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ISSUES NOTE ON RECORDING OF CRYPTO ASSETS IN THE SYSTEM OF NATIONAL ACCOUNTS

Issues note on recording of crypto assets in the System of National Accounts
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Introduction

The last few years have seen a significant proliferation in the number and types of crypto assets. As guidance on how to record crypto assets in macroeconomic statistics is largely absent, the IMF and the OECD started to explore guidance for their recording. This has led to interim guidance (see International Monetary Fund (2019) and Zwijnenburg, De Queljoe and Ynesta (2020)). Whereas for most types of crypto assets there is broad consensus on their recording, there is still quite some discussion regarding one specific subcategory: the recording of cryptocurrencies without a corresponding liability that do not yet act as a general medium of exchange. This issues note highlights the main pending questions regarding the treatment of this subcategory. Further reflection in the coming months on these issues is needed, in order to prepare for a discussion at the meeting of the Advisory Expert Group on National Accounts in October 2020.

Interim guidance

The IMF and the OECD started to explore the statistical measurement of crypto assets in 2018. Discussions took place at meetings of the IMF Committee on Balance of Payments Statistics (BOPCOM), the OECD Working Party on Financial Statistics (WPFS), and the Advisory Expert Group (AEG) on National Accounts in 2018 and 2019, feeding into interim guidance on the recording of crypto assets in macroeconomic statistics. All of this has been reflected in an IMF paper that was published in 2019 and in an updated OECD paper in 2020. The latter paper also contains updated guidance on the recording of crypto assets that emerged over the last year. In addition, it addresses feedback received from the 2019 AEG meeting regarding the need for more specific definitions and classification of crypto assets. The final result is attached to this issues note.

Whereas there is broad consensus on the recording of most types of crypto assets, discussion still remains regarding one specific subcategory, i.e. the classification of cryptocurrencies without a corresponding liability that do not yet act as a general medium of exchange. This issues note presents the main pending questions that will need to be reflected upon to arrive at final guidance. This can then be put forward to and discussed at the meeting of the Advisory Expert Group on National Accounts in October 2020, after which the paper with recommendations on the recording of crypto assets in the national accounts could be updated accordingly.

Remaining issues

As mentioned above, a couple of issues is still pending regarding the classification of cryptocurrencies without a corresponding liability that do not yet act as a general medium of exchange. The main interrelated issues concern the following:

- *How to account for their creation?* Are they the result of mining activities, i.e. do miners produce/create them, or do they “appear” in the same way that fiat currency “appears”? This is a relevant question, as it will determine whether these cryptocurrencies should be classified as produced or non-produced assets.
- *Does it make sense to record crypto assets as non-financial instruments even though they are intended to serve as medium of exchange?* This relates to the question whether there should always be an explicit liability in order to be regarded as financial instrument (except for monetary gold) and how this relates to the recording of traditional currencies and SDRs, for which this claim is often more a matter of convention. In this respect, one could possibly consider the collective network accepting these stores of value as the counterparty for these decentralised issued

currencies, similar to assuming government/central bank as the counterparty of fiat money (as is currently the case in the SNA).

- *What is the output of miners?* Are miners indeed producing cryptocurrencies? Or are they actually producing some kind of validation services? Has the terminology used to describe individuals producing validated blocks for inclusion in distributed ledgers, inadvertently affected the way that we view their activities? Would, for example, outcomes have been different if they had been described as 'auditors' for example, creating a clear delineation between the output produced by the miners/auditors (a service) and their remuneration (e.g. a Bitcoin)?
- *How should the output be valued?* There is little contention that miners/auditors are remunerated via cryptocurrencies (in addition to explicit fees). The key issue is how much of that remuneration is necessarily compensation for a productive activity. Taking the view that the miners/auditors provide validation services (which are clearly in the production boundary), it follows that their output should be valued on the basis of this remuneration, i.e. including the value of the cryptocurrencies they receive, which adds to GDP. However, if they are treated as miners and if we consider their activity as producing cryptocurrencies, the question arises whether their output should be valued via the sum of costs (in line with the recording of the creation of fiat money). One item that has been little discussed in the various papers presented on the subject so far, concerns the output of unsuccessful miners/auditors, i.e. those that receive no or very little compensation for their efforts. Clearly, it follows that in these cases (and the literature suggests that these may be significant) they have negative value added. What practical recommendations are needed to ensure that these flows are adequately captured in the accounts?
- *Who is consuming the relevant output?* In the case of recording these cryptocurrencies as production of valuables (as originally proposed), the miners would be consuming this part of their output, and the part of their validation services that is not covered by explicit fees would then be provided for free. In the case that we view all of their output as the production of validation services, it would follow that for the part not covered by explicit fees, they are being paid by the network of the relevant cryptocurrency owners collectively. What types of imputations are needed to record these flows?

In the interim guidance, cryptocurrencies without a corresponding liability that do not yet act as a general medium of exchange are recorded as valuables. However, if they would not be regarded as being produced by miners, a recording as non-produced non-financial assets may make more sense. In that case, the output of the miners could be recorded as being consumed by the network of cryptocurrency owners, paid for in the form of new cryptocurrencies. These should then be accounted for as appearing on the balance sheet of the network (just before the remuneration to the miners takes place) via the other changes in assets account. An alternative would be to regard all crypto assets that qualify as an asset according to the asset boundary of the SNA, including cryptocurrencies without a corresponding liability that do not yet act as a general medium of exchange, as financial instruments. This would have the advantage that there is no need to consider whether they should be regarded as produced, that it avoids a difference in recording between those that already act as a medium of exchange and those that don't, and that there would be no need for a change in classification when their role changes over time. These alternatives should be reflected upon in the coming months to prepare for a further discussion at the meeting of the Advisory Expert Group on National Accounts in October 2020.

Conclusion

The OECD paper on the recording of crypto assets in the System of National Accounts (OECD, 2020) provides interim guidance on the classification and recording of these assets in the SNA. However, there is still a couple of questions pending that need further reflection to arrive at a more definitive proposal. Further discussions will take place at the meeting of the Advisory Expert Group on National Accounts in October 2020, after which the paper will need to be updated accordingly. In the meantime, reflections on the paper and on these pending issues are much welcomed. For further questions or comments, please contact Jorrit.Zwijnenburg@oecd.org.

References

International Monetary Fund (2019) "Treatment of crypto assets in macroeconomic statistics".

Zwijnenburg, J., M. De Queljoe and I. Ynesta, "The recording of crypto assets in the System of National Accounts – Intermediate guidance".