Bagehot and the Stabilization Function of Central Banks

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„Walter Bagehot was a brilliant observer and writer on contemporary economic and financial matters. In his remarkable book *Lombard Street*, Bagehot brought together his own observations with the analysis of earlier thinkers such as Henry Thornton to provide a critique of central banking as practiced by the Bank of England and a manifesto for how central banks could handle financial crises in future by acting as a lender of last resort. The present financial crisis dwarfs any of those witnessed by Bagehot. What lessons can we draw from recent and current experience to update Bagehot's vision of finance and central banking "

(King 2010, 1)

"Credit is a power which may growth but cannot be constructed." (Bagehot, 1873, Ch. II, 69)

Trust and expectations of creditors and debtors play a constitutive role.

He analyzes the inherent interdependencies of a financed based economy describing the asymmetric creditor-debtor obligations, whose DNA is mutual trust.

Bagehot points out that the Bank of England recognizes this functional condition as a stabilizing institution in its decisions and in some cases also practices it, but has so far failed to represent a transparent and responsible position towards the public.

Bagehot outlines the unique characteristics of a creditor-debtor interaction, pointing to the inherent fragility of trust. He draws attention to the various aspects of asymmetry systematically inherent in this game. To name just a few of these asymmetries, there is time, power, capacity to act, information and responsibility of the debtor or the creditor.

"The main point on which one system of credit differs from another is ' soundness.'

Credit means that a certain confidence is given, and a certain trust reposed. Is that trust justified?

And is that confidence wise? These are the cardinal questions.

To put it more simply—credit is a set of promises to pay; will those promises to be kept? Especially in banking, where the 'liabilities' or promises to pay, are so large, and the time at which to pay them, if exacted, is so short, an instant capacity to meet engagements is the cardinal excellence." (Ch. II, 22)

"In what form the best paper currency can be supplied to a country is a question of economic theory with which I do not meddle here. I am only narrating unquestionable history, not dealing with an argument where every step is disputed." (Ch. III, 84)

Bagehot steps beyond the paradigmatic thinking of his time. He addresses the need for **trust** in the functionality of this contractual obligation for the finance-based economy.

Money functions as money because the role of the central bank has been accepted by society according to its credibility. Constitutive legislation and a functioning state that guarantees compliance with the law are undoubtedly among the necessary contexts for the success of general acceptance.

Bagehot recognized that trading in the new financial instruments involves a promise to pay at a later point in time. This creates time asymmetry between debtor and creditors and increases the perception of uncertainty, which in turn requires a solid trust in the business and its agents.

Bagehot resumes: "We are still living in the debris of that controversy, for, as I have so often said, people can hardly think of the structure of Lombard Street, except with reference to the paper currency and to the Act of 1844, which regulates it now." (Ch. III, 85)

Since any mistrust can lead to disruptions, Bagehot sees it as the Bank of England's task to ensure that a promise to pay can be kept.

- "But fortunately or unfortunately, no one has any fear about the Bank of England. The English world at least believes that it will not, almost that it cannot, fail. Three times since 1844 the Banking Department has received assistance and would have failed without it. In 1825, the entire concern almost suspended payment; in 1797, it actually did so. But still there is a faith in the Bank, contrary to experience, and despising evidence.
- No doubt in every one of these years the condition of the Bank, divided or undivided, was in a certain sense most sound ; it could ultimately have paid all its creditors all it owed, and returned to its shareholders all their own capital." (Ch. II, 39)

„In consequence all our credit system depends on the Bank of England for its security. (…) If a merchant has 10,000 Pound at his bankers, and wants to pay it to some one in Germany, he will not be able to pay it unless his banker can pay him, and the banker will not be able to pay if the Bank of England should be in difficulties and cannot produce his 'reserve'". (Bagehot Ch. II, 34)

What is noteworthy about this quote is that Bagehot places the term "reserve" in quotation marks.

This term takes on a different, new meaning in the context of its analysis. Reserve does not refer to an unchangeable stock of liquidity.

Reserve as a term implies the ability to provide liquidity. This elasticity requirement is one of the reasons why his book "Lombard Street" is still highly regarded today, as it conclusively explaines the basic principles of a functioning financed-based economy.

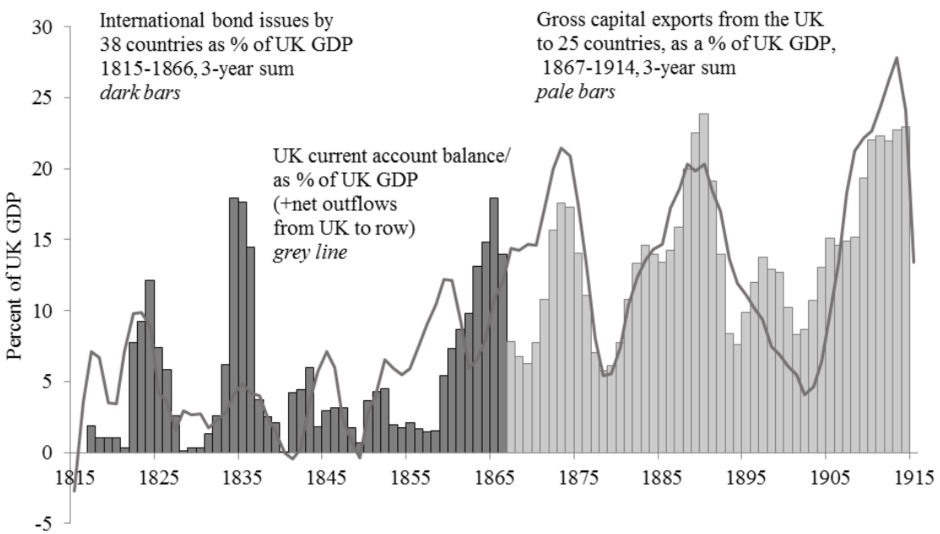
Bagehot examines the principles of finance-based macroeconomics in the modern understanding. This is even more remarkable as the Bank of England had a different constitution at the time and the focus on gold played an important role in the public debate (Chapter VII, 198f.).

He points to the dysfunctionality of the Peel Law:

> "In fact, in none of those years could the Banking Department of the Bank of England have survived if the law had not been broken." (Ch. II, 28-29)

With surprising clarity, Bagehot discusses that international capital movements occur because of interest rate differentials between currency areas. Therefore, in the event of a capital outflow, there is only one rule of action or responsibility for the Bank of England: it must raise its interest rate and reverse this capital outflow

Figure 1. Measuring International Capital Flows in the 19th Century



Sources: Reinhart et al. (2016). See also Data Appendix.

Reinhart, C., V. Reinhart & Ch. Trebesch 2016, Global Capital Flows, Commodities, and Sovereign Defaults 1815-2015, NBER WP 21958, Cambridge

"The Bank of England requires the steady use of an effectual instrument. That instrument is the elevation of the rate of interest. If the interest of money be raised, it is proved by experience that money does come to Lombard Street, and theory shows that it ought to come. To fully explain the matter, I must go deep into the theory of the exchanges, but the general notion is plain enough. Loanable capital, like every other commodity, comes where there is most to be made of it. Continental bankers and others instantly send great sums here, as soon as the rate of interest shows that it can be done profitably." (Ch. II, 45-46)

"The Bank of England has been endowed with privileges by the government and is obligated by the government to invest money in the money market" (Ch. IV, 12).

Since the bank has a monopoly on the issuance of banknotes, it is an unfair player in the money market as it is more privileged than other players (see Ch. II, 41ff.). Bagehot urged the Bank of England, which had been the government's official bank since 1694, to be transparent about its accountability and responsibility.

Bagehot's critique of the Peel's Acts of 1844 precisely contains this contradiction: these privileges imperatively dictate their responsibility, i.e., their accountability, transparency, and communication to society (see Ch. II). The Bank of England must act and make decisions in the public interest.

Context-sensitive explanation of potential decisions is elementary in this regard. In addition, central banks must clearly communicate their own expectations about short- and medium-term economic developments.
The goal of central bank communication is to achieve the greatest possible convergence between the public's expectations and the central bank's own expectations (Muchlinski 2011 2014).

Bagehot quotes Jeremiah Harman in the Lords' Committee in 1832:

- „'We lent it' said **Mr. Harman**, on behalf of the Bank of England, 'by every possible means and in modes we had never adopted before; we took in stock on security, we purchased Exchequer bills, we made advances on Exchequer bills, we not only dis-counted outright, but we made advances on the deposit of bills of exchange to an immense amount, in short, by every possible means consistent with the safety of the Bank, and we were not on some occasions overnice. Seeing the dreadful state in which the public were, we rendered every assistance in our power.' After a day or two of this treatment, the entire panic subsided, and the 'City' was quite calm'". (Ch. II, 51-52)

Bagehot strongly advocates the immediate provision of liquidity by the BoE.

In addition, like Harman, he also emphasizes the need for **risk assessment by the BoE**.

Risk management was important in addition to immediate **liquidity management**

"(…) These advances should be made on all good banking securities, and as largely as the public ask for them (…). No advances indeed need be made by which the Bank will ultimately lose. The amount of bad business in commercial countries is an infinitesimally small fraction of the whole business. That in a panic the bank, or banks, holding the ultimate reserve should refuse bad bills or bad securities will not make the panic really worse." (Bagehot, Ch. VII, 197-198)

Bagehot emphasizes that this decision has gained credibility for the Bank of England (Ch. VI, 142, 148, 157). However, credibility is not an immutable characteristic of a bank or a creditor-debtor interaction. Inevitable credibility depends on how other market players perceive and assess the institution in question in terms of its economic performance and capability to develop in the future.

He criticizes that this intervention to secure the creditor-debtor relation was implemented far too late by the BoE (Ch. VII, 202)

It is important for the Bank of England to strengthen its credibility by clearly defining its own role and function in interaction with developments in trade, the economy, and even international relations.

"The public has the right to know whether the Bank of England – the holders our ultimate bank reserve – acknowledge this duty, and are ready to perform it" (Bagehot Ch. VII, 21).

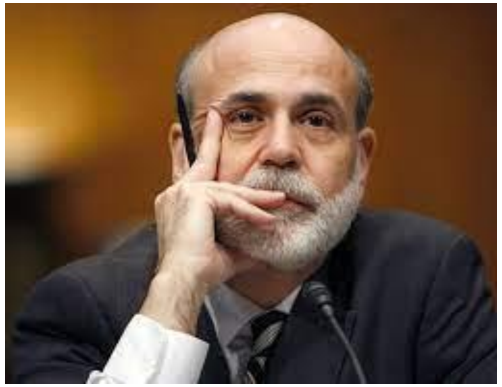
In a panic situation caused by a liquidity problem with the threat of insolvency in entire areas of the economy, a central bank that is not willing to recognize or accept the responsibility of thwarting this panic with its effective instruments, does not deserve the designation central bank.

"Mr. Hankey leaves us in doubt altogether as to what will be the policy of the Bank of England in the next panic, and as to what amount of aid the public may then expect from it. His words are too vague. No one can tell what a 'fair share' means; still less can we tell what other people at some future time will say it means." (Ch. VII 173)

This Harman quote by Bagehot is the reference for modern central banks. Unlike the often-recited Bagehot rule in today's research, 'lend freely', 'against good collateral', at a 'penalty rate' this is irrelevant to the central banker Harman.

Empirical study on the measures taken by the **Federal Reserve Bank** in the context of overcoming the GFC 2007-2009 confirms this perspective.

The FED changed its liquidity provision management in a context-sensitive manner, depending on the further course of this endogenous crisis. Coping with this crisis demonstrates also the **effective cooperation** between the **Treasury and the FED**, as a coalition of the willing (*e.g., Le Maux 2012, Carré & Le Maux 2022a, 2022b, Madigan 2009, Sakar & Shrader 2010*).

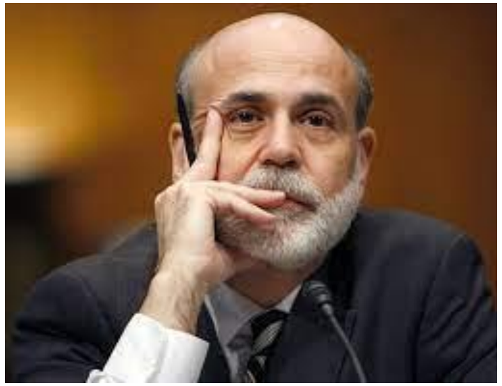


"'Our whole strategy was based on finding a buyer,' Tim said. It was a question of practicability as much as legality.
(…) We were staring into the abyss. I pressed Tim for an alternative solution, but he had none.
'All we can do,' Tim said, in a classic Geithnerism, 'is put foam on the runway'.
The phrase itself conveyed what we all knew: Lehman's collapse, like the crash landing of a jumbo jet, would be an epic disaster, and, while we should do whatever we could, there wasn't much we could do." (Bernanke 2015, 268).

It became apparent that non-bank financial institutions and companies were more involved in this crisis than previously assumed (cf. Alvarez et al. 2020, 113-143).

This required an adjustment of the legal options for the Federal Reserve Bank in coordination with Congress (see Alvarez et al. 2020, 144-170).

In the context of discussions on the AIG bailout in 2008, Congressman Barney Frank asked Ben Bernanke:



"Do you have $80 billion?" Bernanke's response - "Well, we have $800 billion."

This answer indicates the fundamentally unlimited power of a functioning central bank.

Frank's question referred to the then-obscure but now-famous Section 13(3) of the Federal Reserve Act, which gave the Fed virtually unlimited lending powers in "unusual and urgent circumstances." This power was to be restricted with the Dodd-Frank Act of 2010.

See also Haldane (2010) "The 100 billion Dollar Question", Blinder at al. (2017) with reference to Wessels (2009, 197-198).

The central bank's responsibility for financial stability is based on the functional requirement of a stable credit and banking system for monetary transmission.

As February 2020 and uncertainty of this exogenous shock steadily increased, the capital markets in the euro area, the financial markets in the U.S., and the global financial markets went into a downward spiral of negative earnings expectations.

Research literature documents the measures & risk management taken by the FED and ECB since spring 2020 to support resilient structures of financial interactions (see McCauley and Schenk 2020, Bahaj and Reis 2018, 2022).

The U.S. S&P 500 index lost a third of its value in the first quarter of 2020, and the Euro Stoxx fell 37%.
The bond market also reacted to the crisis situation, where investment grade and high yield bond yields in the euro area exceeded the highs reached during the sovereign debt crisis in 2012 (Zaghini 2021, 5).

Asset owners shifted their portfolios into higher-quality and safer investments. Since government bonds are considered almost risk-free, they were preferred. As a result, government bond yields fell around the world in March 2020. As the pandemic worsened and government measures were announced, investor demand for cash surged.

The rising liquidity preference led to enormous selling pressure on government bonds. The former flight to quality immediately turned into a global flight to liquidity, also known as "dash-for-cash" (Barone et al. 2022, 3).

Now government bonds are sold and put enormous pressure on this market for government bonds. This has been evident in almost all advanced economies, where there has been a rise in bond yields and rapid deterioration in the functioning of the market itself.

In the USA, the enormous pressure to sell US government bonds led to the market almost collapsing. The T-Bonds are usually executed relatively quickly via the balance sheets of the special traders who, as market makers, temporarily hold these bonds.

However, the unexpectedly high selling pressure could no longer be realized. The Federal Reserve Bank intervened immediately, substituted the dealers' market-making function, and bought up their own government bonds (cf. Brunnermeier 2021, Ch. 9).

In this respect, the Federal Reserve Bank expanded its function as **the lender of last resort to include this market-maker function** (Milstein and Wessels 2023).

The exogenous shock, combined with an unprecedented lack of knowledge about the causes of this pandemic, put all central banks and governments under immediate pressure to act. The immediate task of the ECB was to ensure the functioning of the capital market in the European currency area and to avoid financial fragmentation.

With its communicated, transparent, and immediate responsibility to the high level of uncertainty during the pandemic in 2020, the ECB succeeded in improving corporate financing conditions and preventing a bank run. This signaling effect was effectively understood by markets.

Philip Lane documents, prior to the announcement of the PEPP, how average government bond yields relative to the benchmark overnight index swap (OIS) yield curve rose significantly in the first half of March 2020 but fell sharply with the announcement of the PEPP (Lane 2020b).

Blog by Lane 2020b, see Chart 4: 10-Year Euro Area GDP-weighted sovereign yield. https://www.ecb.europa.eu/press/blog/date/2020/html/ecb.blog200605~0ee256bcc9.en.html

Lombard Street is a book about the new finance-based interdependencies of an emerging industrial nation where functional tasks need to be redefined and restructured

Bagehot addresses these issues when he calls on the Bank of England to show itself worthy of its government-endowed powers and take responsibility accordingly.

In the COVID-19 pandemic, a committed cooperation of monetary policy measures and government aid programs was practiced in both the industrialized and the emerging economies, the dimensions of which were previously unimaginable as the data from the OECD and the IMF shows.

This cooperation aimed to reduce the negative consequences of the spiral of lockdown, unemployment, loss of production and income and, to a large extent, to cushion demand and supply shocks and insolvencies in the goods and financial markets (Altavilla et al. 2020).

Although Lombard Street does not provide an analysis of a central bank‘s ILOR, Bagehot does highlight this international responsibility of the Bank of England.

Foreign investors draw commercial bills, make deposits, and payments in London and articulate with their decision a high preference for London where stock exchange transactions are also increasingly concentrated.

Due to the importance of London for international payment transactions as a "clearing house for foreign countries", the Bank of England has new obligations towards foreign investors. Investing in London reflects confidence that expectations of positive returns will be met (cf. Bagehot Ch. II, 33).

As discussed in my paper, trust is not always granted, and can be shaken regardless of an actual event.

Bagehot refers to the panic of 1866, which resulted in a sudden outflow of capital. “After the panic of 1866, especially after the suspension of Peel's Act (which many foreigners confound with a suspension of cash payments), a large amount of foreign money was withdrawn from London” (Ch. II, 33-34).

Hypoth.: The US has the ability to stabilize the key functions of its currency and thus ensure confidence in them. This is the reason for the US Dollar's resilience.

How does the US manage to stabilize trust in its currency?

The are many answers to this Q: One refers to swap lines between central banks.

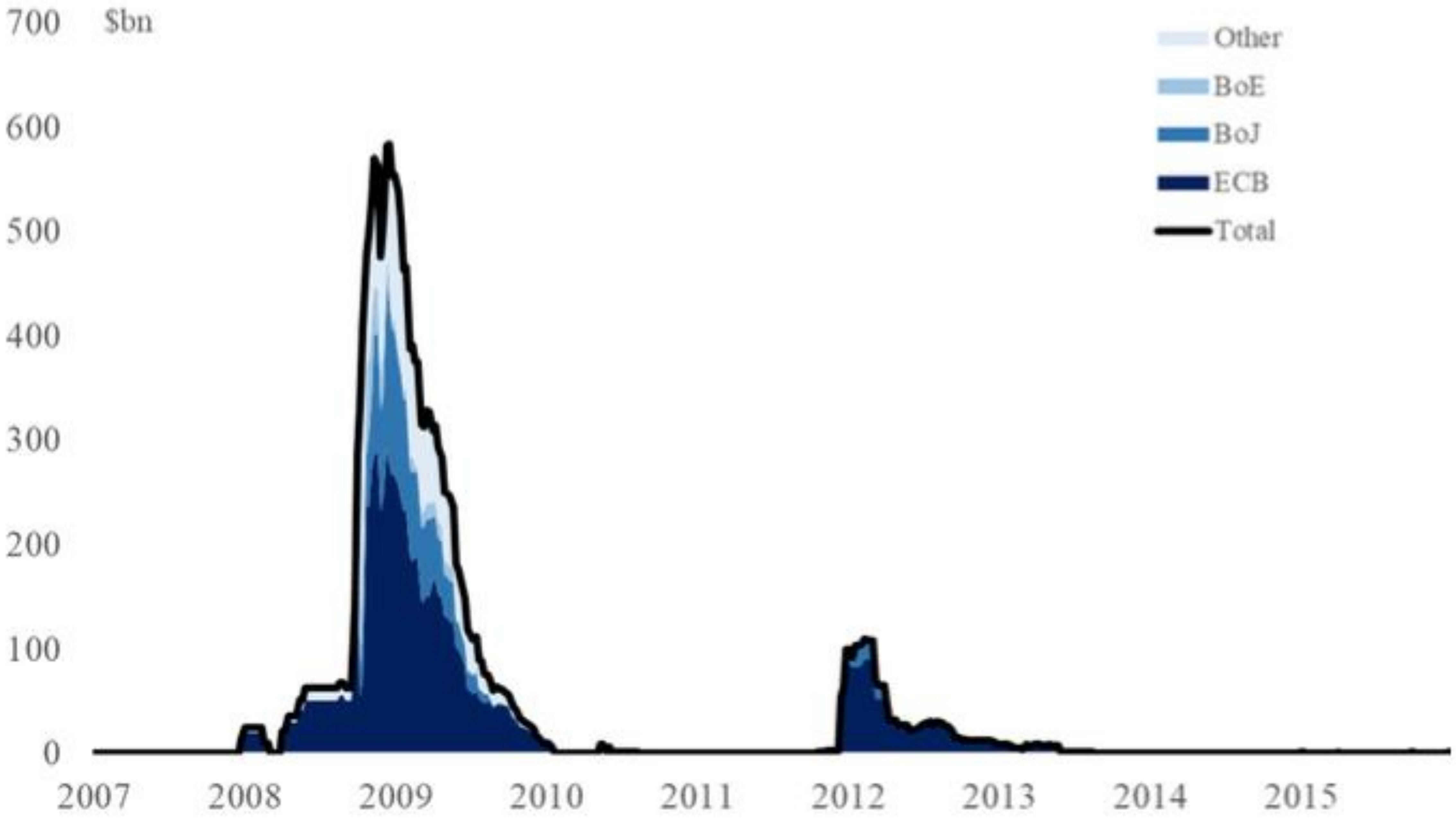
The resilience and strength of the US currency manifests itself in the ability to arrange dollar swaps with other central banks and thus ensure the international availability of the US currency.

While swaps were still referred to a crisis interventions before 2008, today they are an integral part of the established toolbox of a responsible central bank (Carré and Le Maux 2020, 2022a, b).

Central bank swap agreements provide a form of liquidity protection for the central banks primarily concerned with ensuring payment obligations in US currency. The term swap-agreement is an umbrella term for linear or reciprocal lines of credit between central banks.

Bahaj and Reis (2018, 2022) explaines that the United States does not act as a borrower according to the SWAP Agreements.

https://voxeu.org/article/central-bank-swap-lines Bahaj and Reis 2018, 2



The resilience and strength of the US currency manifests itself in the ability to arrange dollar swaps with other central banks and thus ensure the international availability of the US currency ; i.e., the ‘Safe Asset Argument’ (:= high liquidity)

McCauley (2019) justifies the stability of its credibility with the fact that the USA actively and successfully hedges the wealth function of its currency, and that the US dollar enjoys competitive advantages as a result which in turn manifested the international lender of last resort.

McCauley (2019) describes the successful competition to issue US dollars between the Federal Reserve, the national (government mandated institutions) and international institutions authorized to issue US dollar bonds.

He explains the fiscal backstop is the decisive influencing factor which justifies the ILOR of the US dollar.

I would like to add that the successful cooperation between government and the central, bank manifest the LOLR and ILOR and guarantee the ‘safe asset’.

Bagehot proposes that the Bank of England analyzes, recognizes, and understand the financial interdependencies at all levels of the economy, trade, industry, manufacturing, and banking and develop a systemic response to prevent further crises of this kind.

Bagehot describes that a loss of trust can lead to a disruption in creditor-debtor relationships.

Central bank responsibility for financial stability is founded on the functional requirement of a stable credit and banking system for money transmission and price stability.

Bagehot's also emphasizes the importance of international aspects which are relevant to the decision-making and actions of central banks.

Central bank liquidity and risk management includes swap agreements that provide liquidity to other central banks, primarily in foreign currency, particularly US currency.

"Practice has been ahead of theory, as central banks have set up multiple swap lines worth trillions of dollars, which already receive significant attention in discussions of the global financial architecture, of the role of the IMF, or of monetary policy coordination across borders." (Bahaj and Reis 2022, 1655)

Many thanks