Renzo Corrias

Secretariat of the Basel Committee on Banking Supervision

Banks' exposures to cryptoassets – a novel dataset

1. Introduction

Since 2018, the Basel Committee has been pursuing a multi-pronged set of analytical, supervisory and policy initiatives related to cryptoassets. As part of this work, a new cryptoasset data collection template was introduced starting with the current Basel III monitoring exercise based on end-2021 data. The template was specifically designed to support the Committee's two consultative documents on the prudential treatment of banks' cryptoasset exposures, which were published on 10 June 2021 and 30 June 2022.[53] It collects granular information on banks' holdings of cryptoassets, including information at the level of individual cryptoassets. This special feature provides some analysis on banks' exposures to cryptoassets based on the data collected.

Overall, 19 banks submitted cryptoasset data – 10 from the Americas, seven from Europe and two from the rest of the world (Graph , left panel). All reporting banks are Group 1 banks, except for three Group 2 banks (of these, two Group 2 banks do not participate in the wider Basel III monitoring exercise and appear to specialise in cryptoassets). These banks make up a relatively small part of the wider sample of 182 banks considered in the Basel III monitoring exercise – 17.1% of total RWA, and 20.9% of overall leverage ratio exposure measure (LREM) (Graph 1, right panel), with banks from the Americas contributing to approximately three quarters of these amounts.[54]

As this is the first data collection using the new template, the results in this special feature are subject to a number of data quality caveats and potential biases. As the cryptoasset market is fast evolving, it is difficult to ascertain whether some banks have under- or over-reported their exposures to cryptoassets, and the extent to which they have consistently applied the same approach to classifying any exposures. As such, while they are helpful in providing a broad indication of banks' cryptoasset activity, they should interpreted with a degree of caution.

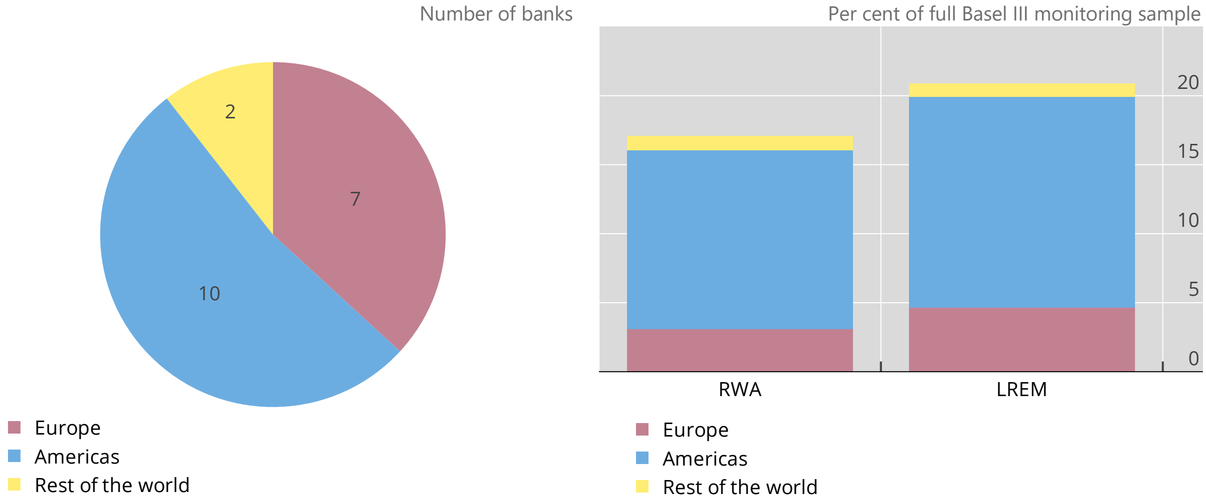
[53] See www.bis.org/bcbs/publ/d533.htm.

[54] These amounts also account for the amounts of the two Group 2 banks which only participate in the crypto exercise and are not included in the general analysis of the Basel III monitoring exercise.

A small proportion of banks reported crypto exposures at end-2021 Graph 1

Number of banks reporting cryptoasset exposures[1]

Proportion of banks reporting crypto exposures[2]



[1] All reporting banks are Group 1 banks, except for three Group 2 banks. Two Group 2 banks participated only in the crypto exercise and did not participate in the wider Basel III monitoring exercise. [2] The denominators used also account for the amounts of the two Group 2 banks which only participate in the crypto exercise and are not included in the general analysis of the Basel III monitoring exercise.

Source: BCBS end-2021 data collection and Secretariat calculations.

2. Composition of crypto exposures

2.1 Overall amounts

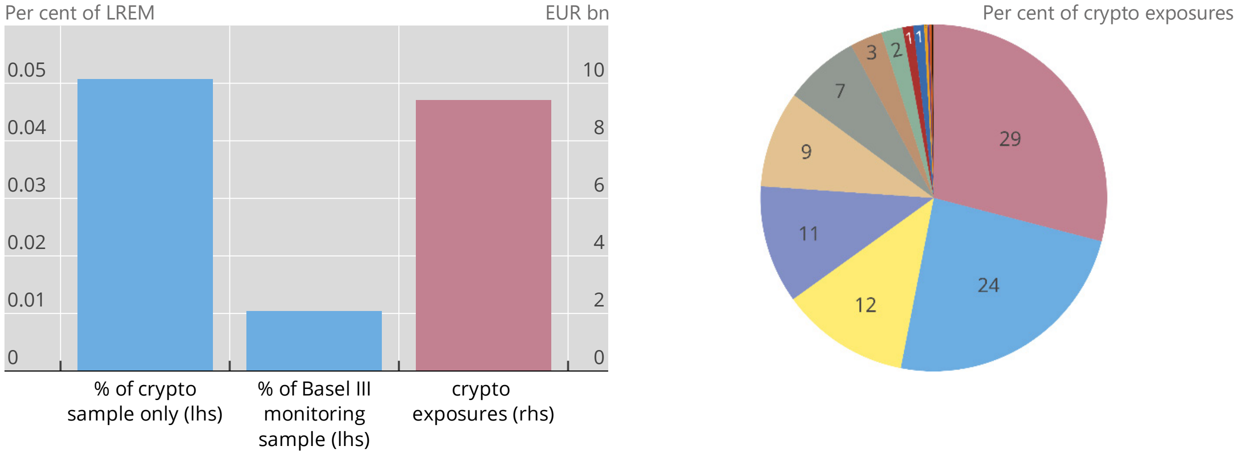
Total cryptoasset exposures reported by banks amount to approximately €9.4 billion. In relative terms, these exposures make up only 0.05% of total exposures on a weighted average basis across the sample of banks reporting cryptoasset exposures.[55] When considering the whole sample of banks included in the Basel III monitoring exercise (ie also those that do not report cryptoasset exposures), the amount shrinks to 0.01% of total exposures (Graph 2, left panel).

Cryptoasset exposures are distributed unevenly across reporting banks, with two banks making up more than half of overall cryptoasset exposures, and four more banks making up just below 40% of the remaining exposures (Graph 2, right panel).

[55] Cryptoasset exposures are weighted by the leverage ratio exposure measure.

Crypto exposures are relatively small and unevenly distributed across banks — Graph 2

Reported crypto exposures — Distribution of total crypto exposures across banks[1]



[1] Each slice represents one of the banks which reported crypto exposures.

Source: BCBS end-2021 data collection and Secretariat calculations.

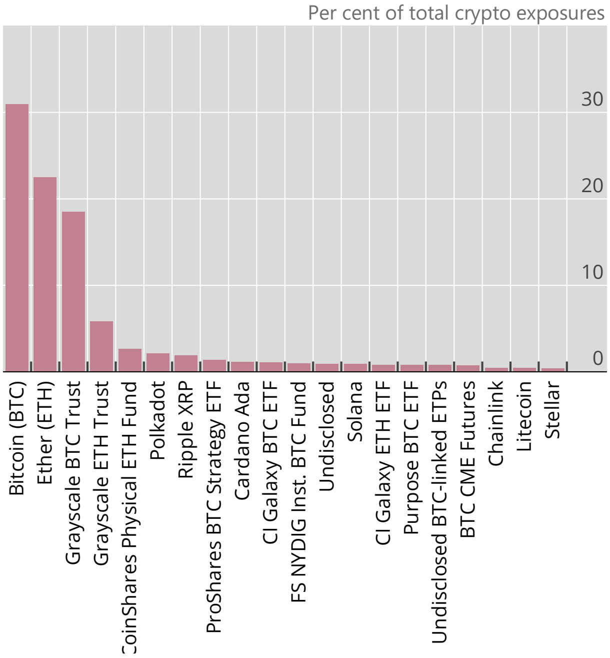
2.2 Composition across cryptoassets

Reported cryptoasset exposures are primarily composed of Bitcoin (31%), Ether (22%) and a multitude of instruments with either Bitcoin or Ether as the underlying cryptoassets (25% and 10% respectively). Together, these make up almost 90% of reported exposures (Graph 3). Focusing on the top 20 reported cryptoassets by exposure amount, other relatively significant reported cryptoassets include Polkadot (2% of reported exposures), Ripple XRP (2%), Cardano Ada (1%), Solana (1%), Litecoin (0.4%) and Stellar (0.4%). These exposures would likely be classified as Group 2 cryptoassets under the current consultative proposal of the Basel Committee.[56] Banks also reported, in smaller amounts, a stablecoin (USD coin) and tokenised assets (not shown).

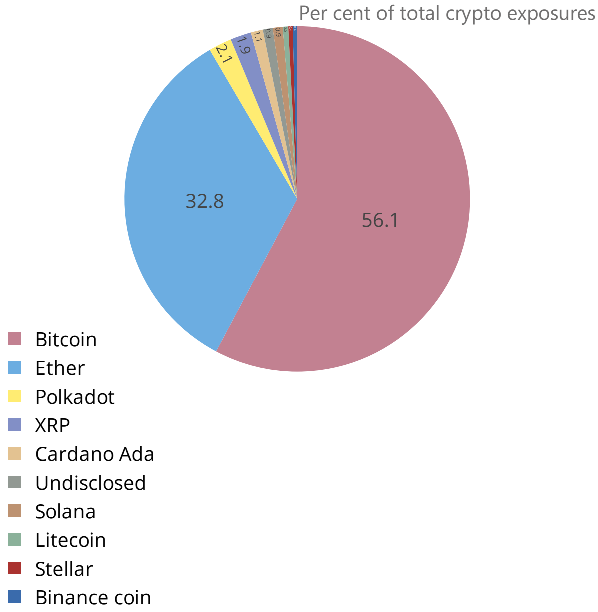
[56] See www.bis.org/press/p220630.htm. The proposal divides cryptoassets into two broad groups: (i) Group 1 cryptoassets, which must meet in full a set of classification conditions and are either tokenised traditional assets, or cryptoassets with effective stabilisation mechanisms, which would be eligible for treatment under the existing Basel Framework with some modifications; and (ii) Group 2 cryptoassets, which include unbacked cryptoasset and stablecoins with ineffective stabilisation mechanisms, which are subject to a new conservative prudential treatment.

Bitcoin, Ether and related cryptoassets make up the vast majority of crypto exposures Graph 3

Top 20 reported cryptoassets by exposure amount



Top 10 reported cryptoassets grouped by underlying asset



Source: BCBS end-2021 data collection and Secretariat calculations.

2.3 Distribution across activities

The reported exposures span a variety of activities which directly or indirectly expose banks to cryptoassets. For the purpose of this special feature, they have been grouped into three broad categories:

1. **Crypto holdings and lending**: this includes outright holdings and investments in cryptoassets or products with underlying cryptoassets, lending to households, corporates and financial institutions with exposures to cryptoassets (eg crypto exchanges, investment funds), and issuing cryptoassets backed by assets on the bank's balance sheet;[57]

2. **Clearing, client and market-making services:** this includes activities such as trading (on client accounts) and clearing cryptoasset derivatives and futures, undertaking securities financing transactions (SFTs) involving cryptoassets, underwriting initial coin offerings and issuing securities with underlying cryptoassets (eg crypto trackers) while hedging the underlying exposures; and

3. **Custody/wallet/insurance and other services:** this includes providing custody/wallet/insurance services for cryptoassets, and facilitating client activity of products with underlying cryptoassets, including self-directed or manager-directed trading of cryptoassets or crypto-related securities.

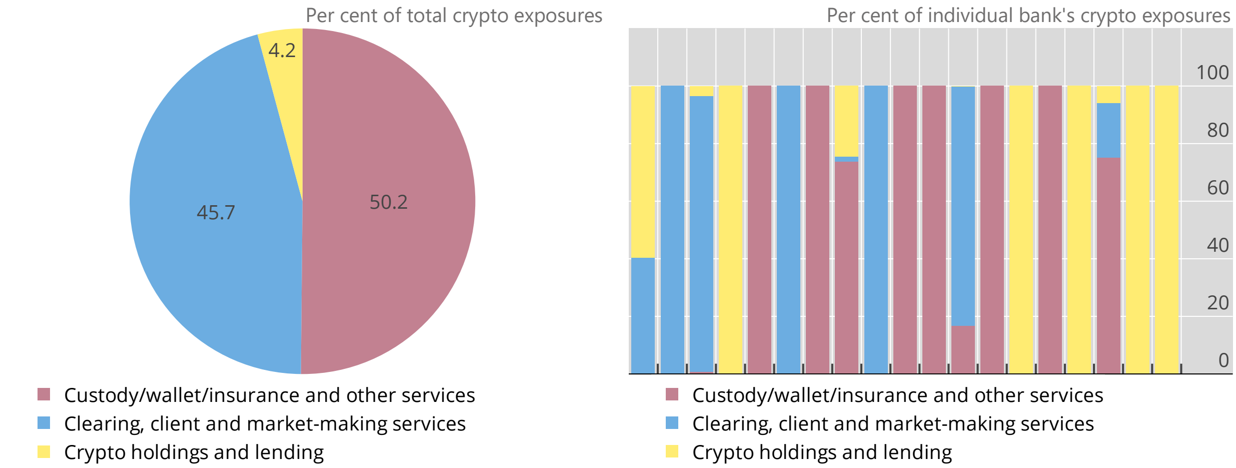
Graph 4 (left panel) shows the split of reported cryptoasset exposures across those categories. Custody/wallet/insurance and other services make up half of the reported crypto exposures, with the rest largely made up of clearing and market making services (46%) and the remaining 4% due to crypto

[57] This category also includes proprietary trading of cryptoassets or securities with cryptoassets as underlying, as well as transactions that involve exchanging virtual currency for real currency, and use of cryptoassets for internal or inter-bank operational processes.

holdings and lending. Zooming in on activity subcategories, (i) providing custody and wallet services, (ii) trading crypto on client accounts and (iii) facilitating client self-directed trading make up 14.4%, 13.4% and 11.7% of total reported crypto exposures respectively, followed by (iv) SFTs involving cryptoassets (7.8%) and (v) issuing crypto-related securities while hedging the underlying exposure (7.5%) (Graph 5). Several of these subcategories are also the most reported by banks, particularly providing custody and wallet services (seven banks), trading on client accounts (four banks) and SFTs (three banks). Owning cryptoassets, or owning products with underlying cryptoassets are also popular activities (six banks), even though their combined exposures are relatively small. Nonetheless, there is significant heterogeneity in the distribution of activities across banks, and most banks appear to have crypto exposures primarily or exclusively in one activity group (Graph 4, right panel).

Custodian, clearing and market-making services dominate bank crypto activities — Graph 4

Crypto exposures by main activity group[1] | Crypto-related activities by bank[2]

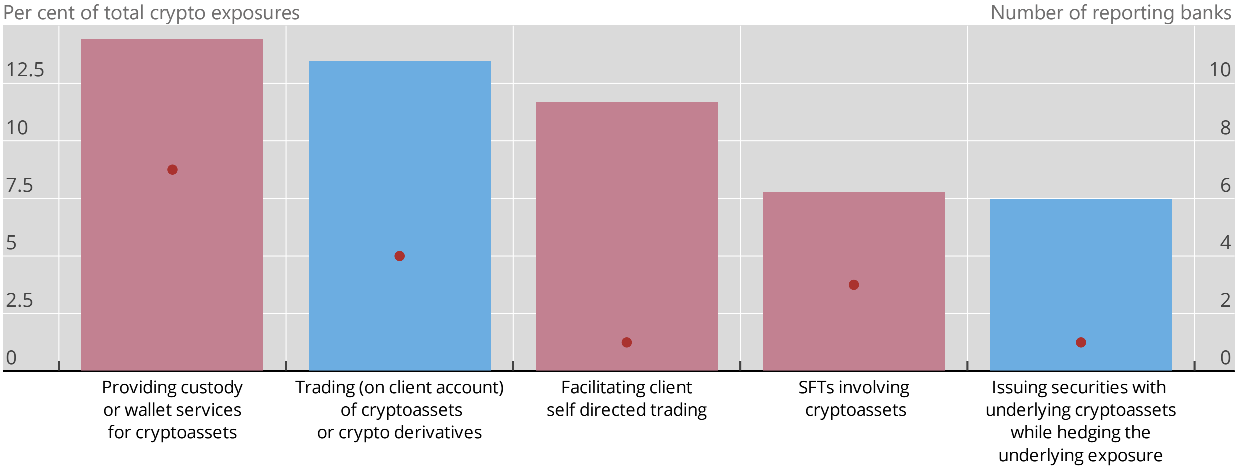


[1] *Crypto holdings and lending* includes outright holdings and investments in cryptoassets or products with underlying cryptoassets, lending to households, corporates and financial institutions with exposures to cryptoassets (eg crypto exchanges, investment funds, etc), issuing cryptoassets backed by assets on the bank's balance sheet, proprietary trading of cryptoassets or securities with cryptoassets as underlying, as well as transactions that involve exchanging virtual currency for real currency, and use of cryptoassets for internal or inter-bank operational processes; *clearing, client and market-making services* includes activities such as trading (on client accounts) and clearing cryptoasset derivatives and futures, undertaking securities financing transactions (SFTs) involving cryptoassets, underwriting initial coin offerings, and issuing securities with underlying cryptoassets (eg crypto trackers) while hedging the underlying exposures; *custody/wallet/insurance and other services* includes providing custody/wallet/insurance services for cryptoassets, and facilitating client activity of products with underlying cryptoassets, including self-directed or manager-directed trading of cryptoassets or crypto-related securities. [2] Each column represents one of the banks which reported crypto exposures.

Source: BCBS end-2021 data collection and Secretariat calculations.

Top 5 activities by exposure amount

Graph 5



- Number of reporting banks
- Custody/wallet/insurance and other services
- Clearing, client and market-making services

Source: BCBS end-2021 data collection and Secretariat calculations.