Contagion Effects of Three Late Nineteenth Century British Bank Failures

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British banking during the period 1860 to 1908 experienced a number of bank failures. For example, between 1880 and 1890 there were 29 bank failures. The failure of a bank not only affects the depositors of that bank but also other banks, their shareholders, the monetary system and general economic stability. The main reason for the latter is the loss in public confidence in the banking system which leads to a withdrawal of funds by depositors.

In this paper I consider the contagion effects of the failure of Overend Gurney Co. in 1866, City of Glasgow Bank in 1878 and Baring Brothers in 1890. I look at these bank failures for two reasons. First, these failures have been of large and prominent banks which have been argued to lead to banking crises. Second, the failure of these banks played a large part in shaping British banking. For example, the failure of City of Glasgow Bank led to the Companies Act of 1879 which required all banks to have their accounts audited. Unlike previous studies which have considered bank failures, this study uses capital market data in order to assess the impact of these failures on British banks. This study also examines the relationship between the contagion effect and the specific cause of the bank failure.

The paper is arranged in the following manner. Section II provides a brief history of the failed banks and tries to identify the causes of their failure. Section III provides a theoretical background to the various attempts that have been made to model contagion. Section IV describes the sample data while section V explains the methodology used. Section VI presents the results, and finally, section VII concludes the study.

British Bank Failures: Overend Gurney and Co. (1866)

Overend Gurney and Company grew out of a merger between the Gurney Bank of Norwich and the London bill broking firm of Richardson, Overend and Company. Both businesses had started in a small and simple manner and after the merger grew to quite a considerable size. The growth of the new firm was based on the fundamental banking principles of carefully checking of their clients for reliability. Their discounts were confined, to bills, "representing current mercantile transactions." These principles helped the bank weather the banking panics of 1825, 1837 and 1840. According to Batchelor [3], by 1820 the firm of

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Overend Gurney was considered to be a quality finance house, so much so that not only were all the major London banks and finance houses investing in the firm but so was the Bank of England. A decade later the firm had become the largest discount house in London.

During the 1850s Gurney underwent a significant change that disfigured it until its collapse. The prudent management of Samuel Gurney and David Barclay Chapman was replaced by a new group. Samuel Gurney who originally worked for Richardsons, Overend and Company died in 1856. A year later, David Barclay Chapman, who worked for the firm from 1817 to 1857, retired. Both of these men were skilled bankers who played a significant role in Gurney's success. The new management lacked the prudence of its predecessors and lent unwisely on inadequate security. Gurney's customers were no longer checked for soundness and the old principle of lending on real trade transactions was no longer adhered to. The Economist claims that "the worst bills and securities they would strike out at once, but the rest in the common and usual course of affairs they would renew and take on. And in doing so they must have taken on some of the worst bills in England" [10]. In fact the Economist made veiled comments regarding the firm's lending policies from as early as the 1860s. These comments went a long way in causing concern in London regarding the firm's solvency. Regardless of these views the firm was still highly regarded by country banks.

Although the new management took effective control from 1857, the rise in bad loans did not take place until 1862. During the years 1862 and 1863 the rate of interest in the London money market was low while deposits were rising. One effect of this was that if the firm wanted to grow fast and maintain profit levels it had to find more profitable investments. The Economist commented on the situation by saying that, "if you leave much money in people's hands to employ for their own advantage, and they cannot so employ it on obvious, good business, they are apt to search out bad business" [10]. One method of obtaining high profits was to invest in risky business, which the firm did.

In 1865 the firm took advantage of the 1862 Companies Act and changed its status to a limited company. However, by this stage, the firm's finances were in such a poor state that the firm was insolvent by £4.246 million. An attempt to balance the accounts was made by crediting the proceeds of the partners' private estates, the goodwill and other assets against the losses. It was well known that the partners' assets were quite large but the manner in which the bank had been run still created a difference in the accounts. The state of affairs was no secret to insiders and again the Economist expressed its concern regarding the value of the company. The only positive effect it could see coming from the change of status, from a private company to a joint stock firm, was that it would now have to publish its accounts. By early 1866 rumors had spread stating that the old partners were personally bankrupt and the firm had large liabilities arising from the failure of its creditors. The rumors led to a fall of almost a third of the firm's deposits. In July 1865, the deposits stood at £14.4 million, while ten months later in May 1866 they had fallen to £9.8 million. By Thursday May 10, 1866 the situation had deteriorated to such an extent, that the once glorious firm which that had come to the Bank of England's assistance on numerous occasions, now had to seek £400,000 from that bank. The Bank of England refused the loan and that afternoon the firm was declared insolvent.

The scene in Lombard Street on Friday May 11, 1866 was described by the Economist as that befitting a country fair. Moreover depositors and investors were unable to tell which banks were sound and which were not. The immediate effect of this was a run on London banks by country banks. Solvent banks such as the Bank of London failed and were later absorbed by competitors. The Bank of England was not free from the panic, and saw a drain in its note reserves by £3 million in a single day, to £2 million. The Bank Act of 1844 was suspended in order to provide the necessary assurance by the Bank of England to country bankers.

City of Glasgow Bank (1878)

In 1839 a prospectus was published outlining the start of a new Glasgow bank namely the City of Glasgow Bank. The prospectus mentioned that Glasgow only had had three new banks (the Union, the Western and Clydesdale) in the previous three decades. With an increase in business each of these banks was making handsome profits and the implication from the prospectus was that there was room for another bank. This view was shared by a large number of people and the City of Glasgow Bank, (the Glasgow bank), was established with a paid up capital of £656,250 and 779 partners. The paid up capital was higher than any other Glasgow bank.

Even though during the first few years of the its existence the Glasgow bank did not produce wonderful results it nevertheless had a desire to become a large bank. The bank had a rigorous policy of opening new branches and, by 1857, it had 88 branches, second only to the Western and Union banks. In addition to this it also owned the Bank of Mona on the Isle of Man. However, the Glasgow bank was not content to allow expansion to take place merely through its branch network, which were all profitable to various degrees, or even through takeovers. Instead the bank placed a very high percentage of its resources on the discount market and therefore became heavily dependent on the London money market. Checkland [6] argues that the Glasgow bank saw great potential in international financing, and therefore discounted a considerable amount of paper connected with America and East India.

On November 9, 1857 the Western Bank collapsed causing a severe run on the Glasgow bank, to such an extent that it was unable to open its doors two days later. Investigations into the Glasgow bank showed a deficit of £77,577. On the last day of 1857 the Glasgow bank resumed business on the condition that it closed its New York agency, which was opened only month earlier. This condition was placed by the Edinburgh banks for their effort in the rescue of the Glasgow bank. After the suspension of operations in 1857 there was a change in the board of directors. The most significant of these was the appointment of Lewis Potter.

In early September 1878 the Glasgow News regularly wrote about the difficulties facing one Scottish bank, but no name was mentioned. These rumors soon reached London, where in banking circles there was only one opinion as to which Scottish bank would need help. These rumors did not have a detrimental effect on the Glasgow bank. There was no run on the bank by depositors but then the bank was known to have a large number of partners, (1,819 at the time

of the failure), with unlimited liability. There seemed to be no cause for concern to the partners because the bank had built up a good branch network, (133 at the time of the failure), and deposits of over £8 million. Moreover, the annual accounts were framed, especially from 1857, to show steady progress. In fact it was considered by some to be the most active and prosperous of all Scottish banks. The Glasgow Bank's share price was high in comparison to other banks. The stability in the share price was maintained through the bank purchasing its own shares. The only inconvenience came from the London money market which felt that it had absorbed enough of the bank's paper and refused to accept any more.

On September 11, 1878, the Bank of Scotland acting on reports of a troubled bank in Scottish newspapers and on rumors in London, asked the Glasgow bank to retire a large part of its acceptances. The bank's response was to seek assistance from the Bank of Scotland of initially £200,000 to £300,000 but later increased the request to £500,000. Prior to the approval of the loan, the Bank of Scotland demanded an examination of the Glasgow bank's accounts. The Edinburgh accountant, employed by the Bank of Scotland, produced his report on September 28, 1878, showing there to be a concentration of non-performing loans. After receiving the accountant's report the loan was denied on October 1, 1878, and the Glasgow bank never opened its doors for business again.

The failure of the bank had a huge impact on the financial and industrial community in Scotland. The Edinburgh and Glasgow newspapers regularly carried reports of firms that had gone bankrupt as a result of the Glasgow Bank. Out of the financial firms the most affected was the Caledonian Bank which held £400 worth of the Glasgow bank's shares as collateral. This relatively small holding in the bank was enough to cause a run on the Caledonian bank. The general view was that not even the total assets of all the shareholders including the Caledonian bank was enough to meet the calls for cash from the liquidators. On December 5, 1878, the Caledonian bank closed its doors and its shares were suspended. Later it was revealed that the Caledonian bank's call for cash would amount to £11,000 which represented half a year's profits. In addition to this the shareholders of Caledonian Bank and their friends set up a guarantee fund of £150,000. The liquidation of the Caledonian bank was cancelled and the bank resumed operations; nine months from suspension the shares were trading again.

The crisis was not limited to Glasgow or even Scotland and has been argued to affect England and Wales. Gregory [13] and Holmes and Green [14] looking at the histories of the National Westminster Bank and Midland Bank respectively argue that the failure of the Glasgow bank had a devastating effect on each of these banks. In fact Gregory [13] claims that it was "a disaster of the first magnitude." The obvious effect was the failure of the West of England Bank and the Wales District Bank, both occurring in December 1878. (These banks later resurrected a joint bank operating under the name of West of England and Wales Bank.) A number of English smaller banks also failed. (A more detailed account of the effects on English banks can be found in Collins [7].)

Baring Brothers and Co. (1890)

The origins of Baring Brothers and Company go back to 1763, when it was established by John and Francis Baring, in order to exploit their European connections in financing the textile trade. Although the bank had a modest beginning it soon grew rapidly, and with size came reputation. One element of its success was its ability to adapt to the ever changing economic environment. There were two important changes, first the lifting of restrictions on the international flow of gold and short term money. Baring, with its wide network of connections in Europe, soon became a broker in this market. The second change was the growing need for financing public projects. The early nineteenth century was a boom period for railway finance not only in the UK but also in the US and certain parts of the British Empire. A number of UK banks financed the railway developments either directly or indirectly. In addition to this, Baring facilitated the finance of utility projects initially in Europe and then in North America and Latin America.

Baring's European loans were generally prudent and became a staple part of their business. The North American loans were somewhat less secure in comparison. In contrast to this, the bank's Latin American loans made during the boom years of 1821/2, provided no return five years later. The Economist commented on the bank's Latin American loans on a number of occasions. One such comment after its failure was that, "they [Baring] were not satisfied with the safe and magnificent profits which their splendid merchant banking business yielded. It is now seen that they acted very unwisely, but temptation to add to riches is hard to resist" [10].

In the 1880s, Baring extended new loans to Latin America. The new loans were much larger than previous ones and Baring soon became a specialist in providing finance in South America. In the period of one decade, (1880 to 1890), the bank had lent more than £30 million to national governments, provincial governments and utility companies in the River Plate region. This sum represented by far the greatest proportion of the £100 million lent during the period in this region by non Latin American banks. For example, Baring had lent more than eight times the amount of its nearest rival in Argentina, and this practice was the rule rather than the exception. In addition to this Baring also had a direct shareholding in an Argentine water company.

There were two important reasons behind these large loans. First, during the 1880s the British bank rate was low in comparison to the expected return on River Plate loans. In fact after 1883 the bank rate never rose above 4%. Also, the return on European investments was stable and secure but low in comparison to the expected return on River Plate loans. The second factor was that these securities were barely marketable. This meant that even if Baring were to decide to dispose of them they would have found it difficult if not impossible to do so. This left only option of riding the boom.

By the late 1880s the River Plate loans were imposing a strain on the creditor banks. In April 1890 the Argentine government ran into difficulties and could not maintain its interest payments. The short term solution, which was accepted by the creditor banks, was to purchase the "Western Railway" at a price above the market value. Worse still, the National Bank of Argentina, which had

speculated in land prices, suspended dividends when property prices fell. The latter had fallen by 50% in a single year (1889 to 1890). This caused a massive run on the entire Argentine banking system. The National Bank of Argentina was not alone in speculating, the National Bank of Uruguay also speculated but in public work programs and was forced to suspend payments as a result of it's misguided activities. Both banks were forced to seek short term loans in London.

These events put a considerable strain on Baring and the value of their Argentine securities fell by over a third. Moreover, the flow of income from the River Plate loans came to an end and Baring also faced a large liability from the failure of the water company. Baring's initial reaction to these events was to borrow heavily from the London money market. Matters were made worse with the arrival of the Argentine negotiator Dr. Plaza to discuss the reconstruction of River Plate loans. The Argentine agreed to write off Baring's liability arising from the water company on condition Baring raised more finance for them to meet their interest obligations. Baring refused as they had done previously to the request from Uruguay.

On Saturday November 8, 1890, Barings disclosed its situation to the directors of the Bank of England. The problem now facing the Bank of England was the fear that if Baring's present situation were known to the public at large it would lead to not only a banking crisis but a drain of foreign capital from London. In order to avert this, both the Bank of England and the government decided to keep Baring's situation a secret. In addition to this, steps were taken to cater for any run by depositors on British banks or large capital flows out of London. The first of these was to induce Rothschilds to import £3 million in gold from France, while the Bank of England secured £1.5 million from Russia.

The second step was to establish the true position of the bank. In the event of the bank being insolvent Goschen, the Chancellor of the Exchequer, was reluctant to support the bank. In contrast Lidderdale, who was the governor of the Bank of England, was quite confident that the Bank of England had sufficient funds to weather the failure of Baring. However, Lidderdale was more interested in following the French precedent of the previous year, by providing a lifeboat to the failed bank. The Economist argued that "the mercantile business of Baring, on the other hand, [in contrast to Overend Gurney et al] is thoroughly sound, and there is no question whatever as to the ultimate solvency of the firm" [10]. This view was confirmed by the accountant's report which stated that the bank was solvent but needed approximately £10 million to finance current interest obligations.

The accountant's report was enough for Lidderdale to establish a lifeboat and the subscription list was set up that day. The Bank of England, Rothschilds, and other merchant banks put their names onto the list, guaranteeing a total of £3 million, by the end of the first day. By the end of the next day the total subscribed had reached over £10 million, largely due the Bank of England strongly influencing joint stock banks and discount houses to add their names to the list. The list did not stop at £10 million and continued to climb to over £17 million by the end of the third day (i.e. Sunday). However, by this time news had gotten out that Baring was in trouble, which frightened country bankers. The next day country banks switched their holdings into cash but no major run occurred nor was there a drain of capital.

Review of Literature on Bank Failures

One can model contagion using three different models. First, risk premium which considers the spread of interest rates between the failed (or the bank with a negative announcement) and other banks. The second group of contagion models have attempted to use credit rationing which consider the quantity of loans/deposits supplied. The third group of contagion models use capital market data in order to observe the post announcement share performance. In this paper I attempt to model contagion using the capital market model. The reason for using the capital market model is lack of sufficient data required for the other models.

Capital market models aim to use event study methodology in order to consider the post announcement effect of a failure on solvent banks[2]. The idea behind this particular contagion model is that an adverse announcement will affect the share price of other banks. If the post announcement share prices of all other banks are adjusted downwards than it implies a contagion effect. However, if the post announcement share price is only adjusted for weak or insolvent banks, it implies investors are able to differentiate between banks.

Various studies have been carried out that use the capital market model in order to test for contagion [24;1; 21], among others. Aharony and Swary [1] have considered the contagion effects of the failure of three large banks on money center banks, medium sized banks, and small banks. The three bank failures considered are the United States National Bank of San Diego (USNBSD) in 1973, Franklin National Bank in 1974 and Hamilton National Bank in 1976. The precise nature of the failures were fraud, foreign exchange losses, and fraud and illegal inter-company property loans respectively. Each of the causes of failures is bank specific, leading one to assume that there would not be any contagion effects.

Data Sources

Weekly share price data for banks listed on the London Stock Exchange was collected from the Course of Exchange[3]. The Course of Exchange stopped publication in June 1908, after this date, share price data were obtained from *The Economist*. For the Scottish banks, share prices from the Edinburgh Stock Exchange were used. The main reason for this was that more than three quarters of the Scottish bank shares were traded at this exchange. Some bank shares, such as the City of Glasgow Bank, Bank of Scotland and the Caledonian Bank were traded at more than one exchange. (The other stock exchanges in Scotland at the time were in Aberdeen, Dundee and Glasgow.) Share prices from the Edinburgh Stock Exchange were published in the *Edinburgh Evening Courant*. In 1886 the newspaper merged with the *Scottish News* which was published in Glasgow until

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[2] For a discussion of the various event study models see Brown and Warner [4] and [5].

[3] The more detailed description of the share price data for the period and the manner in which it was collected is given in Mahate [18].

1892. Share prices after the 6th February 1886 were collected from the *Edinburgh Evening News*. The dividends are collected from *The Economist*, Investors Monthly Manual and the *Stock Exchange Official Intelligence*'.

Methodology

In accordance with similar studies that have used the capital market model, I use the event study methodology, to calculate abnormal returns[4].

For each company i, I define an abnormal return AR_{it} as

$$AR_{it} = R_{it} - C_{it}$$

R_{it}= the continuously compounded realized return on week t (dividend plus capital gains). This is calculated as[5]

$$R_{it}=Log \frac{P_{it} + D_{it}}{P_{i,t-1}}$$

P_{it} = Price of the bank i's share at the end of trading on week t.
D_{it} = Dividends received on week t.
t = time defined relative to an event date.
C_{it} the control rate of return which estimates what company i's return would have been in the absence of a failure.

Using the mean adjusted return model the control rate of return of any firm for a week in the event period is the mean weekly return of the firm over the estimation period is:

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[4]The main assumption underlying this type of study is that it assumes the market is efficient, and prices reflect all available information. This point is itself a source of debate (see Summers, [25].

[5]An alternative method of calculating R_{it} is to use discrete returns, where

$$R_{it} = \frac{P_{it} + D_{it} - P_{i,t-1}}{P_{i,t-1}}$$

I use logarithmic returns, because when linking sub-periods together to form longer event periods, logarithmic returns can be simply added, whereas discrete returns cannot be easily manipulated in this way. Additionally logarithmic returns are more likely to be normally distributed.

$$C_{it} = \frac{\sum_{t=-200}^{t=-50} R_{it}}{150}$$

This model assumes that the expected return for company i is a constant that can vary across firms. The model would be accurate if the risk free rate, risk premia and a company's systematic risk are constant over time. (For a detailed explanation of event study methodology see [4; 5].)

Results: Overend Gurney and Company (1866)

Table 1

Window (weeks)	All Banks		Scottish Banks		English Banks	
	CAR%	t	CAR%	t	CAR	t
-50 to 50	-42.33	-1.87	-5.10	-0.12	-76.18	-4.23
-40 to 40	-36.37	-1.79	-4.39	-0.15	-65.37	-3.98
-30 to 30	-34.07	-1.93	-4.61	-0.14	-60.89	-4.35
-20 to 20	-27.32	-1.89	-5.24	-0.19	-46.99	-4.14
-10 to 10	-12.97	-1.25	-3.77	-0.22	-22.92	-2.56
-5 to 5	-0.48	-0.06	21.05	1.53	-20.78	-3.36
0	-1.73	-0.77	-0.39	-0.09	-2.95	-1.65

The results show that for all banks the abnormal returns are negative for thirty four out of the fifty one weeks[6]. Although, the returns are negative for most weeks, one does not find large losses, but an average of 1% per week. This general fall in the share price from six months prior to the failure of Gurney's could be argued to be a result of the rumors in *The Economist*, among other newspapers, regarding Gurney's financial situation. During the week of the announcement of the failure the abnormal return is -1.73%. This is considerably larger than previous weeks at -5.39% for all banks, one week after the announcement, implying an increased activity in the trade of bank shares. (A large negative return implies that there was a huge pressure to sell bank shares.) The panic in the capital market seems to be short lived because the abnormal

[6]Both the raw returns and the mean adjusted returns models were run but only the latter are reported. The reason for this is that there are not significantly different.

returns rise to 22.55% five weeks after the announcement. The positive abnormal returns are generally maintained during the post announcement period implying that shareholders have sufficient information to differentiate between banks having problems, and those who are not.

Dividing the banks into those listed on the Edinburgh and London stock exchanges one finds quite different results in each. In the case of banks listed on the London stock exchange (i.e. English banks), one finds contagion to be present. In the case of Scottish banks no contagion seems to be present. English banks have a negative abnormal return for almost all the weeks prior to the announcement and five weeks afterwards. In sharp contrast, Scottish banks have a positive abnormal returns throughout the period, with only a very few exceptions. Moreover, the size of the abnormal return is considerably larger for English banks than for all banks or Scottish banks. English banks have an average abnormal return of -1.37% per week for the period six months prior to announcement until five weeks afterwards. For Scottish banks the abnormal return is 0.77% per week during this period. On the announcement week English and Scottish banks have a negative abnormal return of -2.95% and -0.39% respectively. The difference in the performance of bank share prices listed on the Edinburgh and London exchanges implies that shareholders were sufficiently knowledgeable to differentiate between banks in different trading areas.

The cumulative abnormal return for the one year before and after the announcement of the failure, and the shortest, is the week of the announcement. Taking the first case of one year before till one year after the announcement one finds that Scottish banks have a small positive abnormal return of 2.45%. However, British banks have an abnormal return of -42.33%, during this period, but the greatest fall is in English banks of -76.18%. Over two thirds of the fall in English bank shares occurred prior to the announcement. For shorter event windows the cumulative abnormal returns are much smaller, for example, in the case of ten weeks before the announcement till ten weeks after it is -22.92% for all banks, -3.77% for Scottish banks and -17.53% for English banks. The large difference in the performance of English and Scottish banks implies that shareholders of English banks were not able to differentiate between troubled and non troubled banks in the same trading area. This inability to differentiate between banks in the same trading area may help explain the panic of 1866 and the failure of solvent banks such as the Bank of London.

City of Glasgow Bank (1878)

The abnormal returns are negative for twenty eight out of the fifty one weeks with an average weekly abnormal return of -0.47%. The vast majority of negative abnormal returns occur after the announcement. In fact, the total abnormal return for the period six months prior to the announcement is -0.01%. However, the total abnormal returns for the six months after the announcement is over -25.53%. The average weekly abnormal return during this period is 0.5%. The abnormal return for the six months after the announcement is -19.65 implying the majority of losses to occurred in this period. In the case of Scottish banks the average weekly abnormal return is -1%. Again the majority (15 out of 23) of the negative abnormal returns occur after the announcement week. The

total abnormal return for the six months prior to the announcement week is -0.44%. However, the total abnormal return for the period six months after the announcement is -34.79%. For English banks the abnormal returns are negative for twenty eight weeks of which ten occur prior to the announcement. Also the average weekly abnormal return for the period six months prior to the announcement till six months after is -0.35%. The total abnormal return during this period is -18.11%, of which -17.4%, occurred after the announcement. The rather similar post announcement performance of both Scottish and English banks (of -34.7% and -17.4% respectively for the six month period), implies that contagion had taken place in both areas but was considerably stronger in Scotland.

Table 2

Window (weeks)	All Banks		Scottish Banks		English Banks	
	CAR%	t	CAR%	t	CAR%	t
-50 to 50	-25.54	-1.68	-34.83	-0.35	-18.11	-0.18
-40 to 40	-25.80	-1.90	-40.23	-0.40	-14.25	-0.14
-30 to 30	-29.14	-2.47	-50.08	-0.50	-12.38	-0.12
-20 to 20	-25.33	-2.62	-47.68	-0.48	-7.46	-0.07
-10 to 10	-24.95	-3.60	-38.19	-0.38	-14.35	-0.14
-5 to 5	-14.48	-2.89	-20.29	-0.20	-9.84	-0.10
0	-2.01	-1.33	0.26	0.00	-3.82	-0.04

Unlike the case of Gurney's, the negative cumulative abnormal returns do not fall as the event windows become smaller. An explanation for this is that the events did not end with the closure of the bank. After the announcement of the failure of the bank various inspections were made into the bank's accounts by the liquidators of the Glasgow bank. Furthermore, calls for cash were also made by the liquidators of the Glasgow bank, at various times creating a fear among bank shareholders. This was apparent in the case of Caledonian bank which eventually had to suspend its shares. In table 2 one can see that the window -30 to +30 weeks has the negative cumulative abnormal returns at 50% for Scottish banks, 12% for English banks and 29% for British banks. These results provide further evidence that there was a strong contagion effect in Scotland, which lasted for some time. There was also a contagion effect on English banks, but it was considerably weaker than that in Scotland, and it also lasted for a much shorter period.

Baring Brothers and Company (1890)

Table 3

Window (weeks)	All Banks		Scottish Banks		English Banks	
	CAR%	t	CAR%	t	CAR %	t
-50 to 50	0.50	0.09	-0.72	-0.13	1.88	0.25
-40 to 40	1.08	0.22	-1.48	-0.29	3.95	0.60
-30 to 30	-0.97	-0.23	0.00	0.00	-2.07	-0.36
-20 to 20	-2.96	-0.87	-1.58	-0.43	-4.51	-0.96
-10 to 10	-1.45	-0.59	-1.07	-0.41	-1.87	-0.56
-5 to 5	-0.56	-0.32	-0.94	-0.50	-0.13	-0.05
0	0.70	1.31	0.10	0.17	1.37	1.86

In the case of British banks the abnormal returns are negative for twenty three out of the fifty one weeks. Unlike the failure of the City of Glasgow bank where the bulk of negative abnormal returns occurred after the announcement in the case of Baring, these were evenly split during the pre and post announcement periods. Moreover, the average weekly abnormal returns were fairly consistent before and after the announcement at 0.35% for the six months before and 0.41% for the six months after. On the day of the announcement there was a positive abnormal return for all British banks. The negative abnormal returns did not start until the third week, after the announcement, and initially lasted for two weeks. Even then, these negative returns were not sufficiently large to offset the gains made in the first two weeks, after the announcement. The large number of weeks with positive abnormal returns after the announcement imply that there was not a contagion effect.

Looking at the segregated data one finds the results to be very similar. In the case of Scottish banks, the average weekly abnormal return for the six months prior to the announcement was 0.02%. For the six months following the announcement the weekly abnormal return was 0.01%. Although the average weekly abnormal return had dropped, the number of weeks with negative abnormal returns had increased by just one after the announcement. On the week of the announcement, the abnormal return was 0.1%, which implies that the Baring Bank failure had no contagion effect on Scottish banks. For English banks the average weekly abnormal returns actually increased from 0.05%, for the six months before the announcement, to 0.07% for the six months after the announcement. Even though, the average abnormal returns increased, the number of weeks with negative abnormal returns also increased, from nine weeks for the six months prior to the announcement to eleven weeks, for the six months after.

On the week of the announcement English banks had an abnormal return of 1.37%. These results indicate that no contagion effects were present in either the Edinburgh or London stock exchanges as a result of the Baring Bank failure. In fact one can strongly argue that there was confidence in the banking system as a result of the Bank of England's attempt at setting up a lifeboat in order to assist Baring Bank.

Conclusion

This study has attempted to look at three of the largest bank failures in the UK during the late nineteenth century. This study also uses capital market data in order to analyze the cause and the contagion effect of each of these bank failures on British, English and Scottish banking. The results from this study show that in the case of the failure of Overend Gurney and Company, investors were sufficiently knowledgeable to differentiate between banks in different trading areas, but not within the same trading area. The results show there to be contagion effects for banks listed on the London stock exchange, (i.e. English banks), but not for those listed on the Edinburgh stock exchange, (i.e. Scottish banks). In the case of the City of Glasgow Bank failure, this study has shown that contagion effects occurred for both the English and Scottish banks although they were considerably stronger and lasted much longer for the latter. Finally, in the case of the Baring bank failure no contagion effects seem to have occurred for either the English or Scottish banks.

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