

Annex to BIS Bulletin No 67: the sources of money growth

What accounts for the surge in money stock during 2020 that we identified in the main analysis? The sources vary considerably across countries. But before considering them, it is useful to recall some basic facts about how changes in the money stock come about.

The money stock is defined as currency (notes and coins) in circulation plus a subset of bank deposits of the non-bank public. The subset always includes transactions deposits, which are a means of payment (narrow money), and may also include other types, such as saving and time deposits or certificates of deposit (broad money). While the specific definition of the money stock used in this study varies across countries, based on availability, it generally corresponds to a broad monetary aggregate.

The mechanics of changes in the money stock differ as between cash and deposits. Cash is a liability of the central bank, which the institution meets passively, on demand. This component is generally small and typically accounts for only a small fraction of changes in the overall stock. Bank deposits increase whenever the banking system issues them. This can occur for two reasons: (i) for a given size of the banks' overall balance sheet, there may be a shift in its composition into the relevant type of deposit; and (ii) as the balance sheet expands, banks issue the corresponding liabilities to finance their purchases of assets or granting of loans.¹ A peculiarity of the banking system is that it can issue transaction deposits, ie it creates a means of payment "out of thin air" – a privilege it shares with the central bank.

Thus, looking at the asset side of the banking system provides clues as to what drove the expansion in the money stock. By comparison, shifts in its composition tend to be smaller. Simplifying, there are three main components to bank assets: loans, securities and deposits with the central bank ("bank reserves"). The amount of loans and deposits is decided by the banks; that of bank reserves, by contrast, is decided by the central bank. Banks may try to "get rid" of those deposits, but, in the process, they will simply shift them from one bank to another.

This explains why changes in the amount of bank reserves provide an indication of the impact of central bank large-scale asset purchases (LSAPs) on the money stock.² When the central bank carries out those purchases, it will pay for them in the first instance by issuing bank reserves. If it purchases the assets from the *banks*, this does not increase the money stock: the increase in reserves is matched by a decrease in the securities held in the banks' portfolio. But if the central bank purchases the assets from non-banks, the increase in the reserves is matched by an equivalent increase in bank deposits. As long as the central bank does not reabsorb ("sterilise") the increase in reserves by issuing other claims (eg securities or reverse repos), their increase is reflected in that of the money stock.

What about government transfers to households and firms? The impact will depend on (i) where the government holds its deposits; and (ii) how the central bank reacts to those transfers. If the government holds its deposits with banks, this leads only to a shift in the ownership of those deposits – from the government to households and firms. If the government holds its deposits with the central bank, this increases bank deposits unless the central bank sterilises the corresponding increase in bank reserves.

¹ When deposits are denominated in foreign currency, yet another factor is any valuation effect from changes in the exchange rate.

² The impact of FX intervention – purchases of foreign-currency assets – is similar.

This, in turn, will depend on the central bank’s operating procedures for setting interest rates.³ Central banks that have engaged in LSAPs may decide to allow bank reserves to swell; those that don’t will typically sterilise.

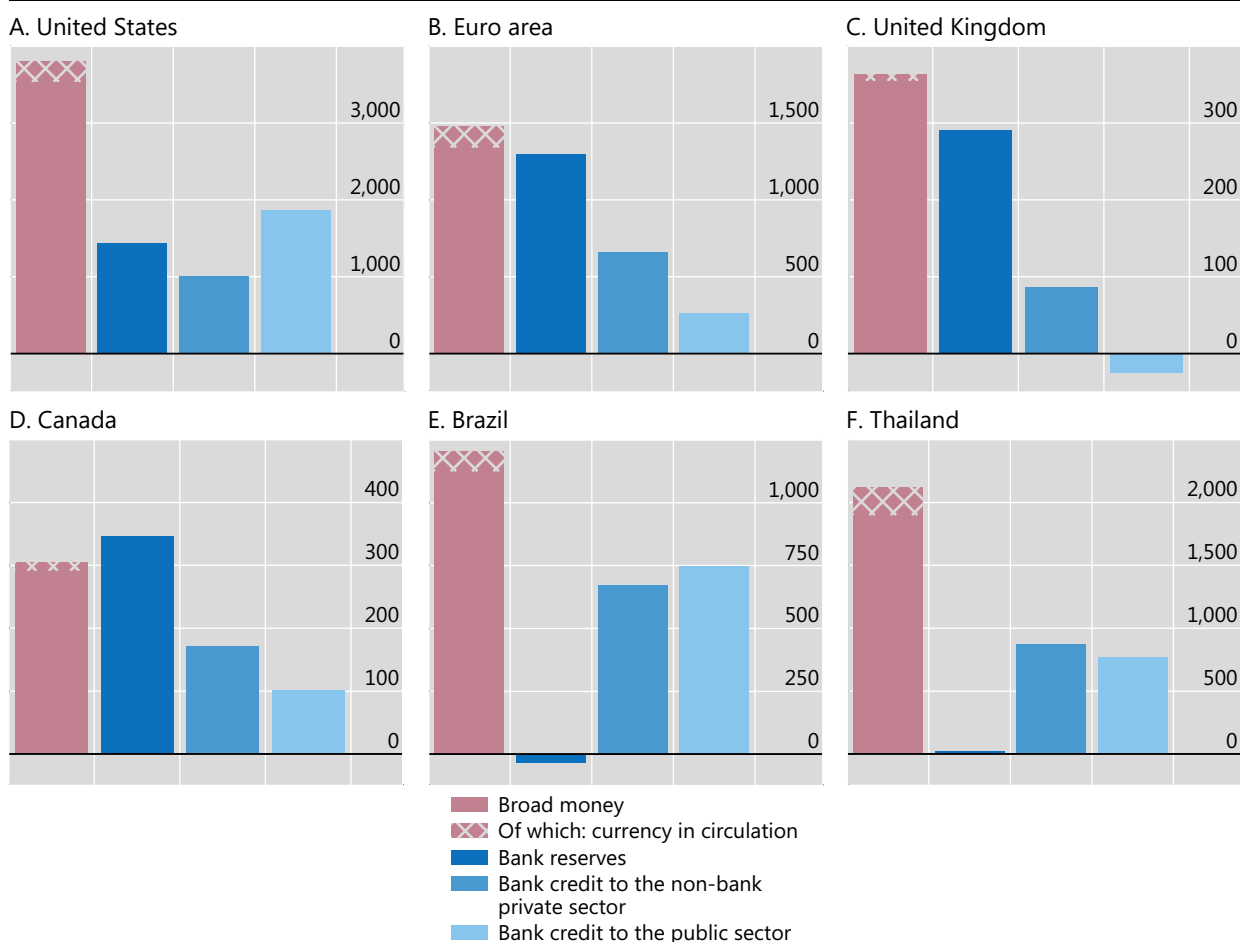
The graph below provides a sense of the factors behind the surge in the money stock for the countries included in Graph 1 in the main text. A more comprehensive analysis would require detailed information, which is not readily available, about the balance sheets of both the banks and the central bank’s balance sheet.

We see that the sources of money growth in 2020 vary considerably across countries. In the advanced economies, as suggested by the sizeable increase in bank reserves, LSAPs played a key role, especially outside the United States. In the two EMEs, the expansion of credit to the non-financial private sector and the public sector was the main factor.

Changes in broad money, bank reserves and bank credit in 2020¹

In billions of local currency

Graph A1



¹ Broad money, currency in circulation and bank reserves are taken from central bank websites; bank credit to the non-bank private sector and bank credit to the public sector are taken from the IMF International Financial Statistics, except for Canada and United Kingdom where national sources are used. Canadian and euro area bank credit does not include credit to public non-financial corporations.

Sources: FRED; IMF; Datastream Refinitiv; national data; BIS calculations.

³ Specifically, whether the central bank operates an ample-reserves (floor) or a scarce-reserves (corridor) system. In a corridor system, the central bank will have no choice but to sterilise; in a floor system, it may decide not to do so. Central banks that engage in LSAPs typically operate floor systems and, in 2020, they decided not to sterilise. For an explanation of the two systems and a description of how their adoption has evolved, see Borio (1997) and Cap et al (2020).

References

Borio, C (1997): "The implementation of monetary policy in industrial countries: a survey", *BIS Economic Papers*, no 47, July.

Cap, A, M Drehmann and A Schrimpf (2020): "Changes in monetary policy operating procedures over the last decade: insights from a new database", *BIS Quarterly Review*, December, pp 27–39.