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GOVERNANCE

The sustainability-linked loan – concept, development, outlook

ROLAND A. J. MEES

ESG

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DEAR READER,

Welcome to edition 56 of the Capco Institute Journal of Financial Transformation, produced in partnership with King's Business School and dedicated to the theme of ESG – environmental, social and governance.

We all recognize that transformation towards a green economic system via sustainable finance is needed, welcome and inevitable. Our clients have a crucial role to play here. Acknowledging the scope and complexity of the evolving ESG landscape, we are perfectly positioned to prepare them for the ESG era.

With climate change accelerating and generating physical events on an unprecedented scale, governments and societies are considering measures to mitigate carbon emissions via net zero initiatives. The focus is firmly on greater sustainability and more equitable policies in response to shifting public attitudes. ESG considerations are reshaping investment risks on the one hand, and opening the way for green financing and sustainable technologies and innovations on the other.

This edition of the Journal examines all three pillars – environmental, social, and governance, highlighting efforts by regulators and practitioners to create a unified approach.

Moving forward, compliance with emerging ESG standards will be a critical differentiator for long-term business success. Data will also play a critical role in delivering the transparency and insights required to validate the ESG credentials of businesses, and investment strategies. Advances in areas such as machine learning, artificial intelligence and cloud technologies will be key to establishing a future model of sustainable finance.

This edition draws upon the knowledge and experience of world-class experts from both industry and academia, covering a host of ESG topics and innovations including the value of tracking Return on Sustainability Investment (ROSI) and the importance of moving away from purely external risks to addressing issues that can have positive commercial and societal impacts.

I hope that that the research and analysis within this edition will prove valuable for you as you shape your own ESG strategies, policies, and innovation.

Thank you to all our contributors and thank you for reading.

Lance Levy, **Capco CEO**

THE SUSTAINABILITY-LINKED LOAN – CONCEPT, DEVELOPMENT, OUTLOOK

ROLAND A.J. MEES | Professor of Practice of Business Ethics, University of Groningen and Director of Sustainable Finance, ING Wholesale Banking

ABSTRACT

Since the introduction of the "sustainability-linked loan" (SLL) in April 2017, the market for this lending product has grown significantly. The SLL is a loan where the interest margin is linked to the sustainability achievements of the borrower. If the borrower improves its sustainability performance, the margin decreases, and vice versa. This article provides an overview of the features of the product, currently offered by over 500 banks worldwide, including real-life examples of SLLs. It highlights market developments (quality standards for SLLs, product diversification, and growth of the syndicated SLL market) and it discusses how the risks of greenwashing that come with this product can be mitigated. The risks of greenwashing are high, which means that the parties involved will have to make a greater effort to maintain the integrity of the SLL product. We conclude with some reflections on the kind of commitment by corporates and banks that is required for keeping up the integrity of the SLL, a type of loan that is intended to contribute to the goals of the Paris Agreement and the net zero targets that many companies and banks have stated in public.

1. THE SUSTAINABILITY-LINKED LOAN

In this section, we start with highlighting the commitments that banks have made to become net zero by 2050, and the implications this has for reducing their Scope 3 emissions. We describe the features of the SLL product as a concrete example of how banks can engage with their customers on reducing their greenhouse gas emissions and deliver on other sustainability goals. We then provide some real-life examples of SLLs that have been closed. Finally, economic aspects of the SLL are discussed.

1.1 Banks focus on reducing their Scope 3 emissions

On December 4, 2018, five international banks stated: "[…] we commit to measure the climate alignment of our lending portfolio, and to explore ways to progressively steer financial flows through our core lending towards the goals of the Paris Agreement" [ING (2018)]. The statement made at COP24 is known as the Katowice commitment by BBVA, BNP Paribas, ING, Société Générale, and Standard Chartered. Through this statement these banks commit to institutionally engaging their clients to take action to meet the target of "holding the increase in the global average temperature to well below 2 °C above preindustrial levels […], recognizing that this would significantly reduce the risks and impacts of climate change" [UNFCCC (2015), art. 2.1(a)]. At COP26, November 2021 in Glasgow, these banks joined the UNEPFI governed industry initiative to aligning their lending and investment portfolios with net zero emissions by 2050 [UNEPFI (2021)].

At first sight, banks have two options for sustainable strategies to live up to their commitments to mitigate climate change. The first option is that they limit their own environmental footprint, through reducing paper usage, limiting air and car travel, using climate neutral buildings, and buying electricity from renewable energy sources (Scope 1 and 2). The second option is that they somehow engage with their retail and

business clients with the aim of reducing their environmental footprint (Scope 3). As the greenhouse gas emissions of banks are mainly driven by their employees, and not by industrial processes, the first option ought to be implemented; however, its contribution to their Katowice or net zero commitment is of relatively minor significance. As greenhouse gas emissions assigned to banks consist of 95 percent Scope 3 emissions [Lloyd et al. (2022)], the Katowice and net zero commitments show that banks take seriously the moral obligation to do justice to future generations by going beyond their traditional role description and work on mitigating climate change not only within their own organization, but mainly through engaging their clients.

The ethical stance taken by the Katowice and net zero banks can be considered as deviating from classic economic theory. According to classic economic theory, a firm can be seen as a nexus of contracts among the parties that constitute a corporation [Boatright (2014), Jensen and Meckling (1976)]. Economic theory further assumes that markets function optimally when actors are motivated by self-interest without recourse to ethical motivations [Koslowski (2012)]. This means that the Katowice and net zero banks have committed to do the right thing, ethically speaking, and may face some difficulties with living up to their commitments from a strict economic point of view. In this article, we show how the "sustainability-linked loan" (SLL) could be considered a solution to engaging with corporate clients on their sustainability achievements, while remaining within the competitive level playing field of corporate banking.

1.2 The sustainability-linked loan product[1]

In April 2017, ING introduced a lending product that couples the interest rate on a loan to the corporate client's sustainability achievements [ING (2017), Philips (2017), Schoenmaker and Schramade (2019), Kim et al. (2022)]. Companies can use these loans for their corporate purposes in general, not just for environmentally friendly projects. When the borrower's sustainability performance improves, the interest rate decreases. On the other hand, when the borrower's sustainability performance deteriorates, it will pay more interest. Originally, ING named this loan "sustainability improvement loan", thereby emphasizing that the business client's commitment to do better on sustainability is most important [ING (2019)]. In the meantime, however, the loan market associations[2] have labeled this form of loan "sustainability-linked loan", which is the recognized name of the product in the financial markets since.

The SLL comes in two different forms that represent different ways of measuring the sustainability performance of the borrower. Firstly, the sustainability performance of the borrower can be assessed by an independent, specialized environmental, social, and governance (ESG) rating agency. Based on a questionnaire regarding, for example, the company's greenhouse gas emissions (E), the company's social practices (S) and the way in which it is managed (G), the agency produces a report with an overall sustainability score for the company. Typically, the sustainability score is a natural number between 1 and 100. The better the company performs on sustainability, the higher the score. By implementing sustainable policies – for example, reducing its water consumption or improving the health and safety of its employees – a company can improve its overall sustainability score. As mentioned above, the sustainability rating agency is independent, meaning that neither the company nor the bank can influence the final sustainability score; it is determined by the analyst working for the rating agency.

In the loan agreement between the borrower and the bank, reference is made to the improvement of the sustainability score by the company. First, the company acknowledges the sustainability score as representing the actual situation in the company regarding the status of its sustainable policies, actions, and results. Second, the company undertakes to inform the rating agency during the life of the loan about its sustainable policies, actions taken, and external recognition received – to the extent that this is reasonable and practicable. Third, within the clause that formulates the pricing of the loan, it is stated that if the company improves its sustainability score by x points (say from 60 to 70), then the interest rate will decrease by y percent (say from 1 percent to 0.95 percent). Conversely, if the sustainability score for whatever reason decreases by x points (from 60 to 50), the company will incur an increased interest rate of y percent (from 1 percent to 1.05 percent). Finally, to prevent a situation in which the company benefits from the lower interest rate just by disclosing a few of its policies to the rating agency, the bank insists that

[1] This section is in part based on Mees (2020, Ch. 8).
[2] Loan Market Association (LMA), Asia Pacific LMA and Loan Syndications, and Trading Association (LSTA)

the sustainability score cannot be older than six months at the time of signing the loan agreement. In other words, the sustainability-linked loan is there to incentivize concrete and ambitious sustainable actions taken by the business client, and not just the disclosure of documents to the rating agency.

Secondly, since the introduction of the SLL, businesses and banks have discovered that, for some companies, sustainability achievements can be approximated by focusing on key performance indicators (KPIs), such as greenhouse gas emissions, renewable energy, and water consumption, rather than the sustainability score by the rating agency. To find out which sustainability issues matter most to specific industry sectors, the Sustainability Accounting Standards Board (SASB) published its Materiality Map. The SASB table specifies, for example, that circular economy in the sense of achieving zero waste in production plants matters more to one industry sector, whereas employee health and safety matters more to another sector [SASB (2022)]. To understand materiality more specifically, the Global Reporting Initiative defines: "material are those topics that have a direct or indirect impact on an organization's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large" [GRI (2022)]. By combining this with the SASB "materiality map", it follows that companies in the real economy across all industry sectors typically deal with between seven and thirteen material sustainability issues, of which at least three are most material. In practice, therefore, banks and the borrower discuss the selection of the sustainability KPIs based on sources like SASB in combination with the borrower's own materiality matrix as disclosed in their annual or integrated report.

For the selected key performance indicators, quantitative goals beyond the term of the loan should be defined. In the loan agreement a table is included, which specifies the KPIs, the historical values that have been achieved prior to entering into the loan agreement, and the quantitative values per KPI that should be achieved in the years after signing the loan agreement. The annual check of which KPI has been met determines those KPIs that should be considered when calculating the discount or the premium on the interest margin. The structure of the discount and premium mechanism that relates to the interest margin depends on the number of KPIs chosen and the relative weight of the KPIs. For example, depending on the efforts required for achieving the goal, one KPI can have a higher weight relative to another KPI.

The most challenging aspect of arranging a SLL is that the goals per KPI should be ambitious and realistic at the same time. On the one hand, the bank needs to assess the level of ambition of their client per KPI and form an opinion on the following questions: will achieving the goal of this KPI in a significant way contribute to mitigating the material ESG issue that the KPI addresses? Or, does achieving the KPI require more from the borrower than just business as usual? In any case, committing to realize the KPIs must entail the real risk that the borrower may not achieve the goal. On the other hand, it is important that the company's management believes that they can achieve the goal and is motivated to exercise efforts to stretch the organization. If the goals to be achieved are too ambitious and the borrower fails to become motivated to go the extra mile, then the contribution ("impact") of that loan to, for example, the bank's net zero target may be negligible. From experience with structuring many SLLs, we can say that striking the balance between ambition and realism regarding the KPIs is the most challenging and interesting aspect of such a structuring role.

As in the case of the ESG rating agency, banks do not impose any additional administration on the borrower when structuring a SLL based on sustainability KPIs. The main requirement is that progress on meeting the KPIs is verified by the company's independent auditor. Increasingly, auditors take up the task of providing assurance on the borrower's non-financial data. They provide their audit either in the company's annual integrated report, or in a separate sustainability report. In most cases, progress on achieving the KPIs is measured annually along with the auditor's review cycle. However, a two-yearly review cycle would also be possible.

While syndicating the €1 billion revolving credit facility for Philips in 2017, the bank structuring the ESG features of the loan was named the "sustainability coordinator". It was acknowledged by parties involved that structuring the sustainability aspects of a loan, as described above, requires different competencies than the traditional roles in a bank syndicate like coordinator, book runner, documentation agent, and facility agent. Since then, it is primarily up to the borrower and the sustainability coordinator to prepare the proposal for the syndicate banks to link the interest margin on the loan to the ESG rating or the sustainability KPIs of the borrower. Because the link to the sustainability achievements of the borrower has a direct effect on the pricing of the loan, the syndicate's approval requires consent from all lenders.

The upshot so far is that providing SLLs to corporate customers can be considered in line with the Katowice or net zero commitment that banks have expressed following the Paris Agreement. As long as the most material ESG issues of the borrower are addressed and the KPIs are sufficiently ambitious, a contribution of a SLL to a bank's net zero target can be expected. However, below we will discuss the potential obstacles that need to be overcome to prevent the SLL becoming insignificant, that is preventing them from becoming prone to greenwashing.

1.3 Examples of SLLs

Barry Callebaut is one the largest cocoa grinders in the world. The company sources cocoa from Côte d'Ivoire and Ghana, the two largest producing countries. In November 2016, the program "Forever chocolate" was launched with the aim of embedding sustainability more strongly into the business. In line with its strategic commitment to sustainability, Barry Callebaut decided in June 2017 to link the interest margin of its €750 million corporate revolving credit facility to its ESG rating issued by Sustainalytics. The facility had a tenor of five years with two extension options (5+1+1 years). At the date of signing the loan agreement, the ESG rating of Barry Callebaut was 72. It was agreed that if the ESG score rose (fell) by five points, the margin dropped (increased) by five basis points [Tepla and Duke (2020)].

Johnson Controls International (JCI) is a global diversified technology and multi-industrial company, serving a wide range of customers in over 150 countries. The company creates intelligent buildings, efficient energy solutions, integrated infrastructure, and next generation transportation systems for smart cities and communities. In 2018, JCI released their ambitious global sustainability strategy for 2025. In December 2019, JCI coupled their U.S.$3 billion revolving credit facility to three KPIs: health and safety of its employees, improving the sustainability of their products and services, and reducing JCI's own operational climate footprint. The loan was provided by a syndicate of 18 international banks [JCI (2019)].

PUMA, the manufacturer of sporting goods and branded apparel, coupled the coupon on its €250 million Schuldschein to its "10for25" strategy [PUMA (2022)]. The KPIs that PUMA has chosen are related to renewable energy usage, sustainable sourcing of raw materials, water consumption, reducing plastic bags by their clients, and community engagement [Brown (2020)]. A lower coupon will be payable when the KPIs are met. Conversely, PUMA will pay a premium when the KPIs are not achieved. Starting with an original amount of €150 million, the Schuldschein was significantly oversubscribed and was settled at €250 million.

1.4 Economics of SLLs

The policy of providing sustainability-linked loans means that banks shift their priority towards increasing lending volumes with business clients who want to invest in sustainable business processes or have already done so. Correspondingly, banks will want to decrease their lending to clients who have no plans whatsoever for a sustainable course of action. As said, engaging with business clients on improving their sustainability achievements and facilitating this by providing loans linked to those sustainability achievements, serves the purpose of living up to the commitment of steering the bank's lending portfolio towards the goals of the Paris Agreement. The ESG rating or the sustainability KPIs approximate the sustainability achievements of the business client in a holistic way, which is instrumental for the sustainability-linked loan. The question then is: does providing these loans also make sense from an economic point of view? To answer this question, we will consider the point of view of the bank's shareholders, since the situation of the other stakeholders (i.e., retail and business clients, employees, and regulators) seems less complicated.

In 2014, the Basel III regulations came into force [CRD IV (2013)]. One of the main consequences of this regulation is that the connection between the risks a bank assumes in its lending operations and the return on their investment for the bank's shareholders has become tighter. The main difference with the traditional concept of return on equity (ROE), defined as net profit as a percentage of shareholders' equity, is that equity has been replaced by $c \times RWA$ for internal capital allocation purposes, whereby the constant c is chosen to be equal to the bank's core tier-1 ratio, and RWA stands for "risk weighted assets" – that is, the risk weighted exposure of the bank towards its lending customers. This leads to the following formula being used as the basis for defining ROE under Basel III: $ROE = result/capital = result/(c \times RWA)$. Through the ratio between result and risk, the return on the shareholders' capital is now directly related to the revenues banks receive for extending their services and the risks they incur in doing so.

We can now assess the consequences for shareholders of the bank's policy to increase its lending volumes with business clients working on reducing their greenhouse gas emissions and improving on sustainability in general. As the regulators indicate [Schotten et al. (2016)], a differentiation in risk profile is likely to emerge between carbon intensive companies that strive for a green future and companies that do not take the required greenhouse gas reduction measures in time. Assets of the latter group might need to be written off before their economic life ends, potentially causing an accelerated depreciation of the bank loans that finance the respective companies. Since regulators represent the public interest in the continuity of the financial system, banks will anticipate the change in risk profile of their clients and start migrating to clients with sustainable policies sooner rather than later.

The credit risk that banks run on business clients committed to mitigating climate change decreases. Since these clients anticipate a shortage of resources soon, they are likely to be among the companies that will survive the transition towards a low carbon economy, compared with companies that do not take any measures. Following the market's transparency, however, clients with a sustainable policy will demand lower interest rates in return for their lower risk profile, causing a corresponding reduction of the bank's revenues. In fact, the phenomenon of reduced revenues from effective sustainable companies has already been observed in the financial markets [Kim et al. (2014)]. The question, then, is: will the reduction in credit risk compensate sufficiently for the reduction in revenues, leaving the equilibrium between result and risk in place?

As explained above, the SLL is based on the assumption that a slight decrease in the interest rate (i.e., result) will be accompanied by a slight decrease in the probability of default for the portfolio of companies that do significantly better on sustainability. The decrease in probability of default, all other things equal, would then lead to a decrease in risk weighted assets (RWA). The overall return for the shareholders on their equity – that is, $ROE = result/(c \times RWA)$ – could then remain stable or increase. However, a slight decrease in ROE would also be possible. Regarding the impact of improved sustainability scores and KPIs on a company's probability of default, more empirical evidence is needed to reach more definitive conclusions. Consequently, for the other stakeholders (retail and business clients, employees, and regulators), the sustainability linked loan has positive implications, whereas this remains uncertain for the shareholders until empirical studies have been published.

2. DEVELOPMENTS IN THE MARKET SINCE 2017

Since the introduction of the sustainability improvement loan in 2017, three interdependent developments have taken place: loan market associations worldwide have started to issue principles and guidance to maintain the integrity and credibility of the SLL product; the feature of linking the sustainability achievements of corporates to the price of financial products that banks provide has proliferated beyond the market for bilateral and syndicated loans; and the volume of SLL transactions has grown to such an extent that the SLL has become mainstream in the syndicated loan market.

2.1 Loan market associations set standards for SLLs

Within two years of the first SLL, in March 2019, the Loan Market Association (LMA) adopted the so-called Sustainability Linked Loan Principles (SLLP). As the LMA states: "The goal of the SLLP is to promote the development and preserve the integrity of the sustainability linked loan product by providing guidelines which capture the fundamental characteristics of these loans. In doing so, the purpose of the SLLP is also to promote sustainable development more generally. The SLLP are voluntary recommended guidelines, to be applied by market participants on a deal-by-deal basis depending on the underlying characteristics of the transaction" [LMA (2019)]. The SLLP are meant to facilitate the borrower's achievement of ambitious, predetermined sustainability performance objectives. This means that companies are encouraged to make public their sustainability strategy against the background of their overall company strategy, and to report annually about the progress they are making.

These are the main principles of SLLs. First, the selection of the KPIs should represent the borrower's material ESG challenges. The KPIs should be core to the borrower's business, they should be measurable on a consistent methodological basis, and able to be benchmarked as much as possible using an external reference like, for example, SASB. Second, the quantitative targets per KPI should be ambitious – that is, beyond business as usual – where possible compared to a benchmark or an external reference and determined on a predefined timeline, set before the origination of the loan. The targets should be based on performance levels not older than six to twelve months. Third, borrowers should at least once per annum provide the lenders with up-to-date information on their performance regarding the targets per KPI. Finally, the SLLP prescribe independent and external verification of the borrower's performance level against the targets per KPI.

In May 2021, the global loan market associations released a revised version of the SLLP, which aligns with the Sustainability-Linked Bond Principles (SLBP) as published by the ICMA in June 2020 (see below). These new versions, which were again updated in March 2022, are a further improvement and strengthening of the principles underlying sustainability-linked financial products. In addition, the loan market associations issued separate papers with further guidance on the selection of material sustainability KPIs, setting appropriate ambition levels for the targets per KPI, and preventing greenwashing by not allowing a loan to be named SLL in case the KPI mechanism does not start at signing of the loan agreement, but only later when KPIs or the target values have been established (i.e., so called "sleeping SLLs").

To conclude, the loan market associations have followed the emergence of the SLL closely. They have played their institutional role in initiating and sustaining the SLLP on time, just before the market grew significantly in 2020 and beyond, doing their best to maintain the integrity of the SLL product.

2.2 The SLL mechanism extends to other financial products

As mentioned above, PUMA coupled the coupon on its Schuldschein to five sustainability KPIs (see Section 1.3 above). This turned out to be an obvious extension of the SLL, because a Schuldschein can be regarded a term loan, which is placed with investors and held until maturity. Regarding the sustainability-linked features there is hardly any difference between a syndicated SLL and a Schuldschein.

The first financial product that included the sustainability-linked feature outside the loan and Schuldschein market was the sustainability-linked bond (SLB). In September 2019, the first SLB was issued by ENEL, a leading Italian electricity company. The KPI to which the bond coupon is linked reads: "a percentage of installed renewable generation capacity equal to or greater than 55 percent of total consolidated installed capacity. To ensure the transparency of the results, the achievement of that target (as of 30 June 2019, the figure was already equal to 45.9 percent) will be certified by a specific assurance report issued by the auditor engaged for this purpose" [ENEL (2019)]. In June 2020, ICMA released the Sustainability-Linked Bond Principles (SLBP) [ICMA (2020)]. As with the SLLP, the SLBP emphasize the selection of material KPIs, setting ambitious targets per KPI, annual reporting by the bond issuer, and independent verification of the issuer's performance against the target values per KPI.

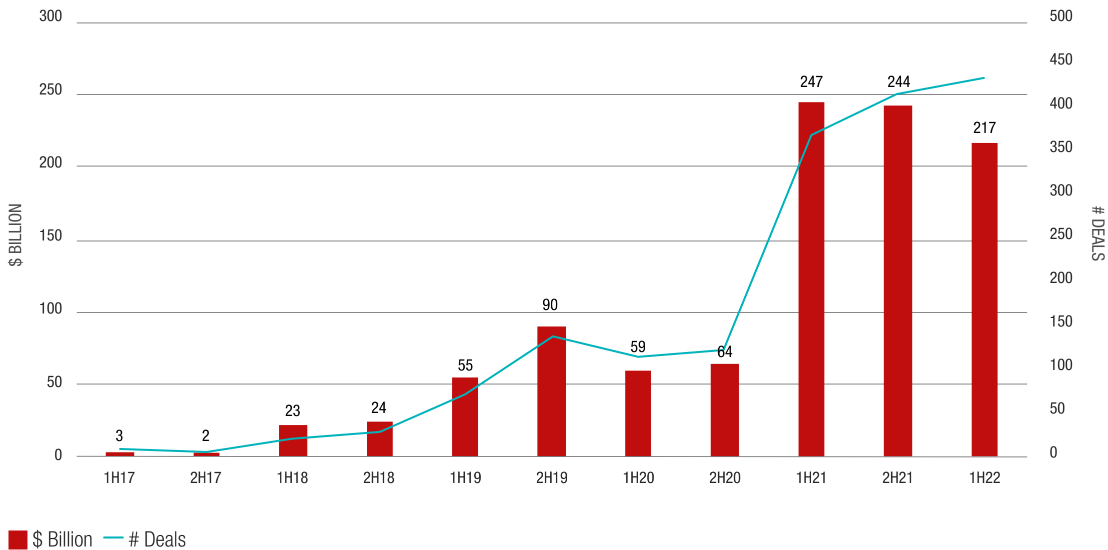
> *"Borrowers and lenders in the financial markets should share the responsibility for maintaining the integrity of sustainability-linked financial products."*

Two key differences between the SLBP and the Sustainability Linked Loan Principles (SLLP) should be noted. First, the SLBP state that "one or more KPIs" should be selected. The SLLP, on the other hand, do not mention any number, but only emphasize the importance of materiality of the KPIs and being at the core of the issuer's business. Second, both SLLP and SLBP "recommend" pre-signing external review of the KPIs and the targets by means of a "second party opinion" (SPO). However, based on our experience, the bond market seems to have implemented the practice of SPOs ex-ante much more carefully than the loan market. SPOs for syndicated loans are hardly applied.

In the meantime, the sustainability-linked derivative (SLD) has been implemented. In September 2021, ISDA has issued guidance regarding the SLD to market parties [ISDA (2021)]. SLDs create a sustainability-linked cash flow that is a component of, or relates to, a conventional derivatives instrument – for example, an interest rate or credit default swap – by using KPIs to monitor compliance with sustainability targets. Both KPIs and the corresponding pricing and cash flows can take several forms. For example, meeting a KPI can result in an increase or decrease in payments, payment of a rebate or fee, a margin, or spread amount. The same or different KPIs can apply to one or both parties to a derivatives transaction.

The most recent implementation of the sustainability-linked feature is in supply chain finance. Supply chain finance is a working capital instrument, through which a bank provides liquidity to the suppliers of a buyer by paying their invoices at a discount and allowing the buyer to pay later. Like the SLL, the rates offered to the suppliers can be linked to their sustainability achievements; for example, as approximated by an ESG rating.

Figure 1: Growth of the syndicated sustainability-linked loans market



Source: BloombergNEF

2.3 Linking syndicated loans to sustainability becomes mainstream

The impressive growth of the market for syndicated SLLs has been followed by market research firms. Bloomberg New Energy Finance (BNEF) reports a strong growth of syndicated sustainability-linked loans worldwide over the years 2017 to 2021 (Figure 1). Beginning in 2017, the global volume of SLLs that were provided by bank syndicates increased tenfold during 2018 to U.S.$47 billion, within the total market for sustainable debt, which grew by 30 percent to U.S.$315 billion in 2018 (BNEF). From there on, with a pause in 2020 due to the COVID-19 pandemic, global syndicated SLL volumes quadrupled to U.S.$491 billion, with total sustainable debt issuance reaching U.S.$1.6 trillion in 2021.

To put these figures in the context of the global syndicated loan market: global syndicated loans reached U.S.$5.3 trillion in 2018 [Dealogic (2019)], which means that sustainability-linked loans made up 0.9 percent of the entire syndicated loan market in 2018. However, the share of syndicated SLLs of the entire syndicated loan market (U.S.$5.6 trillion) grew to 8.8 percent in 2021 [Dealogic (2022)].

Given that the loan market associations provided a quality standard and the feature of linking the price of a financial product to the sustainability achievements of the issuer proliferated to bonds, derivatives, and supply chain finance, it is warranted to conclude that sustainability linked products have become mainstream in the financial markets. Moreover, according to ING analysis, in 2022 more than 500 banks worldwide are offering the SLL by means of participating in syndicated SLLs. The SLL has brought about change in the banking sector, i.e., change in the sense of integrating a tangible reward for acting to achieve the goals of the Paris Agreement and net zero commitments in the day-to-day practice of banking services to corporate customers.

3. OUTLOOK FOR SUSTAINABILITY-LINKED FINANCIAL PRODUCTS

The rise of the sustainability-linked feature in financial instruments has been followed closely by the media. More recently, both SLLs and SLBs have been criticized for allowing companies to greenwash their sustainability strategies. The E.U. considers greenwashing as "companies giving a false impression of their environmental impact or benefits. Greenwashing misleads market actors and does not give due advantage to those companies that are making the effort to green their products and activities. It ultimately leads to a less green economy" [E.U. (2020)]. Investopedia (2022) defines greenwashing as "an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly".

The principles and guidance that the loan market associations have issued (see Section 2.1 above) emphasize the importance of maintaining the integrity and credibility of the sustainability-linked loan and bond markets. This means that banks should withstand the pressure to greenwash their client's weak sustainability plans in the competitive, commercial struggle to win a mandate to structure a sustainability-linked loan or bond. It belongs to the fiduciary duty of banks to ensure that the money of deposit holders and investors is allocated to borrowers and issuers who truly live up to their sustainability commitments. Banks assess the credibility of these commitments. In this section, we will further lay out what it means for a SLL to be credible and how banks should maintain the integrity of this product.

3.1 SLLs address a company's material sustainability issues

To begin with, sustainable development is considered a comprehensive concept as formulated by the U.N. in the original report "Our common future" [WCED (1987)] and adopted at the Earth Summit in Rio de Janeiro (1992). Since then, sustainable development has been worked out in the U.N. Sustainable Development Goals (SDGs), which were adopted in 2015. Sustainability means that we cannot focus on one goal, for example, mitigating climate change, while neglecting other goals like, for example, famine relief. The U.N. 2030 Agenda for Sustainable Development is about realizing all 17 SDGs, not just a subset. The SDGs mutually depend on each other. To preserve the planet for future generations the full U.N. sustainable development agenda must be realized during this decade of action, 2020-2030.

Having said that, it should be noted that no private company can realize all the SDGs on its own. Some sustainability issues matter more to a business than others. For example, a company's business processes may be more related to clean water and sanitation (SDG 6), whereas another company's business processes could be strongly related to industry, innovation, and infrastructure (SDG 9).

Given the all-encompassing nature of sustainable development, the above means that a company's sustainability strategy can be called credible once it addresses the significant material sustainability issues that the company faces. Making our best effort to bring sustainable development further means that our strategies must tackle the material sustainability issues inherent to our business processes. We should do substantially more than solving the "easy" issues, or the ones that might not even be material. Consequently, when playing a significant role in a sustainability-linked loan transaction (e.g., as sustainability coordinator, documentation agent, or bookrunner), banks should promote tackling a minimum of three material sustainability issues with respective KPIs. Three KPIs is the minimum number of most material ESG issues that companies face across industry sectors. Where possible, and when the industry's materiality matrix so prescribes, more KPIs related to material sustainability issues should be added.

A recent example of an industrywide initiative to agree on the material sustainability issues for the sector is the Net Zero Steel Sector Strategy [NZSI (2022)]. Eight leading steel producers have agreed on a pathway that should lead to 50 percent greenhouse gas emission reduction by 2030 and net zero emissions by 2050, thereby keeping alive the 1.5 °C scenario of the Paris Agreement. The sector will, for example, increase the use of scrap steel, make investments now that are compatible with this strategy, increase the use of green hydrogen, and disrupt today's dominant technology (the blast furnace) to make it more sustainable.

3.2 SLLs incentivize achieving ambitious sustainability targets

Despite stronger efforts worldwide to act on the SDGs, concerns voiced by scientists that the affluent countries are not doing enough are becoming louder. The IPCC 6th Assessment Report [IPCC (2021)] expresses these concerns more explicitly than ever before. This means that, while we focus on the material sustainability issues of companies, an important question is: which sustainability targets can be considered ambitious? It is obvious that global business is crucially important to taking the SDGs further; governments and individual citizens cannot do this alone. All players in the world economy face the task of addressing climate change and realizing a sustainable economy that is resilient in the future. Thus, it is a must that all players in the economy take their responsibility to make a resilient economy happen.

Taking significant steps beyond business-as-usual means setting ambitious targets for tackling material sustainability issues by stretching oneself and the company. An ambition that does not entail the risk of failure cannot be considered a credible ambition. Being ambitious on material sustainability issues means that companies and their representatives do their utmost in good faith to execute all reasonable courses of action required to solve the issue.

However, for many of us, committing oneself to an ambition reveals another risk: self-certification or self-approval. The credibility of defining a sustainability strategy without external review may be questioned. To mitigate this risk in setting target levels for sustainability KPIs, the SLLP and SLBP strongly recommend referring to authoritative, independent sources of sustainability pathways like the Science-Based Target initiative [SBTi (2022)] or the Transition Pathway Initiative [TPI (2022)]. In addition, credibility is gained if one can show that if all businesses in the company's industry sector would set the same target, for example, as provided by the SBTi or the International Energy Agency [IEA (2022)], the entire sector would be in line with the goals of the Paris Agreement. These independent bodies set clear transition pathways for companies and form a solid basis for a sustainability-linked financing structure. Finally, in line with the SLLP and SLBP, companies and banks should let target levels for sustainability KPIs be verified by a reputable second party opinion (SPO) provider.

3.3 A credible sustainability strategy means acting now, not later

A recent report by the Cambridge Sustainability Commissions highlights the challenges of the behavioral change that is required for attaining the goals of the Paris Agreement [Newell et al. (2021)]. Significant steps are urgently required to make our food, transport, and energy habits more sustainable. We should see, for example, linearly decreasing greenhouse gas emission reduction pathways linked to an abatement curve and corresponding investment plan, or linearly increasing recycling rates for waste. Even better, we would like to see companies taking the most difficult actions first.

At the same time, we acknowledge that the financing calendar of companies may not always match with their strategic review timetable. The review of the company's sustainability strategy may fall in the middle of the tenor of the loan to be linked to the sustainability KPIs. Consequently, we understand that companies would like to include certain provisions in SLL documentation to enable them to include the sustainability KPIs more easily later. However, staying true to the SLLP, when structuring a SLL with KPIs that will be set after signing the loan agreement, a robust process should be in place to ensure the quality of the KPIs including agreement with the lenders. Only when the entire framework has been implemented in loan documentation and is activated, it can be communicated in public as a SLL.

3.4 A credible sustainability strategy is not about corporate philanthropy

Recently, we have seen a few SLL transactions where the discount and/or premium on the interest margin were donated to a charity. Banks should be reluctant to promote this practice for the following reasons.

First, a bank's business model by regulation is based on risk and reward, which means that low risks can be priced modestly, whereas higher risks require a higher price. Since it is becoming clearer every day that the sustainability domain and the credit risk domain are getting closer to each other, companies without a credible sustainability strategy mean a higher credit risk to lenders. This is emphasized by Standard & Poors who state: "ESG credit factors are those ESG factors that can materially influence the creditworthiness of a rated entity or issue and for which we have sufficient visibility and certainty to include in our credit rating analysis" [S&P (2021)]. Consequently, being asked to donate the premium to compensate for the higher credit risk is something we deem misaligned with the business model that banks operate. Lenders also do not do this when applying usual margin ratchets, commonly used in loan facilities. These are mechanisms whereby the initial margin is reduced as and when the borrower receives a better financial position.

Second, the charity mechanism leads to divergence of the loan market and the bond market, instead of aligning these markets around the sustainability-linked feature. The SLLP and SLBP do not mention the charity construct whatsoever. We, therefore, consider using charities in financial products confusing for the market parties involved.

Third, the reporting of these donations is not transparent. ING reports on its economic value generated and distributed from operations towards different stakeholder groups (suppliers, employees, shareholders, governments, and community) [ING (2020)]. The donations to charities, as we see them in a few deals, do not show up in financial reporting. In addition, drafting a separate report for these donations, like for the purpose of tax reporting, is cumbersome and does not contribute to making a sustainability impact.

4. CONCLUDING REFLECTIONS ON NET ZERO COMMITMENTS AND THE SLL

In this paper, we have reflected on a few recent developments in the sustainable finance market. As the architect and initiator of banking products that link the sustainability achievements of clients to the price of these products, we are concerned about the credibility of this market [ING (2021)]. Given the enormous growth of the market for sustainability-linked financial products and their potential for helping to make the real economy more sustainable, we want to be clear on where we stand on the risks of being satisfied with realizing too few, not very ambitious sustainability KPIs at some point in the distant future. In other words, the risk of the SLL slipping into insignificance because all parties greenwash each other, is simply high.

This means that while they are part of the competitive level playing field of winning mandates for SLLs in the commercial relationships to their clients, banks face a few "on-the-spot burdens" (see Section 3), which could lead to a deterioration of the credibility of SLL products [Mees (2020)]. The on-the-spot commercial pressure to give in to a proposal with too few, not very ambitious sustainability KPIs to be realized at some point in the distant future, can become a motivational roadblock, resulting in greenwashing. Because greenwashing does not lead to a green economy, such on-the-spot burden can hamper realizing the net zero goal the bank has committed to. In fact, greenwashing is increasingly hindering the achievement of banks' net zero commitments.

An important question is: which institutional policies, or which "ex-ante burdens" should we then accept to prevent the risk of using the SLL as a greenwashing tool? Which institutional commitments are strong enough to prevent bankers from allowing SLL to slip into an easy greenwashing exercise?

Since we have conceptualized a bank as a nexus of contracts (see Section 1.1), keeping up the integrity and credibility of the SLL may involve a renegotiation of these contracts with the stakeholders. For example, as we have seen in Section 1.4, the SLL may or may not be in the short-term interest of all the bank's stakeholders, in particular the shareholders. To reach a new equilibrium in the relationships with the stakeholders, banks will need to show a commitment to proceed with implementing their net zero commitment, which may be stronger than the commitment we have seen to be required for a sustainable strategy generally.

Very similar to Mario Draghi, the former president of the European Central Bank, in my view, a commitment is required from banks to achieve net zero "whatever it takes". A commitment of "whatever it takes" enables banks to overcome the commercial pressures to greenwash their clients' weak sustainability strategies, without losing the sensibilities to learn from one's mistakes and the ability to receive feedback from the market. The commitment of "whatever it takes" entails a particular meta-decision to overcome the motivational problems that one will come across when being faced with a greenwashing case. By taking the meta-decision to commit oneself to a net zero pathway, "whatever it takes" will enable bankers to overcome the heavy on-the-spot burdens when being confronted with greenwashing situations [Mees (2020)].

Borrowers and lenders in the financial markets should share the responsibility for maintaining the integrity of sustainability-linked financial products. Market parties should voluntarily do their best to preserve the integrity and credibility of sustainability-linked financial products; for example, in line with the goals of the Paris Agreement and their net zero commitments. Best efforts to be understood as doing one's utmost in good faith to execute all reasonable courses of action that are required to solve the issue. Sustainability-linked financial products are a tool that help companies to transition to a sustainable economy, by incentivizing them to act now on material, ambitious, and predefined sustainability performance objectives.

REFERENCES

BloombergNEF, 2022, 1H2022 sustainable finance market outlook

Boatright, J., 2014, Ethics in Finance, 3rd edition, Blackwell Publishing, Malden, USA.

Brown, S., 2020, "Puma raises 250m with ESG SSD issue," GlobalCapital, December 9, https://bit.ly/3fO22nn

CRD IV, 2013, Directive 2013/36/EU of the European Parliament and of the Council, June

Dealogic, 2019, https://bit.ly/3RTzaaK

Dealogic, 2022, Syndicated loans – full year 2021

ECB, 2012, https://bit.ly/3CoWB5U

ENEL, 2019, https://bit.ly/3Ck3e9F

E.U., 2020, "Initiative on green claims," https://bit.ly/3ROd2ys

GRI, 2022, Global Reporting Initiative, https://bit.ly/3T4g0jo

ICMA, 2020, "Sustainability-linked bond principles," International Capital Markets Association, https://bit.ly/3TqS4an

IEA, 2022, "Net-zero by 2050," International Energy Agency, https://bit.ly/3Eyog7h

ING, 2017, "ING and Philips collaborate on sustainable loan," https://bit.ly/3ypuiDm

ING, 2018, "ING talks climate in Katowice at COP24," https://bit.ly/3epLEsV

ING, 2019, "Sustainability improvement loans," https://bit.ly/3CsyXWy

ING, 2020, Annual report 2020, https://bit.ly/3Csywvo

ING, 2021, "The credibility of the sustainability-linked loan and bond markets," https://bit.ly/3CmZyUC

Investopedia, 2022, "Greenwashing," https://bit.ly/2Sa7SDe

IPCC, 2021, "Summary for policymakers," in Climate change 2021: the physical science basis, contribution of working group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.), Cambridge University Press, 3-32

ISDA, 2021, "Sustainability linked derivatives – KPI guidelines," September, https://bit.ly/3RP1jjj

JCI, 2019, Johnson Controls International, https://on.jci.com/3MhmwBk

Jensen, M., and W. Meckling, 1976, "Theory of the firm: managerial behaviour, agency costs and ownership structure," Journal of Financial Economics 3, 305-360

Kim, M., J. Surroca, and J. Tribó, 2014, "Impact of ethical behavior on syndicated loan rates," Journal of Banking and Finance 38, 122-144

Kim, S., N. Kumar, J. Lee, and J. Oh, 2022, "ESG Lending," ECGI working paper

Koslowski, P., 2012, The ethics of banking, Springer

Lloyd, S. M., M. Hadziosmanovic, K. Rahimi, and P. Bhatia, 2022, "Trends show companies are ready for Scope 3 reporting with US climate disclosure rule," World Resources Institute, https://bit.ly/3rJb7ko

LMA, 2019, "Sustainability linked loan principles," Loan Market Association

Mees, R., 2020, Sustainable action and motivation, pathways for individuals, institutions and humanity, Routledge, London

Newell, P., F. Daley, and M. Twena, 2021, "Changing our ways? Behaviour change and the climate crisis," Cambridge Sustainability Commissions, University of Sussex

NZSI, 2022, Net-Zero Steel Initiative, https://bit.ly/3SW7F1O

Philips, 2017, "Philips couples sustainability performance to interest rate of its new euro 1 billion revolving credit facility," press release, https://philips.to/3EwMoY8

PUMA, 2022, https://bit.ly/3Eynkjh

S&P, 2021, Standard and Poors, https://bit.ly/3Mh0Mpa

SASB, 2022, Materiality map, https://bit.ly/3Euq40X

Schoenmaker, D., and W. Schramade, 2019, The principles of sustainable finance, Oxford University Press

SBTi, 2022, Science Based Targets Initiative, https://bit.ly/2P0YhbW

Schotten, G., S. Van Ewijk, M. Regelink, D. Dicou, and J. Kakes, 2016, "Tijd voor transitie: Een verkenning van de overgang naar een klimaat neutrale economie," Occasional Study: de Nederlandsche Bank

Tepla, L., and L. Duke, 2020, "Does sustainability pay? Barry Callebaut's sustainability improvement loan," working paper, INSEAD, https://bit.ly/3fVAFrv

TPI, 2022, "Transition pathway initiative," https://bit.ly/3TaHTX0

UNEPFI, 2021, Net-zero banking alliance, https://bit.ly/3ErQK2D

UNFCCC, 2015, UN framework convention on climate change, Conference of the Parties, 21st session, Paris

WCED, 1987, Our common future, report of the World Commission on Environment and Development, Oxford University Press

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