



FRS 102 - ACCOUNTING FOR EXCHANGE-BASED TOKENS

GUIDE

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While FRS 102 does not include any specific requirements on how to account for digital assets, including exchange-based tokens, this guidance for ICAEW members explains how to consider the potential accounting treatment under FRS 102 for holders of exchange-based tokens within financial statements.

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In the context of this guidance, exchange-based tokens include common types of digital assets that leverage blockchain to transfer value among the holders, such as Bitcoin and Ethereum. We define exchange-based tokens using the following criteria:

- do not provide the asset holder with enforceable rights to or claims on underlying goods, services, or other assets;
- are created or reside on a distributed ledger based on blockchain or similar technology;
- are secured through cryptography;
- are fungible; and
- are not created or issued by the reporting entity or its related parties.

This guidance does not consider stablecoins (tokens pegged to another asset, such as USD Coin), asset-backed tokens, non-fungible tokens, utility tokens, or security tokens. It also does not consider derivatives over digital assets or digital liabilities.

The helpsheet primarily relates to direct holdings of exchange-based tokens and does not consider holdings as custodians or wallets. The accounting for exchange-based tokens held for trading is also briefly covered. It should be noted that this is still an emerging area and practice will no doubt evolve over time. It does not consider different types of decentralised financing activities or activities that reward coin holders for participating in the maintenance of security of the blockchain, for example through staking.

Potential accounting consequences of exchange-based tokens acquired as a part of a business combination are not covered in this guidance. Where exchange-based tokens are acquired as part of a business combination, in accordance with the requirements of FRS 102 Section 19 *Business Combinations and Goodwill*, the application of paragraph 8 of Section 18 *Intangible Assets other than Goodwill* of FRS 102 needs to be considered.

Anyone holding or working with clients that hold exchange-based tokens should ensure they have sufficient knowledge and experience to carefully articulate any choices in the accounting policies to the financial statements and any judgements made in the disclosure notes to the financial statements.

ACCOUNTING FOR DIRECT HOLDINGS OF EXCHANGE-BASED TOKENS

The economic substance of the exchange-based tokens and what the entity intends to do with the exchange-based tokens held is important as it will be the starting point for determining an appropriate accounting treatment.

Cash or cash equivalents

Cash and cash equivalents are defined respectively as:

“Cash on hand and demand deposits” and “Short-term, highly liquid investments that are readily convertible to known amounts of cash and that are subject to an insignificant risk of changes in value.” (Appendix I: Glossary to FRS 102)

In order to classify exchange-based tokens as cash, consideration would need to be given to whether the exchange-based token was legal (which is not the case in the UK) and whether it was widely used as a medium of exchange. Further consideration would need to be given to whether the exchange-based token was used as the monetary unit in pricing goods or services to such an extent that it would be the basis on which all transactions are measured and recognised in financial statements. At its June 2019 meeting, the [IFRS Interpretations Committee discussed the holding of cryptocurrencies and stated that it is not considered as cash](#). We have considered this here given paragraph 10.6 of FRS 102.

To meet the definition of cash equivalents, exchange-based tokens should not be subject to a greater than insignificant risk of change in value. Evidence to date demonstrates that exchange-based tokens are often subject to a reasonable amount of volatility in value.

Financial instruments

Financial instruments are defined as:

“A contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.” (Appendix I: Glossary to FRS 102)

The definition of a financial asset is:

“Any asset that is: (a) cash; (b) an equity instrument of another entity; (c) a contractual right: (i) to receive cash or another financial asset from another entity ...”

The definition of a financial liability is:

“Any liability that is: (a) a contractual obligation: (i) to deliver cash or another financial asset to another entity; ...”

While it may be possible to exchange exchange-based tokens into cash (by selling them on an exchange to another investor in exchange for cash), the holder does not have a contractual right to cash or another financial asset. So, if exchange-based tokens are not cash, the equity instruments of another entity or the contractual right to receive cash or another financial asset, they do not give rise to a financial asset of one entity and therefore are not likely to meet the definition of a financial instrument.

Inventories

The definition of inventories includes assets “held for sale in the ordinary course of business” (Appendix I: Glossary of FRS 102). Exchange-based tokens would not necessarily be precluded from being treated as inventory if they are being purchased and sold as part of the entity’s ordinary course of business. This may be applicable for entities trading exchange-based tokens in the short term.

The accounting treatment for inventories in FRS 102 is set out in *Section 13 Inventories*. The chapter includes the measurement basis for inventories (including the meaning of cost), impairment, recognition and disclosure requirements.

If an entity were to classify exchange-based tokens within inventory, then it follows that holding them “at the lower of cost and estimated selling price less costs to complete and sell” (ie, net realisable value) would usually be appropriate (FRS 102.13.4).

This may lead to impairment of the exchange-based tokens should their estimated selling price fall below their historical cost.

However, under the UK Companies Act it is possible to measure some inventories at fair value less costs to sell through profit and loss. Paragraph 13.3 of FRS 102 states that this method of measurement may only be used if “it is a more relevant measure of the entity’s performance because the entity operates in an active market where sale can be achieved at published prices and inventory is a store of readily realisable value.”

Where an entity trades exchange-based tokens in an active market (see discussion of this definition below under the heading *Active Market*), the latter treatment above may be acceptable. This could be the case for a broker-dealer that trades in exchange-based tokens in the short term.

Intangible assets

Appendix I: Glossary of FRS 102 defines an intangible asset as:

“An identifiable non-monetary asset without physical substance. Such an asset is identifiable when: (a) it is separable, i.e. capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, asset or

liability; or (b) it arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.”

Exchange-based tokens are likely to be considered identifiable if they are capable of being separated from the entity and are saleable on exchange-based token exchanges.

Exchange-based tokens might be considered non-monetary assets where they are:

- not units of currency held; and
- assets and liabilities to be received or paid in a fixed or determinable number of units of currency.

As a form of digital asset, exchange-based tokens do not have a physical substance as a matter of course.

Initial recognition and measurement

Exchange-based tokens which are not held for trading and also meet the definition of an intangible asset, are recognised from the point the entity obtains control. Control is the ability to access and direct the use of the asset and the ability to restrict others from accessing and directing the use. Control of exchange-based tokens will be presumed to exist from the point at which the entity can make sell and hold decisions regarding the exchange-based token.

The general recognition criteria for intangible assets require that:

- it is probable that the expected future economic benefits attributable to the asset will flow to the entity; and
- the cost or value of the asset can be reliably measured (FRS 102.18.4).

All intangible assets are initially measured at cost (FRS 102.18.9).

Subsequent measurement

Section 18.18 of FRS 102 permits an accounting policy choice, by class of intangible asset, between the cost model and revaluation model. This is in line with the UK Companies Act, which permits intangible fixed assets to be held under historical cost accounting rules (cost model) or under the alternative accounting rules (revaluation model).

Cost model

Under the cost model, intangible assets are measured at cost less any accumulated amortisation and any accumulated impairment losses (FRS 102.18.18A).

Revaluation model

Under the revaluation model, intangible assets are measured at a revalued amount, being the intangible asset's fair value on the date of revaluation less any subsequent accumulated amortisation and subsequent accumulated impairment losses, provided that the fair value can be determined by reference to an active market (FRS 102.18.18B).

In order to apply a revaluation model an entity would need to meet the criteria and follow the requirements of paragraphs 18.18B to 18.18H of FRS 102.

Active market

One of the essential criteria for the revaluation model is the need for an active market. An active market is one in which the items traded are homogeneous, willing buyers and sellers can normally be found at any point in time and prices are available to the public (FRS 102 Appendix I: Glossary). Further guidance was given in the Periodic Review 2024 amendments namely an active market is one “in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis”.

While FRS 102 does not provide explicit guidance on how to interpret this definition, it appears clear that only a market with a sufficient level of trading activity (ie, frequency of trades) and volumes will be considered active. As such, an active market may exist for some but not all exchange-based tokens, so the specific circumstances of each exchange-based token would need to be considered carefully on a case-by-case basis.

Frequency of valuations

The frequency of revaluations depends on movements in the fair value of intangible assets. FRS 102 is not explicit as to the frequency of valuations other than to state that they shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of each reporting period (FRS 102.18.18D).

Market prices for some exchange-based tokens typically suffer significant and volatile movements and it is therefore likely that valuations will need to be performed at least at the end of each reporting period. The frequency with which such intangible assets are valued will affect the amount which is recognised through profit or loss as a gain or loss on ultimate disposal upon derecognition.

Given the lack of explicit guidance, entities will need to apply their own judgement to interpret their accounting policy regarding the frequency of valuations.

Measuring revaluation gains and losses and treatment of accumulated amortisation

Another issue arising under FRS 102 relating to the revaluation model is the question of how to treat accumulated amortisation upon subsequent measurement. FRS 102 18.18B states the asset “shall be carried at a revalued amount, being its fair value at the date of revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.”

FRS 102 is not explicit; however, in practice, where the intangible asset is being revalued in excess of its current carrying value, accumulated amortisation is eliminated against the gross carrying value, resulting in a reduction in accumulated amortisation.

Recognition of revaluation gains or losses

Increases in carrying amount would be recognised through other comprehensive income (OCI) and would accumulate in equity. To the extent that a revaluation increase reverses a revaluation decrease of the same intangible asset that was previously recognised in profit or loss, then that increase would also be recognised in profit or loss (FRS 102.18.18G).

Decreases of an intangible asset’s carrying value as a result of a revaluation shall be recognised in OCI to the extent of any accumulated revaluation increases in equity in respect of that intangible asset, with any excess recognised in profit or loss (FRS 102.18.18H).

Accumulated revaluation gains and losses are required to be presented within a separate ‘revaluation reserve’ within equity and on the statement of financial position. This is net of provision for amortisation, impairment and deferred tax (SI 2008/410 Schedule 1.35).

Revaluation gains on exchange-based tokens that are unrealised will need to be assessed against the provisions of the UK Companies Act to determine whether such a gain constitutes a distributable profit. [ICAEW Technical Release Guidance on realised and distributable profits under the Companies Act 2006](#) provides guidance on determining whether these revaluation gains are realised and therefore distributable.

AMORTISATION AND IMPAIRMENT

Estimated useful life

Under both the cost model and revaluation model an entity is required to amortise the carrying amount of intangible assets over their estimated useful life. Under FRS 102, all intangible assets are considered to have a finite useful life (FRS 102.18.19). In other words, there is no ‘indefinite lived’ intangible asset under FRS 102.

This means that an entity is required to make an estimate of the useful life of exchange-based tokens that are being classified as an intangible asset. In the context of exchange-based tokens held for investment purposes this can be a complex and highly subjective judgement because of the nature of such intangible assets. Such intangible assets are not 'used' by the entity in the same way as traditional intangible assets where the economic benefit embodied therein is systematically consumed or recovered over the asset's life. Rather, in the case of exchange-based tokens held for investment purposes, the economic benefit will be recovered only through the exchange-based token's eventual sale.

Paragraph 18.20 of FRS 102 requires, in exceptional cases where a reliable estimate of an intangible asset's useful life cannot be made, that the life shall not exceed 10 years. Consideration of the exchange-based token's market may be made when making judgements around the exchange-based token's estimated useful life. The market for exchange-based tokens is still relatively new, with new markets for newly issued exchange-based tokens. It remains to be seen how these markets will develop. Consequently, estimating the useful life of individual exchange-based tokens involves significant judgements about the future prospects and use cases of different types of exchange-based token and whether the market for an exchanged-based token will exist at the time the entity looks to dispose of it.

Residual value

The amount of amortisation to be recognised in profit or loss on a systematic basis over the estimated useful life of an intangible asset is calculated based on the intangible asset's depreciable amount. The depreciable amount of the intangible asset is the cost of the intangible asset less its residual value, being the amount the entity could obtain from disposal, after deducting estimated costs of disposal, if the asset was already of the age and condition expected at the end of its useful life (FRS 102 Appendix I: Glossary).

The estimated residual value of an intangible asset is therefore a key estimate required in determining the amount of amortisation to recognise for exchange-based tokens. The "age" and "condition" of such assets are irrelevant inputs in their market valuation, ie, exchange-based tokens of the same type are homogenous.

FRS 102.18.23 requires an entity to assume that the residual value of an intangible asset is "zero unless: (a) there is a commitment by a third party to purchase the asset at the end of its useful life; or (b) there is an active market for the asset and: (i) residual value can be determined by reference to that market; and (ii) it is probable that such a market will exist at the end of the asset's useful life."

To satisfy (a), consideration would need to be given to the existence of a contract or substantive undertaking to acquire the exchange-based tokens.

For (b), entities will need to consider the facts and circumstances of the respective exchange-based token they are accounting for. The market values of exchange-based tokens are often quoted on exchanges and are driven by market participants' views of those exchange-based tokens' perceived values. However, while an active market might exist currently, FRS 102 also requires consideration as to the likelihood that the market exists at the end of the assumed useful life. As mentioned, given the nascent state of exchange-based tokens, significant judgement may be required to determine whether it is probable that an active market will exist at the end of the useful life.

While FRS 102 requires the carrying amount to be amortised over the intangible asset's estimated useful life, where the residual value is estimated to be equal to or exceed cost, no amortisation would be recorded within profit or loss. Accordingly, if it is concluded that it is probable that an active market will exist at the end of the intangible asset's useful life, and if residual value is assumed to equate to market value which equals or exceeds cost, then the depreciable amount of that exchange-based token could reasonably be concluded to be nil.

Paragraph 22 of Schedule 1 to the SI 2008/410 requires intangible assets to be written off over their useful economic lives. Therefore, paragraph A3.37A in Appendix III *Note on legal requirements* to FRS 102 observes that, “In those cases where an intangible asset has a residual value that is not zero, the amortisation of the depreciable amount of an intangible asset over its useful economic life is a departure from the requirements of paragraph 22 of Schedule 1 to the Regulations for the overriding purpose of giving a true and fair view. In these circumstances entities must provide, in the notes to the financial statements, the ‘particulars of the departure, the reasons for it and its effect’ (paragraph 10(2) of Schedule 1 to the Regulations).”.

The estimated useful life and residual value are required to be reassessed when factors indicate that such may have changed from the most recent reporting date (FRS 102.18.24). Given the significant volatility associated with the market value of exchange-based tokens it is likely that these estimates will need to be reassessed at least at the end of each reporting period and an entity will need to consider whether these constitute a key source of estimation uncertainty about which disclosure is required (FRS 102.8.7).

Impairment

To determine whether an exchange-based token meeting the definition of an intangible asset is impaired, an entity shall apply the requirements of Section 27 *Impairment of Assets*. That section explains when and how an entity reviews the carrying amount of its intangible assets, how it determines the recoverable amount of an intangible asset and when it recognises or reverses an impairment loss. Further details can be found in [FRS 102 Impairment of Assets](#).

Derecognition

Exchange-based tokens meeting the definition of an intangible asset are derecognised when the entity ceases to control them. This is generally upon disposal of the exchange-based tokens.

When exchange-based tokens are disposed of the carrying amount is derecognised with any a gain or loss on disposal being recognised in the statement of profit or loss (FRS 102.18.26).

For intangible assets measured under the revaluation model, any accumulated revaluation gains or losses recognised within equity are not reclassified to profit or loss. However, any accumulated amount relating to the disposed intangible asset held within the separate revaluation reserve may be reclassified to the profit or loss account (ie, retained earnings) and is generally considered to be distributable, see [ICAEW Technical Release Guidance on realised and distributable profits under the Companies Act 2006](#).

PRESENTATION OF EXCHANGE-BASED TOKENS IN THE FINANCIAL STATEMENTS

Once it has been determined what accounting treatment can be applied, using the FRS 102 requirements noted above, it becomes necessary to consider how the exchange-based tokens should be presented in the financial statements in line with the UK Companies Act formats. SI 2008/410 provides formats for both the profit and loss account and balance sheet for large and medium-sized companies and groups, SI 2008/409 provides similar formats for smaller entities.

Exchange-based tokens that are being accounted for as inventories under Section 13 of FRS 102 would fall within stocks under current assets.

Exchange-based tokens that are being accounted for as intangible assets under Section 18 of FRS 102 could be presented on the statement of financial position as intangible assets within fixed assets or fixed asset investments, depending on the intended use of the asset.

The balance sheet formats within SI 2008/410, which are colloquially known as the Statutory Formats, have a classification ‘Fixed asset, Investments, Other investments other than loans’. If this classification fairly represents the intended use of the asset and as long as the accounting requirements of Section 18 of FRS 102 have been met, then this could be an appropriate balance sheet classification for exchange-based tokens. Because investment is not a defined term under the UK Companies Act and so classification as an investment can be reasonable if the entity intends to hold it as such.

Judgement will be required to determine the most appropriate financial statement presentation in any given scenario.

It may be appropriate to present exchange-based tokens separately on the face of the balance sheet if the holding is material for the entity. This is in accordance with the requirements of FRS 102.3.15, ie, “an entity shall present separately each material class of similar items. An entity shall present separately items of a dissimilar nature or function unless they are immaterial”.

An entity that has chosen to adapt the balance sheet formats by applying paragraph 1A(1) of SI 2008/410, which are colloquially known as the Adapted Formats, would apply paragraph 4.2A of Section 4 *Statement of Financial Position* of FRS 102 instead of the Statutory Format. Therefore, such an entity would distinguish between items that are current and non-current based on the definition of non-current assets in Appendix I: Glossary of FRS 102.

Essentially, exchange-based tokens would be presented as non-current if the entity did not expect to realise or consume them in its normal operating cycle, or it did not hold them primarily for the purpose of trading, or it did not expect to realise them within 12 months of the balance sheet date.

DISCLOSURES

Preparers of financial statements will need to adhere to the relevant accounting disclosure requirements of Section 13 or Section 18 of FRS 102, as applicable, depending on whether the exchange-based tokens are classified as inventories or intangible assets.

Whichever accounting treatment is adopted, clear disclosures will be needed in the financial statements to ensure the user gains clarity as to how the exchange-based tokens are recognised, measured and presented, as well as obtain an understanding of the nature of these assets and their financial effect.

Preparers need to present information about the basis of preparation of the financial statements and the specific accounting policies used as well as follow the disclosure requirements specific to their chosen accounting treatment (as set out in Section 8 *Notes to the Financial Statements* of FRS 102).

IMPACT ON DISTRIBUTABLE PROFITS

Whether the gains or losses associated with exchange-based tokens are distributable or not is a matter of significant judgement and we recommend that members consider the guidance contained within [ICAEW Technical Release Guidance on realised and distributable profits under the Companies Act 2006](#) when making such judgements. Entities might also consider seeking the guidance of an exchange-based tokens expert given the complexities associated with this area.

GOING FORWARD

Accounting for exchange-based tokens is still a new and rapidly evolving area.

Overall, the accounting and financial reporting treatment of exchange-based tokens will vary depending on the entity's business model and different treatments may be possible.

When working with exchange-based tokens, members should ensure they document and justify any decisions made. Members also need to understand the nature and substance of the transaction and, in many cases, this might involve seeking the guidance of an exchange-based tokens expert. Members should keep abreast of accounting developments and be aware that there may be a need to adapt or update accounting and financial reporting treatments as new guidance emerges. ICAEW will be monitoring developments to support members.

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