

Accounting Analysis for ESG-related Transactions and the Impact on Derivatives

This paper considers the growing trend of market participants entering into transactions linked to environmental, social and governance (ESG) factors to further promote sustainability goals. It aims to identify and illustrate how ESG factors impact accounting and reporting on embedded ESG features under US Generally Accepted Accounting Principles (US GAAP), and includes comparisons to International Financial Reporting Standards (IFRS).

As ESG features become more pervasive in the market, alternative approaches to assessing ESG features could be introduced under US GAAP to alleviate the operational burden on companies when entering into green transactions. At present, ISDA members believe the existing accounting frameworks, as they relate to ESG-linked transaction activity, do not provide decision-useful information to users of the financial statements.

The paper proposes that ESG-related issues are better covered through qualitative sustainability disclosures that many entities are already reporting on.

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BACKGROUND

Sustainable finance has developed at a tremendous pace over the past five years, supporting real economic change. Despite the challenging macroeconomic environment due to the COVID-19 pandemic, Bloomberg¹ reported that the sustainable finance market grew by 29% in 2020, hitting a new record of \$732 billion of sustainability-themed debt instruments issued during the year. Social bonds spearheaded the growth, jumping sevenfold to \$147.7 billion. Green bond issuance also reached a new high of \$305.3 billion, pushing cumulative green bond issuance since 2007 past \$1 trillion. The United Nations² has estimated that the annual funding gap to reach its Sustainable Development Goals is \$2.5 trillion per year.

In January 2021, ISDA published a paper (*Overview of ESG-related Derivatives Products and Transactions*³) that provides examples of recently issued sustainability-linked derivatives (SLDs). That paper is intended to help market participants understand the role of derivatives in sustainable finance.

The financial services sector will be an essential partner in providing funding and managing the risks associated with sustainable investments. Derivatives markets can play a key role in this process by enabling firms to manage project risk and interest rate and currency risk. The January 2021 paper outlines the range of product structures and transaction types that comprise the universe of ESG-related derivatives, including SLDs, ESG-related credit default swap indices, exchange-traded derivatives on listed ESG-related equity indices, emissions trading derivatives, renewable energy and renewable fuels derivatives, and catastrophe and weather derivatives.

Meanwhile, the Financial Accounting Standards Board (FASB) recently published an educational paper⁴ stating that ESG covers a broad range of topics well beyond those covered by financial accounting standards. The paper provides examples of how an entity may consider the direct or indirect effects of material environmental issues when applying current US GAAP.

However, the examples provided by the FASB are intended to be illustrative and do not cover embedded derivatives. While the examples focus on the intersection of environmental matters with financial accounting standards, the FASB observes that the effects of such matters on financial statements, if material, are considered in a similar manner to other changes in an entity's business and operating environment (such as shifting consumer preferences and technological or regulatory change). Furthermore, the FASB states that when an entity considers the effects of environmental issues on financial statements, it is required to calibrate facts and circumstances in the evaluation.

Measurable and verifiable key performance indicators (KPIs) on ESG goals are critical to fostering trust, growth and long-term confidence. Currently, ESG features are difficult to value due to a lack of observable information crucial to developing accounting principles to facilitate sustainability reporting. As stated in a new ISDA paper (*Sustainability-linked Derivatives: KPI Guidelines*⁵): "KPIs need to be accurately defined in order to have legal certainty over how they operate and impact cashflows and so they can be objectively verified. This will enhance the credibility of SLDs and the sustainability-linked market as a whole."

¹ https://assets.bbhub.io/company/sites/56/2021/04/Impact_Report_2020.pdf

² www.un.org/press/en/2019/dsgsm1340.doc.htm

³ www.isda.org/a/qRpTE/Overview-of-ESG-related-Derivatives-Products-and-Transactions.pdf

⁴ https://fasb.org/cs/BlobServer?blobkey=id&blobnocache=true&blobwhere=1175836268408&blobheader=application%2Fpdf&blobheadername2=Content-Length&blobheadername1=Content-Disposition&blobheadervalue2=333644&blobheadervalue1=filename%3DFASB_Staff_ESG_Educational_Paper_FINAL.pdf&blobcol=urldata&blobtable=MungoBlobs

⁵ *Sustainability-linked Derivatives: KPI Guidelines*, ISDA. The paper sets out proposed guidelines on KPIs for SLDs, with the objective of providing further information to market participants about this nascent market, developing best practices, promoting the safety and soundness of the market, and enhancing liquidity. See www.isda.org/2021/09/07/sustainability-linked-derivatives-kpi-guidelines

INTRODUCTION

Following the growth of transactions linked to ESG factors, ISDA members have been considering the accounting implications of introducing ESG features into loans and debt instruments, which may require bifurcation and derivatives accounting treatment.

This paper examines the issues under current US GAAP accounting guidance for ESG features. It also sets out a framework to assess potential alternative solutions to address issues related to bifurcation and derivatives accounting treatment.

A derivative is defined in the accounting guidance as a financial instrument or other contract with all of the following characteristics:

- An underlying variable (eg, interest rate risk or a commodity price, credit rating or foreign exchange (FX) rate);
- Requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that have similar responses to changes in the underlying; and
- The contract permits net settlement.

Derivatives are generally required to be accounted for at fair value with any changes in fair value recognized immediately in earnings, which may result in volatility in earnings. A derivative can either be a freestanding financial instrument (eg, an interest rate swap) or an embedded component within a host contract (eg, a feature within a loan that changes the timing or amount of cashflows similar to how freestanding derivatives do).

When a derivative is embedded within another financial instrument that is accounted for at amortized cost, the embedded feature needs to be assessed for bifurcation. Bifurcation means the embedded feature will need to be accounted for separately as a freestanding derivative. If the embedded feature meets the definition of a derivative and is not clearly and closely related to the host contract (as described in further detail in the Scope section), this embedded feature will require bifurcation.

Table A illustrates typical examples of embedded ESG features observed in the market to date, which this paper considers when analyzing the embedded features and alternative accounting treatments.

Table A: Embedded ESG Features

#	ESG Feature	Description
1	Reduction of interest for submitting and meeting certain sustainability metrics	The borrower enters into a revolving credit facility whereby the interest paid is equal to the floating base rate plus a credit margin. This can be reduced by 1-5 basis points (bp) if the borrower chooses to submit a sustainability rating and that rating meets certain improvement metrics. The sustainability rating is a metric of the borrower's operations of physical assets owned or managed by the company.
2	Increase or reduction in interest dependent on CO2 emissions and workplace injuries	The borrower enters into a revolving credit facility whereby the interest paid is equal to the floating base rate plus a margin that varies based on credit risk and ESG risk. The ESG risk is based on two variables: the company's CO2 emissions and workplace injury record. The company's performance against these two metrics can cause the margin charged to either decrease or increase by 5bp for a total range of potential variance from the base case (zero) of 10bp. Both the CO2 emissions and workplace injury record are metrics of the borrower's operation of physical assets owned by the company.
3	Increase or reduction of interest based on the company's sustainability rating against predetermined metrics	The borrower enters into a revolving credit facility whereby the interest or unused commitment fees paid can be reduced or increased by either 2.5bp or 5bp, depending on the company's sustainability rating score against a set of predetermined metrics. The sustainability rating is a metric of the borrower's operation of physical assets owned or managed by the company and is an overall score in respect of ESG factors, as calculated and assigned to the company from time to time by a third party.

SCOPE

Under US GAAP, any feature within a contract that could impact the timing or amount of cashflows needs to be assessed as an embedded derivative that may require bifurcation. According to Topic 815, Derivatives and Hedging, and specifically Accounting Standards Codification (ASC) 815-15-25-1, an embedded derivative requires bifurcation and is accounted for as a derivative if all three of the following criteria are met:

- 1) The economic characteristics and risks of the embedded derivative are not clearly and closely related to the economic characteristics and risks of the host contract;
- 2) The hybrid instrument is not remeasured at fair value under otherwise applicable US GAAP with changes in fair value reported in earnings as they occur; and
- 3) A separate instrument with the same terms as the embedded derivative would be considered a derivatives instrument subject to derivatives accounting (the initial net investment for the hybrid instrument should not be considered the initial net investment for the embedded derivative).

Generally, contracts with ESG features may meet criteria 1, as an ESG component similar to the examples in Table A may be deemed not clearly and closely related to the characteristics of a debt host contract, which are considered to be interest rate risk or the borrower's creditworthiness.

However, ISDA's members believe some ESG features could be related to the borrower's creditworthiness. Failure to meet ESG requirements could impact a company's creditworthiness from the perspective of its investors, lenders and vendors, which increasingly consider companies' progress on sustainability goals. There is interpretative complexity in determining whether each ESG feature will meet the clearly and closely related criteria. This complexity in accounting assessments could lead to diversity in practice, which is one of the reasons why a scope exception for ESG features should be provided.

Contracts with ESG features may meet criteria 2 if the debt host is accounted for at amortized cost or as available for sale, unless the fair value option is elected under Topic 825, Financial Instruments. Similarly, criteria 3 may be met given many ESG features would be considered derivatives as standalone instruments, given they could be settled net through a one-way transfer of cash via an adjustment to the required interest under the debt arrangement.

Notwithstanding that the three criteria may be met, Topic 815 provides a few scope exceptions to derivatives accounting that companies may consider when analyzing embedded features to determine if they meet criteria 3. Two scope exceptions pursuant to 815-10-15-59 that are commonly considered are for non-exchange-traded contracts with underlyings based on the following:

- A climatic or geological variable or other physical variable (such as number of inches of rainfall or snow in a particular area and the severity of an earthquake as measured by the Richter scale); or
- Specified volumes of sales or service revenues of one of the parties to the contract.

ESG features generally do not meet the first scope exception because the trigger events in the contract that result in a change in the amount of cashflows may not relate to a climatic, geological or other physical variable (eg, meeting specific environmental metrics, such as a company's CO2 emissions, is not considered a climatic, geological or other physical variable).

The second scope exception is generally not met. While many ESG features may not be revenue based, some executives are measured and compensated on their ability to meet certain targets. However, because the ESG features are not specifically related to revenue or a revenue-like metric, the scope exception is not met. As a result, ESG features generally will be required to be bifurcated and accounted for at fair value separately from the host contract.

Additional accounting and operational challenges are introduced once it is determined an ESG feature requires bifurcation. Principally, ESG features are currently difficult to value due to a lack of observable information that will determine the timing and magnitude of the impact on cashflows.

In most cases, due to the level of estimation and assumptions that are required, the valuation⁶ may not result in decision-useful information for users of financial statements. In practice, many entities view these features as having de minimis or immaterial value today, and therefore do not recognize the embedded derivative at fair value with changes in fair value through earnings. Consequently, the operational burden of analyzing, bifurcating and valuing these features does not result in useful information to the issuers or users of financial statements.

⁶ *Sustainability-linked Derivatives: KPI Guidelines*, ISDA. The paper states that “the KPI methodology calculation should be included in full in the documentation and, where relevant, expressed as an equation or formula rather than a description of how it operates”. See www.isda.org/2021/09/07/sustainability-linked-derivatives-kpi-guidelines

ALTERNATIVE ACCOUNTING MODELS

When considering potential solutions to the challenges of bifurcating ESG features from contracts, there are some key principles that can help assess their acceptability. These include:

- The solution obviates the need to require bifurcation with a focus on ESG underlyings that are specific to an entity;
- The solution will not change existing accounting under US GAAP guidelines for other types of instruments or embedded features; and
- The solution is sufficiently specific so it can be applied in practice.

This paper explores two potential solutions that could be considered, based on these key principles:

- The IFRS 9 model; and
- Expansion of revenue scope exception.

IFRS 9 Model

One approach is to introduce guidance similar to that existing under IFRS 9. As noted in IFRS 9.BA.5, the definition of a derivative refers to non-financial variables that are not specific to a party to the contract. These include an index of earthquake losses in a particular region and an index of temperatures in a particular city. Non-financial variables specific to a party to the contract include the occurrence of a fire that damages or destroys an asset of a party to the contract.

A change in the fair value of a non-financial asset is specific to the owner if the fair value reflects not only changes in market prices for such assets (a financial variable) but also the condition of the specific non-financial asset held (a non-financial variable).

As such, non-financial variables that are specific to a party to the contract would not be considered derivatives instruments (or embedded derivatives instruments that require bifurcation) under IFRS 9. In short, this exception is intended to exclude insurance contracts from the scope of IFRS 9, but it can also apply to other contracts as there is no consensus on what exactly a non-financial variable is. For example, financial indicators of an entity's performance may be considered non-financial variables specific to a party to the contract.

ESG triggers, as illustrated in the three examples in Table A, generally represent non-financial variables that are specific to either party to the contract and therefore do not meet the definition of a derivative and would not be bifurcated under IFRS 9 for financial liabilities.

It is important to note that, under IFRS 9, the solely-payments-of-principal-and-interest (SPPI) test needs to be assessed for financial assets to determine if the instrument can be accounted for at amortized cost or fair value through other comprehensive income. If the cashflows are determined not to be solely payments of principal and interest, then the entire instrument, including the embedded ESG feature, would be accounted for at fair value through profit and loss. However, this test does not exist under US GAAP, and loans and debt instruments can be accounted for at amortized cost for both lenders and borrowers (or as available for sale for lenders), which would then need to assess for embedded derivatives.

ISDA members do not believe the SPPI test should be introduced into US GAAP, as Topic 815 provides specific scope exceptions for embedded features when considering if they are clearly and closely related to the host instrument. Instead, ISDA proposes including elements of the IFRS definition of a derivative – in particular, the exclusion of non-financial variables – as a scope exception in US GAAP.

Assuming this definition of a derivative and, in particular, the exception for non-financial variables applies to both the lenders and borrowers under US GAAP, it would greatly reduce the number of ESG features that would require bifurcation and alleviate the operational burden of bifurcating and valuing these features separately as derivatives. Furthermore, this solution would be sufficiently specific so it could be applied in practice, and would support an overarching goal to converge IFRS and US GAAP where possible.

Incorporating the IFRS 9 model, which broadly defines what types of features would be considered embedded derivatives, into US GAAP as a new scope exception would be in addition to existing scope exceptions within ASC 815. Topic 815 explicitly lists scope exceptions from derivatives accounting in ASC 815-10-15-13. For example, under US GAAP, there are already scope exceptions for insurance contracts under 815-10-15-52 – many of these contracts would also have non-financial underlyings that are specific to an entity. This paper proposes including a statement within ASC 815 specifying that this model only applies to features that do not already qualify for other scope exceptions under ASC 815.

ISDA's members do not believe replacing ASC 815-10-15-59(d) with the IFRS model would impact most existing bifurcated derivatives. As illustrated in the Appendix, several examples have been analyzed under the IFRS 9 model and the current US GAAP scope exception in ASC 815-10-15-59(d). In each instance, the accounting treatment is consistent.

Expansion of Revenue Scope Exception

An alternative approach would be to expand the revenue scope exception under ASC 815 to include ESG features. Under US GAAP, there is a scope exception from derivatives accounting for non-exchange-traded contracts with underlyings based on specified volumes of sales or services rendered of one of the parties (ASC 815-10-15-59(d) states underlyings based on “specified volumes of sales or service revenues of one of the parties to the contract”).

This scope exception applies to contracts with settlements based on the volume of items sold or services rendered (eg, royalty agreements). It does not apply to contracts based on changes in sales or revenues due to changes in market prices.

In order to incorporate ESG features into this scope exception, it could be added that “contracts with underlyings based on environmental or sustainability factors that impact the company's operations and/or profit and loss would be considered related to the specific volumes or sales or service revenues of one of the parties to the contract”. For the avoidance of doubt, other features with non-ESG-related underlyings that impact the profit and loss of the company would still be required to be analyzed and bifurcated consistent with existing US GAAP.

In order to implement such a scope exception and make it operable, the criteria for defining an ESG feature needs to be sufficiently precise. The criteria should not scope out existing features that should be bifurcated and accounted for as derivatives, while also alleviating the burden of companies spending time and resources analyzing and accounting for most ESG features as is required today.

An ESG feature could be defined as a contractual provision that can affect the contractual cashflows of a financial instrument where the criterion (or criteria) triggering a change(s) in cashflows is the attainment of (or failure to attain) a goal(s) that is purported by the contract, context or marketing materials to benefit one of the parties to the contract, or society at large, in respect of ESG objectives.

As with the IFRS 9 model, this approach would result in fewer bifurcations of ESG features. The solution would not change the accounting under existing GAAP for other types of instruments or embedded features. However, this might be viewed as not sufficiently specific to apply in practice. For example, there is diversity in how the existing own-revenue scope exception is applied today, with some expanding the scope exception to include all profitability metrics. Diversity could exist in the future on how an ESG feature is identified.

When this scope exception is applied to the three examples in Table A, each feature would be determined out of scope of Topic 815.

- 1) This feature requires the company to submit its own sustainability report and compare against pre-determined metrics. This feature would be out of scope of Topic 815 as it is specific to the borrower and directly related to environmental sustainability metrics.
- 2) This feature contains two metrics. One is based on the CO2 emissions emitted by the borrower. The second is based on workplace injuries reported during the period. As both features are specific to the entity and directly related to environmental sustainability metrics or social and governance metrics, respectively, they would be out of scope of Topic 815.
- 3) Similar to the first feature, this ESG component would be out of scope of Topic 815 because it is linked to the company's sustainability rating and how it compares to predetermined ratings.

CONCLUSION

This paper aims to identify and illustrate how financial transactions linked to ESG features impact accounting and reporting under US GAAP.

As ESG features become more pervasive in the market, alternative approaches to assessing these components could be introduced to alleviate the operational burden on companies when entering ESG-related transactions. Existing accounting under US GAAP creates a burden for issuers to identify, analyze and value the ESG features.

Due to the level of estimation and assumptions required to assign a value to an ESG feature, the outcome may not provide decision-useful information to users of financial statements. Instead, this paper proposes these issues are better covered through qualitative sustainability disclosures that many entities already provide.

APPENDIX: EXAMPLES OF THE IFRS MODEL

The relevant fundamental difference in the IFRS definition of a derivative is that IFRS excludes instruments with a non-financial underlying variable that is specific to a party to the contract. The corresponding provision in US GAAP, ASC 815-10-15-59(d), which refers to “specified volumes of sales or service revenues of one of the parties to the contract”, is more limited.

To illustrate how incorporating the IFRS 9 model for identifying embedded derivatives into US GAAP guidance would not have unintended consequences, an analysis was performed on five examples of features under IFRS and existing US GAAP. The analysis includes ISDA’s view on whether these would meet the IFRS definition of a derivative, particularly when they are non-financial variables.

- 1) Entity A produces oil and enters into physically-settled oil sale contracts. In order to enhance some capital expenditures related to oil production, Entity A receives funding from Bank B in the form of a loan. The loan principal is repayable in seven years and is subject to a variable interest rate. The variable rate – specifically, the spread above the benchmark – may be adjusted downward to the extent Entity A meets sales targets set by Bank B at the inception of the loan.
 - a) The underlying is based on a non-financial variable (ie, sales) of the borrower (specific to one of the parties to the contract). No embedded derivative under IFRS.
 - b) There would be no difference in accounting under existing US GAAP. This feature would meet the scope exception in ASC 815-10-15-59(d) as it is a non-exchange-traded contract and the underlying is based on a specified sales volume of a party to the contract.
- 2) Entity A owns investment properties that earn rental income. The loan principal is repayable in seven years and is subject to a fixed interest rate. In addition to interest, the loan entitles Bank B to a share of Entity A’s rental income in each period.
 - a) The underlying is based on a non-financial variable (ie, rental income) of the borrower (specific to one of the parties to the contract). No embedded derivative under IFRS.
 - b) There would be no difference in accounting under existing US GAAP. This feature would meet the scope exception in ASC 815-10-15-59(d) as it is a non-exchange-traded contract and the underlying is based on a specified sales volume of a party to the contract.
- 3) Same as 2), but the loan entitles the holder to a percentage of earnings before interest, taxes, depreciation and amortization of Entity A in each period.
 - a) The underlying is based on a non-financial variable (ie, rental income) of the borrower (specific to one of the parties to the contract). No embedded derivative under IFRS.
 - b) There would be no difference in accounting under existing US GAAP. This feature would meet the scope exception in ASC 815-10-15-59(d) as it is a non-exchange-traded contract and the underlying is based on a specified sales volume of a party to the contract.

- 4) Government A issues a bond subject to a variable interest rate that varies proportionately based on the increase/decrease in gross domestic product (GDP).
 - a) The underlying is based on a non-financial variable (ie, GDP) of the borrower (specific to one of the parties to the contract). No embedded derivative under IFRS.
 - b) There would be no difference in accounting under existing US GAAP. This feature would meet the scope exception in ASC 815-10-15-59(d) as it is a non-exchange-traded contract and the underlying is based on a specified sales volume of a party to the contract.
- 5) Entity A enters into an FX swap with Entity B to exchange an amount of foreign currency determined by the sales volume of Entity B at a fixed exchange rate at a future date.
 - a) Dual underlyings: sales volume (non-financial variable specific to one of the parties to the contract) but also FX (financial variable). Contract is a derivative under IFRS.
 - b) In this example, this instrument would also require derivatives accounting under US GAAP as the swap has notional, underlying (FX rates), no initial net investment and is net settleable. This instrument also does not meet any of the scope exceptions under US GAAP.

DISCLAIMER

This paper is intended for general information only and is not expected to be and should not be relied upon as being legal, financial, investment, tax, regulatory business or other professional advice. ISDA does not represent or warrant that the report is accurate, suitable or complete and none of ISDA, or its respective employees, shall have any liability arising from, or relating to, the use of this paper or its contents.

ISDA has published a variety of other papers on ESG-related topics, including

Sustainability-linked Derivatives: KPI Guidelines

www.isda.org/2021/09/07/sustainability-linked-derivatives-kpi-guidelines

Implications of the FRTB for Carbon Certificates:

www.isda.org/a/i6MgE/Implications-of-the-FRTB-for-Carbon-Certificates.pdf

Financing a US Transition to a Sustainable Low-Carbon Economy

www.isda.org/a/qXITE/Financing-a-US-Transition-to-a-Sustainable-Low-carbon-Economy.pdf

Overview of ESG-related Derivatives Products and Transactions

www.isda.org/a/qRpTE/Overview-of-ESG-related-Derivatives-Products-and-Transactions.pdf

Derivatives in Sustainable Finance: Enabling the Green Transition

www.isda.org/a/KOmTE/Derivatives-in-Sustainable-Finance.pdf

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Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 960 member institutions from 78 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In

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