How to Prevent a Banking Panic: the Barings Crisis of 1890

Financial histories have treated the Barings Crisis of 1890 as a minor or pseudo-crisis with no threat to the systems of payment and settlement. New evidence reveals that Baring Brothers was not simply suffering from a temporary liquidity problem but was an insolvent institution. Just as knowledge of 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---and is generally believed. Instead of waiting for the panic to break and then lending freely at a high rate on good collateral, the Bank organized a pre-emptive lifeboat operation. A large domestic financial crisis was avoided, while effective steps were taken to mitigate the effects of moral hazard from this discretionary intervention.

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Since 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 a crisis.

This paper re-examines the first major threat to British financial stability after the publication of Lombard Street, the Barings Crisis of 1890. Previous financial histories have treated it as a minor crisis, arising from a temporary liquidity problem that posed no threat to the systems of payment and settlement. However, contemporaries believed that a panic would engulf the financial system if Baring Brothers & Co., Britain's second largest merchant/investment bank and a highly interconnected global institution, collapsed. New evidence reveals that this SIFI was a deeply insolvent bank whose true condition was obscured in the effort to halt a panic. Although the Bank of England raised its discount rate and lent freely, it violated Bagehot's rule by making a huge loan to Barings, organizing a lifeboat operation, and separating the firm into a recapitalized "good" bank and a "bad bank" holding "toxic" assets. In conducting this operation the Bank drew directly on the policy devised by the Banque de France in 1889. A financial crisis in London was thus avoided, while the design of the lifeboat and demands on Barings' partners sought to mitigate the effects of moral hazard.

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 lender of last resort (LOLR) policy for central banks, it is in Walter Bagehot's Lombard Street: A Description of the Money Market that the policy was clearly exposited. To halt a panic, Bagehot, then editor of the Economist, 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 hesitation 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).

Did Central Banks Follow Bagehot's Prescription?

The current scholarly consensus is that, if nineteenth century banks were not already beginning to follow Bagehot's prescription, his writings persuaded them to adopt a "Bagehot rule."[1] 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 LLR 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 a largely 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)

This paper argues that this 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.

An Incipient Panic

An unlimited liability partnership, Baring Brothers & Co. was a very large British institution, second only, among private banks, to the London Rothschilds. Already a preeminent merchant bank, Baring Brothers was tempted by the emerging markets of South America to become the

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

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).

As a private firm, Baring Brothers was not subject to any disclosure rules and relied on its long established reputation to reassure its creditors. To finance its holdings of unsold Argentine securities, it used acceptances---short-term funding from other financial intermediaries. Although by modern standards it may not appear to have been highly leveraged, with a capital of £4 million and assets of £20 million pounds, its risk exposure was huge, with a big slice of its portfolio was composed of, what today would be considered "toxic" assets. To fund this portfolio and avoid sounding any alarm, the Barings had borrowed around the acceptance market, accumulating a liability of £15.7 million by the end of October 1890.

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.

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."[2]

Although there were signs of an incipient panic, it is possible that the Goschen and Lidderdale were exaggerating the danger. One common sign of a panic is a flight of deposits from weak to strong institutions. Detailed daily deposit data for all banks is lacking, but what exists suggests a flight to quality. One the hand, Martin's bank, which had made loans to fund Baring Brothers saw its deposits shrink unexpectedly by 18 percent in November as rumors of its involvement circulated (Chandler, 1964). On the other hand, private deposits at the Bank of England, a safe haven, jumped (Economist. November 22, 1890). 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) If the sale of consols could not yield liquidity, the Bank of England could and the beginning of a rush for liquidity is reflected in the six-fold increase in its discounts from November 7 to 14 (Bank of England, Archives C28/50, Daily Discounts 1890). Most recently, Turner (2014) has sought to identify panics by examining

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

banks' share prices, as a run on a bank's deposits should be correlated with a flight from the bank's stock. For the crisis period in 1890, Turner finds a return on bank stocks' 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%. 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.

With these apparent pressures building Goschen met Lidderdale on Monday, November 10th. 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. 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 11th, 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.

Was Baring Brothers Solvent?

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 14th. 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.[3] Apart from the short-term acceptances of £15.7 million, there were substantial deposits of £5.2

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

million that might be withdrawn. Lacking liquid resources, a run would force 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 (Freixas and Parigi, 2014). 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 (Shleifer and Vishny, 2010).

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, which leads to the question of how Currie and Green could have declared Barings to be solvent, and implicitly worthy of a loan. 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. What no one has done thus far is to check Green's work, which seems suspicious given his "uneasy" mind. My checking showed that the 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. 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.

A French Lesson for the Old Lady of Threadneedle Street

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 Economist 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).[4] 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:

> 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.

The Guarantee Syndicate

On the same day as Currie and Green reported, Friday November 14th, Goschen again attempted to get Lidderdale to accept a Chancellor's letter, but the Governor refused and apparently made a threat, 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]." At this impasse, Goschen and the Prime Minister blinked and agreed to cover half of loss until Saturday afternoon, November 16th 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

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

praise, condolence and thanksgiving was going up from the Press. (Clapham, 1945, p. 335)

The results of this operation are found in the first complete post-crisis balance sheet of Baring Brothers. In this March 31, 1891 account, most of the acceptances have run off and deposits have been withdrawn, leaving the Bank of England as the firm's dominant creditor with an advance of £7.4 million.[5] Recognizing Barings' important mercantile business, as separate from its investment banking activities, the Bank executed a very modern exercise, again on modelled on the 1889 Paris operation, splitting the old firm into a "good bank" and a "bad bank." The good bank, Baring Brothers & Co. Ltd., was recapitalized as a limited liability company and obtained some of the good assets present in the October 31, 1890 balance sheet. The bad bank was left the "toxic" securities of £8.3 million. [6] Since all securities were entered at face value, there was a surplus of £3,464,672 recorded.

The Economist accepted the Bank of England statement of 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).

Yet, 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).

[5] Bank of England Archives, 9A240/1.
[6] The two largest items are the Buenos Ayres Water Works Bonds valued at £1,994,161 and the Buenos Ayres Water Works 4% Debentures valued at £1,648,593.

The guarantee that troubled the Economist was extraordinarily large. Announcing the rescue package 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 £17.1 million. How so many banks were induced to join is unknown, but history Glyn's Bank offers one clue. Representing Glyn's bank, Currie volunteered £500,000 from his bank if Rothschild would contribute an equal amount, inducing the later 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. It is unknown, how many more banks were given similar deals that eliminated an immediate loss but still imposed a potential penalty for their support of Baring's Argentine issues.

An Orderly But Difficult Liquidation

Ultimately, the guarantee syndicate members were not drawn upon to make good on their pledges, as the Baring partners, subject to unlimited liability, drew down on 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.[7]

This process of liquidating Baring Brothers and repaying the Bank of England can be seen in the multiple sets of accounts that the bank kept. Where there is no write-down, there is positive capital for the bad bank, as on December 31, 1891 when Argentine securities are recorded as having a value of £7,950,766. In another account for the same date, when there is an acknowledged write-down, assets stand at £4,154,950 and the "surplus" is a negative £228,833. In the next entry, this loss was covered by the newly added Barings' personal property and securities. Thus, these account books imply that if Baring Brothers' securities had been marked to market or sold immediately, the firm would have been shown to be insolvent. Not surprisingly, the process of liquidation took far longer than anticipated, as buyers had little interest in toxic assets. In 1894, 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, with little further progress, the Bank sold the bad bank to a "salvage" company for £1.5 million, closing the liquidation.

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

[7] 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.

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).

The crisis may also have had a salutary effect on the lack of financial transparency that had enabled the Barings to continue their operations for so long. More banks began to publish balance sheets; and Goschen pushed for the regular publication of audited balance sheets. 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.

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 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 of the Comptoir and by the partner's wealth for Baring Brothers.

One may object that this history may be 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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