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United Kingdom: Bank of England Lending during the Panic of 1866[1]

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Abstract

In 1866, the largest discount house in London, Overend-Gurney, teetered on the verge of insolvency as a result of extensive loan losses. It appealed to the Bank of England, then a privately held joint-stock bank with a monopoly over note issuance, but the Bank refused to help Overend-Gurney on the grounds that it was insolvent. When Overend-Gurney suspended payments, a massive bank run spread throughout London, with observers remarking that an "earthquake" had torn through the City. Panicked bankers flooded to the Bank of England's discount window, where the Bank fulfilled any "legitimate request for assistance." Fulfillment came in two forms: discounts, which were outright purchases of bills, and advances, which were akin to modern-day repurchase agreements using debt securities. In the first week of the Panic of 1866, the Bank lent about 10 million British pounds sterling, more than doubling its noncrisis level of discounts and advances. Although the Bank lent freely and widely during the Panic of 1866, scholars believe the suspension of the Bank Charter Act of 1844 finally calmed the bank run. This move allowed the Bank to issue notes beyond the limit set by the Act of 1844, but the Bank never used this ability as the suspension announcement immediately calmed the market. This action highlighted the Bank's implicit government backing and role as the lender of last resort during financial crises.

Keywords: Bagehot, Bank of England, discount window, lender of last resort, Overend-Gurney, Panic of 1866

[1] This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering broad-based emergency lending programs. Cases are available from the *Journal of Financial Crises* at
https://elischolar.library.yale.edu/journal-of-financial-crises/.

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Overview

In the middle of the 19th century, bills of exchange were the most prominent money market instrument in London. In a stylized example, a manufacturer, the drawee, would send a bill of exchange to a merchant, the acceptor, as credit if the merchant could pay for the goods only after selling them and not upfront (Anson et al. 2017). As a result, a bill of exchange represented a debt, which the drawee could either hold to maturity or sell on the secondary market to either another bank or a discount house. These bills were frequently purchased by *discount houses*, (also known as *bill brokers*), which funded the purchases with demand deposits from banks and functioned as early money market funds (Flandreau and Ugolini 2013).

In the 1860s, Overend-Gurney, the largest discount house in London, slowly slid into insolvency due to losses on poorly underwritten commercial loans. Overend-Gurney approached the Bank of England, then a privately held joint-stock bank with a monopoly over note issuance, but the Bank refused to help Overend-Gurney on the grounds that it was insolvent (Sowerbutts, Schneebalg, and Hubert 2016). As a result, the discount house suspended payments to its creditors on May 10, 1866 (Flandreau and Ugolini 2013). This sparked "the wildest panic," throughout the City's banks, as depositors rushed to withdraw funds and bankers withdrew deposits from the discount houses and fled to the Bank's discount window for cash to fulfill these requests (King 1936, 243; Sowerbutts, Schneebalg, and Hubert 2016).

In response to the Panic of 1866, the Bank lent freely and widely from its discount window. The month of May 1866 saw an almost 40% increase in discounters approaching the window from the year prior (Flandreau and Ugolini 2013). According to the then–governor of the Bank of England, the Bank did not

Key Terms

Purpose: "To mitigate the panic that followed [the failure of Overend-Gurney] the Bank of England, a privately owned joint-stock bank at the time, extended the largest market-wide lending it had ever done and drew heavily on its own reserves" (Sowerbutts, Schneebalg, and Hubert 2016)

Launch Dates	May 10, 1866
Expiration Dates	Not applicable
Legal Authority	Bank Charter Act of 1844 and the Exchequer's letter suspending this act
Peak Outstanding	Not applicable
Participants	Firms, merchant and commercial banks, and bill brokers
Rate	The bank rate served as a minimum for discounts provided by the Bank
Collateral	Collateral requirements are unclear
Loan Duration	The Bank bought bills with a term below 95 days typically
Notable Features	Suspension of the Bank Charter Act of 1844
Outcomes	Money markets calmed significantly by the announcement of the Bank Charter Act suspension, while rates remained high for weeks

"refuse any legitimate application for assistance" (Sowerbutts, Schneebalg, and Hubert 2016).

The Bank funded the liquidity provision from its own cash reserves. The Bank used up 85% of its cash reserves that it had access to without the suspension of legal limits on note issuance (Sowerbutts, Schneebalg, and Hubert 2016). The Bank provided assistance through two avenues administered by the Bank's Discount Office: discounts and advances. For discounts, the Bank conducted outright purchases of bills of exchange at a discount. Alternatively, the Bank provided advances through the purchase of debt securities with an agreement to sell them back to the original counterparty at a later date, similar to present-day repurchase agreements (repos) (Anson et al. 2017).

For discounts, eligible bills had to be endorsed by two "good" British counterparties (Anson et al. 2017). The Bank provided discounts on a non-anonymous basis since it documented the underwriter and the discounter of the bill (Flandreau and Ugolini 2013). Unfortunately, the Bank did not keep detailed documentation on the collateral used for advances and the haircuts applied to it. However, there is indirect evidence that the Bank's standards for collateral were conservative, as late payments and write-offs did not rise dramatically, despite significant lending increases (Anson et al. 2017).

On the day after Overend-Gurney suspended payments, the Bank lent more than 3 million British pounds sterling (GBP) (Anson et al. 2017). It eventually lent about GBP 10 million during the first week of the crisis, more than double the Bank's usual level. The highest levels of lending were mostly concentrated within a week of the panic, but the Bank continued to lend at a slightly elevated level for the remainder of May 1866 (Sowerbutts, Schneebalg, and Hubert 2016). On May 11, the Bank requested that the government suspend the Bank Charter Act of 1844, which limited the size of note issuance backed by gold. The chancellor of the Exchequer approved this suspension on the same day. The Bank then had the authority to issue notes greater than previously allowed by the act, thereby extending its ability to provide liquidity. The only obligation the chancellor placed on the Bank was that the discount rate be raised further to 10% (from 6% prior to the crisis), with the government being able to increase the rate again if necessary (Sowerbutts, Schneebalg, and Hubert 2016). The announcement of this suspension immediately calmed the money markets, and the Bank never utilized this ability. However, about 200 financial firms failed during the Panic of 1866 (Tucker 2020).

Summary Evaluation

In a speech given in September 1866, the governor of the Bank, Lancelot Holland, stated,

> We would not flinch from the duty which we conceived was imposed upon us of supporting the banking community, and I am not aware that any legitimate application made for assistance to this house was refused. (Kynaston 1995, 242)

Contemporaneous sources praised the Bank's response to the Panic. The *Economist*, a leading financial magazine at the time and normally a critic of the Bank, stated, "their policy has been sound, cautious, and admirable" (Economist 1866). In the aftermath of the Panic of

1866, Walter Bagehot, editor-in-chief of the *Economist* at the time, claimed that the Bank had implicitly accepted its role as the lender of last resort for the British banking sector. Although some officials at the Bank of England objected strenuously to this characterization, economic historians now widely agree with Bagehot's assessment (Bignon, Flandreau, and Ugolini 2012).

Notably, there did not appear to be significant public criticism of the Bank for letting Overend-Gurney, "the most trusted private firm in England," fail by not lending to it (Bagehot [1873] 1979, 174). Bagehot states that "a panic occurred, but I do not think that the Bank of England can be blamed for it" (Bagehot [1873] 1979, 174). He describes the collapse of Overend-Gurney as unexpected and sudden. This appears to indicate that the public accepted that the Bank should not lend to insolvent institutions such as Overend-Gurney.

Retrospective studies similarly support the Bank's actions during the Panic of 1866. Flandreau and Ugolini (2014) note that prior to 1866, the banking sector suffered repeated crises, while the only two periods of financial stress between 1866 and 1914 where unrelated to money market dislocations. Flandreau and Ugolini also argue that this period of relative stability was driven by the Bank's generous provision of liquidity on a non-anonymous basis, which ended the pattern of repeating banking crises caused by credit rationing in moments of stress.

Some scholars have compared the Bank's refusal to help Overend-Gurney with the US Federal Reserve's denial of support to Lehman Brothers in September 2008. In both situations, the banks refused to assist a major source of money market liquidity and were later required to act as the lender of last resort to money markets in order to end a financial crisis (Flandreau and Ugolini 2013).

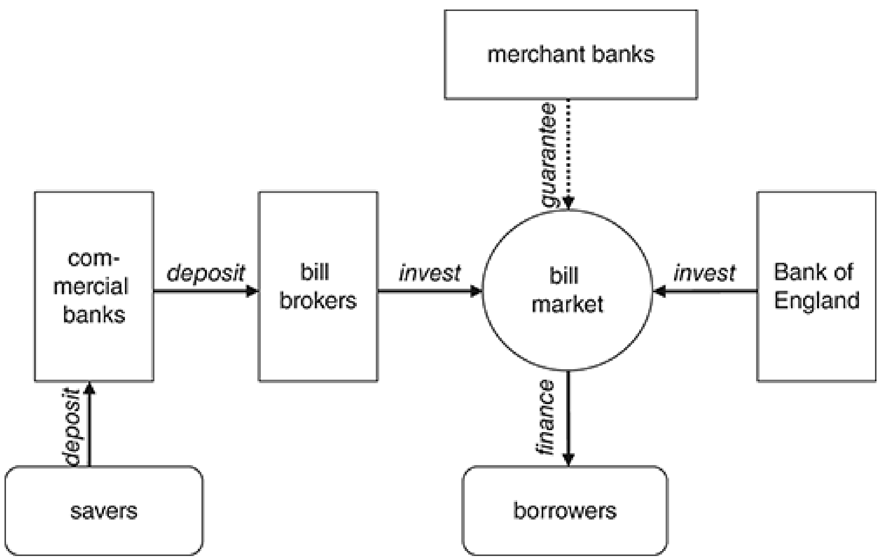
Context: Great Britain 1865-1867	
GDP (nominal GDP at market prices, Great Britain and Northern Ireland)	GBP 951 million in 1865 GBP 982 million in 1866 GBP 969 million in 1867
GDP per capita (nominal GDP at market prices, Great Britain and Northern Ireland)	GBP 36.98 in 1865 GBP 37.76 in 1866 GBP 36.86 in 1867
Bank of England total assets	GBP 67.82 million in 1865 GBP 65.04 million in 1866 GBP 76.58 million in 1867
Bankers' balances at the Bank of England	GBP 4.90 million in 1865 GBP 6.59 million in 1866 GBP 6.19 million in 1867
Bank of England unconsolidated balance sheet as a percentage of nominal GDP (Great Britain and Northern Ireland)	7.22% in 1865 6.84% in 1866 7.80% in 1867
Total commercial bills drawn (three-month maturity assumed)	GBP 1.38 billion in 1865 GBP 1.31 billion in 1866 GBP 1.2 billion in 1867
Total net public liabilities of commercial banks, England and Wales (private and joint-stock banks)	GBP 256.1 million in 1865 GBP 254.7 million in 1866 GBP 254.2 million in 1867
Sources: Huang and Thomas "Annual data on the Bank of England's balance sheet, 1696-2014"; Collins "Long-Term Growth of the English Banking Sector and Money Stock, 1844-80"; Hills, Thomas, and Dimsdale "A millennium of macroeconomic data."	

Key Design Decisions

1. Purpose: After Overend-Gurney failed and the money market froze, the Bank of England provided liquidity to the banks and discount houses through discounts and advances.

In times of money market crisis in 19th century England, commercial banks in need of cash would go to the Bank of England's discount window and discount the bills they held. Additionally, these banks would call their deposits with the bill brokers back, forcing the brokers to also approach the discount window with their own bills to unwind their balance sheets. As a result, the Bank of England became the ultimate backstop to the money market (Flandreau and Ugolini 2013). See Figure 1 for a stylized diagram of how the money market operated in London.

Figure 1: Stylized London Money Market Mechanics



Source: Flandreau and Ugolini 2014.

By 1865, Overend-Gurney, the largest discount house in London, was practically insolvent as a result of credit losses on poorly underwritten commercial loans, despite its profitable discount business (Sowerbutts, Schneebalg, and Hubert 2016).[3] It approached the Bank of England for a loan of GBP 400,000 on May 10, 1866, but the Bank refused to help (Flandreau

[3] In 1865, Overend-Gurney raised GBP 5 million in a share offering, including GBP 1.5 million up-front and GBP 3.5 million that the company could call if necessary. It was later revealed that Overend-Gurney was insolvent at the time of the offering by between GBP 4 million and GBP 5 million against a balance sheet of GBP 20 million. Overend-Gurney was losing an average of GBP 500,000 annually in the early 1860s even while the bill broking business brought in GBP 200,000 in annual profits (Sowerbutts, Schneebalg, and Hubert 2016).

and Ugolini 2013; Ogden 1988, 123). According to King (1936, 242–43, footnote) and Kynaston (1995, 239), the Bank appointed a committee of three, consisting of a former governor and two private bankers, in the spring of 1866 to examine the books of Overend-Gurney. In their confidential report, these three men advised that the Bank offer no help to the discount house, which was "rotten beyond redemption" (Kynaston 1995, 239).[4] Furthermore, King (1936, 242) notes that the governor of the Bank believed that the Bank should not assist individual insolvencies unless "it was prepared also to assist the many others which were known to be in similar plight." This statement was reported publicly in the papers on May 11. Additionally, this appears to imply that the Bank's refusal to lend to Overend-Gurney was related to its insolvency not its illiquidity (Schneider 2021). Essentially, the Bank would act only if the problems affecting Overend-Gurney spiraled into a systemic issue amongst discount houses. According to Flandreau and Ugolini (2014), Overend-Gurney's position as a buyer of bills, rather than an originator, meant that its demise would not have a major impact on money markets themselves.

At 3:30pm on the day that the Bank of England refused assistance (May 10), Overend-Gurney left a note on its door announcing that it was suspending payments (Sowerbutts, Schneebalg, and Hubert 2016). This unleashed the Panic of 1866, which King (1936, 243) describes as "the wildest panic" and notes that one observer called it an "earthquake."

According to Xu (2019, 15), the failure of Overend-Gurney had two major effects. First was a negative supply shock for cash. Since Overend-Gurney was the largest discount house in London, its closure resulted in the disappearance of a major source of liquidity for banks. Moreover, Overend-Gurney served as a major source of liquidity for banks outside London, or "country" banks, forcing country banks to run on London banks, which turned to the Bank of England (Ogden 1988, 124). King (1936, 243) states that "open market discounts were unobtainable," with a nearly complete freeze in the money market.

On the other hand, its failure resulted in a sudden spike in demand for cash (Xu 2019, 15). Depositors began runs on banking establishments, and bankers immediately went to the discount window of the Bank of England for cash to satisfy these withdrawal requests (Sowerbutts, Schneebalg, and Hubert 2016). The Panic of 1866 was "purely and simply a credit panic, with the failure of Overend-Gurney threatening the financial stability of the whole system" (Ogden 1988, 122).

2. Legal Authority: The Bank Charter Act of 1844 provided the Bank of England with a monopoly over note issuance, and the chancellor's suspension of its restriction on note issuance allowed the Bank to calm money markets.

In 1844, Parliament passed the Bank Charter Act, which effectively gave the Bank of England, a privately held joint-stock bank, a monopoly over note issuance (Sowerbutts, Schneebalg, and Hubert 2016). Parliament intended for this act to limit the overissuance of private banknotes, which many in England saw as the driver of previous crises (Anson et al. 2017).

[4] This confidential report could not be found, according to Mike Anson, the Bank of England archivist, and thus appears lost (Tucker 2020).

In pursuit of this goal, the act stated that the Bank could issue notes only backed one-for-one with gold above a GBP 17 million fiduciary limit (Xu 2019, 119).[5] As the run spread, banks turned to the Bank to raise funds to meet their withdrawal requests. As a result, the Bank quickly depleted its reserves of banknotes because the Bank Charter Act provided that the Bank was limited by the fiduciary limit on its note issuance (Anson et al. 2017).

As the run on London banks began, Bank of England governors requested that the chancellor of the Exchequer suspend the act so that the Bank could issue notes beyond the legal limit, which he did (Bank of England 1866b). Technically, only Parliament could suspend the act. It had previously been done so in the crises of 1847 and 1857 (Bagehot [1873] 1979, 108). However, the chancellor promised in a reply to the Bank that the government would ask Parliament for its sanctioning if the Bank ended up issuing notes beyond the legal limit, which never happened (Bank of England 1866b). The chancellor's announcement inspired widespread confidence that the Bank would be able to provide the amounts of liquidity needed and had the effect of calming the runs.[6]

In an article for the *Economist*, Bagehot (1866) writes that the Bank Charter Act should "break down" during crises, as its restrictions on the Bank of England were intended for periods of calm. Bagehot further commented, "[b]ut a panic is now come to mean a state in which there is a confidence in the Bank of England, and in nothing but the Bank of England" (Bagehot 1866). In his later book *Lombard Street*, Bagehot ([1873] 1979, 108) states:

> Since 1797, the public have always expected the Government to help the Bank if necessary . . . one of [the suspensions'] effects is to make people think that Government will always help the Bank if the Bank is in extremity. And this is the sort of anticipation which tends to justify itself, and to cause what it expects.

3. Part of a Package: There were no other related programs.

There were no other programs implemented at the time.

4. Management: The Bank of England, a privately held joint-stock bank at the time with the backing of the government, conducted its lender-of-last-resort operations through its discount window.

In 1866, the Bank of England was a privately owned bank with a monopoly over the issuance of banknotes in London (Sowerbutts, Schneebalg, and Hubert 2016). Under the Bank Charter Act, the Bank of England had two departments: the Issue Department and the Banking Department (Anson et al. 2017). The Issue Department handled note issuance and ensured that issuance of notes above the fiduciary limit set by the Bank Charter Act maintained a one-

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[5] In the initial act, there was a limit of GBP 14 million, but this cap was later increased to GBP 17 million. Any note issuance above GBP 17 million was backed by gold one-for-one (Xu 2019, 119, footnote).

[6] The chancellor's diary from the Panic of 1866 shows that he was beset by nonstop meetings on May 10 with country bankers and London magnates asking for him to suspend the Bank Charter Act (Kynaston 1995, 240–41). This pressure appeared to have a greater influence on his actions than the request from the Bank itself (Kynaston 1995, 240–41).

for-one ratio to gold. The Banking Department, which included the Discount Office, functioned more like a commercial bank, accepting commercial deposits, and was allowed to operate for profit. The Banking Department held some of the Issue Department notes as reserves. The Discount Office, which conducted the Bank's lender-of-last-resort operations through the discount window, typically had a staff of seven and was open for only about three hours a day, six days a week (Anson et al. 2017).

The Bank maintained a system of "embedded monitoring and screening operations" when it came to its discount window (Flandreau and Ugolini 2013). Some historians have portrayed the Bank as conducting purely anonymous lending, as if the discount window were made of frosted glass and raised only high enough to fit bills through. However, it would have been impossible for the Bank to conduct anonymous lending. Every bill presented for discounting contained the names of the acceptors and discounters of the bill, meaning the Bank "would have immediately known who was on the other side of the window" (Flandreau and Ugolini 2013). In fact, the entire value of the bill rested on the Bank's trust of the names written on the bill, thus eliminating the possibility of anonymity (Flandreau and Ugolini 2013).

In the letter informing the Bank that the Bank Charter Act would be suspended, the chancellor of the Exchequer stated that the profits from the penalty rates on loans during the crisis should accrue to the public (Bank of England 1866b). However, the Bank likely never returned the profits to the Treasury, despite annual profit and dividends increasing by 38% in the year of the crisis (Anson et al. 2017).

5. Administration: The Bank provided liquidity through purchasing bills of exchange (discounts) and debt securities with an agreement to sell them back at a later date (advances).

The Discount Office at the Bank had two primary avenues for lending: discounts and advances. Discounts involved the Bank buying bills of exchange at a discount to their face value. With advances, bill brokers sold debt securities to the Bank with an agreement to buy them back prior to their maturity, in a manner similar to modern day repurchase agreements. In 1866, 62% of transactions conducted by the Bank were discounts (Anson et al. 2017).

Advances were not systematically documented, unlike discounts (Flandreau and Ugolini 2013). Therefore, the majority of this case study deals with the details surrounding discounts, as there is readily available documentation and data on them.

6. Eligible Participants: The Bank maintained a list of eligible counterparties, which included firms, merchant and commercial banks, and bill brokers, although bill brokers were allowed to borrow only during the quarterly payment of dividends and during crisis periods.

The Bank of England kept a list of authorized counterparties at the discount window. This included merchant banks and other trading houses, commercial banks, and bill brokers. Beyond these industry classifications, counterparties needed to be recommended by an external evaluator. In 1866, there appear to have been 503 participants eligible for the discount window. In May 1866, 372 discounters approached the Bank's discount window, a significant increase from 269 customers a year earlier (Flandreau and Ugolini 2013).[7]

However, the Bank of England restricted access to its discount window for bill brokers. The Bank of England and bill brokers maintained a strained relationship (Sowerbutts, Schneebalg, and Hubert 2016). During a panic in 1857, Overend-Gurney requested that the Bank provide "unlimited assistance" to the discount house (Schneider 2021). The Bank feared that providing unrestricted access to liquidity to these brokers created moral hazard by promoting high leverage and low reserve ratios. The Bank partially blocked bill brokers from accessing the discount window in March 1858 (Sowerbutts, Schneebalg, and Hubert 2016).

In its March 1858 decision, the Bank ruled that bill brokers could get advances or discounts only once a quarter—when the financial system needed liquidity to help companies pay dividends—or "under special and urgent circumstances" (quoted in Flandreau and Ugolini 2013, 158). When the Bank unexpectedly raised the bank rate in 1860, the bill brokers, led by Overend-Gurney, revolted and threatened to pull their deposits from the Bank en masse (Sowerbutts, Schneebalg, and Hubert 2016).[8] Eventually, the bill brokers backed down.

On its face, this ruling resembles a forerunner to the Federal Reserve's Section 13(3) authority to provide emergency lending to a wider set of institutions, which was used most prominently during the Global Financial Crisis and the COVID-19 crisis (Sastry 2018). The Bank clearly delineated stricter rules that would apply during normal times, while acknowledging that certain crises could call for expanded lending.

These rules led to substantial discount window usage by merchant banks and other trading houses prior to the Panic of 1866. In May 1865, bankers accounted for only 2% of activity and bill brokers, facing restrictions, took no discounts (Flandreau and Ugolini 2013). In noncrisis periods, the bank rate served as a soft ceiling on the discount market rates, which led bankers and bill brokers to stay away from the Bank's discount window. The Panic of 1866 caused a significant transformation in the types of participants in the discount window. During the panic in May 1866, as the Bank acknowledged the crisis and allowed bill brokers to borrow at the window, bill brokers accounted for 21% of discounts; banks accounted for 33%. Flandreau and Ugolini (2013) determine that the increased lending during the Panic of 1866 was the result of large requests from financial intermediaries that were not usually customers of the Bank facing a liquidity shock.

The bills of exchange discounted by the Bank were debt owed by third-party acceptors. The bills were not typically payable by the counterparties approaching the Bank's discount window. Additionally, they were guaranteed by other parties, reducing the risk for both the Bank and discounter (Anson et al. 2017). Therefore, the Bank did not particularly concern itself with solvency tests, as solvency of the discounter did not affect the underlying bills

[7] This number does not account for discounters that came to the discount window multiple times in the month; it simply reflects the total number of discounters that requested discounts at least once.

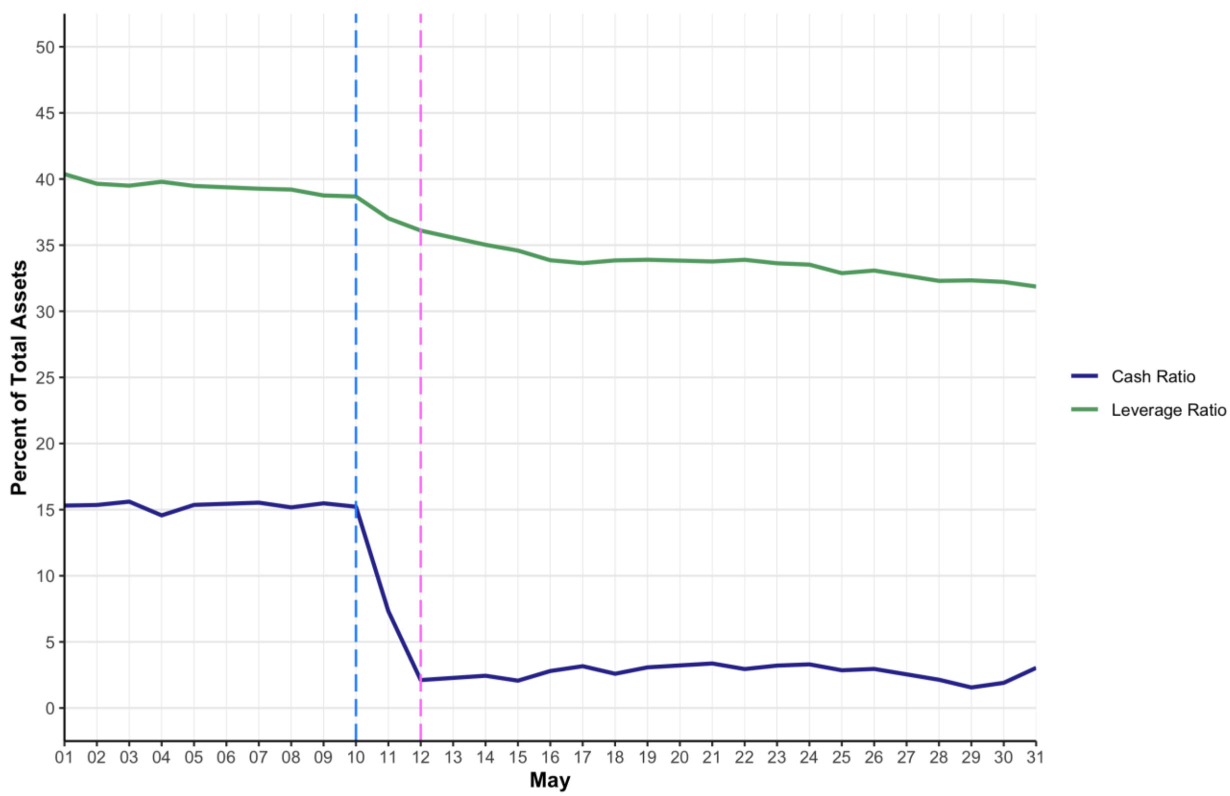
[8] During this crisis, the governor of the Bank of England discovered an anonymous letter on his desk that threatened to take out all of the Bank's reserve notes (Sowerbutts, Schneebalg, and Hubert 2016).

being utilized. Instead, Bagehot noted that the lending must be against "good security" (Bagehot [1873] 1979, 188).

7. Funding Source: The Bank funded the liquidity provision by severely running down its cash reserves.

The Bank of England funded the liquidity provision by depleting its cash reserves by 85% in three days, while expanding its balance sheet by only 7%. Using other measures, the Bank's ratio of cash (including gold and silver coins) to total assets dropped from 16% to 2% in three days, while its ratio of capital to total assets only declined from 39% to about 32% (Sowerbutts, Schneebalg, and Hubert 2016). See Figure 2 for a view at this reserves depletion during the Panic of 1866.

Figure 2: Bank of England's Funding of Its Lending during the Panic of 1866



Note: The blue dotted line indicates May 10, 1866, when Overend-Gurney suspended payments and began the panic. The purple dotted line indicates May 12, 1866, the day after the Bank Charter Act of 1844 was suspended, immediately calming money markets.

Sources: Author's recreation; Bank of England 1866a; Sowerbutts, Schneebalg, and Hubert 2016.

According to Ogden (1988), for months, the Bank of England had anticipated that Overend-Gurney could fail and had built up its reserves in preparation for possible money market instability. Therefore, the Bank's actions indicate that it saw itself as a lender of last resort, although it would not publicly admit so (Ogden 1988, 124).

As mentioned earlier, the Bank petitioned the chancellor of the Exchequer to suspend the Bank Charter Act. This became especially relevant as the cash ratio dropped to just 2%. However, the Bank never needed to use this ability to issue notes beyond the legal limit as the suspension of the act itself restored confidence in the money market (Sowerbutts, Schneebalg, and Hubert 2016). This can be viewed as an early example of "announcement effect," where the mere announcement of an intervention is observed to have a positive impact.

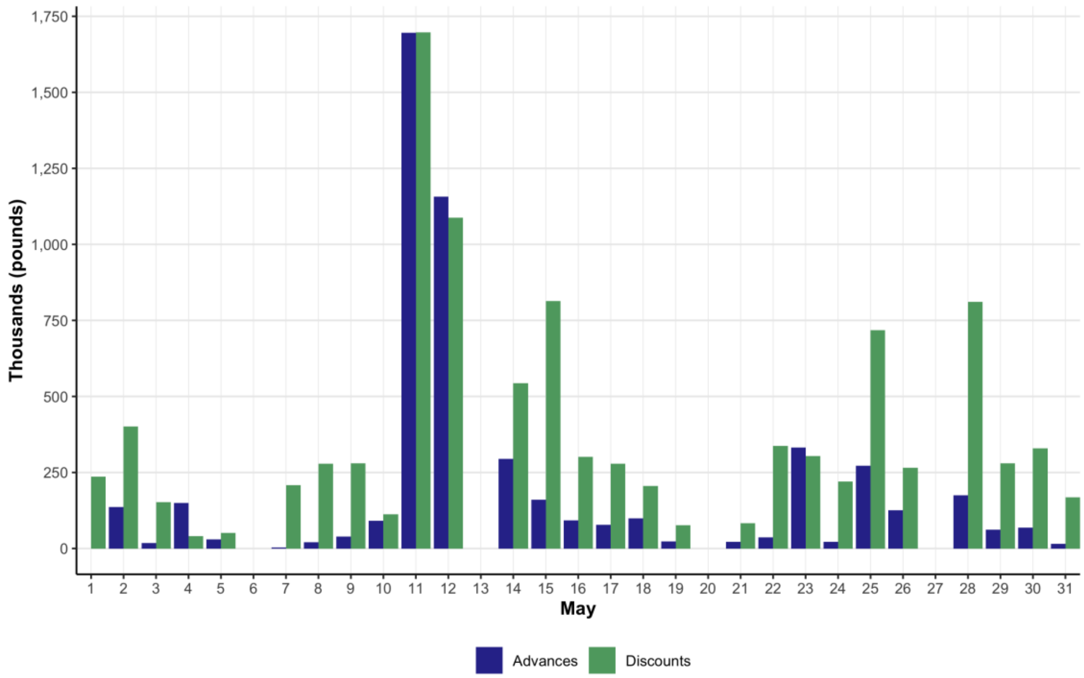
8. Program Size: The Bank lent about GBP 10 million in the first week.

In his seminal book *Lombard Street*, Bagehot discusses the ideal program size, specifically drawing on lessons learned from the Panic of 1866.

> [The Bank of England] is simply in the position of a Bank keeping the banking reserve of the country; that it must in time of panic do what all other similar banks must do; that in time of panic **it must advance freely and vigorously to the public out of the reserve** [emphasis added]. (Bagehot [1873] 1979, 187)

On just the first day of the panic (May 11), the Bank lent more than GBP 3 million. While it is difficult to determine an exact end date for the panic, the Bank lent more than GBP 8 million by May 17. After the suspension of the Bank Act, the advance activity largely subsided, although discounts continued at a slower rate throughout the month (Anson et al. 2017). In a May 11 letter to the chancellor of the Exchequer, the Bank stated that it had not refused any "legitimate" application for liquidity (Bank of England 1866b). See Figure 3 for a depiction of the Bank's daily liquidity provision.

Figure 3: Bank of England Lending during the Panic of 1866



Source: Author's recreation; Flandreau and Ugolini 2013.

9. Individual Participation Limits: There did not appear to be any individual participation limits.

There did not appear to be a rule limiting an institution's participation at the Bank's discount window.

10. Rate Charged: The Bank of England set a bank rate as an interest rate ceiling for discounts and raised it during the Panic of 1866.

Bagehot writes about the rates that central banks should charge in a time of crisis:

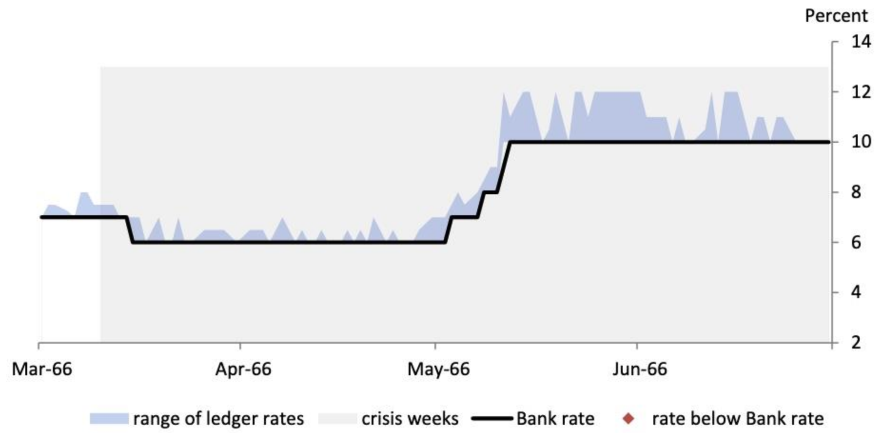
> First, that **these loans should only be made at a very high rate of interest** [emphasis added]. This will operate as a heavy fine on unreasonable timidity, and will prevent the greatest number of applications by persons who do not require it. The rate should be raised early in the panic. (Bagehot [1873] 1979, 187–88)

Starting after the 1844 Bank Charter Act, the Bank set a bank rate as the minimum rate charged for discounting high-quality, short-term bills. Market rates for these bills were typically lower than the bank rate. The Bank charged a premium on top of the bank rate for bills of lower quality or longer maturities (Anson et al. 2017). Initially, the Bank raised the bank rate from 7% to 8% on the day that Overend-Gurney suspended payments and then to 9% the day after. The chancellor of the Exchequer ordered the Bank to raise the discount rate from 9% to 10% on May 11, 1866, as a condition for its agreement to suspend the Bank

Charter Act (Bank of England 1866b). The Bank left this discount rate at 10% for a full 95 days, significantly longer than after previous crises. Maintaining such a high penalty rate for so long caused public consternation about the Bank's potential role in extending the crisis longer than necessary (Schneider 2021). The Bank's reasoning for this extended period of high rates was likely an attempt to avoid depleting its gold reserves, as the convertibility of gold had not been suspended.

See Figures 4 and 5 for graphics depicting the rates charged by the Bank of England during 1866.

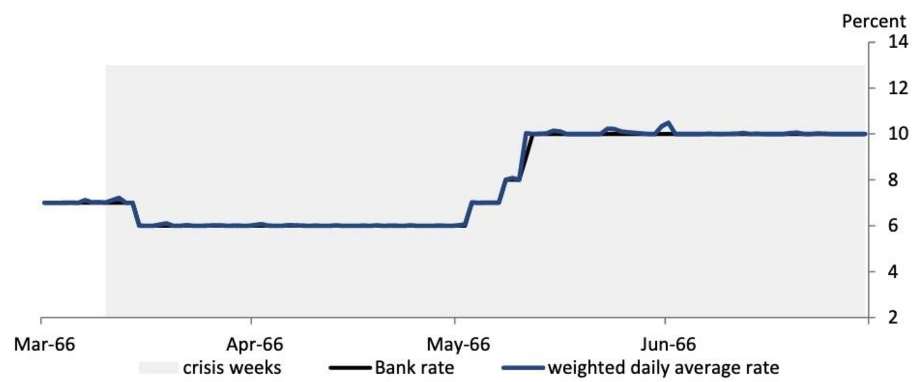
Figure 4: Spread of Discount Rates in 1866



Note: In previous crises, the Bank occasionally lent below the bank rate but did not do so during 1866, which explains the absence of any red diamonds.

Source: Anson et al. 2017.

Figure 5: Daily Average Rate vs. Bank Rate and Market Rate in 1866



Source: Anson et al. 2017.

There does not appear to be any information on how the Bank of England priced advances.

11. Eligible Collateral: The Bank had high standards for eligible bills at the discount window, while the criteria for collateral pledged for advances is unknown.

Bagehot writes about the type of collateral that should be eligible for central bank lending during a crisis:

> [A]t this rate these advances should be made on all good banking securities [. . .] If it is known that the Bank of England is freely advancing on what in ordinary times is reckoned a good security [. . .] the alarm of the solvent merchants and bankers will be stayed. But if securities, really good and usually convertible, are refused by the Bank, the alarm will not abate, the other loans made will fail in obtaining their end, and the panic will become worse and worse. (Bagehot [1873] 1979, 188–89)

The Bank of England discounted bills of exchange, which were unsecured debt. The Bank held no recourse to the underlying transactions being conducted using the bills (Anson et al. 2017).

To be accepted, the Bank required bills to be endorsed by two "good" British counterparties, with one of them being the drawee (Anson et al. 2017). Historians cannot find a systemic definition of a "good" counterparty, but it is assumed to apply to prominent merchant banks in London. The endorsers were liable for payment if the drawee defaulted on the bill, so endorsement was taken seriously and was most valued when from well-respected entities (Anson et al. 2017).

Despite this criteria, there appeared to be a significant amount of discretion on the part of the Bank in determining to accept bills based on its judgement of the creditworthiness of the acceptor and subsequent endorsers of the bill (Anson et al. 2017). The bills discounted by the Bank were primarily drawn from abroad.[9] In May 1865, 85% of the bills at the Bank's discount window were foreign, since they were issued for commercial trade activities. As the Panic of 1866 unfolded, this relative share declined significantly to 63%. This likely reflected the "dash for cash" during the panic and the usage of domestic bills that typically did not interact with the Bank (Flandreau and Ugolini 2013).

In evaluating the Bank's criteria for "good" collateral, Anson et al. (2017) find that the level of write-offs by the Bank was minimal and hovered around 1% of all discounts. This likely shows that the Bank had high standards for accepting bills at the discount window, or we would see a higher proportion of write-offs. On the other hand, the share of rejected bills declined from 1865 to 1866, which suggests the Bank widened its eligibility for bills to include those it would usually reject (Flandreau and Ugolini 2013).

The collateral on bills discounted by the Bank was not commodity-based. Instead, Flandreau and Ugolini (2013) claim that the true collateral backing these bills was the character and reputation of the participants who had their names signed on the bills of exchange. It was

[9] Advances were not systemically documented and therefore are lacking in the clear data that is available for discounts (Flandreau and Ugolini 2013, footnote).

impossible for the Bank's lending to be anonymous due to the signatures on the bills they were discounting.

The Bank's definition of "good collateral" for advances is not readily available. The securities that the Bank made advances on and the haircuts applied to them are unknown (Anson et al. 2017). Flandreau and Ugolini (2013) believe that haircuts were applied and that they were based on "character" of the customer rather than a rules-based analysis of the underlying collateral.

12. Loan Duration: While not certain, it appears that the Bank preferred to purchase bills with a maturity of about 65 days.

While the exact criteria for the maturity of bills accepted at the discount window might have changed over time, an 1844 report from the Bank stated that "no Bill be discounted having more than 6 months to run" (Anson et al. 2017). Historians have claimed that the Bank preferred bills with a maturity of around 65 days and did not discount bills with a term longer than 95 days (Anson et al. 2017). When the Bank raised the bank rate during the panic, it specifically stated its intention to "raise the minimum Rate of Discount on Bills not having more than 95 days to run" (Bank of England 1866b). In fact, the Bank's average maturity of bills discounted hovered around 60 days. This average dipped during crises, possibly reflecting a tightening of eligibility criteria (Anson et al. 2017).

We found no information on the maturity of advances.

13. Other Conditions: Research did not find any additional conditions attached to the lending at the discount window.

Discounts and advances did not seem to carry any additional conditions, as they were simple financial transactions.

14. Impact on Monetary Policy Transmission: The Bank used its cash reserves to fund the liquidity provision and never needed to issue notes beyond its legal limit.

According to Flandreau and Ugolini (2014), the Panic of 1866 was also possibly the worst currency crisis in England throughout the gold standard era. Fearful of the risk induced by the collapse of Overend-Gurney, foreign investors withdrew funds and weakened the sterling for months, despite the Bank maintaining an extremely high bank rate. However, the Bank focused on the credit crisis, by increased lending through the discount window, as a way to fix the currency crisis. As a result, when the lending by the Bank calmed money markets, these high rates heavily rewarded investors that stayed in London for maintaining their faith in the sterling and the Bank and incentivized those who left to trust in the Bank during successive crises. Therefore, Flandreau and Ugolini state that "the role of sterling as a key reserve asset was established" (Flandreau and Ugolini 2014).

In terms of the Bank's balance sheet, discounters approaching the Bank assumed the entirety of risks. If the third-party acceptor of the bill did not pay the Bank, the discounter had to refund the Bank immediately or be banned from the discount window (Flandreau and Ugolini 2013).

15. Other Options: There did not appear to be other options considered.

Research did not uncover additional options pursued by the Bank of England at the time.

16. Similar Programs in Other Countries: Research did not determine any international coordination conducted during the Panic of 1866.

Research did not determine any international coordination conducted during the Panic of 1866.

17. Communication: There is no indication that the Bank of England conducted any communication about the expansion in lending.

The Bank seemingly did not need to announce any changes or expansion in lending, as bankers swarmed the discount window (Sowerbutts, Schneebalg, and Hubert 2016). Bagehot ([1873] 1979) criticizes the Bank's communication policy during the Panic of 1866. At the time, there was a fear in London that the Bank would not provide advances against British government bonds, which "made the panic indefinitely worse" (Bagehot [1873] 1979). Bagehot claims that the Bank's approach to lending was "hesitatingly, reluctantly, and with misgiving" but that instead the Bank should "lend freely, boldly, and so that the public may feel you mean to go on lending" (Bagehot [1873] 1979). As a result, this failure to publicly project confidence and lending ability worked to neutralize the effect of lending to money markets (Bagehot [1873] 1979).

18. Disclosure: Research could not determine how the Bank of England disclosed usage of the discount window.

It is unclear how or if the Bank disclosed usage of the discount window. It maintained daily ledgers in the London office that exist to this day, but these were embargoed for 100 years.

19. Stigma Strategy: The discount window did not seem to be affected by stigma, with the suspension of the Bank Charter Act of 1844 smoothing over most fears.

Research could not find any effort by the Bank of England to address stigma. In fact, the anecdotal descriptions of the Panic of 1866 indicate that the discount window did not suffer from stigma and was instead inundated with discount requests. According to Bignon, Flandreau, and Ugolini (2012), the spread between market rates and the bank rate never turned significantly positive, meaning that discounts from the Bank were seen by the market as a feasible source of funding. This implies that the discount window was not stigmatized. The earlier quote from Bagehot (1866) supports this view, "But a panic is now come to mean a state in which there is a confidence in the Bank of England, and in nothing but the Bank of England."

It appears that the letter from the chancellor allowing the Bank to break the Bank Charter Act of 1844 assuaged the fears of nervous bankers. After this announcement, lending increased dramatically, as bankers did not worry about the Bank running out of money (Flandreau and Ugolini 2013).

Flandreau and Ugolini (2013) note that the Bank of England limited "moral hazard by *not* lending 'anonymously.'" By threatening to ban any discounters that sold bills to the Bank that the third-party acceptors refused to pay, the Bank ensured that discounters themselves conducted rigorous screening procedures in addition to the screening conducted by the Bank itself. Since London banking in 1866 was heavily relationship-based, the Bank had extensive knowledge of discounters, and discounters feared losing access to its discount window (Flandreau and Ugolini 2013).

20. Exit Strategy: The Bank of England did not establish an exit strategy but began to fully assume its implicit role as the lender of last resort with its actions during the Panic of 1866.

The Bank of England did not establish any programs or new procedures during the Panic of 1866. It simply did not "refuse any legitimate application for assistance" (Bank of England 1866b). Therefore, there was no need for an exact exit strategy or expiration date of programs. The Bank did keep the bank rate at 10% until August 16, 1866, at which point the reserves of the Bank had recovered only to GBP 4.6 million (Ogden 1988, 125).

Starting with the Panic of 1866, the Bank of England assumed its role as the lender of last resort to the banking sector (Bignon, Flandreau, and Ugolini 2012). The governor of the Bank stated (to his fellow directors' displeasure), "we would not flinch from the duty which we conceived was imposed upon us of supporting the banking community" (Sowerbutts, Schneebalg, and Hubert 2016).

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