on the economic value of equity) or repricing risk (impact of interest rates on the net interest income). In short, the accounting rules are compatible with an economically viable management of market risk in the context of financial intermediation activities.

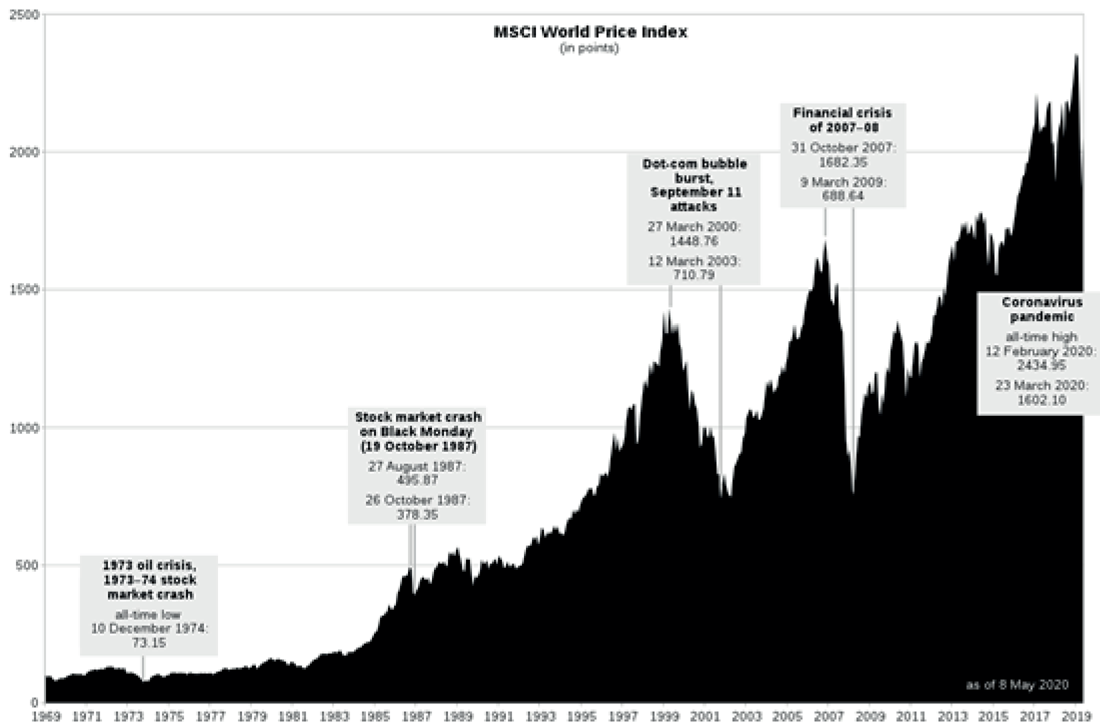
The story is completely different when stock market risk in involved. Hedge accounting does not apply in this context, because the key condition of a one-to-one association between the risk exposure and the corresponding hedge is almost impossible to meet. As a consequence, the largest part of the off-balance sheet activities of a bank, namely asset management and investment advice for assets held by customers, is essentially unhedgeable (in contrast with proprietary trading, for which risk management techniques are very developed).

This loophole in the accounting framework is not the only reason why banks have not (yet?) put a great accent in the market risk management of their off-balance sheet activities. The behavior of stock markets has also greatly contributed to this myopia. As a matter of fact, the equity market has been uninterruptedly bulling for 13 years, *i.e.* since the great financial crisis of 2008. Of course, there have been crises and crashes, sometimes very severe (2011, 2020), but they have been extremely limited in time, and the recovery of financial markets has been strong and fast every time.

Does equity risk matter nowadays for a bank? The answer is probably: it should! As banks derive a growing proportion of their income from asset management, especially relating to equity-linked products, this part of their profit essentially fluctuates in line with the stock market. Even if one considers a limited sensitivity of the sensitivity of their fees and commissions income to a stock index such as the Eurostoxx50, for instance, as much as 27.5% of their revenues are concerned. Assuming that asset management activities are responsible for 50% of this amount and a beta (sensitivity) of 0.5 of their AUM to a relevant stock benchmark, a stock market drop of 30% over one year (thus without recovery, unlike in 2020) would translate into 27.5% x 0.5 x 0.5 x 30% = 2% of their total income, with a multiplicative impact on their net income of course. Of course, for pure players (like private banks or asset management companies), the impact would be much more dramatic, because of their concentration on that type of income. Moreover, they would not benefit from the netting effect of the negative correlation between interest rates and stock returns: while universal banks could see (to some extent) their NIM increase with interest rates in the case of negative stock returns, asset management specialists would mostly face the downside of this scenario.

But this is only a first order effect, that could be easily hedgeable if accounting rules allow it – which is not the case yet. Behavioral finance tells us that the side effect of market movements on fund flows is far from negligible. Figure 4 tells us that the worst year in terms of net funds flows in Belgium over the last 10 years was during the sovereign crisis (2011). Looking at Figure 5 that shows the evolution of the world stock index over a very long period (1969–2020), this crisis is hardly noticeable. What is more striking, is that the last 50 years correspond to a clear bullish long cycle, with only two important bearish sub-cycles: the so-called burst of the dot-com bubble (2000–2003) and the period surrounding the global financial crisis (2007–2009). Thus no more than 3 years each. What would happen in the (non-negligible) situation of a bearish period that would last as least as long as those ones? What if we entered a longer period of negative market returns, leading investors to regret the 0.11% return that they would obtain on their savings accounts? What we now suspect is that: (i) this scenario is not seriously considered in most financial institutions; (ii) they have not put in place a risk management system that would deal with this scenario; and (iii) even if it were the case, the behavioral aspects that could reinforce the negative impact of depressed stock markets on the evolution of funds flows still need to be fully addressed at the micro (*i.e.* bank) level.

**Figure 5. Commented evolution of the MSCI World**




Source: Wikipedia

### 3.2. The ESG investment puzzle

Simultaneously with the ongoing efforts made by financial institutions in order to move money away from bank accounts, we currently witness a race towards ESG (Environment – Social – Governance) investment vehicles. Some asset managers have been proposing best-in-class funds for years, while others have only jumped on the train recently. While the principles of diversification would entail that investors should not restrict themselves to the sub-universe of ESG-compliant firms, the recent behavior of their associated market indexes has displayed a substantial outperformance that seems to justify the under-diversification. Figure 6 shows that since 2019, the European ESG index (in blue) has clearly beaten its all-shares counterpart (in red). Thus, idiosyncratic ESG risk has paid off. As a result of the convergence of qualitative (virtue) and quantitative (outperformance) arguments, the inflows to the subset of mutual funds and ETFs that have a sustainable focus have boomed.

**Figure 6. Joint evolution of the MSCI Europe (red) and MSCI ESG Europe (blue)**


Source: Morningstar

Collectively, our understanding in the financial properties of ESG investing is not yet very advanced however. Two main reasons explain this statement. Firstly, the rating criteria used in order to characterize the ESG performance of listed companies are numerous, heterogeneous, and sometimes inconsistent from one provider to the other. Secondly, and most importantly, it is still difficult to disentangle the two explanations of superior ESG returns: is it mostly because of the superior quality of firms that have successfully integrated sustainability criteria in their activities, or is it simply the outcome of the positive inflows of funds that has inflated the market valuation of these companies? This causality assessment is important because it will not only drive the profitability of ESG investing, but also the enthusiasm of investors and asset managers.

ESG investing is there to last, but in which form? Will a universal norm emerge to decide who is ESG or not, or is it going to remain a largely unreadable landscape? It is important to make sure that investors do not suspect that greenwashing would be pervasive. That could create an as strong divestment wave as the current investment wave is massive. Furthermore, is it better to focus on best-in-class firms and continue to feed their overvaluations, or will the market prefer to help the companies that lag behind and trigger a catching up effect, with an opposite picture as in Figure 6? Little is known about the potential reactions of investors to these sources of uncertainties. Again, understanding the behavior of retail investors when confronted with potentially dissonant evidence regarding the ESG choices that currently seem obvious is an important challenge for financial institutions. This is also an unresolved source of market risk, essentially not hedgeable, whose correct way of tackling it might lie in a diversification of the ESG sub-strategies (best-in-class, activism, transition-based investment) in the asset management products.

## 5. Concluding remarks

The purpose of this paper was to shed light on some market risk issues that may become relevant in the near future. The dimensions that we have discussed – stock market and ESG investment risks – might seem much less important for banks than the ones that currently stand on top of their agendas. This was precisely the intent. Thinking out of the box is sometimes useful for the people who are in the driving seat. Of course, sock markets may continue their positive path for many years without any more serious accidents that the ones we have seen in the last decade. Of course, the choices made to focus almost solely on ESG-best-in-class investments may create sustained value for investors as a continuation of the currently observed momentum. But, as unlikely as it can be, adverse scenarios might as well occur. It is important, from a risk-mindedness point of view, to adopt a holistic and proactive stance in anticipation of potential black swans. This is where researchers may also help.