IFRS 9 Classification Aspects – Measurement of Sustainability-Linked Loans at Amortised Cost or Fair Value

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ABSTRACT: Lending agreements may contain certain sustainability-linked features that can modify the contractual cash flows via the interest - shall the borrowers meet or fail to meet the objectives set by the loan agreement. IFRS 9 provides that in order to measure the financial assets at amortised cost, the primary objective of the business model in which the asset is held shall focus on the collection of the cash flows over the life of the asset and the contractual terms of the financial asset shall give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. In other words, the contract is a basic lending agreement. At the time of the IFRS 9 implementation, commercial banks sought to measure financial assets, when possible, at amortised cost as it is more predictable and stable compared to fair value measurement. The International Accounting Standards Board is willing to amend IFRS 9 in order to ensure the true and fair view of the financial statements in respect of lending agreements with sustainability-linked features since it appears that the current regulation of IFRS 9 would result in fair value measurement rather than measurement at amortised cost. The objective of this paper is to summarise the implications of sustainability-linked features from accounting point of view by presenting the requirements of IFRS 9 with regard to classification, the application of them and the current dilemmas.
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Introduction

In our rapidly changing economic environment, there is an ever more increasing emphasis on sustainability considerations effecting several different areas. Sustainability is one of the greatest challenges of the twenty-first century from many aspects. For companies it can be a source of opportunities as well as risks (Marx and Dyk, 2011).

The need to move in the direction of sustainability is no longer a question, since, according to scientists, immediate intervention is needed. Effective and early management of problems related to environmental protection is only one part of promoting sustainability, but change is clearly critical in this area. At the 27th COP conference held on November 20, 2022, UN Secretary-General António Guterres declared that much more drastic measures are needed against climate change, said that "We can and must win this battle for our lives". It can be seen that the ecological effects and risks, as well as the steps taken in connection with them, cover an increasingly large area, far beyond the immediate issues, and they increasingly anticipate the need for a long-term planning affecting all sectors with the common goal to protect our world for a long time. (Becsei et al., 2021). Along these lines, it is important to realize that money is not edible, so the financial world cannot survive without the existence of the known world, what is more, the financial world can contribute to the maintenance of the known world. (Szathmáry, 2023)

It can be observed that the European Union shifted its focus towards such topics in the last decade, as well as the United Nations by developing its 2030 Agenda for Sustainable Development Goals (Kaur and Lodhia, 2019). Based on the 2013/34/EU Regulation large corporates must disclose in their non-financial information how their operations are in line with environmentally sustainable activities for years now. In 2020 the European Union issued a sustainable finance taxonomy (Regulation 2020/852) on the establishment of a framework to facilitate sustainable investments. The objective was to emphasize that it is not sufficient to disclose information only on financial performance that relates to a rather condensed economic situation focusing on the past, but it is important to elaborate on sustainability challenges and actions to be taken that are indispensable for the longer-term operation of entities. Furthermore, the European Union issued the 2021/2178 Regulation on the presentation of information to be disclosed by certain scope of entities concerning environmentally sustainable economic activities. The reason was to facilitate extending scope of the entities in terms of such disclosures, where the three dimensions of sustainability as environmental, social and governance (ESG) aspects play a crucial role. The decisive question for the coming years and decades is how much emphasis will be placed on sustainability in the policies of governments, companies, and banks in order to maintain ecological balance.

Question also arises what motivating factors may have an impact on the decisions made for ecological sustainability, and to what extent do these factors directly or indirectly contribute to the competitiveness of companies. Entities will continue to be motivated by profit or at least to maintain economic stability but it is a question whether they are able to gain an economic competitive advantage with innovative solutions that minimize the burden on the environment, thereby also benefiting the community and society.

For more than two decades, researchers have been concerned about the motivational factors that drive sustainability (Harrison, Freeman (1999); Henriques, Sadorsky (1999); Drumwright (1994); Starik, Rands (1995); Banerjee et. al (2003); Cater et al. (2009)). The motives for sustainability can include the competitive advantage

that can be gained, the commitment of senior management, the public interest, the regulatory factor itself.

It is very important that a "soft" factor in regulation, a shift towards sustainability can also be facilitated via loan agreements since to achieve sustainability goals it is clear that there is a need for active involvement of the financial intermediary system (Matolcsy, 2022). It is also important to note that that climate change and other environmental problems can cause significant losses not only for ecological systems and society, but also for the economy and, through it, the financial system. (Deák, 2021). Not to mention that the traditional business described by neoclassical economists – "The business of business is business" (Friedman, 1970) - is less and less "sellable" in modern market economies, because it is important for consumers that the purchased product or service is sustainable and or responsible. (Szennay, 2020)

In the last few years there were several developments and a significant increase in the sustainable debt part of the financial market. Bloomberg reported that the total market of sustainable debt instruments exceeded USD 4 trillion until 2021, from which USD 1.6 trillion were issued only in 2021 (Bloomberg, 2022). Although from financial accounting perspective it is difficult to estimate the real magnitude of the sustainable finance market. This is because for now most of the regulators do not make it mandatory to present sustainable finance relevant information and data in the financial statements (Gilchrist et al., 2021).

Recognizing the need for funds for sustainability reforms, the financial sector has developed a number of sustainable debt instruments in order to promote companies' sustainability efforts (Hauptmann, 2017). Among the financing options, in addition to green bonds, green loans and sustainability loans have become the largest source of debt financing (Hauptmann, 2017). The common characteristic of green bonds and green loans is that the income shall be separated, and only environmentally and climate-friendly projects can be financed from them, while sustainability linked loans (SLL - Sustainability Linked Loan) can be used for general corporate purposes, where the loan pricing conditions are lined to ESG performance, so these loans are also called as ESG linked loans (Kim et al., 2023).According to the Loan Market Association (LMA), the Asia Pacific Loan Market Association (APLMA) and the Loan Syndication and Trading Association (LSTA) the definition of sustainability-linked loans is the following: *"Sustainability-linked loans are any types of loan instruments and/or contingent facilities (such as bonding lines, guarantee lines or letters of credit) which incentivise the borrower's achievement of ambitious, predetermined sustainability performance objectives. The borrower's sustainability performance is measured using predefined sustainability performance targets (SPTs), as measured by predefined key performance indicators (KPIs), which may comprise or include external ratings and/or equivalent metrics, and which measure improvements in the borrower's sustainability profile."* (Loan Market Association, Asia Pacific Loan Market Association, Loan Syndication and Trading Association, 2022)

As part of the strategy of the European Union, new loan agreements with sustainability-linked features (ESG features) appeared and are going to appear on the markets.

In recent years, ESG linked loans have become increasingly popular among companies with high environmental standards due to favourable financing conditions. The high financial incentive as well as the wide conceptual applicability suggests that these loans hold great potential for promoting sustainable business transformations. For companies with good sustainability practices, sustainability loans provide an opportunity to transform a successful sustainability strategy into financial benefits (Pohl et al., 2023).

Sustainability linked loans provide flexibility to borrowers and lenders. Borrowers are encouraged to fulfil predetermined sustainability requirements by tying the pricing conditions of the loan to the achievement of goals and performance indicators, i.e., they depend on the ESG performance of the borrower. Interest margins change (downward or upward) depending on whether the borrower is able to meet the sustainability metrics that were established at the time of the loan (Hauptmann, 2017) (Pohl et al., 2023).Banks with a well-founded ESG risk assessment offer reduced interest rates to borrowers if they meet sustainability targets or charge higher rates if they do not (Du et al., 2023). If the borrowers actually achieve the set goals, they consequently improve their ESG characteristics, which results in an actual reduction of ESG-related credit risks from the bank's point of view (Pohl et al., 2023).

The criterion of providing loans with sustainability-linked features is that the entities can contribute to sustainability goals through their activities, as presented above. According to several commercial banks in Europe these types of financial instruments with sustainability-linked features are becoming increasingly relevant within the normal course of business. As part of the basic lending market, commercial banks are about to integrate sustainability related risks into their risk framework (BBVA Group, 2022).

At the same time, banks and companies alike face challenges that can affect profitability and the lending environment. On one hand, banks must continuously ensure that sustainability metrics are incorporated into their lending practices, as sustainability-linked loans will become more and more dominant, which can have a significant impact on banks' profitability. Transparency is greatly distorted by the fact that loan agreements are bilateral agreements between borrowers and lenders, and as a result, data on loan spreads is only available for a certain part of the SLL market. It is also necessary to increase transparency regarding sustainability goals and interest rate adjustment mechanisms (Pohl et al., 2023).

Commercial banks that are preparing its financial statements in accordance with the International Financial Reporting Standards need to assess their sustainability-linked loan contracts considering the requirements of IFRS 9 financial instruments standard that provides guidance on the classification and measurement of financial assets but in the light of the rules and requirements of IFRS 9 it can be very challenging for the accounting professionals. The complexity of this topic is also proven by the fact that the International Accounting Standards Board (Board) and also the European Financial Reporting Advisory Group (EFRAG) have discussions about the classification and measurement requirements of IFRS 9 in respect of

sustainability-linked loans in order to ensure the true and fair view in the financial statements of the entities.

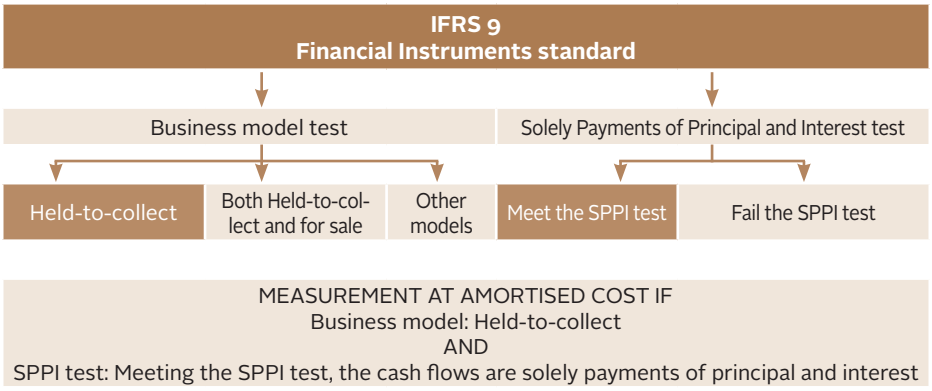
It seems that based on the exact wording of the rules of IFRS 9 commercial banks would have to measure sustainability-linked loans at fair value which would require additional resources and thus could result in a disadvantage for sustainable financing compared to conventional ones.

The Board received number of comments in the post implementation review project of IFRS 9 from experts and practitioners on the implications regarding the accounting treatment of sustainability-linked loans in the light of the current rules of IFRS 9. The Board decided to discuss this topic as an urgent matter and amend IFRS 9 if necessary.

Requirements of IFRS 9 in terms of classification of financial assets

According to IFRS 9 financial instruments standard, financial assets are measured at amortised cost if the underlying asset is held within a business model whose objective is to hold the financial assets and collect the contractual cash flows from the asset over the life of it and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding (IFRS9 4.1.2 (a,b), 2014). For the classification of the financial assets at initial recognition – that will determine the subsequent measurement method – IFRS users have to assess the contracts by using the business model and the SPPI test. In case of sustainability-linked loans, the business model test is expected to be less relevant than the SPPI test in terms of the potential classification outcome, especially if the sustainability-linked features have an impact on the interest rate.

1. Figure: Business model test and Solely Payments of Principal and Interest test



Source: Own editing according to IFRS 9

Business model test

In the business model test entities need to identify and assess the objective of the business model in which the asset is held. The assessment shall not be based on management's intention with an individual financial asset but at a higher level of aggregation (The KPMG International Standards Group, 2020).

IFRS 9 specifies three possible business models: "Held-to-collect", "Both held to collect and for sale" and "Other business models". In order to subsequently measure a financial asset at amortised cost the entity shall classify the asset as Held-to-collect, in other words the asset must comply with the provisions of the Held-to-collect business model. Financial assets in this model are held to realise the cash flows by collecting the payments of principal and interest over the life of the asset (Lakatos et al., 2018). Although the primary objective is to collect the cash flows, entities do not need to hold the assets classified as Held-to-collect until maturity per se. In certain cases, IFRS 9 allows entities to sell assets that are classified as Held-to-collect with reasonable explanations, for example due to an increase in the credit risk (The KPMG International Standards Group, 2020). In such cases, the sales event would not suggest that the original asset was wrongly classified in the underlying business model.

Business model test application for sustainability-linked loans

For the business model test, entities need to assess what is the intention of management with the agreements that contain sustainability-linked features. Since commercial banks' main activity is providing loans to customers (i.e., collecting cash flows from these loans) whereas in most of the cases not bearing any additional risks other than those arising from a basic lending agreement, normally loans are held in the Hold-to-collect model, where sale is highly unlikely.

In case if management's intention is simply the collection of the cash flows over the life of the financial asset, – according to the business model – the classification may result in amortised cost. However, in this respect the challenging part is the SPPI test. IFRS users argued that even though the model is Held-to-collect there is an increased focus on the result of the SPPI test. It is suggested that if a contract does not meet the criteria of a basic lending agreement according to IFRS 9, it does not really matter what management intends to do with it.

Solely Payments of Principal and Interest test (SPPI)

Entities can only measure financial assets at amortised cost if – the business model is Held-to-collect and – the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding (IFRS9 4.1.2 (a,b), 2014).

Considering the requirements – entities need to assess whether the cash flows of the sustainability-linked loans consist of only principal amount and interest, where

the principal is the fair value of the financial asset at initial recognition and the interest consists of:

- the time value of money,
- the credit risk associated with the principal amount outstanding during a particular period of time;
- the other basic lending risks;
- the costs,
- the profit margin (IFRS9 4.1.3 (a, b), 2014).

The above guidance may sound obvious, but the assessment of the interest element can be challenging. According to IFRS 9, interest cannot contain anything else but the five above mentioned elements in order the contract to meet the requirements of a basic lending agreement.

Solely Payments of Principal and Interest test application for sustainability-linked loans

Given the shift in regulatory focus towards sustainability it can be assumed that sustainable financing (e.g., sustainability-linked loans, green bonds etc.) is going to become the business-as-usual in the near future. Based on statistical analysis it seems that profitability at companies with management with a sustainability focus is not higher than at companies that ignore sustainability (Timár, 2021), and it is likely that in many cases a non-green project can be more profitable than a green project. Considering the basic principles of economics, commercial banks' aim is to provide loans from which deals they can expect a full return of the principal amount and the interest. Taking into account that it is likely that non-green projects are less profitable nowadays than green projects the risk of return is likely to be higher at commercial banks. Why would then commercial banks shift towards sustainability-linked financing?

Through the regulatory pressure sustainability-linked financing can be an effective motivational tool for the regulator to improve the companies' sustainability profile but this clearly requires the involvement of commercial banks into the process. One of the most effective motivational tools for achieving sustainability goals is if compliance with the requirements is linked to the lending agreement. At the moment it seems essential to the regulator to require commercial banks to cooperate but for the future it would be necessary to create a mutually beneficial structure since as stated above the need to focus on sustainability in every area is no longer a question for the future of the planet and mankind.

According to experts the cost of green sustainable financial assets and instruments should be reduced in order to be able to use them more widely and under much more favourable conditions (Horváth et al., 2022). Thus, within a few years, sustainable financing agreements might just be the regular way of financing, with no more potential discount in the margin when the borrowers meet certain pre-set targets. If that happens, non-green financing may face difficulties meeting

the SPPI test since non-green financing will ceased to be a basic lending agreement in the future (German Banking Industry Committee, 2022).

It is important to highlight that there is a difference from accounting classification and measurement point of view between green loans that finance green projects and sustainability-linked loans. In terms of the SPPI test it shall be assessed whether the principal or the interest of the loan are linked to sustainability features. In case of plain vanilla green loans, where the aim is to finance a green project and the principal and interest are not linked to any sustainability related features the below assessment is not relevant since they are going to meet the features of a basic lending agreement (if there are no other specific features in the contract) and thus those can be measured at amortised cost. In this part of the paper, we are focusing to those agreements where the principal and interest related terms of the lending agreement is linked to sustainability related features.

As described earlier above – according to IFRS 9 –, when assessing the SPPI test, interest can only consist of the time value of money, credit risk, other basic lending risks, certain costs and a reasonable profit margin. Based on previous assessments it appears that sustainability-linked features could be considered (IFRS Staff Paper, 2021):

- as part of the consideration for credit risk,
- as part of other basic lending risks,
- as part of the profit margin,
- or as a de minimis feature.

In the next sections an assessment will be provided whether sustainability-linked features can be considered as any possible element of the interest rate.

Consideration for credit risk

Assessing whether the changes in the cash flows due to ESG features are in line with the change in the credit risk of the underlying loan can be very challenging to support, mainly in case of shorter-term loans. One might argue that simply because sustainable operation may increase the credit worthiness and may have a beneficial effect on the going concern principle in a longer-term – there is no commensurate link with the credit risk itself (IFRS Staff Paper, 2021).

Commercial banks may be able to prove the link and correlation if they take the targets into consideration during the pricing mechanism and the monitoring of the credit risk of the asset. The connection may be underpinned if there is a link between the sustainability-linked feature and value of the corresponding collateral or between the sustainability-linked feature and the probability of default of the loan (EY, 2022). Indeed, policy makers and regulators are currently working on the introduction of sustainability aspects in the credit risk management processes and trying to integrate their legislative framework with ESG (Brogi et al., 2022).

Considering the above it can be concluded that there is no ultimate answer. In case of certain types of sustainability-linked features there may be a direct link

between the changes in the cash flows and the changes in credit risk, nevertheless it seems that in most cases it is more likely that only an indirect link can be supported by analysis which would result in a failure in the SPPI test.

Other basic lending risks

IFRS 9 provides that interest can consist of other basic lending risks – for example liquidity risk –, but it does not present an exhaustive list of what type of basic lending risks can be considered. Many IFRS adopters suggested to the Board to issue a statement that ESG features can be part of other basic lending risks to avoid fair value measurement. The IFRS adopters shall assess what the commercial bank is actually compensated for (IFRS Staff Paper, 2021). It shall be noted, that if the borrower can meet or fail to meet certain ESG targets, it does not automatically mean that there is a direct impact on the exposure to sustainability risks of the borrower (e.g., even if the borrower fails to meet the targets set by the loan agreement, the borrower can be able to perform and pay back the loan). It also needs to be considered how significant contractual cash flows might change as a result of meeting or failing the relevant targets. This is important given the higher the impact is compared to the total interest of the loan due to such potential features, the stronger the incentive becomes for the borrower to meet the targets. Such a construction might indicate a compensation for an exposure to a certain type of risk (EY, 2022). The compensation for ESG risks is often unlikely to meet the SPPI criterion (IFRS Staff Paper, 2021).

The question is – assuming that green financing might be the business-as-usual in the near future – could this compensation have created by the lender related to certain ESG targets considered as part of a basic lending risk? Where is the line between encouraging sustainability goals with lower interest rates and seeking for higher interest rate if the borrower fails to meet the targets? Similar questions and issues may arise in the absence of further guidance for IFRS adopters.

Consideration for profit margin

The Board did not provide clear guidance on what profit margin can consist of. IFRS 9 simply indicates that it should be a reasonable percentage. That profit margin is usually a fix and small spread that causes no variability in the contractual cash flows (IFRS Staff Paper, 2021). This is not the case considering ESG features. Contracts with such targets shall be revised periodically and the interest rate shall be adjusted from time-to-time. In this respect it can be debated that ESG features might be considered as part of the profit margin. According to IFRS 9, all features that would result in a variability in the contractual cash flows shall be analysed from SPPI point of view.

De minimis feature

IFRS 9 provides that a contractual cash flow characteristic does not affect the classification of a financial asset if it could only have a de minimis effect on the

cash flows (IFRS9 B4.1.18, 2014). The de minimis effect can be described as a feature where the insignificance of the feature is foreseeable without any calculation. For now, ESG features might be considered as de minimis thus currently there may no need to perform SPPI tests in respect of these features – based on experience of a commercial bank (Erste Group, 2022).

The de minimis effect approach however can be challenged considering how increased the focus is on sustainable financing, suggesting a meaningful objective behind it. Further, it can be argued that even if the impact is de minimis for now as professionals highlighted, sustainability-linked loan contracts will likely be the business-as-usual in the near future. This might suggest that the impact of the features is to be ceased to be de minimis.

Measurement implications

Potential implications of fair value measurement

In case of a conclusion according to which contracts with ESG features will fail the SPPI test, the underlying financial assets shall be measured at fair value through profit or loss, where the fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (IFRS13.9, 2017). Fair value remeasurement would occur periodically, in case of commercial banks mostly on a monthly basis.

The positive impact of fair value measurement in the financial sector was questioned many times in the past, beginning with the fact that using mark-to-market values brings more volatility into the financial statements of commercial banks (Palea, 2018). The researchers drew attention to that compared to historical cost accounting, fair value measurement resulted in a more unstable accounting system (Biondi et al., 2015).

IFRS adopters also debate that fair value measurement would provide useful information for the users of the financial statements. Fair value measurement could impair comparability of financial statements of different entities given that each commercial bank has its own fair value model with their own assumptions. It is important to highlight that in most cases the observable inputs for fair value measurement would be minimised if any and therefore the measurement would be based on unobservable factors only which increases the uncertainty in the value of the underlying contracts reflected by the financial statements. Although this might be partially compensated via appropriate disclosures on such unobservable inputs and sensitivity analysis as required by IFRS7.

Further, commercial banks need to use additional resources to be able to measure the fair value of such loans which could result in a disadvantage for sustainable financing compared to conventional ones. Financial institutions will likely argue that in order to support sustainable financing they should not be penalised by the volatile impact fair value measurement (Erste Group, 2022).

Potential implications on amortised cost measurement

Even if the Board will amend IFRS9 in order to sustainability-linked loans meet the SPPI test amortised cost measurement can also be challenging.

Financial assets can only be measured at amortised cost using the effective interest rate method if they are classified as held-to-collect in terms of the business model test and the contract meets the SPPI test.

According to IFRS 9 Appendix A – Defined terms, the amortised cost of a financial asset or financial liability is *the amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.*

To understand the amortised cost better, we also need to understand the so called effective interest rate method.

According to IFRS 9 Appendix A – Defined terms, the effective interest rate is *the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, an entity shall estimate the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but shall not consider the expected credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts.*

Based on the above definition the effective interest rate is practically the internal rate of return (IRR) of the contract that shall be determined at contract inception, but it does not mean that the effective interest rate cannot change during the life of the contract. In case of basic lending agreements without any special features like sustainability-linked targets, commercial banks negotiate fix or variable interest rates with clients where variable interest rates are tied to reference interest rates (e.g., EURIBOR, LIBOR etc.). In these cases, every time the reference interest rate changes the variable interest rate of the contract changes as well. For example, in case of a variable interest rate loan where the interest is set as 12-month EURIBOR + 2%, the nominal interest rate of the contract will be recalculated in every 12 months to reflect the market conditions.

IFRS9 B4.1.11 sets *that a variable interest rate that consists of consideration for the time value of money, the credit risk associated with the principal amount outstanding during a particular period of time (the consideration for credit risk may be determined at initial recognition only, and so may be fixed) and other basic lending risks and costs, as well as a profit margin is an example of contractual terms that result in contractual cash flows that are solely payments of principal and interest on the principal amount outstanding*. It means that a contract with variable interest rate can still meet the SPPI test if the variable interest rate only represents the five element of the interest according to IFRS 9.

In case of sustainability-linked loans the interest rate would change from period to period based on the assessment whether the client meet the sustainability-linked performance targets set by the lending agreement. It means that in every assessment period set by the lending agreement the commercial bank will recalculate the nominal interest rate of the contract as well as it recalculates the effective interest rate of it.

The below example illustrates the recalculation of the effective interest rate from period to period in case of a bullet loan where the principal amount is paid back at the end of the contractual term.

Contractual data:

Amount of the loan	100,000,000 HUF
Nominal interest rate	12-month BUBOR + 2%
Disbursement commission paid by the client (cash inflow from the bank's point of view)	300,000 HUF + 0.25% of the amount of the loan
Sales commission (cash outflow from the bank's point of view)	100,000 HUF
Contractual term	5 years

Amortised cost is calculated as the total of the cash outflows and cash inflows:

- Cash outflows: 100,000,000 HUF loan amount + 100,000 HUF Sales commission
- Cash inflows: 300,000 HUF + 250,000 (0.25%) disbursement commission

Amortised cost = 99,550,000 HUF

Date	Principal amount outstanding	12M BUBOR yield curve	Credit spread	Interest cash flow	Principal cash flow	Total cash flow	IFRS interest (with EIR)	Amortisation	Amortised cost
20x1.01.01	100 000 000				-99 550 000	-99 550 000			99 550 000
20x1.12.31	100 000 000	10,0%	2,0%	12 000 000		12 000 000	12 225 739	225 739	99 775 739
20x2.12.31	100 000 000	10,39%	2,0%	12 388 568		12 388 568	12 253 462	-135 106	99 640 632
20x3.12.31	100 000 000	10,27%	2,0%	12 265 423		12 265 423	12 236 869	-28 554	99 612 078
20x4.12.31	100 000 000	10,12%	2,0%	12 120 930		12 120 930	12 233 363	112 433	99 724 511
20x5.12.31	100 000 000	9,97%	2,0%	11 971 681	100 000 000	111 971 681	12 247 170	275 489	0

The effective interest rate of the example is calculated as the internal rate of return of the total cash flow of the contract and in the first period it will be 12.281%.

Due to the fact that the nominal interest rate in the contract will be recalculated annually, the amortised cost calculation table shall also be recalculated annually with the new 12M BUBOR yield curve. For the recalculation of the table, the first table's 20X1.12.31 amortised cost shall be equal to the following table's 20X1.12.31 amortised cost, but it can be observed, that the 12-month BUBOR yield curve has changed.

Date	Principal amount outstanding	3M BUBOR yield curve	Credit spread	Interest cash flow	Principal cash flow	Total cash flow	IFRS interest (with EIR)	Amortisation	Amortised cost
20x1.12.31	100 000 000				-99 775 739	-99 775 739			99 775 739
20x2.12.31	100 000 000	9,7%	2,0%	11 650 000		11 650 000	11 718 307	68 307	99 844 045
20x3.12.31	100 000 000	10,25%	2,0%	12 252 534		12 252 534	11 726 329	-526 205	99 317 841
20x4.12.31	100 000 000	9,40%	2,0%	11 398 416		11 398 416	11 664 528	266 112	99 583 953
20x5.12.31	100 000 000	9,28%	2,0%	11 279 735	100 000 000	111 279 735	11 695 782	416 047	0

The effective interest rate of the example is calculated as the internal rate of return of the total cash flow of the contract and in the second period it will be 11.745%.

Date	Principal amount outstanding	12M BUBOR yield curve	Credit spread	Interest cash flow	Principal cash flow	Total cash flow	IFRS interest (with EIR)	Amortisation (nominal interest – EIR)	Amortised cost
20x2.12.31	100 000 000				-99 844 045	-99 844 045			99 844 045
20x3.12.31	100 000 000	9,6%	2,0%	11 640 000		11 640 000	11 883 226	243 226	100 087 271
20x4.12.31	100 000 000	9,99%	2,0%	11 994 751		11 994 751	11 912 174	-82 577	100 004 694
20x5.12.31	100 000 000	9,91%	2,0%	11 907 040	100 000 000	111 907 040	11 902 346	-4 694	0

The effective interest rate of the example is calculated as the internal rate of return of the total cash flow of the contract and in the third period it will be 11.902%.

Date	Principal amount outstanding	12M BUBOR yield curve	Credit spread	Interest cash flow	Principal cash flow	Total cash flow	IFRS interest (with EIR)	Amortisation (nominal interest – EIR)	Amortised cost
20x3.12.31	100 000 000				-100 087 271	-100 087 271			100 087 271
20x4.12.31	100 000 000	9,6%	2,0%	11 640 000		11 640 000	11 766 315	126 315	100 213 587
20x5.12.31	100 000 000	9,99%	2,0%	11 994 751	100 000 000	111 994 751	11 781 165	-213 587	0

The effective interest rate of the example is calculated as the internal rate of return of the total cash flow of the contract and in the fourth period it will be 11.756%.

Date	Principal amount outstanding	12M BUBOR yield curve	Credit spread	Interest cash flow	Principal cash flow	Total cash flow	IFRS interest (with EIR)	Amortisation (nominal interest – EIR)	Amortised cost
20x4.12.31	100 000 000				-100 213 587	-100 213 587			100 213 587
20x5.12.31	100 000 000	9,6%	2,0%	11 640 000	100 000 000	111 640 000	11 426 413	-213 587	0

The effective interest rate of the example is calculated as the internal rate of return of the total cash flow of the contract and in the fifth period it will be 11.402%.

Based on the above illustrative example it can be observed that the recalculation of the effective interest rate and the IFRS interest is complicated, therefore it is support by IT solutions. In case if the variable interest rate is tied to a reference interest rate, IT solutions can handle the recalculation automatically by adding reference interest rate data.

The calculation however could be more complex in case of variable interest rates where the interest rate itself is not tied to any published reference interest rate but to an assessment whether the client meets the sustainability-linked targets in the contract and based on the assessment the nominal interest rate shall be recalculated according to conditions of the lending agreement that can vary widely.

Decision of the Board

The Board on its September 2022 meeting tentatively decided that there might be a need to amend IFRS 9 by the following clarification (IASB Update September, 2022):

a. "for contractual cash flows of a financial asset to be 'solely payments of principal and interest on the principal amount outstanding', a basic lending arrangement does not cause variability in cash flows arising from risks or factors that are unrelated to the borrower, even if such terms and conditions are common in the specific market in which the entity operates; and
b. a financial asset that includes contractual terms that change the timing and amount of the contractual cash flows would be consistent with 'a basic lending arrangement', if:
   - the contractual cash flows that could arise from any contingent events are solely payments of principal and interest in all circumstances (that is, the probability of a contingent event occurring is not considered);
   - the contingent event is specific to the borrower;
   - the timing and amount of any variability in contractual cash flows are determinable and specified in the contract; and
   - the contractual cash flows arising from the contingent event do not represent an investment in the borrower or exposure to the performance of any underlying assets."

It seems that the Board's intention is to amend IFRS 9 in order the sustainability-linked loans to meet the requirements of the SPPI test but the above tentatively decided amendment would not automatically mean that. Careful analysis would still be required whether the variability comes from risks and factors that are related to the borrower and it is still unclear what the Board means under "not considering the probability of occurrence of a contingent event". The Board also plans to issue illustrative example for the tentative amendment which example will may answer the users' questions related to the amendment.

Conclusion

Considering that commercial banks seek to measure financial assets, whenever it is feasible, at amortised cost and they are trying to avoid fair measurement, the commitment of commercial banks towards sustainable financing may be jeopardised in the light of the current regulation. Considering the classification provisions of IFRS 9 the question arises whether the sustainability-linked loan contracts meet the SPPI criterion or whether they are going to meet it after the possible amendment of IFRS 9. At the time of the development of IFRS 9, sustainability-linked loans were not so characteristic thus, it is uncertain what would have been the intention of the Board in applying IFRS 9 classification rules to these features. (IFRS Staff Paper, 2021).

The Board is discussing the matter with a high priority, and it is expected that the amendment will be adopted as soon as possible. For commercial banks this amendment is crucial since they would have an active role in improving the sustainability profile of companies via sustainability-linked loans.

In our opinion, sustainability-linked loans will affect the operation and the accounting practice of both banks and companies in the future. A transformation of the borrowing practice is expected, which will also affect accounting. It becomes inevitable to quantify sustainability performance and demonstrate its effectiveness, including:

- Recording performance indicators and performance numbers:
  The sustainability loans concluded with companies are unique and may differ from sector to sector and from company to company, so it is necessary to record which indicators and performance metrics are taken into account during the conclusion of the contract.
- Costs related to the sustainability loan and the resulting income:
  Companies must consider the costs associated with achieving sustainability goals and the revenues derived from them. SLLs usually include specific conditions and costs associated with achieving sustainability goals. The numerical statement of costs and revenues in accounting documents can further increase transparency, and effectiveness can also be easily measured.
- Interest payments:
  The interest rate of sustainability loans can change based on sustainability performance, which also has an influence on the result.
- Audit:
  Independent auditors must obtain assurance that companies are accounting for sustainability-linked loans correctly, thereby ensuring the true and fair view of the financial statements on both sides.
  According to the above it is crucial for commercial banks to assess the IFRS9 implications of sustainability-linked loans, set the pricing of the loans as well as covenants considering the classification and measurement results of the standard to avoid fair value measurement and in case of amortised cost the recalculation of the effective interest rate of contract could be automated as much as possible in order to avoid manualities in the process.

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