Carbon Credits

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As concerns about climate change grow, governments and regulators are looking for ways to incentivise corporates to reduce greenhouse gas emissions and mitigate their impact on the environment in a responsible and sustainable way. One approach that has gained popularity in recent years is the use of carbon credits.

Carbon credits represent a way to control and offset greenhouse gas emissions or other pollution by incentivising polluters to invest in projects, processes or activities that reduce emissions. Carbon credits allow the owner of the credit to emit a certain amount of carbon dioxide or other greenhouse gases. In a typical approach, companies that pollute are awarded credits that allow them to continue to pollute up to a certain limit, which limit is reduced periodically. The company is allowed to sell unneeded credits to others that need them. Companies must either spend money on extra credits if their emissions exceed the cap, or can make money by reducing their emissions and selling their excess allowances.

While the use of carbon credits can be an effective way to reduce greenhouse gas emissions and demonstrate environmental responsibility, it also presents accounting challenges for companies. This is because the costs incurred, resources committed, or obligations assumed for this purpose need to be accounted for and reported appropriately. The carbon credits awarded or acquired can be assets that are consumed during the carbon emission offsetting period, or that are held for sale. Either alternative may have a significant impact on a company's financial statements.

There is currently no IFRS standard that deals explicitly with the accounting for carbon credits. Consequently, a company applying IFRS must consider which of the existing standards most closely reflects the economics of their holding in the credits. In general terms, companies usually look to IFRS 9 *Financial Instruments*, IAS 2 *Inventories* or IAS 38 *Intangible Assets* to provide accounting guidance. This article discusses the accounting approaches, and highlights some of the challenges and issues associated with accounting for carbon credits.

Carbon credits are typically traded on two types of carbon markets: compliance markets and voluntary markets. Compliance markets are regulated by government policies, such as emissions trading schemes, and are designed to help countries or regions meet their emissions reduction targets. Voluntary markets are driven by corporate or individual demand for carbon offsets and are not typically subject to government regulations. The price of carbon credits varies depending on the supply and demand dynamics of the market, as well as the quality and verifiability of the carbon credits. Companies can buy carbon credits to offset their own emissions, or they can sell carbon credits they have acquired, been awarded or earned.

IFRS 9

IFRS 9 provides the guidance for accounting for financial instruments. Financial instruments are defined by IAS 32 *Financial Instruments: Presentation* as contracts that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Applying this definition, one party has the right to receive something, either cash or another financial instrument, and the other entity has the obligation to deliver something, again either cash or another financial instrument.

This definition is not consistent with the normal construct of a carbon credit. Under a typical carbon credit, the holder has the right to emit pollution (to do something) while the issuer has no right or obligation after issuance. The fact that carbon credits are tradable and traded does not make them financial instruments. Other assets, such as agricultural produce, are tradable and traded and are also not considered financial instruments. However, if the carbon credit is designed and has the financial effect of a derivative as defined under IFRS 9, then they are financial instruments and should be recorded as derivatives which are carried at fair value through profit or loss under IFRS 9.

IAS 2

IAS 2 provides guidance on how to account for inventories, which are defined as assets that are held for sale in the ordinary course of business, are in the process of production, or are in the form of materials or supplies to be consumed in the production process. Carbon credits can potentially fall into any of these categories, depending on the company's business model and activities. The key consideration in determining whether carbon credits are held for sale in the ordinary course of business is whether they are intended to be resold or alternatively used in the company's operations.

It's worth noting that the determination of whether carbon credits are considered inventory can be complex, particularly in cases where the carbon credits are purchased for multiple purposes. In these situations, companies may need to consider factors such as the intended use of the carbon credits, the frequency of transactions involving the credits, and the company's business model to determine whether the credits should be classified as inventory under IAS 2.

Under IAS 2, recognition occurs when the company obtains control over, and assumes the risks and rewards of ownership, and it is probable that the future economic benefits will flow to the company.

The company will then need to decide whether it meets the definition of a broker-trader. Brokers-traders acquire carbon credits with the purpose of selling them in the near future and generating a profit from fluctuations in price or broker-traders' margin. If the carbon credits are inventories of a broker trader, then the broker-trader has the choice to measure the credits at fair value less costs to sell, both at initial recognition and subsequently in accordance with the broker trader's adopted accounting policy.

Otherwise, the carbon credits recognised as inventory should be measured at cost or net realisable value (NRV), whichever is lower. Cost may include the purchase price of the carbon credits, plus any direct costs incurred. NRV is the estimated selling price of the carbon credits less any estimated costs of completion and selling expenses. If the company has been awarded the carbon credits at no cost, it should consider whether IAS 20 *Government Grants* is applicable. Any impairment losses should be recognised immediately in profit or loss.

IAS 38

IAS 38 provides guidance on how to account for intangible assets, which are defined as identifiable non-monetary assets without physical substance. If a carbon credit is not inventory, then it will most likely be an intangible asset. Carbon credits would be recognised as an intangible asset if the company has the power to obtain future economic benefits from the credits and does not regard them as inventory with a primary intention of reselling as discussed above.

Companies have a choice as to whether to measure carbon credits using either the cost model or the revaluation model. If carbon credits are accounted for using the revaluation model, all the other assets in the same class must be accounted for the same way, unless there is no active market for those assets. Under the revaluation model, the carbon credits are measured at fair value on the date of the revaluation less any subsequent accumulated impairment losses. Revaluations must be made with such regularity that at the end of the reporting period the carrying amount of the asset does not differ materially from its fair value. Fair value is the amount for which the carbon credits could be exchanged between knowledgeable, willing parties in an arm's length transaction.

Applying the cost model, the carbon credits are measured at cost at the date of acquisition. Cost may include the purchase price, plus any direct costs incurred in acquiring the carbon credits. As with inventory, if the company has been awarded the carbon credits at no cost, it should consider whether IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance* is applicable. Subsequently, carbon credits should be measured at cost less any impairment losses. Amortisation of the cost over time may also be relevant consideration if the value of carbon credit is consumed over time.

Conclusions

Accounting for carbon credits under IFRS 9, IAS 2 or IAS 38 can present several challenges and issues for companies. Some of the most common are the determination of fair value if there is limited market activity or if the carbon credits are not actively traded, estimation of future economic benefits, and estimating the period of expected future economic benefits.

Selecting which of the three accounting standards to apply to carbon credits requires judgement, and the accounting under IAS 2 or IAS 38 presents companies with important choices. While each judgement and choice have advantages and disadvantages, the decision ultimately depends on the nature of the carbon credits, the business model of the company, and the specific circumstances of the transaction.