# Censored Success:
# How to Prevent a Banking Panic, the Barings Crisis of 1890 Revisited

Financial histories have treated the Barings Crisis of 1890 as a minor or pseudo-crisis, presenting no threat to the systems of payment or settlement and readily managed by following Bagehot's LOLR rule. New evidence reveals that Barings Brothers, a SIFI, was a deeply insolvent institution. Just as its true condition was revealed and a full-scale panic was about to ignite, the Bank of England stepped in; but it did not respond as Bagehot recommended. While lending freely at a high rate on good collateral to other institutions, the Bank organized a pre-emptive lifeboat operation. Barings was split into a good bank that was recapitalized and a bad bank that had a prolonged but orderly liquidation supported by credit from the Bank. A financial crisis was thereby avoided, while steps were taken to mitigate the effects of moral hazard from this discretionary intervention. Contrary to the historical consensus for the pre-1914 era, central banks did not follow a strict Bagehot rule but exercised discretion when faced with the failure of a giant financial institution. Their success has led to a reading of history that has censored lessons in effective approaches to halting incipient crises.

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> "It was a great mistake…..not to have adopted the course which was adopted at the time of the Baring Crisis, namely to guarantee complete solvency of the Knickerbocker."
>
> -----Nathaniel Rothschild, letter to his French cousins (October 23, 1907).

After the failure of Northern Rock in the U.K. and the collapse of Baer Sterns, Lehman Brothers and AIG in the U.S. in 2007-2008, arguments have intensified over whether central banks should follow a Bagehot-style policy in a financial crisis or intervene to save a failing SIFI (systemically important financial institution). In this debate, the experience of central banks during the classical gold standard is regarded as crucially informative. Most scholars have concluded that the Bank of England eliminated panics by strictly following Walter Bagehot's dictum in Lombard Street (1873) to lend freely at a high rate of interest on good collateral. In addition to liquidity for the market, the rule gives the central bank an automatic "exit strategy" to quickly shrink an expanded balance sheet, as borrowers will not be willing to borrow at high rates for a prolonged period.

This paper re-examines the first major threat to British financial stability after the publication of Lombard Street, the Barings Crisis of 1890. I argue that the Bank of England's management of the crisis deviated from Bagehot's prescription and followed a superior strategy. Overlooked because of its very success—in effect, censored because a major panic was avoided----the 1890 crisis and its French 1889 predecessor significantly alter the historical record that has supported the case for following a strict Bagehot rule.

Most recently Bignon, Flandreau and Ugolini (2012) and Flandreau and Ugolini (2013) have provided evidence that the Bank of England and the Banque de France followed Bagehot's prescription in the nineteenth century. When the Federal Reserve emerged, its leadership, notably Benjamin Strong, urged the new central bank to follow Bagehot's "golden rule."[1] However, while the evidence presented here clearly shows that while the Bank of England applied a Bagehot rule when confronted by the Overend-Gurney crisis in 1866, it was not the principal instrument of policy when faced with the 1890 collapse of Baring Brothers & Co., an insolvent SIFI. In fact, the Bank of England boldly violated Bagehot's rule when it intervened to split Barings into a recapitalized "good bank" and a "bad bank" that would undergo a slow and orderly liquidation. Both the Bank and the British Treasury believed that following a Bagehot-style rule would permit an emerging financial crisis to amplify a recession. Pre-emptive intervention would avoid this shock and the risk of increased moral hazard could be mitigated if those responsible for the collapse of Barings bore the costs. As the quote at the beginning indicates, the Bank's success in 1890 led key European central banks and prominent bankers to view the U.S. panic in 1907 as the consequence of a failure to follow what they perceived as best practice LOLR (lender of last resort) policy.[2]

[1] Quoted in Lester V. Chandler (1958), pp. 173-174.

[2] In the absence of an American central bank, the New York Clearing House provided liquidity in crises to its member banks. As a trust company, Knickerbocker Trust Company, the failing institution that precipitated the panic was not admissible as a member of the Clearing House. Friedman and Schwartz (1963, p. 159) commented that "Had the Knickerbocker been a member of the Clearing House, it probably would have been helped, and the further crisis developments might thereby have been prevented."

Drawing on archival information from the Bank of England and other leading institutions and newly available data, this paper offers a radically different description and appreciation of the premier central bank's LOLR operations in the nineteenth century; and begins by first briefly discussing Bagehot's rule and its limitations. In the second section, the literature on whether Bagehot's rule was followed by central banks in the pre-1914 era is examined. In recent financial crises, concerns have been raised that the failure of a SIFI may require a different policy response, and the third section offers evidence that Baring Brothers was such an institution. Section 4 provides a narrative of the Barings Crisis and Section 5 addresses the question, whether the Barings was insolvent. How the Bank of England learned of Barings fragile condition is examined in the sixth section, while the question of whether a general banking panic would have broken out if Barings had collapsed is treated in Section 7. The French model for intervention—previously ignored in the literature---that was used by the Bank of England is discussed next, followed by an account of how a guarantee syndicate to cover any losses from a Barings' insolvency was formed. The tenth section describes how Barings was liquidated and how, when losses were realized, they were primarily borne by the partners responsible for the debacle. Whether this intervention prevented a deeper recession and if it induced banks to reconsider their risks is discussed briefly in Section 11, with the conclusion examining possible lessons for today.

## 1. Bagehot's LOLR Prescription

A financial panic represents a serious threat to modern economies. If not halted promptly, a scramble for liquidity can produce a collapse and a contraction of credit that may precipitate or amplify a recession. How a central bank reacts to a panic is of crucial importance in mitigating these effects. Although Henry Thornton (1802) is first credited for formulating a LOLR policy for central banks, it is in Walter Bagehot's <u>Lombard Street: A Description of the Money Market</u> that the policy was clearly exposited. To halt a panic, Bagehot, then editor of the <u>Economist</u>, laid down two rules to guide the Bank:

> (1) loans should only be made at a very high rate of interest. 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….(2) That at this rate these advances should be made on all good banking securities, and as largely as the public ask for them...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. (Bagehot, 1873, pp. 96-97)

It is important to note the environment in which Bagehot was advising the Bank of England. Under the classical gold standard, the Bank operated primarily through its discount window, rather than by modern open market operations, offering collateralized loans in the form of its gold-convertible banknotes. Because the Bank had limited gold reserves, its ability to provide liquidity was constrained; but Bagehot did not believe that this hindered the power of the central bank. At the first signs of a panic, the Bank should lend freely to calm the market because the danger lay in any hesitation that would alarm the market and lead to a sharp decline in the Bank's gold. If this happened, the Bank had the option of asking for a "letter" from the Chancellor of the Exchequer to indemnify it for violating its reserve requirements under the Act of 1844. However, Bagehot regarded this action as only necessary if the Bank did not clearly state its policy and act promptly (Bagehot, 1873, p. 101). If his prescription were followed, Bagehot believed that panics could quickly be brought under control; there would be no rash of bank failures because illiquid but solvent firms would have access to liquidity, while insolvent institutions could safely fail (Bordo, 1990).

Bagehot's prescription for dealing a panic has many contemporary adherents. Meltzer (2009) and Taylor (2009) criticized the Federal Reserve for failing to follow a strict monetary and LOLR rules during the 2008 Crisis and for exercising discretion to intervene when a large institution was on the brink of failure. However, recent theoretical developments in the theory of the LOLR function offer support for discretionary interventions. In their survey of LOLR theory, Freixas and Parigi (2014) noted that if there is a perfectly functioning money market, the monetary authority only needs to manage aggregate liquidity. The market will then allocate funds to liquid banks and deny them to insolvent ones whose liquidation can be managed by the legal system or fiscal authority, as argued by Goodfriend and King (1988). Yet, given the opacity of bank assets, information asymmetries make it difficult for the financial system to distinguish between illiquid and insolvent institutions after a shock, leading to a systemic halt or gridlock in the interbank market and, more generally, financial intermediation. Freixas and Parigi identify systemic risk as arising from networks of financial contracts for the payments system, the interbank market and markets for derivatives. In the case of Baring Brothers & Co., a huge portfolio of newly issued and ready-to-issue Argentinian securities was funded by acceptances with other banks. When bad news from Argentina arrived, banks refused to roll over their acceptances for Barings and a scramble for liquidity began. What concerned the Bank of England was that a massive dumping of Argentine and other emerging economies securities would lead to a "fire sale" that would spread through the market. The literature on fire sales (Shleifer and Vishny, 2010) shows that dumping assets on a market may cause them to be sold below their fundamental values, leading to a cascade of bank failures and a panic.

The Bank of England could have followed Bagehot's rule and allowed Barings to fail. However its, modest gold reserves made it fearful that it could not supply British banks with sufficient liquidity without provoking a currency crisis---from its inability to sustain convertibility---in addition to a banking crisis. Faced with a potential dual crisis, it chose intervene pre-emptively. While this action may be seen as establishing a dangerous discretionary precedent, discretion had been a feature of the Act of 1844 that granted the Bank of England the option, with a "chancellor's letter" of violating its gold serve ratio in a time of exigency. In doing so, the Bank was following a contingent rule for price stability (Bordo and Kydland, 1995); now for the first time in the Barings Crisis, it was following a contingent rule for financial stability (Mishkin and White, 2014). While this pre-emptive action might avoid a financial crisis, it might also create moral hazard, increasing inducements to banks to take more risk in the future. Successful contingent rules thus require ex post penalties for risk taking. In this episode, the Barings partners, under unlimited liability, were forced to make their creditors whole, while the banks that had incautiously lent to them were induced to form the core of a lifeboat to guarantee and limit the losses to the Bank of England. Yet, by successfully quashing an incipient panic, this central banking episode has receded in historical importance while financial history has focused on explosive events when central banks failed.

## 2. Did Central Banks Follow Bagehot's Prescription?

The current scholarly consensus has missed out on the relevance of the 1890 Crisis and holds that, if mid-nineteenth century central banks were not already beginning to follow Bagehot's prescription, his writings persuaded them to adopt a "Bagehot rule."[3] In an influential survey of LOLR policy, Michael Bordo (1990) wrote that after 1866, the Bank of England followed Bagehot's rule and thereby prevented incipient crises in 1878, 1890 and 1914 from developing into full-blown panics. Bordo concluded that between 1870 and 1970, European countries' central banks generally observed Bagehot's prescription. Similarly, in a much cited article, Thomas Humphrey (1989, p. 8) concurred and emphasized that "the Thornton-Bagehot version of the LOLR concept provides a useful benchmark or standard for central bank policy.

Attributing the absence of panics to central banks' adherence to a Bagehot rule, scholars have almost universally dismissed the events of 1890 as a minor crisis. In contrast to "real" crises in Britain in 1825-1826 and in the United States in 1929-1933, Anna J. Schwartz (1986) considers the Barings' crisis to be a "pseudo-crisis." Roy Bachelor (1986, p. 54) is equally dismissive, stating that "although the Baring crisis caused a flurry of activity at the Bank and the Treasury, its impact on financial markets was small." Only Leslie Presnell (1986), in an obscure and ignored article, recognized the importance of the crisis and the Bank of England's response. More recently, Reinhart and Rogoff (2009) identified 1890 as a minor banking crisis; and John Turner argued that "there have been only two major banking-system crises in the past two centuries. The first major crisis was in 1825-6; the second was the Great Crash of 2007-8. In the interim there were periods when the banking system was under stress and weak banks failed, but at no time was there a major crisis or a threat to the overall stability of the banking system." (Turner, 2014, p. 7)

While historians may have forgotten the threat posed by the failure of Baring Brothers and the significance of the Bank of England's intervention, the Investors Monthly Manual, an importance voice of market sentiment, had no doubts:

> The past month will long be remembered in the City. The downfall of Messrs Baring Brothers, perhaps the greatest firm of merchant bankers in the world, would alone have sufficed to keep it in remembrance: but it will be even more distinguished by fact that a crisis of the gravest character has been averted by the action of the Bank of England, aided by the Joint-stock and other banks. (November 29, 1890, p. 563.).

At the end of the report, the editors of the publication re-emphasized the threat that Baring's collapse presented:

> On the whole, the downfall of this great house—one that competed with Messrs Rothschild for supremacy in the financial world—has taken place without causing a disastrous crisis, owing, of course, to the action of the Bank of England; but there can be no doubt that if the central institution had not rendered assistance, the City would have had to encounter difficulties unequalled in their severity since the failure of Overend, Gurney in 1866. (November 29, 1890, p. 564).

[3] See, (Bignon, Flandreau, and Ugolini, 2012; Flandreau and Ugolini, 2013).

This paper supports contemporary opinion and argues that the historical consensus that consigns the crisis of 1890 to minor importance errs by censoring a crisis where a central bank pre-emptively and successfully acted to halt an incipient panic. By doing so, the literature misses out on an important example of how a panic was quickly aborted. However, scholars are only partly to blame, as the Bank of England, the Chancellor of the Exchequer and key insiders were careful not to reveal the true condition of Baring Brothers, as they hurried to save the bank by violating Bagehot's rule.

### 3. How Big Was Baring Brothers? Was It a "SIFI"?

While contemporaries agreed that Barings was the only real rival to the Rothschilds, it is still necessary to establish its relative importance in the financial system to understand the extraordinary response by the Bank of England and the City to its imminent demise in 1890. Comparisons are difficult because there was minimal financial reporting for public companies and essentially none for partnerships like the Barings and the Rothschilds.

On the eve of the great merger wave that would create the giant London banks, the limited liability banks were smaller than the two great merchant/investment banks. Table 1 reports the capital of some of the largest limited liability, publicly traded banking companies; it includes four London banks, two prominent provincial banks—the Bank of Liverpool and Lloyds---with significant offices in London and two discount houses. As is quickly evident, the nominal capital of these financial institutions was far smaller than their paid-in capital. Although they were subject to limited liability, there was an extended liability, where the whole of the capital was potentially callable. For example, the London and Westminster Bank shareholders had supplied £2.8 million in capital but they were liable for another £11,120,000 in a crisis. While they had many more shareholders than the merchant/investment banks had partners, this extended liability feature made these banks more like their private rivals that were subject to unlimited liability.

**Table 1**
**Limited Liability Banks and Financial Institutions in London, 1890**

| | Number of Shares | Nominal Capital (£) | Paid In Capital (£) |
|---|---|---|---|
| London and Westminster Bank | 140,000 | 14,000,000 | 2,800,000 |
| London Joint Stock Limited | 120,000 | 12,000,000 | 1,800,000 |
| Union Bank of London | 110,000 | 11,000,000 | 1,760,000 |
| Lloyds Bank | 162,500 | 8,125,000 | 1,300,000 |
| Bank of Liverpool | 80,000 | 8,000,000 | 1,040,000 |
| City Limited | 100,000 | 4,000,000 | 1,000,000 |
| National Discount Co, Ltd | 169,333 | 4,233,325 | 846,665 |
| Union Discount Co. of London | 130,000 | 1,300,000 | 650,000 |

Source: Investors Monthly Manual (November 29, 1890).

For the two great rival banking houses, we have parts of their balance sheets thanks to the archival sleuthing of Ferguson (1999) and Ziegler (1988), which are seen in Table 2. While this table would seem to offer a direct comparison, it must be cautious as there was no standardized accounting in this period. Measured in terms of capital both Barings and Rothschilds were significantly larger than the banks in Table 1, in terms of paid-in capital. In the decade leading up to the Barings crisis, Rothschilds' capital varied from somewhat below £5 million to £6.7 million. Barings was a smaller house with capital of approximately £1.9 million in 1880, reaching £3.1 million in 1888. The figure for October 1890, £4,042,328, which was arrived at by the Bank of England's inspection of Barings records on November 11, is significantly larger and cannot be easily reconciled with the figures provided by Ziegler. The November 11, 1890 report gives assets and liabilities for Barings, but assets here seem to approximate the trial balance for 1890. While smaller by capital, by assets or "trial balance," Barings at £24.1 to £27.9 million for 1889-1890, was the peer of Rothschilds with £23.9 to £30.4 million. Of course, this was the result of the greater leverage of Barings. The growth of Rothschilds assets and liabilities from 1888 to 1890 saw their leverage from 3.5 to 5.1. In contrast, Barings' leverage was 11.1 and 8.4 in 1889 and 1890 by Ziegler's figures and 6.2 by the records of the Bank of England. All of these figures seem modest by 21st century standards of financial institution risk, but they represent a sharply increasingly leverage. The Rothschilds had begun the decade of the 1880s with a leverage ratio of a little more than 2 and then steadily rising to over 5 in 1890 and then post-crisis dropping down to 2.6 by 1896.

**Table 2**
**Assets, Liabilities and Capital of the Rothschilds and Barings**
**1880-1896, (£ sterling)**

| | N.M. Rothschild & Sons | | | | Baring Brothers & Co. | | |
|---|---|---|---|---|---|---|---|
| | Assets | Liabilities | Capital | | Capital | Trial Balance/Assets | Liabilities |
| 1880 | 10,857,738 | 6,061,239 | 4,769,499 | 1880 | 1,855,269 | | |
| 1881 | 12,177,367 | 6,447,359 | 5,730,007 | 1881 | 2,222,495 | | |
| 1882 | 12,511,291 | 7,407,997 | 5,103,295 | 1882 | 2,159,904 | | |
| 1883 | 12,734,390 | 7,707,303 | 5,027,087 | 1883 | 1,981,200 | | |
| 1884 | 13,491,790 | 8,461,352 | 5,030,438 | 1884 | 1,898,745 | | |
| 1885 | 11,446,012 | 6,575,835 | 4,870,177 | 1885 | 2,157,368 | | |
| 1886 | 14,126,858 | 8,028,446 | 6,098,412 | 1886 | 2,463,719 | | |
| 1887 | 16,984,901 | 10,988,123 | 5,996,778 | 1887 | 2,620,292 | | |
| 1888 | 19,638,633 | 14,102,158 | 5,536,475 | 1888 | 3,102,368 | | |
| 1889 | 23,986,545 | 17,236,545 | 6,750,000 | 1889 | 2,452,438 | 27,987,327 | |
| 1890 | 30,433,369 | 24,510,432 | 5,922,937 | 1890 | 2,954,025 | 24,095,982 | |
| 1891 | 22,080,046 | 16,257,697 | 5,822,349 | 10/1890* | 4,042,328 | 25,005,338 | 20,963,000 |
| 1892 | 18,395,602 | 12,935,194 | 5,460,408 | | | | |
| 1893 | 16,424,287 | 11,567,033 | 4,857,254 | | | | |
| 1894 | 18,530,735 | 13,623,238 | 4,907,497 | | | | |
| 1895 | 19,260,482 | 14,245,485 | 5,014,997 | | | | |
| 1896 | 19,004,363 | 11,930,718 | 7,073,645 | | | | |

Sources: Ferguson (1999), Vol. 2, pp. 508-9; Ziegler, p. 376; and Messers. Baring Brothers & Co. Liabilities and Assets on 31st October 1891, Bank of England archives 9A240/5

Although the Barings records are sparse—a worrying bit of financial record-keeping---they suggest a banking house more leveraged and as events would reveal, taking considerable risk in the emerging markets of Latin America. All in all, Barings was larger than any of the limited liability banks, in terms of paid in capital, and within reach of its great rival. By size alone, its collapse would have been alarming but it was also a highly interconnected bank, in modern terms a SIFI, conducting a vast mercantile business and borrowing extensively from other banks to fund its operations.

### 4. The Crisis Begins—Spector of a Dual Crisis

Trouble at Barings was not suspected when, on Friday, November 7, 1890, the Bank of England raised its discount rate from 5 to 6 percent. Reporting on this event the following day, the Economist attributed the increase to the need to protect the Bank's gold reserve from further external drains and the demands of the Scottish banks. It also reported the arrival from of Dr. Victoriano de la Plaza from Buenos Aires whose purpose was understood to be the restructuring of the Argentina's external debts, commenting it is "indeed a very heavy programme." (Economist, November 8, 1890) No mention was made of Baring Brothers.

This standard account of the origins of the crisis and accepted by all subsequent histories was provided by Clapham (1945). According to Clapham, on the same day as the Economist published this information on Saturday November 8, one informed insider, Everard Hambro, a banker and director of the Bank of England sensed trouble and organized a meeting in his office with Lord Revelstoke (E.C. Baring), Francis Baring and the Governor of the Bank of England, William Lord Lidderdale. Before arriving, Lidderdale sent a note to the Chancellor of the Exchequer, George Goschen, requesting him to come to the city on Monday. Goschen suspected that it might be Barings; and, if so, "1866 would be a trifle [compared] to it."[4]

With these apparent pressures building Goschen met Lidderdale on Monday, November 10. When the Governor asked for aid from the government, the Chancellor responded that the government would not "interfere on behalf of an insolvent house;" and "remembering action taken in France when [in 1889] Comptoir d'Escompte was in difficulties, I said the great houses and banks in London must come together and give the necessary guarantee." (quoted from Goschen's diary, Kynaston, 2012, p. 134) Lidderdale did not jump on this suggestion, most probably because to form such a syndicate required informing the banks of Baring's troubles, which might by itself induce a panic. As the Bank's gold reserves had fallen to £10.8 million, Goschen offered a Chancellor's letter to indemnify the bank if it fell below its legal reserve. Lidderdale refused, fearing that its announcement and any further increase in interest rates would not calm the markets nor attract more gold and that a "dual crisis"—a banking and a currency crisis---might erupt with runs on the pound sterling and the banks. Instead he asked Goschen to request Nathaniel Rothschild to contact his Paris cousin Alphonse Rothschild to negotiate a Banque de France gold loan and to form a committee to negotiate with the Argentine Government to quickly determine a haircut for the securities.

All of these negotiations were conducted in secret, as the Bank of England attempted to shore up its reserves. In their discussion of Tuesday November 11, Goshen again informed Lidderdale that the government would not request any assistance from Parliament. Rothschild came through, with gold obtained by borrowing (swapping) £3 million in gold from the Banque de France for Treasury bills, which were obtained by selling consols to the Commissioners of the National Debt. In addition, the Bank bought £1.5 million of gold from Russia with Exchequer bonds; and the Russian government promised not to withdraw its deposit of £2.4 million at Baring Brothers. With its gold reserves replenished, the Bank could now deal with the Barings.

[4] Quoted in Clapham, 1945, p. 329. The failure of the Overend-Gurney bank in 1866 yielded a general banking panic and a recession.

Lidderdale arranged for two directors of the Bank of England, Bertram Currie and Benjamin Buck Green, to visit Barings and provide a verified balance sheet on Friday November 14. On that day, Currie met Greene at the Bank at 2 pm who he found was "uneasy in his mind about the value of the securities." After a discussion they agreed to a joint statement that "as far as was possible in the limited time at our disposal, we were of the opinion that the assets of the firm shewed a substantial surplus over its liabilities." (Fulford, 1953, p. 301) Their assessment was accepted by Clapham (1945) in his standard history of the Bank and has remained unchallenged even in the most recent studies. Grossman (2010) reports that Lidderdale was "convinced that Baring was solvent, but illiquid" and Kynaston (2012, p. 135) states that Barings had "a substantial surplus over its liabilities." Yet, a close examination of Currie and Green's account shows that there was more than a simple liquidity problem.

When Currie and Green delivered their report, they declared that Baring Brothers and Co. was solvent but that it would require an £8 to £9 million loan to meet maturing acceptances.[5] Apart from the short-term acceptances of £15.7 million, there were substantial deposits of £5.2 million that might be withdrawn. Lacking liquid resources, a run would have forced Barings to dump its securities---overwhelmingly Argentinian debt and equities, totaling £8.3 million. Lidderdale and the directors of the Bank recognized what modern theory identifies this as a situation that could easily produce a banking panic. If bank portfolios are opaque and the market cannot distinguish between illiquid and insolvent banks, the interbank market will seize up---acceptances will not be renewed, in this case---and a systemic risk will arise. When banks are unable to access the interbank market, they may dump assets on the market, creating a fire sale, where assets are sold below fundamental prices. Fire sales will produce declines in the value of other banks' portfolios, leading to a cascade of bank failures and a panic. While Currie and Green appear to have obscured Barings' condition, what was the true state of its finances?

## 5. The State of Barings' Finances October 31, 1890

As a private firm, Baring Brothers was not subject to any disclosure rules and relied on its long established reputation to reassure its creditors. Examining Baring Brothers &Co. records, there appears, by modern standards, to have been a lack of standardized accounting methods and transparency that would permit a quick assessment of the bank's liquidity or solvency. While the journal entries in their ledgers allowed the partners to record transactions, it is not clear that tried to form a regular unified view of their balance sheet. Balance sheets were never reported to the public or to government officials or to the Bank of England. It was a very *private* bank. The first complete but not very detailed portrait of Barings' balance sheet, reported in its totality in Table 3, was produced by Currie and Green. It should be noted that there are too many rounded numbers in this report to consider it more than a rough estimate of the first's assets and liabilities.

**Table 3**
**Baring Brothers & Co. Balance Sheet October 31, 1890**
**(pounds sterling)**

| **Total Liabilities** | **20,963,000** |
|---|---|
| Acceptances Running | 15,755,000 |

[5] Bank of England Archives, 9A240/6 Messrs. Baring Brothers & Co.

| | |
|---|---|
| Martin & Co | 300,000 |
| Kidder Peabody | 218,000 |
| Russian Government | 2,440,000 |
| Winans | 750,000 |
| Sundry Depositors | 1,500,000 |
| | |
| **Total Assets** | **25,005,328** |
| Cash with Brokers | 1,000,000 |
| Bills Receivable,Cash with Bankers (Martins) | 7,350,000 |
| Remittances, List A | 4,815,000 |
| Debtors List B | 2,275,000 |
| Due from Baring Brothers & Co.Liverpool | 252,000 |
| Baring Brothers & Co. Securities | 4,155,382 |
| Hale and Securities against Argentine Accounts | 4,157,946 |
| Land Houses and Contents | 1,000,000 |
| **"Apparent Surplus"** | **4,042,328** |

Source: Bank of England Archives, Messrs. Baring Brothers & Co. Liabilities and Assets, 9A240/5

Funding for Barings came from four sources: (1) deposits by identifiable bankers---Martin & Co, Kidder Peabody and Winans, (2) deposits from unidentified bankers and individuals, (3) Russian government, which had agreed to leave its funds on deposits, and (4) acceptances. The non-Russian £2,768,000 of deposits could presumably be withdrawn upon demand, while the acceptances represented short-term fund of up to six months.[6] The acceptances were a critical part of Barings investment banking operations as they provided the short-term finance that enabled the firm to hold new securities for distribution and sale. Selling off securities in a prompt and orderly fashion was essential for repayment of the acceptances when they fell due; and it would prove to be an impossible task with its portfolio of new Argentine bonds. Barings' enormous reputation and absence of any financial reporting apparently permitted it to "borrow around the market." Many financial institutions were willing to take a modest position in Barings paper without being aware of the total sum of Barings' acceptances outstanding. Suspicion of Barings' weakness would lead these lenders to discount Barings' paper with the Bank of England, and would awaken the Old Lady of Threadneedle Street to Barings' distress.

On the surface, the cash assets reported in Table 3 appear to liquid enough to meet all but the largest withdrawals by worried depositors. The cash with brokers, bills receivable, cash with Martin's Bank and the due from Baring Brothers' Liverpool office totaled a healthy £8,602,000. The rest of their portfolio depended heavily on Argentina's economic health---it was far from

[6] An acceptance is a financial instrument where the drawer writes an unconditional order to the drawee, requiring him to pay on demand or at a fixed date a sum to a specific payee or the bearer. If the person to whom the bill is addressed, or anyone else, signs the bill, he becomes the acceptor; and the bill is then known as an acceptance. Typically, acceptances were for periods up to six months. By signing the bill, the acceptor becomes responsible for payment at maturity, but the drawer is still responsible for payment if the bill is dishonored. When the credit taker draws upon a merchant bank, it is the responsibility of the drawer to provide the acceptor with funds to meet their acceptance at maturity (Young, 1966).

diversified. Already a preeminent merchant bank, Baring Brothers was tempted by the emerging markets of South America to become the key investment bank in the 1880s boom in Argentina, where capital of £140 million was imported between 1885 and 1890. This flow of capital contributed to a burst of inflation and when coupled with a bad harvest in 1889, political unrest and coup ensued in 1890. A sovereign debt crisis flared up, with the Barings holding several new issues (Kynaston, 2012).

Remittances "List A" had £2,245,000 due from Kidder Peabody, presumably a strong banking house. There were commercial credits on "America" of £1,560,000, which the investigating Bank of England directors noted was only an estimate as it would "take a month to pick out." Lastly, there were more dubious credits to Bank of Brazil for £430,000, the Bank of the Province of Buenos Aires for £330,000, and the National Bank of Buenos Ayres for £245,000. Debtor's "List B" revealed even more problems. While the City of Montreal owed £150,000, the remainder was due from the Portuguese government, various syndicates, Ceylon Estates and the liquidation of the French Société des Métaux, with £930,000 due from the Argentine government. Though inclined to be optimistic, the directors left notes indicating that there would be difficulty in collecting some of these debts. The least liquid assets were, of course, the land, houses and contents represented the partners banking house and their personal residences, which would have to be auctioned in the case of a bankruptcy.

The two items on the asset side of the balance sheets that were most affected by the Argentine crisis were Baring Brothers & Co. securities and Argentine Securities Against Hale's Securities Account. The Barings' securities totaling £4,155,382 can be divided into £1,622,582 British, U.S. and Canadian securities, and £2,532,800 Latin American securities, which are primarily Argentinian. Of these the Buenos Ayres Water Works bonds valued at £535,000 and 4% debentures valued at £900,000 that the bankers had not been able to sell. There are two categories in Hale's accounts: securities that have been issued that those that have not yet been issued—almost all are Argentine securities with a few Uruguayan and Brazilian bonds. The issued securities totaled £966,946 are at stated at their presumed market values at the time, while the not yet issued or unsold are presented at their hoped for issue prices, totaling £3,191,000. According to the historical record, Baring Brothers assets were valued by Green who used the prices of the Course of the Exchange for October 31, 1890.[7]

In total there were £4,626,000 Argentine securities sitting on the Baring Brothers portfolio that were not issued or sold because the bankers found the market was not receptive. Forgetting all of the other dubious assets and compared alone against the "apparent surplus" or capital of £4,042,238, these securities had the potential to make Barings insolvent. In short, all of its "toxic" Argentinean assets far exceeded its capital.

The folly of these Argentine securities is most readily seen in the notorious securities of the Buenos Ayres Water Supply & Drainage Company. The November 14, 1888 prospectus for the company proposed an offering of ordinary and preference shares that aimed to £5 million.[8] The company had distinguished directors: Henry R. Grenfell, as chairman, a banker and Liberal

[7] What no one has done thus far is to check Green's work, which seems suspicious given his "uneasy" mind. My checking showed that some IPOs in Baring's portfolio were not listed on the Course of the Exchange, and thus Green could not have valued them accordingly. Instead these critical securities appear to have been valued at their issue price. Had they been put on the market, there is every reason to believe that they would have sold far below their issue price, implying also that Barings was insolvent.

[8] Bank of England Archives. G15/189 Baring Brothers & Co. Crisis 1890. General. November 1888 to December 1891.

MP who had been Deputy Governor (1879-1881) and Governor (1882-1883) of the Bank of England (1879-1881), George W. Drabble, chairman of the London and River Plate Bank, Sir E.J. Jenkinson, Director of the Manchester Ship Canal, Major-General Sir Howard C. Elphinstone, Colonel Robert Baring, director of the Northern Insurance Company, J. Coghlan, director of the Buenos Ayres Great Southern Railway, and C.H. Sanford, of Samuel B. Hale & Co. The bankers selected for this issue were Glyn, Mills, Currie & Co. in London and the London and River Plate Bank in Buenos Aires. Thus, for this fateful venture, Barings had the cooperation of the firms of Grenfell, the London and River Plate Bank, Hale & Co., Glyn, Mills, Currie & Co. and Northern Insurance.

The purpose of the issue was to fund the 39 year concession granted to Samuel B. Hale & Co. by the Argentine National government to enlarge and improve the water works for Buenos Aires within three years. The Argentine national government would receive £4.2 million, which would in turn pay the company £30,000 to cover construction and £200,000 for working capital and all other preliminary expenses up to £5 million.[9] Profitability was to be assured by the law passed by the Argentine government that every house—roughly 50,000---in Buenos Aires would pay an annual fee of $6 in gold per month or $72 per year (£14 8s.) "as soon as the Company are in apposition to given them the use of the sewers and water supply." (p. 2) To ensure payment the Company was given a lien on each house. The contract foresaw an expansion of connection for 15,000 to 50,000 houses, with possibilities for future expansion.[10] Projecting an annual increase of the number of houses of 3,000, the company anticipated steadily rising dividends.

This new issue was launched in a weakening market. The Investor's Monthly Manual for November 30, 1888 headlined the fall in the prices of foreign government securities. Argentine 5% 1886 bonds rose from 90 ½ at the beginning of the year and had their highest quotation during the year of 99 ½ but had fallen to 94 ½. The Water and Drainage was not quoted in either the November or the December issue of the Manual, apparently there was no secondary market yet. In its "Financial History of the Year 1888 the Investor's Monthly Manual (December 31, 1888) described the upward pressure on interest rates from the "exceptional efflux of gold to South America" due to "the lavish borrowings by the Argentine Republic," but noted that "the public are scarcely likely to show much favour to any fresh loans for time to come." The Manual's annual review for 1889 shows quotes for the Buenos Ayres Water Supply and Drainage Co.'s ordinary and preference shares, both issued at £10 and apparently holding up well at the last quotations of £9 7/8 and £9 5/8 and recording a dividend payment for the preference share in June 1889. The one odd thing about the information for this company is that while the number of preference shares is correctly listed at 300,000, it shows only 50,000 ordinary shares being issued, not the 200,000 listed in the prospectus. The 1889 "Financial History" had a grim tone in its brief description of Argentina, noting the "vast speculation in land, and the consequent issue of 'Cedulas,'" that led to an almost continuous decline in the value of the paper currency until in September the premium on gold at Buenos Ayres rose to over 140 per cent." Pointing to the large scale national and provincial government borrowings, it commented in an understated way that "some of the later

[9] There was to be a lien on the works securing the Buenos Ayres Provincial Government Loan of 1873, whose balance of £1,579,400 is to be paid.

[10] Revenue of $3,000,000 or £720,000 was anticipated, which was also the maximum permitted by the Argentine government to distribute to company shareholders. After "working" costs of £130,000 and charges for interest and the Sinking Fund for debentures of £272,000, there was a projected £318,000 for a dividend for preference and ordinary shares or 6.36 percentThe contract provided for £5 million of 4 percent debentures to be issued the company, where redeemable by an annual sinking fund, beginning in 1893 and ending in 1927.

issues were so poorly subscribed for, that it became evident to the great financial establishments here that British investors were quite a deeply involved in Argentine affairs as they wished to be."

The sales of the Buenos Ayres Water Works securities should have been completed by the end of 1889; however Barings was forced to hold much of the issue off the market, continually funding it through the acceptance market. The decline in Argentina's economy put all of Baring's securities at risk, but how and why its condition is not well understood.

### 6. How, why and when the Bank of England was alerted

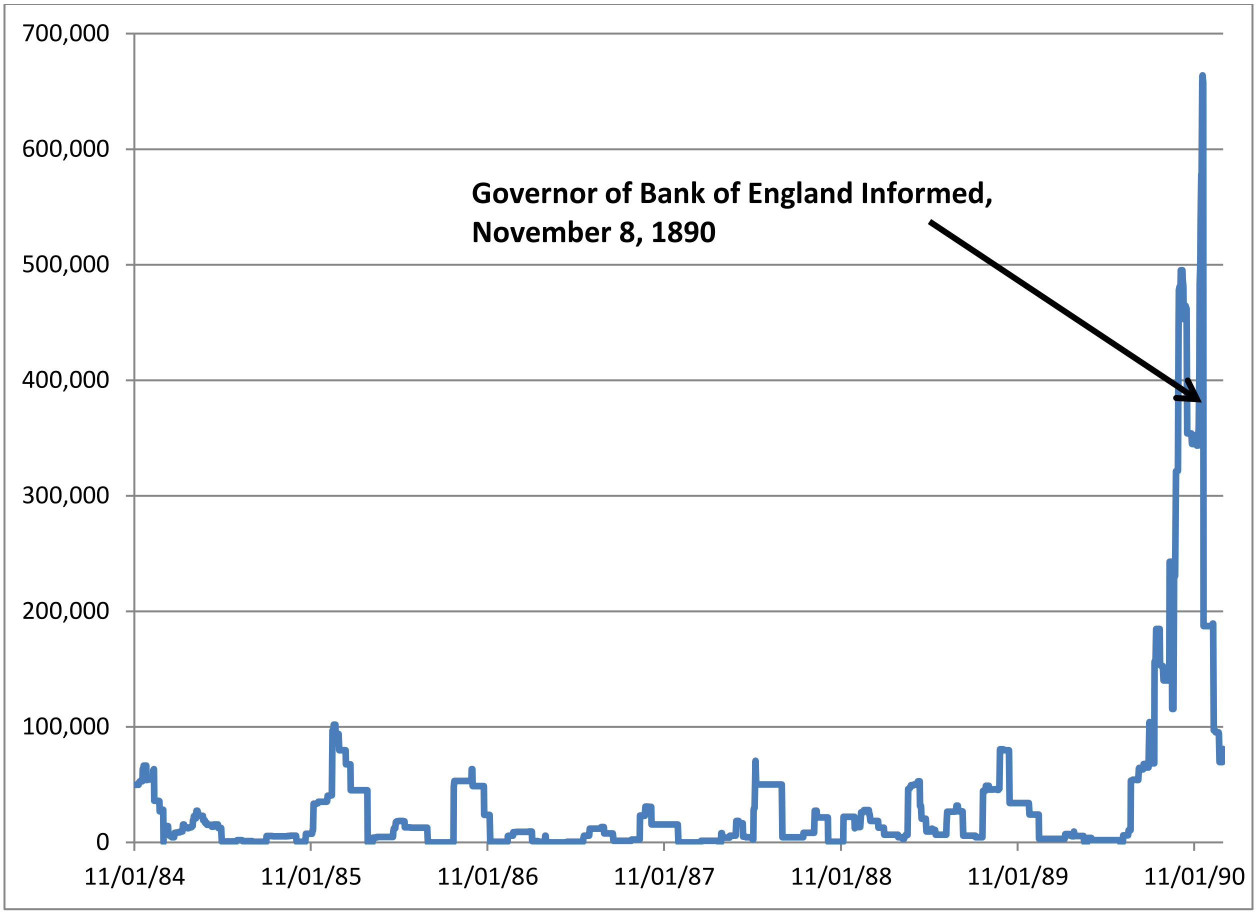
The simple question that Clapham does not address is how Everard Hambro could have known that there was a problem with Barings. Hambro was the senior partner in C.J. Hambro & Co., an important merchant bank whose capital was recorded to be £1.3 million in 1890. As a director at the Bank of England, he was known to be assertive and often abrasive. His principal ally in London was Lord Revelstoke, who aided him when Hambros issued a huge loan of £29 million for the Italian government in 1882, thereby breaking the Rothschild monopoly on Italian government loans, though the issue came close to failure. In this enterprise he was assisted by Barings and he returned the favor by helping to underwrite the floatation of the Buenos Ayres Water Supply and Drainage Company.[11] Given this close relationship, it is reasonable that Revelstoke would have entrusted Hambro with the delicate but awkward mission of informing the Governor of Baring's problems.

However, the Governor probably should have been alerted earlier by the Special Discount Committee that handled the discounting operations of the Bank of England. If wind of Barings problems reached any bank in the City, the bank could take any Barings paper it had discounted and re-discount it with the Bank of England, thereby avoiding a possible default. As can be seen in Figure 1, which records the total discounts of Barings paper outstanding at the Bank of England from 1884 through 1890, there was an unprecedented rise in late summer 1890. By the end of July, the total remained above £100,000. On September 11, it had more than doubled to £242,933. One might imagine that this would have been reported to the entire Court of the Bank given that on that day total discounts of the Bank stood at only £1,252,000. Hambro had been a member of this committee until late 1889 when a new committee was formed on January 23, 1890 with members Albert Sandeman, Herbert Brooks, Charles Arbuthnot and----Lord Revelstoke.[12] As a leading banker on this committee, Revelstoke probably would have dominated it and may have provided assurances that nothing was amiss with the influx of Barings paper.

**Figure 1**
**Daily Discounts Outstanding of Barings Paper at the Bank of England**
**1884-1890**

[11] Sir Everard Hambro, Oxford Dictionary of National Biography. www.oxforddnb.com.

[12] Thanks to Ben White, Archivist at the Bank of England for this information on the Special Discount Committee.




Yet, there was no improvement in Argentina's financial position and hence for Barings. On November 7, 1890, the day before Hambro informed the Governor, total discounts were £2,037,000, and discounts of Barings paper had risen to £343,376. Whatever confidence in discounting paper based on Argentine transactions appears to have left the committee on that day when it was approached by the English Bank of the River Plate Ltd, which asked to discount 46 bills for a total of £205,424. The rate offered was 7 percent well above all other discounts that were made for 5.75 or 6 percent. Previously, on November 5, 1890, E. Murrieta & Co., another banking house deeply involved in Argentine finances, had obtained an advance for £300,000 of 299 bills at 5.25 percent. Rejections of discounts, were not uncommon but often then were a few bills in a packet; but on Friday, November 7, the committee rejected the entire request by the English Bank of the River Plate. The next day, Saturday, was normally a slow day for discounting. There were only three discount transactions on November 8, one for a single bill of £1,000, another for a single bill of £100, and a third for 121 bills brought by C. J. Hambro & Son for £190,879. If Everard Hambro was expecting a rush for liquidity, he made sure that his firm would have sufficient cash on hand.

### 7. An Incipient Panic?

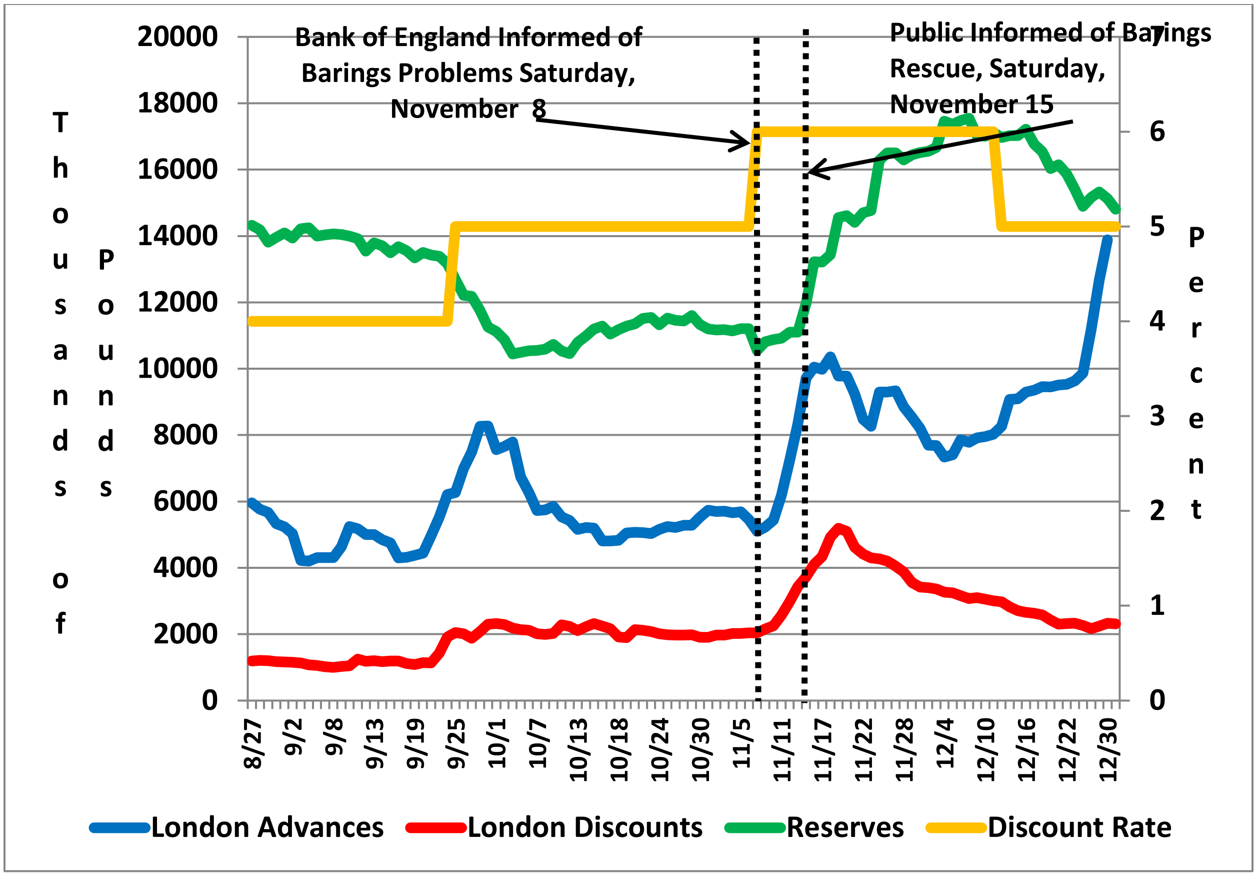
The difficulty of substantiating the claim in this paper that the Bank of England, by violating Bagehot's rule, successfully snuffed out a general banking panic is that evidence must be marshalled to show that one would have erupted in the absence of this action. Goschen and Lidderdale certainly thought that a panic would occur if they did not quickly respond. Yet, traditional histories already cited, have dismissed 1890 as nothing more than a temporary liquidity problem with no significant contagion, involving other financial institutions.

Contagion, a rapid reordering of individuals' and institutions' portfolios for more cash and potentially liquid assets, is a dreaded feature of a full-scale panic. In a meltdown of the financial system it is painfully visible in the rapid withdrawal of deposits of banks and the collapse of stock prices. Even an incipient panic should witness the beginnings of contagion; and if the Barings crisis was an incipient panic that was averted, there should have been signs of contagion. The traditional literature on the 1890 crisis observes no rush for liquidity. However, this literature has overlooked important qualitative and quantitative information that reveal the beginnings of a contagious flight from potentially contaminated financial institutions and a rush for liquidity. Contagion may viewed through a variety of measures, including: (1) rapid deposit withdrawals, (2) flights to quality, (3) interest rate spikes, (4) a difficulty in executing orders, and (5) a collapse of stock prices. In this paper, I present both narrative and numerical evidence of an incipient panic.

Deposit withdrawals and stock price movements of financial institutions that in ordinary times would relatively un-correlated begin to co-move unexpectedly. Yet, tracing contagion by deposit withdrawals is difficult as, even in recent financial crises from Continental Illinois in 1984 to 2008, daily deposit is generally unavailable and researchers have focused on stock prices for signs for contagion. For the 1890s, in Britain, there are unfortunately almost no daily, weekly, or even monthly balance sheets for most banks in this period, except for the Bank of England, which has recently been made available online. The only bit of information on other banks' withdrawals comes from Martin's bank, which had helped to fund Baring Brothers and saw its deposits shrink unexpectedly by 18 percent in November as rumors of its involvement circulated (Chandler, 1964).

Another sign of a panic is the drying up of liquidity in even for the safest of assets, which meant the consols in this era. Thus, while R. S. Sayers, a leading historian of the Bank of England and Lloyd's Bank, writes that "the episode lacked all element of panic in the streets." (Sayers, 1957, p. 155), he relates when Lloyds' City of London office manager noticed that "an excessive amount of Barings' bills were being presented," he informed the head of the bank who hastily caught a train to London from Birmingham and met him "on a dark November afternoon at Euston Station." They repaired to the Oriental Club and decided to sell £500,000 of consols but "Things had, however, gone too far for that: no jobber would make a price." Sayers (1957, p. 213). This seizing up of the market is also reflected in the Investors Monthly Manual for November 29, 1890, which reported that "business in the outside discount and loan market was for two or three days perfectly paralyzed, and money could only be obtained at the Bank of England. There, however, loans were made freely, although at high rates---ranging from 6 to 7 and 8 per cent—until by degrees, confidence was restored." (p. 564).

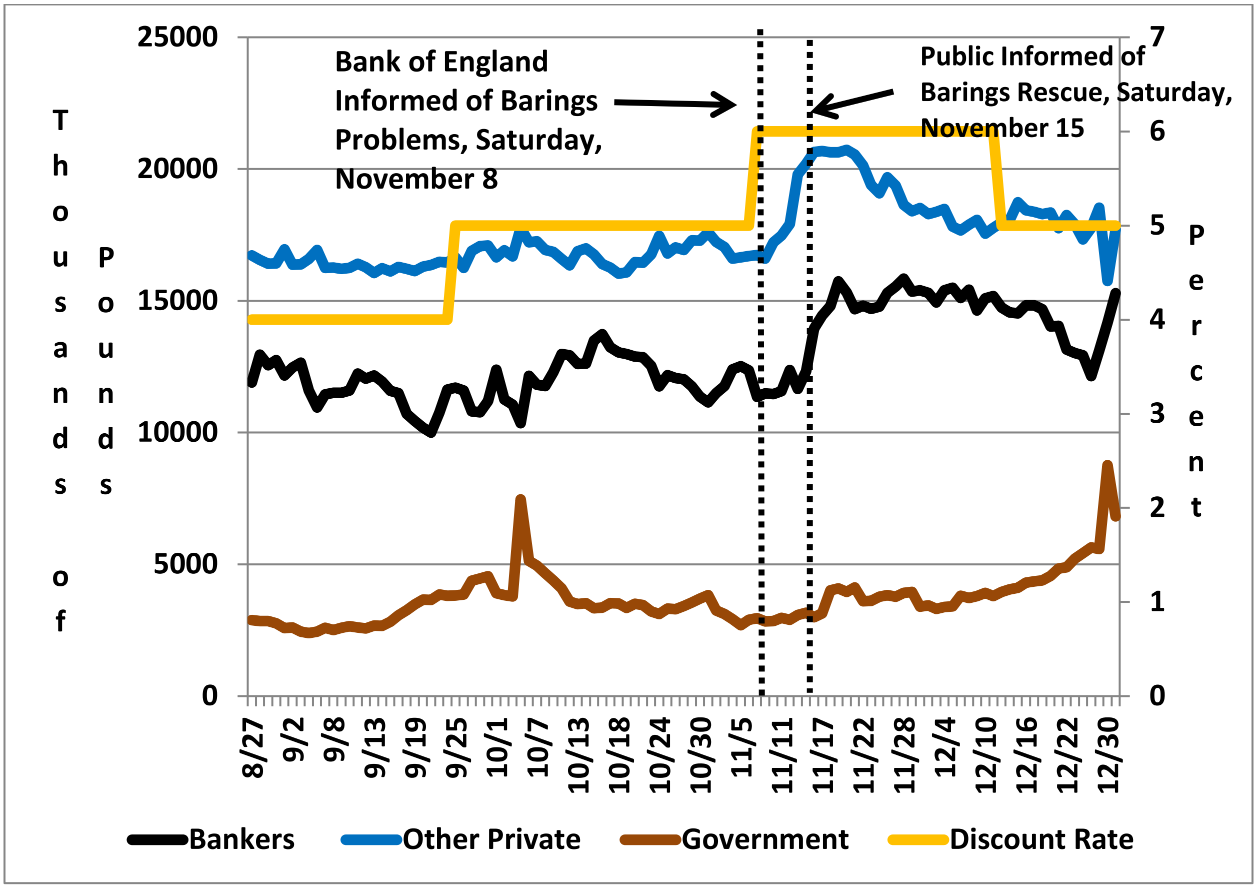
**Figure 2**
**Panic of 1890: Daily Balance Sheets of the Bank of England**




If the sale of consols could not yield liquidity, the Bank of England could provide discounts and advances; and in addition it could accept deposits---depositing funds in the Bank were effect a flight to safety. The daily balance sheets of the Bank have received been made available online and Figures 2 and 3 show the movement of key items in the Bank's balance sheet from late August 1890 to the end of December 1890. The key period of interest is between Saturday November 8, when the Governor of the Bank of England was informed of Barings problems and Saturday November 15, 1890 when the rescue of Barings was announced. It was during this interim period that news of Barings possible insolvency certainly began to leak out and the City of London and the banking public more generally took defensive actions.

Both Figures 2 and 3 show the discount rate, which was raised to 7 percent on November 7 because of concerns unrelated to Baring Brothers. Figure 2 shows a substantial rise in both London advances and London discounts outstanding in this weeklong period, while gold reserves remained steady, which was the outcome of swap arrangements with the Bank of France and the Russian Government. The increases in discounts and advances were substantial and mirror their movement during the acknowledged panic of 1866, as will be seen below. After the announcement of the rescue package for Barings, both discounts and advances declined while reserves continued to pile up as the higher discount rate was maintained. In Figure 3 the movements of three types of deposits are shown: bankers, other private and government deposits. Government deposits are unchanged between November 8 and 15, 1890 but there is a noticeable rise in bankers and other deposits that is suggestive of a flight to the safety of the Bank of England. These are the same patterns that emerged during the panic of 1866.

**Figure 3**
**Panic of 1890: Daily Balance Sheets of the Bank of England**




The Panic of 1866 provides a means to identify the incipient Panic of 1890. Even a quarter century later, it loomed large in the mind of the Governor and the Chancellor, whose remark "1866 would be a trifle [compared] to it" reveals how seriously he considered the situation. The Panic of 1866 also provides an important contrast because the Bank of England followed a strict Bagehot rule and remembered the consequences of doing so. Figure 4 shows the same variables as Figure 2 does for 1890. It considers a similar week long , May 10 to 17, beginning with the failure the big bank Overend Gurney. In response to the bank's failure, the Bank of England raised the discount rate abruptly to 10 percent and lent freely with discounts and advances. As coin flowed out of the Bank, reserves dropped precipitously, and the Bank received a "chancellor's letter" that promised to indemnify the bank for falling below its statutory reserve ratio. Even after a week, advances continued to rise and only stabilizing in early June with reserves slowly recovering. Figure 5 displays the same variables as Figure 3 and reveals the same pattern of the flight to the safety of the Bank of England by depositors.

**Figure 4**
**Panic of 1866: Daily Balance Sheets of the Bank of England**

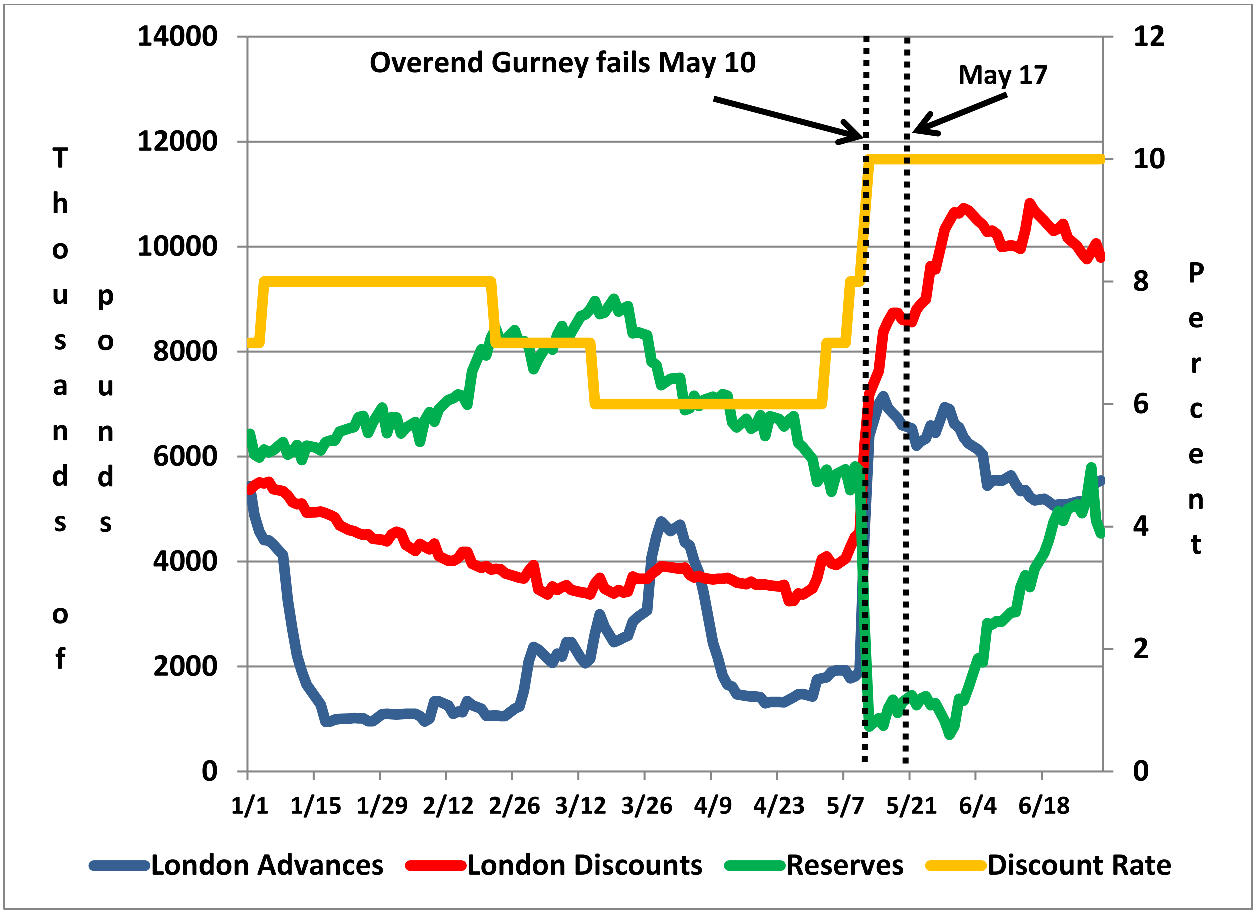



**Figure 5**
**Panic of 1866: Daily Balance Sheets of the Bank of England**

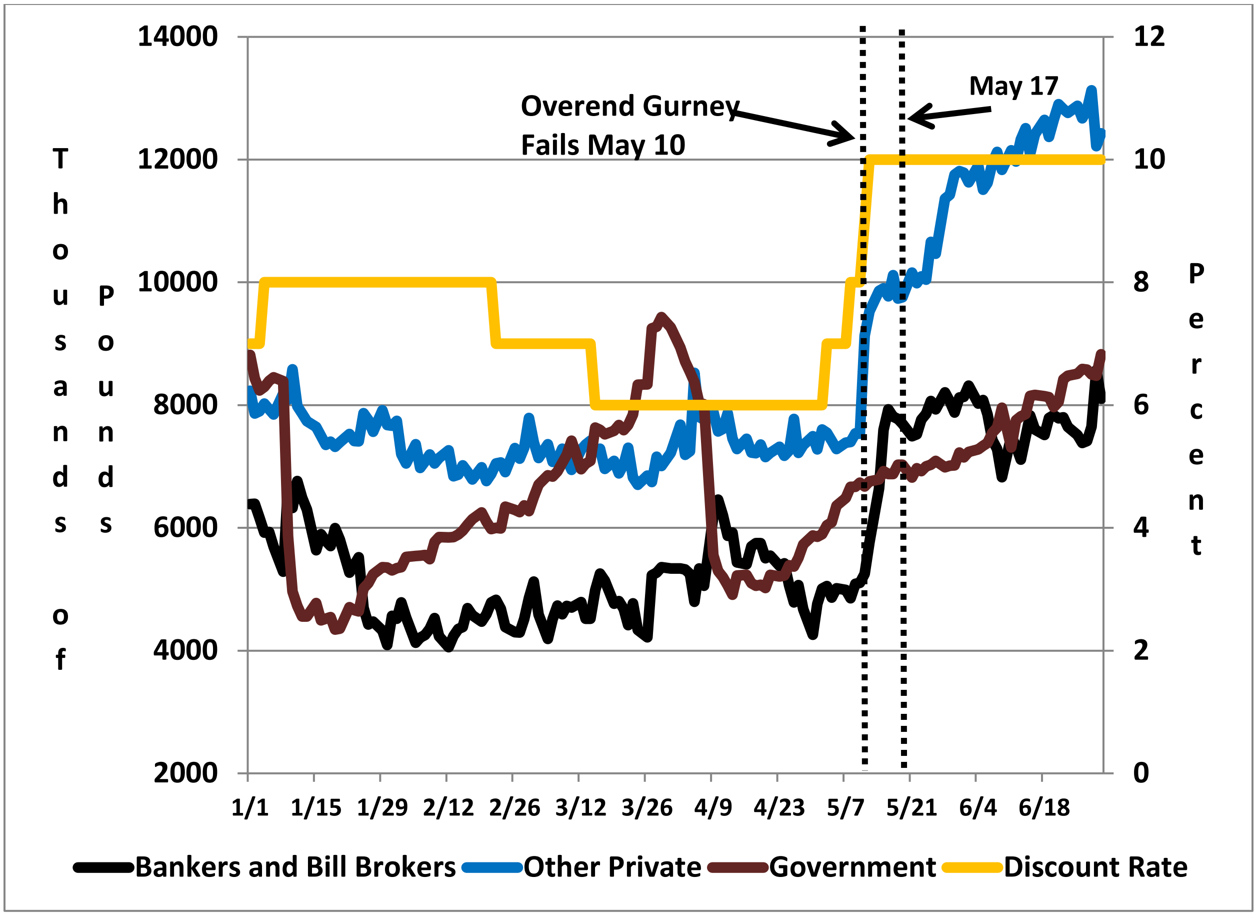



Table 4 provides a comparison the two weeks in 1866 and 1890. The upper panel records the change in the values of the variables in the week after the announcement that Overend Gurney had failed—that is, the week during which the floodgates had been opened. Total credit given by the Bank of England increased by £8.5 million, a rise of 136.6 percent. At the same time, deposits at the Bank climbed by £5.3 million, a rise of 41.8 percent. It should be recalled that no public announcement was made about Barings' condition between November 8 and 15, 1890; the rescue package being announced at the close of business. Inside information was available to a few and rumor drove the rise in credit that grew by a total of £6.6 million or 90.6% and deposits increased by £6.5 million or 23.2 percent. The closeness in the magnitudes of these two events supports the idea that 1890 had an incipient panic, though one can only speculate of how much more these key variables would have increased if Barings had not been rescued. Goshen's fears appear to have had a sound basis.

**Table 4**
**Comparison of the Bank of England Balance Sheets in the Panics of 1866 and 1890**

**(thousands of pounds sterling)**

| | 5/10/1866 | 5/17/1866 | Increase | Percent Increase |
|---|---|---|---|---|
| London Discounts | 4335 | 8736 | 4401 | 101.5% |
| London Advances | 1902 | 6021 | 4119 | 216.6% |
| London Total | 6237 | 14757 | 8520 | 136.6% |
| Bankers Deposits | 5101 | 7813 | 2712 | 53.2% |
| Other Private Deposits | 7542 | 10116 | 2574 | 34.1% |
| Total Private | 12643 | 17929 | 5286 | 41.8% |
| | | | | |
| | 11/8/1890 | 11/15/1890 | Increase | Percent Increase |
| London Discounts | 2155 | 4105 | 1950 | 90.5% |
| London Advances | 5098 | 9719 | 4621 | 90.6% |
| London Total | 7253 | 13824 | 6571 | 90.6% |
| Bankers Deposits | 11491 | 13953 | 2462 | 21.4% |
| Other Private Deposits | 16595 | 20646 | 4051 | 24.4% |
| Total Private | 28086 | 34599 | 6513 | 23.2% |

In modern studies of financial crises the most common means of identifying contagion is to examine abnormal returns for bank stocks. Notable examples of event studies to determine if contagion was present include Swary (1986) and Wall and Peterson (1990) for Continental Illinois' collapse in 1984, Kabir and Hassan (2005 ) for the failure of LTCM in 1998, and Goldsmith-Pinkham and Yorulmazer (2010) for the demise of Northern Rock in 2007. The only empirical study that includes the Baring's crisis is Turner (2014) who finds a return on bank stocks' for the crisis month of 1890 of 1.97% and for the whole year 4.58%----a good year in contrast to the crisis year of 2007 where these returns were -80% and -62%. This evidence leads Turner to conclude that there 1890 was a minor crisis. However, many banks in 1890 were private banks so there are no share prices to follow; and Turner is comparing a potential panic with a full-blown panic---missing developments within the crisis month.

The potential for a full-blown panic—visible in stock prices---existed for all the usual reasons----bank's portfolios of investments were opaque, if not invisible to the public. Barings and other partnerships did not provide any public accounts and even the information from limited liability banks was minimal and infrequent. There had been a huge flotation of Latin American securities but where were they held? Any bank failures could have led to a dumping of these securities on the market leading to fire sales that would endanger even more institutions. The public might reasonably assume that if Barings was in trouble because of Argentina, publically traded banks such as the English Bank of the River Plate, the London and River Plate Bank, the Anglo-Argentine Ltd., the Bank of Tarapaca and London, and even the English Bank of Rio de Janeiro might be dominoes ready to fall. But contagion would have proved truly serious if investors abandoned London banks in general, on the suspicion that they too were involved, while banks removed from the London market, in the provinces, Scotland or Ireland might be less affected.

Examining the Barings Crisis of 1890 presents some further difficulties. First, many prominent banks, even predominantly commercial banks, were still partnerships in the 1890s. Not only did they rarely if ever produce balance sheets for the public but they simply did not access the stock market. Secondly, for those banks that had issued shares, the market was relatively thin. Even though the Course of the Exchange published stock prices twice a week, relatively few of the traded banks were recorded every day or even every week. The Investors' Monthly Manual printed a larger list of banks with the monthly opening, high, low and last prices. While daily data would be preferable, the Investors Monthly Manual data appears to pick up the incipient contagion not visible elsewhere in the published data.

The dramatic events of the Baring Crisis transpired quickly within the month of November, and almost completely within the week following November 8 when the Bank of England was first informed of Barings' difficulty. Except for the public swaps of gold with France and Russia, the Bank attempted to create a lifeboat for Barings as quickly and quietly as possible so not to spark a panic, although suspicions were growing as evidenced by the increased demand for discounts at advances at the Bank. The public was only made fully aware of the appalling state of Barings when it was informed of the rescue on November 15. Although the announcement is generally agreed to have allayed the fears of a panic, it did not do so immediately, though this is the impression given by the secondary literature. The creditors of Barings were assured of payment but the stock market was very shaky as indicated by Investors Monthly Manual and prices then slumped.

While noting that stock and bond prices had been drifting downwards for two months, the Investors Monthly Manual identified November 19—the day when the true dimensions of the Barings fiasco as publicly acknowledged---as the moment when the stock market panicked, fearing more widespread problems:

> It has, of course, to be remembered that on the Stock Exchange little was known of the difficulties in which Barings were involved until arrangements had been completed for assisting the firm; but still the comparative steadiness of the Stock Exchange at first was remarkable. It did not, however, last, for a few days later speculators became alarmed at the prospect of stringent money for a lengthy period and by the knowledge that sooner or later great masses of securities must be liquidated. On Wednesday, the 19thth inst., affairs came to a head, for then speculators threw overboard *en bloc* the stocks they had purchased, and for a time prices collapsed immediately. (November 29, 1890, p. 564).

To make its point, the journal compared the "making up" prices of November 11, with the lowest prices of November 19$^{th}$ for a set of 50 of the leading securities of the market, dominated by British and American railways and Latin American and other "emerging market" (Russian and Egyptian) debt. The average decline registered for these stocks was 9 percent, with British railways taking only a modest hit of 2.6 percent but American and Canadian railwayhs falling 9.6 percent, while Argentinian and other Latin American securities plummeted 15.6 and 20.7 percent. However, when the public had a few days to digest the information that all the major institutions of the City, and many beyond, had pledged to support the guarantee Barings and its securities would not be dumped on the market, possibly precipitating a fire sale, prices bounced back. The Investors' Monthly Manual reported the from the lows of November 19 to the last prices recorded before publication, securities had risen an average of 14.3 percent. British railways rebounded 5.1 percent, American and Canadian railways by 18.8 percent and Argentinian and other Latin

American stocks and bonds by 14.3 and 17.2 percent. Although the journal partly attributed this recover to Jay Gould's speculative activities in New York that pushed up American railroads, the response was taken as recognition that a general financial panic had been averted.

This framing of events should be captured in the returns as measured by the four recorded prices for each bank stock in the Investors' Monthly Manual. The opening prices to low prices and the high prices to the low prices should provide evidence if there was any contagion, especially if there was an unexpected spread from the Latin American banks to the London banks. The measure of spread between the high and low price may be thought of as a proxy for volatility. In addition to a correlated collapse, there should be a correlated bounce back of low prices to last prices when the good news of Barings's rescue sank in. Opening to closing returns were not examined as they would mask the within month movements of interest.

Table 5 provides some preliminary suggestive evidence by examining the information from the Investors Monthly Manual for October and November 1890 for the 151 banks reporting data by region of their principle activity, as indicated in the end-of-year report of the magazine.[13]

**Table 5**
**Mean Bank Stock Returns**

| Banks | Number | High to Low 10/1890 | Open to Low 11/1890 | High to Low 11/1890 | Low to Last 11/1890 |
|---|---|---|---|---|---|
| London | 9 | -3.76 | -6.021 | -7.399 | 5.056 |
| England & Wales | 69 | -2.58 | -1.557 | -2.746 | 1.582 |
| Scotland | 9 | -1.83 | -0.551 | -1.486 | 0.314 |
| Ireland | 10 | -2.58 | -0.856 | -1.750 | 1.186 |
| Empire | 33 | -7,75 | -4.431 | -5.909 | 2.948 |
| Other Europe | 9 | -8.54 | -5.026 | -8.392 | 3.972 |
| USA | 2 | -7.86 | -3.348 | -6.479 | 1.613 |
| Latin America | 8 | -9.49 | -10.229 | -13.545 | 7.043 |
| Other Asia | 2 | -10.54 | -7.026 | -11.268 | 9.399 |

Investors Monthly Manual (October and November 1890).

If we consider October 1890 to be a normal month, it will be noted that the volatility for London banks, English and Welsh banks outside of London, Scotland and Ireland are not dissimilar. Much higher volatility is apparent for Empire, European, American, Other Asia and Latin America. However, in November, the London banks no longer appear to belong in the less volatile group, as measured by open to low or high to low. In addition, the London banks bounce back is close to the Latin American banks. Together this information suggests that the market feared the London banks were highly exposed to problems that would erupt for the collapse of Barings. In this exercise, the stock of Bank of England is excluded for obvious reasons and Lloyds Bank, with its headquarters still in Birmingham but very active in London is treated as a country

[13] For a more though analysis, 60 months data for all banks has been collected to calculate the betas for all of the banks and look for abnormal returns and their correlation for the key dates. The sample is restricted to 60 months because of the amalgamation movement of the period.

bank. If it were treated as a London bank then it would strengthen the results: its high-low return for October was -0.858, while it was -7.69 for November. Combining the varied sources of information, the evidence is strongly suggestive that the London banks and stock market narrowly averted a panic and a crash.

## 8. A French Lesson for the Old Lady of Threadneedle Street

If the Bank of England had followed Bagehot's rule, it would have lent on all good collateral; but it is hard to imagine that Argentinian securities would have qualified. Other banks would have survived but it is highly unlikely that Barings would have escaped bankruptcy. What frightened the Bank here was the imminent failure of a SIFI, which had not been encountered before. Overend-Gurney's failure in 1866 was smaller and yet it had occasioned a panic, magnifying a recession; since that time financial institutions had grown considerably and global financial networks had expanded. In these unchartered waters, the Bank turned to a policy alternative, formulated across the Channel.

By missing the fact that Baring Brothers was insolvent, financial historians have overlooked the lesson that the Old Lady of Threadneedle Street directly took from the Banque de France. Only eight months before, the Comptoir d'Escompte, a limited liability universal bank, was in imminent danger of failure, having supported an effort to corner the copper market with loans and off-balance sheet guarantees of forward contracts. When copper prices began to descend in March 1889, the Banque de France provided a 100 million franc loan to the Comptoir to ensure that it could meet any withdrawals. This loan was guaranteed by all of the bank's assets---both good and bad; and to limit any loss to the Banque, the Minister of Finance and the Governor of the Banque formed syndicate of banks that guaranteed to absorb the first 20 million francs of losses. Contributions were assigned according to banks' ability to pay and their role in creating the financial crisis, thereby imposing a penalty that could mitigate moral hazard. Although a run had hit the Comptoir, it abated when the rescue was announced and spread no further (Hautcoeur, Riva and White, 2014).

British press, including the <u>Economist</u> had chronicled the events Paris in considerable detail; and the Banque de France's intervention made a favorable impression on British policy makers, as evidenced by Goschen's advice to Lidderdale on first being informed of Baring's troubles (Kynaston, 2012, p. 134). What Lidderdale initially thought of this advice is not known; but the House of Rothschild, charged with arrangement gold loans and negotiating with Argentina, pushed to form a guarantee syndicate, drawing on its experience in Paris. The day after being asked to undertake both big tasks, Alphonse in Paris wrote to Nathanial in London emphasizing the lesson from the Comptoir's (Letter, Alphonse Rothschild, November 11, 1890).[14] Alphonse followed this letter with another, making a detailed comparison of the two crises and the role that the House of Rothschild should play, pushing for the formation of a guarantee syndicate. He made it clear that, although the English House was not responsible for the crisis, it was vital to form a guarantee syndicate to prevent a full scale panic. Alphonse reminded his cousin that the Paris House had provided 6 millions FF (£240,000) and now London must provide at least £250,000. Fearing a panic he wrote:

[14] Only letters from Paris to London have been preserved.

> La situation à l'égard de la Baring est exactement la même que celle dans laquelle se trouvait le Comptoir d'Escompte… La maison pourra-t-elle être sauvée ? En tous cas, il faut que l'action soit prompte, autrement le discrédit atteindra toutes les autres maisons…. le marché de l'escompte est entièrement désorganisé à Londres et le change est monté aujourd'hui à 25.4. (Letter, Alphonse de Rothschild, November 14, 1890).

These weighty words from the House of Rothschild may well have been decisive in structuring the rescue of Baring Brothers and inducing banks to join a guarantee syndicate.

## 9. The Guarantee Syndicate

On the same day as Currie and Green reported, Friday November 14, Goschen again attempted to get Lidderdale to accept a Chancellor's letter, but the Governor refused and apparently made a threat---an astonishing one---recorded in his memoire, that "unless government would relieve us of some of possible loss, I should return at once and throw out all further acceptances of the Firm [Barings]." Apparently, the Governor was unwilling to take on more risk without support; the Bank's denial threw down a gauntlet: news that the Bank refused to discount any more Barings paper would have certainly ignited a panic, which the Treasury as much as the Bank wished to avoid. At this impasse, Goschen and the Prime Minister blinked and agreed to cover half of loss until Saturday afternoon, November 15 to permit the formation of guarantee syndicate, after the French model.

Having gained a government stake in the credibility of the enterprise, the Governor put together the rescue package and announced it the next day, Saturday November 15, 1890. Under its terms, the Bank would provide an advance of £7.5 million to Baring Brothers & Co to enable them to discharge their liabilities as they existed on the night of November 15, 1890, with the security of "all bonds and documents representing value." In addition, a four-year syndicate of banks, led by the Bank of England, would ratably share any loss from Baring's liquidation. The Barings' partners quickly agreed to this arrangement, delivering powers-of-attorney over their property, avoiding the danger of immediately selling their assets at fire sale prices. As limited liability partners, they were particularly exposed; and would be expected to cover any losses, drawing upon their considerable personal wealth. Clapham (1945) summarized the result of the announcement that has become the standard interpretation:

> Everything was so quick, so decisive and so highly centralized that there was no true panic, on the Stock Exchange or anywhere else, no run on banks or internal drain of gold; 'the great mass of the country's business' was 'comparatively little affected'; and early in the week that began with Sunday, the 16th, the chorus of praise, condolence and thanksgiving was going up from the Press. (Clapham, 1945, p. 335)

Unfortunately, this account, which has been accepted in almost all subsequent literature, has passed over how the guarantee syndicate was formed and its ultimate purpose. Hautcoeur, Riva and White (2014) demonstrate that the guarantee syndicates organized by the Minister of Finance and the Banque de France to rescue the failing Comptoir d'Escompte in March 1889 had a punitive character. The Banque had advanced the Comptoir 100 million francs, collateralized by all of its assets both good and bad—contrary to statutes of the Banque. The good assets were transferred to a recapitalized Comptoir National d'Escompte while the bad assets were held by the Banque. Anticipating losses, a guarantee syndicate was organized to cover the first 20 million francs of losses from the liquidation of the toxic assets. The Banque was thinly capitalized and would have been unable to absorb losses by itself without cutting its dividend. Any reduction in the Banque's dividend would have enraged its thousands of shareholders who treated its dividends, almost like coupons on consols, and would have brought complaints to Parliament. Thus, a guarantee syndicate was essential. In an econometric analysis, assignment of the shares in this syndicate were not solely based on ability to pay, as measured by their capital but at least equally on banks' responsibility for participating in the scheme to corner the copper market that brought down the Comptoir, as measured by interlocking directorships or subscriptions. The Paris Rothschilds had played a central role in this scheme. If they had been allocated a share solely based on their size, it would have been only 700,000 francs; instead they were allocated a 3 million franc portion, with the econometric model predicting 2,920,000 francs. Individual responsibility for the disaster was emphasized; and although the Comptoir may have been dissolved, the directors of the bank were collectively assigned a share of 2.5 million francs. When the Banque de France had to provide a second loan of 40 million francs, a second syndicate to cover the first 20 million francs of losses was then formed. These actions speak to the clear concerns of the Banque for the moral hazard created by the rescue of the Comptoir and its efforts to mitigate the effects.

The Economist and other publications had covered the events in Paris in considerable detail, and given the close relations of the City with the Place de Paris, the Bank of England and many bankers seem to have been favorably disposed to follow the French example. The London Rothschilds, who unlike their Paris cousins in1889 bore no responsibility for the problems of the Barings, weighed in favorably. Unfortunately, the record of how the syndicate was formed is not as well documented as in the French case. The initial problem facing the Bank of England was that the problems of the Barings were not well known and informing banks, when approaching them for membership in the syndicate risked accelerating the incipient panic. The government's guarantee of half the potential loss for one day probably calmed some bankers concerns.

Announcing the rescue package at the close of business on Friday at 5 pm, Lidderdale promised £1 million from the Bank of England if an additional £3 million could be raised from other banks; yet at the end of the day, pledges totaled £6,250,000. By the time Lidderdale had canvassed all financial institutions, the fund reached £17,105,000. This sum was more than sufficient to protect the Bank from losses, as its maximum advance was £7,526,600. The guarantee syndicate was to last for four years, while the Bank "nursed" Barings assets. Unfortunately, while the initial guarantee syndicate members and their contributions, shown in Table 6, are known, those whose joined later raising, the fund by another £10 million pounds, have not been identified.

While there may have been a punitive element, as in the French case, how so many banks were induced to join is unknown, but history Glyn's Bank offers one clue. It appears that at least part of the initial syndicate was formed during a meeting at the Bank of England. Representing Glyn's bank, Currie volunteered £500,000 from his bank if Rothschild would contribute an equal amount, inducing the shocked Rothschild to double his contribution (Fulford, 1953, p. 300-302). However, Currie's offer also provided protection for Glyn's, which had lent £750,000 to Barings. In the event of a bankruptcy, this sum would have been tied up and conceivably subject to a significant haircut. The Baring Brothers rescue ensured that Glyn's loan would be repaid in full, in exchange for a pledge of £500,000----a smaller potential loss that was further reduced by inducing other banks to join the syndicate and the promise of an orderly liquidation of Barings.

**Table 6**
**Members and Contribution to the Barings Guarantee Syndicate**
**(pounds sterling)**

| | Contribution |
|---|---|
| Bank of England | 1,000,000 |
| Glyn, Mills, Currie | 500,000 |
| Rothschilds | 500,000 |
| Raphael and Sons | 250,000 |
| Antony Gibbs and Sons | 200,000 |
| Brown Shipley | 200,000 |
| Smith Payne | 100,000 |
| Smiths | 100,000 |
| Barclays | 100,000 |
| J.S. Morgan | 100,000 |
| Drexel Morgan | 100,000 |
| Hambros | 100,000 |
| London and Westminster | 750,000 |
| London and County | 750.000 |
| National Provincial | 500,000 |
| Union of London | 500,000 |
| Union Joint Stock | 500,000 |
| Total | 6,250,000 |

While the Investors Monthly Manual and other publications heaped praise upon the actions of the Bank of England, the Economist proved itself skeptical, a disciple of a strict Bagehot rule. The Economist accepted the Bank of England's statement concerning Barings' solvency, reporting:

> there is no question whatever as to the ultimate solvency of the firm. Their assets are estimated to exceed their liability by several millions, and their embarrassments have arisen simply from the fact that they have not taken proper care to keep those assets in a sufficiently liquid form. They have locked up so much money in South

> American securities, and some under such serious obligations in respect to these, that they have not funds enough to meet current liabilities, and have consequently been forced to see outside assistance. (The Economist, November 22, 1890, p. 1466).

But, the Economist was suspicious about the guarantee provided by the financial institutions, which it regarded as "rather too far reaching" though "it was the main instrument in averting a panic." Its skepticism actually penetrated the true purpose of the guarantee fund and revealed that the magazine, true to the LOLR principles laid down by Bagehot, feared the fund's potential for moral hazard:

> from the terms of the guarantee it would almost seem as if something more than this were intended to be done. From the fact that it is to extend over a period of three years, it would appear as if there were some intension of nursing the assets of Messrs Baring, incurring obligations in regard not only to their mercantile operations, which are stated to be perfectly sound, but also to their financial transactions with the Argentine and other South American Governments, which are of a doubtful character. And if anything of this kind is intended, the banks are going beyond their province. It would, no doubt, be very gratifying to big loan and finance houses to have it laid down that if they only overcommit themselves to the extent of a sufficient number of millions, the combined resources of the Bank of England and the leading joint stock banks throughout the country will be used to tide them over their difficulties with as little loss as possible. (Economist November 22, 1890, p. 1466).

Ultimately, the guarantee syndicate members were not drawn upon to make good on their pledges, as the Baring partners, subject to unlimited liability, used their personal wealth to cover the losses. This assessment paralleled the liability imposed on the board of directors and senior management of the Comptoir in 1889 (Hautcoeur, Riva and White, 2014). The partners' country homes, town houses and their contents were sold with the proceeds moved to the asset side of the bad bank's balance sheet. Lord Revelstoke gave up his country house Membland and his Charles Street house in London, while Mr. Mildmay handed over Flete, Shoreham, Coombe Farm properties, and 46 Berkeley Square.[15]

Thus, the Economist may have worried too much, as the Barings partners paid a heavy price, as had the managers and directors of the Comptoir d'Escompte the previous year—a fact widely noted by their contemporaries. The Barings large private fortunes, "including much on which creditors had no legal claims, were thrown into the gulf" (Clapham, 1945, p. ) and they incurred the social opprobrium of their peers. From Monte Carlo, Lord Randolph Churchill wrote to Alfred de Rothschild: "Fancy those Barings being brought so low…Lord Revelstoke will not be able to ride the high horse so much as he used to" (Kynaston, 2012, p. 138).

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[15] The initial estimated value of the properties was £979,700 and the contents £262,000. Baring Bros. & Co. Land and Houses. Bank of England Archive, 9A240/4.

### 10. An Orderly But Difficult Liquidation—and An Effort to Mitigate Moral Hazard

One reason why Clapham's judgment about the solvency of Baring Brothers & Co. has not been challenged may be the difficulty in reconciling the multiple sets of books for the firm's liquidation that the Bank of England kept. While these records rest in the archives of the Bank, there was purposefully little public information about Barings' true condition. In the hectic week of November 8-15, and even the following week, the Bank of England had no desire to release all of the information it had available about Barings. Currie and Green's optimistic statement gave the Bank the cover that it needed to obtain gold reserves from France and Russia, convince the Baring partners to deliver powers-of-attorney to the Bank, thereby giving it control of the failing firm, and form a syndicate in the case of there were losses. As the Bank of England was thinly capitalized like the Banque de France, it was politically dangerous to absorb large losses that would endanger its dividend payments.

In Tables 7A, 7B, 7C, 7D, I have reconciled the various accounts for Baring Brothers & Co. revealing how difficult it was for the Bank of England to liquidate the firm, given its "toxic assets." Column 1 of Table 7A replicates the balance sheet of Barings seen in Table 3. It should be recalled that this appraisal was hurriedly carried out. In Column 1A a corrected the balance sheet for October 31, 1890 was reported on December 11, 1890. In the first, liabilities included "sundry depositors" for £1,500,000; then in the second it was noted "since found to be larger by" £1,050,000---an astonishing amount to have been overlooked at first. Total assets were increased, having found an additional £212,797 of bills receivable and £415,000 of remittances and reduced the value of the land and houses by charges of £40,000. The net result? The "apparent surplus" of £4,042,328 on November 11 was found to be £3,220,125----a 20 percent drop; and yet there has been no write down of bad assets.

The next snapshot we have is for December 31, 1890, the source (Bank of England Archives G15/189 Baring Brothers & Co. Crisis 1890.General) indicates is for the "Process of Liquidation." Although brief, it offers an understanding of how the liquidation was managed. Basically, it permitted an orderly withdrawal of deposits and payment of acceptances as they fell due, with the Russian government making scheduled withdrawals as agreed with the Bank. In the six weeks since the Bank of England announced the rescue acceptances decreased from £15,755,000 to £8,935,164 and total deposits fell from £6,258,000 to £2,855,000. This huge rapid pay out of £10.2 million, the near equivalent of all of the Bank of England gold reserve at the beginning of the crisis, was only partly met by £4,340,400 in Barings' cash on hand, which vanished from the balance sheet, and bills receivable and remittances coming due. The due from debtors fell by £468,000, which may be either payment or a write down of bad debts; but in any case, it would only have slightly augmented the cash. The remainder of the cash was raised by a loan from the Bank of England, which came to £4,125,000. There was still no adjustment to the value of the Baring Brothers and Hale securities, where most of the toxic assets lay.

These slight balance sheets make it clear that the Bank of England got what it wanted: a slow, carefully managed liquidation of Barings. On the liability side, Martin's Bank and Kidder, Peabody & Co. were withdrew their deposits, but the Russian Government and perhaps some of the other depositors were persuaded not to run on Barings. On the asset side, it appears all the ready cash was paid out, supplemented by bills receivable and remittances arriving. As, the process was moving at a moderate pace, the Bank of England did not have to deliver its total promised loan of £7.5 million, only £4,125,000. Still that was a considerable sum, but it was incrementally delivered, which was vital to the process being a success. In the crisis week, total discounts and advances made in London---which did not include any requests by Barings---jumped by £6.6 million, as the Bank was meeting its Bagehot-mandated lending freely at a high rate on good collateral. As the Bank of England's gold reserves only totaled £10.5 million Friday, November 7, it would have been a frightening drain and a threat to the Bank's ability to redeem its banknotes. Instead the swap arrangements with the Banque de France and the Russian Government provided £4.5 million in gold so that by Saturday November 15 when the rescue was announced reserves stood at £13.2 million. The flight to quality, the rise over the same period by £6.5 million in Bank of England deposits by bankers and others, although not noted by the existing literature, was also key in replenishing it reserves.

**Table 7A**
**Liquidating Baring Brothers & Co.**

| **Document** | **[1]** | **[1A]** | **[2]** | **[3]** |
|---|---|---|---|---|
| **Source in Bank of England Archives** | **9A240/5** | **G15/189** | **G15/189** | **9A240/5** |
| **Date** | **10/31/1890** | **10/31/1890** | **12/31/1890** | **3/31/1891** |
| **Total Liabilities** | **20,963,000** | **21,973,000** | **16,529,164** | **9,538,005** |
| Acceptances Running | 15,755,000 | 15,755,000 | 8,935,164 | 1,006,240 |
| Martin & Co | 300,000 | 300,000 | | |
| Kidder Peabody | 218,000 | 218,000 | | |
| Russian Government | 2,440,000 | 2,440,000 | 1,664,000 | 215,320 |
| Winans | 750,000 | 750,000 | 44,000 | 40,000 |
| Sundry Depositors | 1,500,000 | 2,550,000 | 1,147,000 | |
| Bank of England | | | 4,125,000 | 7,420,300 |
| Baring Brothers & Co. Ltd | | | | 856,145 |
| Dividends | | | 614,000 | |
| **Total Assets** | **25,005,328** | **25,193,125** | **20,597,786** | **13,002,678** |
| Cash with Brokers | 1,000,000 | 1,000,000 | | 25,000 |
| Bills Receivable,Cash with Bankers (Martins) | 7,350,000 | 7,212,797 | 5,144,897 | 572,014 |
| Remittances, List A | 4,815,000 | 5,230,000 | 3,957,500 | 1,041,418 |
| Debtors List B | 2,275,000 | 2,225,000 | 1,757,000 | 1,809,382 |
| Due from Baring Brothers & Co.Liverpool | 252,000 | 252,000 | 220,000 | 60,972 |
| Baring Brothers & Co. Securities | 4,155,382 | 4,155,382 | 4,355,382 | 4,048,018 |
| Hale and Securities against Argentine Accounts | 4,157,946 | 4,157,946 | 4,157,949 | 4,336,722 |
| Land Houses and Contents | 1,000,000 | 960,000 | 1,005,000 | 982,150 |
| Argentine a/c Securities to be deposited | | | | 129,000 |
| Other | | | | |
| **"Apparent Surplus"** | **4,042,328** | **3,220,125** | **4,068,622** | **3,464,672** |

The next balance sheet available is for March 31, 1891, Column 3. What has transpired during the intervening months is fairly clear. Acceptances, except for £1 million have been repaid and most deposits have been withdrawn and the advance from the Bank of England standing at £7,420,000 is the primary source of funding for the firm, which is now the "bad bank," with a small deposit of £856,145 from the "good bank" of the reconstituted and recapitalized Baring Brothers & Co. Ltd. What is striking is how little has changed on the asset side of the balance sheet. The cash items are little over £1.5 million but there is no significant change in the holdings of the toxic securities. The shrinkage of the balance sheet has been accomplished by paying out cash and there may have been some acknowledged losses as the firm's surplus or capital has fallen by almost £600,000. The Bank of England appears to be stuck funding a portfolio of at least dubious quality, as few if any of the toxic securities have been sold.

**Table 7B**
**Liquidating Baring Brothers & Co.**

| **Document** | **[4]** | **[5]** | **[6]** | **[7]** |
|---|---|---|---|---|
| **Source** | **9A240/5** | **9A240/6** | **9A240/5** | **9A240/6** |
| **Date** | **5/31/1891** | **5/31/1891** | **12/31/1891** | **12/31/1891** |
| **Total Liabilities** | **8,336,973** | **8,336,973** | **7,143,751** | **7,143,751** |
| Acceptances Running | 376,849 | | 32,115 | |
| Martin & Co | | | | |
| Kidder Peabody | | | | |
| Russian Government | | | | |
| Winans | 27,700 | | 13,809 | |
| Sundry Depositors | | | | |
| Bank of England | 7,508,600 | | 7,028,600 | |
| Baring Brothers & Co. Ltd | 367,824 | | 38,077 | |
| Dividends | 56,000 | | 31,150 | |
| | | | | |
| **Total Assets** | **11,862,268** | **9,787,788** | **10,490,574** | **6,914,918** |
| Cash with Brokers | 206,600 | 206,660 | 79,000 | 79,000 |
| Bills Receivable,Cash with Bankers (Martins) | 206,757 | 206,757 | 27,699 | 27,699 |
| Remittances, List A | 488,088 | 488,088 | 169,877 | 169,887 |
| Debtors List B | 1,788,384 | 1,788,384 | 1,278,882 | 998,882 |
| Due from Baring Brothers & Co.Liverpool | 10,984 | 10,984 | | |
| Baring Brothers & Co. Securities | 3,776,545 | 3,197,600 | 3,820,166 | 2,070,950 |
| Hale and Securities against Argentine Accounts | 4,218,560 | 2,723,025 | 4,130,600 | 2,584,150 |
| Land Houses and Contents | 982,350 | 982,350 | 984,350 | 984,350 |
| Argentine a/c Securities to be deposited | 184,000 | 184,000 | | |
| Other | | | | |
| **"Apparent Surplus"** | **3,525,295** | **1,450,815** | **3,346,823** | **-228,833** |

By May 31 1891, Column 4, two months later the balance sheet has shrunk further to £11.8 million, still primarily funded by advances from the Bank of England that have now crept up to £7,508,600. What seems strange for a bad bank is that the three lines of securities plus the debtors and remittances have decreased but the apparent surplus has grown from £3,464,672 to £3,525,295. However, the picture is very different from a another account book 9A240/6, Messers. Baring Brothers & Co. Valuation of Assets and Liabilities for the same date, May 31, 1891, shown in Column 5. While total liabilities remain the same at £8.3 million, the securities have decreased by over £2 million, with the £634,925 of Mr. Hales securities added to the balance sheet. A note indicates that the securities against Argentine accounts written down by £250,000 for the Buenos Aires Water Works plus £250,000 for the Western Railways of Buenos Aires. The surplus now only stood at £1,450,815. It would appear that there was a writing-down of part of the portfolio and additional securities from a partner Mr. Hales added to bolster the bad bank's value.

**Table 7C**
**Liquidating Baring Brothers & Co.**

| **Document** | **[8]** | **[9]** | **[10]** | **[11]** |
|---|---|---|---|---|
| **Source** | **9A240/5** | **9A240/6** | **9A240/5** | **9A240/6** |
| **Date** | **12/31/1892** | **12/31/1892** | **12/31/1893** | **12/31/1893** |
| **Total Liabilities** | **4,625,091** | **4,625,091** | **3,781,569** | **3,781,569** |
| Acceptances Running | 12,339 | | 11,821 | |
| Martin & Co | | | | |
| Kidder Peabody | | | | |
| Russian Government | | | | |
| Winans | 13,739 | | 16,417 | |
| Sundry Depositors | | | | |
| Bank of England | 4,526,971 | | 3,700,000 | |
| Baring Brothers & Co. Ltd | 55,744 | | 41,529 | |
| Dividends | 16,300 | | 11,800 | |
| | | | | |
| **Total Assets** | **7,865,616** | **5,045,934** | **7,077,175** | **4,340,453** |
| Cash with Brokers | 125,000 | 125,000 | 25,000 | 41,000 |
| Bills Receivable,Cash with Bankers (Martins) | 4,167 | 4,167 | 30,383 | 14,383 |
| Remittances, List A | 141,884 | 111,881 | 75,462 | 65,000 |
| Debtors List B | 180,000 | | 180,000 | 60,000 |
| Due from Baring Brothers & Co.Liverpool | | | | |
| Baring Brothers & Co. Securities | 3,556,224 | 2,206,585 | 3,165,508 | 2,111,458 |
| Hale and Securities against Argentine Accounts | 3,014,165 | 1,854,125 | 2,919,646 | 1,492,436 |
| Land Houses and Contents | 844,176 | 744,176 | 656,176 | 556,176 |
| Argentine a/c Securities to be deposited | | | | |
| Other | | | 25,000 | |
| **"Apparent Surplus"** | **3,240,525** | **420,843** | **3,295,608** | **358,885** |

The hole in the bad bank's portfolio becomes truly clear in the entry for both sets of books for December 31, 1891 in Columns 6 and 7 of Table 7B. While the first set of books still records a healthy "surplus" of £3,346,823, the second set of books should as "deficiency" of -£228,833, where some assets have been written down. Part of this loss---£280,000----is identified arising from "Debtors per List B." The Société des Métaux produced a £150,000 loss, Ceylon Estates, £30,000 and a general "syndicates, another £100,000. The identification of these debtors reveals that there problems beyond investments in Argentina. This double set of books, one which seems to record assets at their book value and the other with reduced value continues through 1892 and 1893 as seen in Columns 8 to 11 in Table 7C. The positive balance seen in Columns 9 and 11 has only been obtained by compelling the Barings partners to contribute more of their private financial and other assets to the bad bank.

**Table 7D**
**Liquidating Baring Brothers & Co.**

| **Document** | **[12]** | **[13]** | **[14]** |
|---|---|---|---|
| **Source** | **9A240/5** | **9A240/6** | **9A240/5** |
| **Date** | **8/31/1894** | **8/31/1894** | **10/31/1894** |
| **Total Liabilities** | 2,481,985 | 2,481,985 | 2,078,931 |
| Acceptances Running | 1,300 | | 1,300 |
| Martin & Co | | | |
| Kidder Peabody | | | |
| Russian Government | | | |
| Winans | 17,276 | | 17,218 |
| Sundry Depositors | | | |
| Bank of England | 2,409,000 | | 1,999,000 |
| Baring Brothers & Co. Ltd | 17,609 | | 17,530 |
| Dividends | 11,800 | | 11,800 |
| | | | |
| **Total Assets** | 5,871,307 | 3,149,397 | 5,464,149 |
| Cash with Brokers | 43,500 | 43,500 | 25,000 |
| Bills Receivable,Cash with Bankers (Martins) | 7,384 | 7,384 | 7,517 |
| Remittances, List A | 68,660 | 62,379 | 68,306 |
| Debtors List B | 5,831 | 5,831 | 5,831 |
| Due from Baring Brothers & Co.Liverpool | | | |
| Baring Brothers & Co. Securities | 3,031,566 | 1,647,568 | 2,770,422 |
| Hale and Securities against Argentine Accounts | 2,070,017 | 838,386 | 1,954,831 |
| Land Houses and Contents | 619,349 | 519,349 | 600,159 |
| Argentine a/c Securities to be deposited | | | |
| Other | | | |
| **"Apparent Surplus"** | 3,389,322 | 667,412 | 3,385,218 |

Table 7D shows the accounts for August 31 and October 31, 1894. The apparent surplus in Columns 12 and 14 is obviously a non-market fiction and even the partial write downs countenanced in Column 13 that leave a positive balance reveal the refusal of the market to absorb the assets at anything close to their book value. In 1894, after its stipulated four years, the guarantee syndicate had to be renewed, although the pledges were reduced to a quarter of the original for its now disgruntled members. A few months later in 1895, with little further progress, the Bank sold the bad bank to a "salvage" company, which included some Barings and their allies, for £1.5 million, closing the liquidation. As of October 31, 1894, the Bank of England was still owed £1,999,000. Whether the sale at £1.5 million entailed a loss for the Bank of England is not clear; but the failure to liquidate Baring Brothers & Co. within a four year window is the surest indication of its insolvency in 1890.

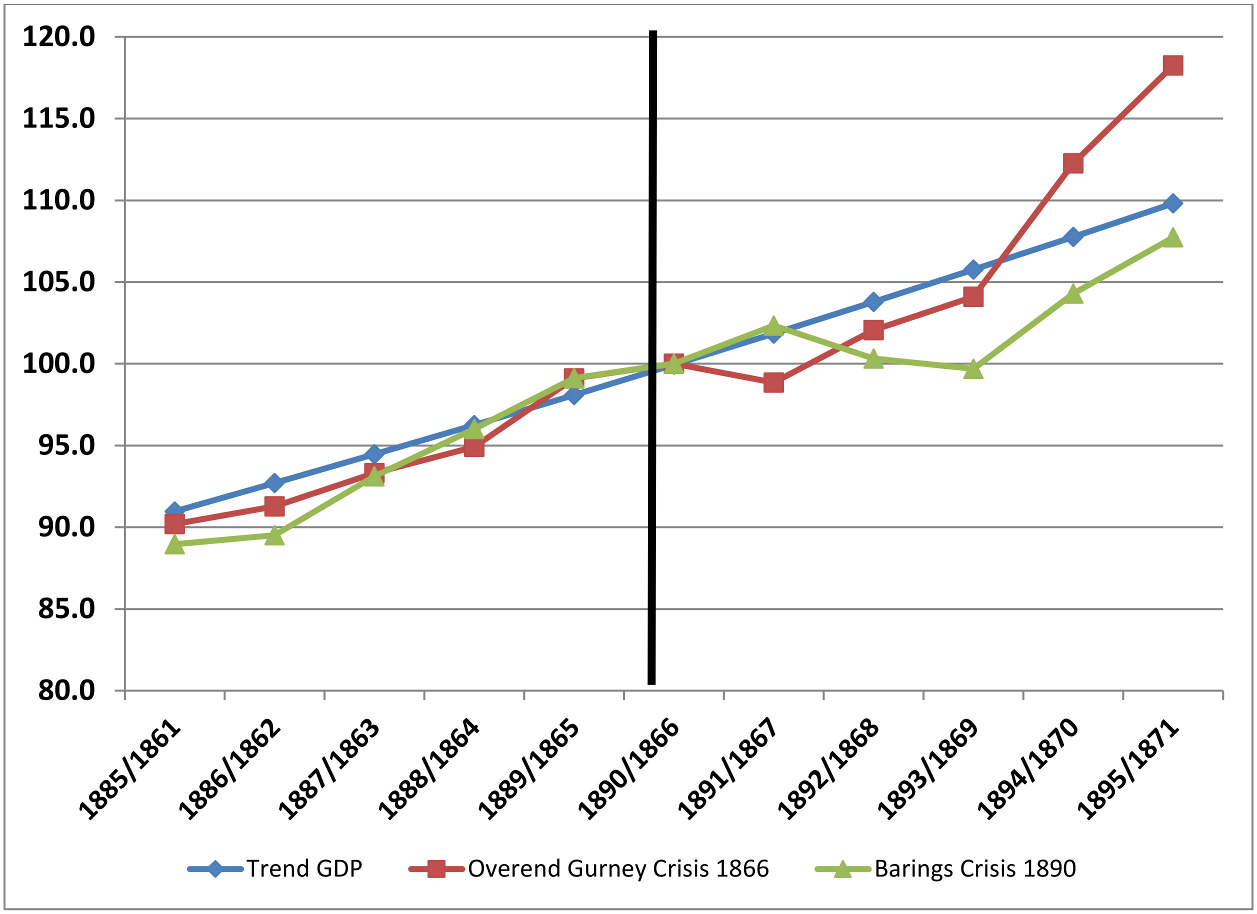
## 10. Broader Consequences

It is important too consider, if only briefly, the impact that the collapse of Barings had on the behavior of other banks and on the business cycle. First, the crisis may have had a salutary effect on disclosure. The lack of financial transparency that had enabled the Barings to continue their operations for so long may have induced banks to publish more information to convince a more skeptical public that they were solvent and sufficient liquid; and more banks began to publish balance sheets. Chancellor Goschen pushed for the regular publication of audited balance sheets, but there was no legal requirement imposed.

Some researchers have noted an increased conservatism among British banks in the late nineteenth century. Baker and Collins (1999) find that balance sheets became more liquid after crises in 1878 and 1890, which may reflect the banks responding to the penalties assessed on the partners of City of Glasgow Bank in 1878 and the Barings. However, to lower their exposure to risk, some banks like Martins switched from partnerships to joint limited liability companies.

Financial crises are often believed to initiate or to amplify recessions. In the absence of a more thorough econometric study, a simple comparison of 1866 and 1890 is offered here. If the actions of the Bank of England prevented a panic in 1890, while it only acted after the fact in 1866 to provide liquidity, then any recession should have been worse after 1866. Figure 6 shows the movement of British GDP relative to trend growth of GDP five years before and five years after the two crises. The level of GDP is normalized at 100 for the crisis year. The Barings Crisis appears to have had little effect GDP, as it continued to grow at the trend rate; it fell in subsequent years as additional shocks hit the economy. In contrast, GDP had a sharp drop after the Overend Gurney panic and remained below trend for three years before a sharp recovery. While far from conclusive, this simple graphing shows no obvious deleterious effects from the Bank of England's innovative intervention, which may have allowed the economy to continue growing at its mean rate.

**Figure 6**
**GDP Growth Post-Financial Crisis**
**1866 and 1890**




## 11. Lessons for Today?

The complete histories of Baring Brothers in 1890 and the Comptoir d'Escompte in 1889, recording pre-emptive actions that halted panics, alter the narrative of how central banks operated in the late nineteenth and early twentieth century. Contrary to the current received wisdom, the two pre-eminent central banks of this era did not adhere to the orthodox LOLR policy as prescribed by Bagehot.

The Bank of England and the Banque de France did respond to heightened demands for liquidity or panics by lending freely at high rates on good collateral. But, at the same time, they were also willing to intervene pre-emptively when the failure of an insolvent SIFI and potential fire sale of its assets threatened to ignite a general panic. Loans against the whole balance sheet of the SIFI were provided so that depositors and other creditors were assured they could withdraw funds, a "good" recapitalized bank was set up, and the toxic assets were left to a "bad" bank that could be liquidated in an orderly fashion so as to minimize losses. No government funds were promised; and to absorb potentially large losses, guarantee syndicates of banks were organized.

Although not openly discussed, these operations were designed and executed in a manner that helped to mitigate moral hazard. The contributions of banks to these syndicates were in part determined by how much they may have actively or passively enabled the crises. Another deterrent were the penalties assessed upon the principals whose recklessness had ruined their banks. Losses were covered by the fortunes of the senior managers and directors for Comptoir and by the partner's wealth for Baring Brothers.

One may object that this history is of little relevance as the world has radically changed since 1890 because of increased globalization and interconnectedness among institutions and markets, but the late nineteenth century was another great era of globalization and financial integration. One certain difference is that crises now erupt not because of one institution taking excessive risk but because of system-wide incentives (Too Big To Fail, deposit insurance and governance failures) to take risk. However, the successful design of these central bank interventions and forceful efforts to contain moral hazard suggest some approaches for improving contemporary LOLR policies.

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