

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

“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

Eugene N. White

Rutgers University and NBER

Fed System Conference on Economic and Financial History

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Long-Running Policy Debate: the Role of the Lender of Last Resort

Three Issues

1. Response to a panic—Reactive or Pre-emptive response?
2. Resolution of failed banks/SIFIs
3. Mitigation of Moral Hazard---Penalties for responsible parties

How Should the Fed Respond to a Panic?

- Pre-1913, no central bank, only mutual assistance from clearing house to members to provide limited extra liquidity
- Federal Reserve Act of 1913: Following Bagehot
 - Assumption that solving seasonal liquidity problems will prevent panics
 - “Bagehot’s Golden Rule” Benjamin Strong
- Banking Act of 1935: Discretionary Lending
 - Inaction of Fed during Great Depression
 - Section 13(3) provides Fed power to lend toin “unusual and exigent circumstances”
- Dodd-Frank Act of 2010: Retreat towards Bagehot

The New York Times | <http://nyti.ms/1lqKlB5>

DealB%k WITH FOUNDER ANDREW ROSS SCHWAB

New Fed Rule Limits Emergency Lending Power

By **PETER EAVIS** NOV. 30, 2015

In the lead-up to the financial crisis of 2008, the Federal Reserve had the ability to make huge emergency loans to almost any entity it chose, a power it used to help save Wall Street firms from possible collapse.

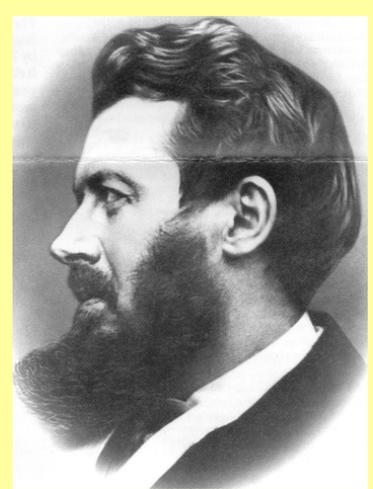
Now, seven years later, the Fed, under the direction of Congress, has adopted a new rule that would place restrictions on its extraordinary financial powers. The restrictions, which stem from the Dodd-Frank Act of 2010, aim to ensure that the Fed's emergency loans are not used to shore up insolvent firms.

New York Times, November 30, 2015



What Should a LOLR do in a Crisis?

“Bagehot’s Rule”---Not Discretion



- Walter Bagehot, Lombard Street (1873)
- Lend freely at a high rate on good collateral.
- Permits all financial institutions that are solvent but illiquid to obtain liquidity
- Limits moral hazard by ensuring borrowing is short-term, an automatic exit strategy, attracts gold (funds) from abroad, adding to liquidity
- Modern Version: Central bank manages aggregate liquidity via open market operations, market then allocates liquidity (Goodfriend and King 1988).

Modern Theoretical Case for LOLR Discretionary Intervention

- Contrary to Bagehot's Rule, there are significant information asymmetries in the interbank market---market won't reallocate liquidity efficiently because bank assets are opaque. Interbank market seizes up.
- Systemic risks from interbank market, networks of financial contracts for the payments system, and the market for derivatives (Freixas and Parigi, 2014).
- Banks, unable to access the interbank market dump assets on the market→fire sale, assets sold below fundamental prices→cascade of bank failures, a panic (Shleifer and Vishny, 2010). Problem is acute if (1) SIFIs are present or (2) “many” smaller banks hold similar portfolios.
- Solution: Pre-emptive intervention or creation of novel discounting facilities by the LOLR

Consider the Two Types of LOLR policies

1. **The Rule is a Reactive Policy**: Respond to but don't prevent panics. Rationale: Hard to distinguish good and bad banks—can only judge collateral. No risk for the central bank and no risk of moral hazard---insolvent banks fail. Don't prevent panic; so cost is a deeper recession, as financial crisis amplifies recessions.
 2. **Discretionary Intervention is a Pre-emptive Policy**: Rescue banks (SIFIs) before they fail and provide for an orderly liquidation/resolution process. Recessions more likely to be brief and shallow as there is no amplification, but cost is it may increase moral hazard (next crisis bigger) unless mitigated.
- **Choice? Which has bigger costs? Trade-off?**
 - **Current Historical Analysis of pre-1914 Central Banking** used as evidence to support Bagehot's Rule, but new interpretation casts doubt---2. superior if control moral hazard

Bottom Line Preview: “Censored” Success

- Baring Brothers (1890): 2nd largest investment bank is insolvent, hit by a run, Bank of England—uses swaps with BdF & Russia to gain liquidity to avoid dual crisis, then lends against all assets (Bagehot style lending is secondary) → Barings is separated into good bank & a bad bank, which is liquidated (orderly) over 5 years; moral hazard is mitigated by partners forced to cover losses. Builds on success of the 1889 Banque de France (Hautcoeur, Riva and White, 2014).
- Hence Rothschild letter

Established View:

No Panics Thanks to Bagehot and 1890 a minor or pseudo-crisis

- **Vincent Bignon, Marc Flandreau, and Stefano Ugolini (2012)** detail how Bank of England and Banque de France followed Bagehot's Rule.
- **Michael Bordo (1990)**: Bank of England followed Bagehot's rule and prevented incipient crises in 1878, 1890 and 1914 from developing into full-blown panics. Concludes that between 1870 and 1970, European countries' central banks generally observed Bagehot's prescription.
- **Thomas Humphrey (1989)**: "the Thornton-Bagehot version of the LLR concept provides a useful benchmark or standard for central bank policy."
- Absence of panics to central banks' adherence to a Bagehot rule: 1890 was a minor or "pseudo"-crisis. **Anna J. Schwartz (1986)**; **Reinhart and Rogoff (2009)**.
- **John Turner (2014)** in the UK "there have been only two major banking-system crises [1825-6; 2007-8] in the past two centuries....In the interim....at no time was there a major crisis or a threat to the overall stability of the banking system."

Historiography: A Minor Crisis?

- But....**Leslie Presnell** (1986, p.200)
- “The outstanding and ultimately most significant departure from precedent and from crisis routine was the collective City guarantee to forestall the domestic panic that seemed otherwise to be the inevitable consequence of public knowledge of Barings’s situation.”
- “The collapse of the shares Barings had underwritten or would have had to unload would undoubtedly have spread to other securities. Goschen was far from exaggeration when he later declared that the catastrophe would have made the 1866 crisis look like “child’s play.”

Historiography: A Minor Crisis?

- Who is right? Two possibilities:
- (1) Schwartz, Bachelor and Turner and others are correct because there were some idiosyncratic shocks that could not have threatened liquidity and the interbank market would have readily reallocated funds to needy solvent banks
- (2) Presnell is correct and there was a potential systemic shock----failure of the interbank market and potential fire sale. If this is correct, then pre-emptive policy action that averted a major crisis is important. Turner, Schwartz and others have censored successful policy interventions from studies of crises.

Traditional story: Bagehotian

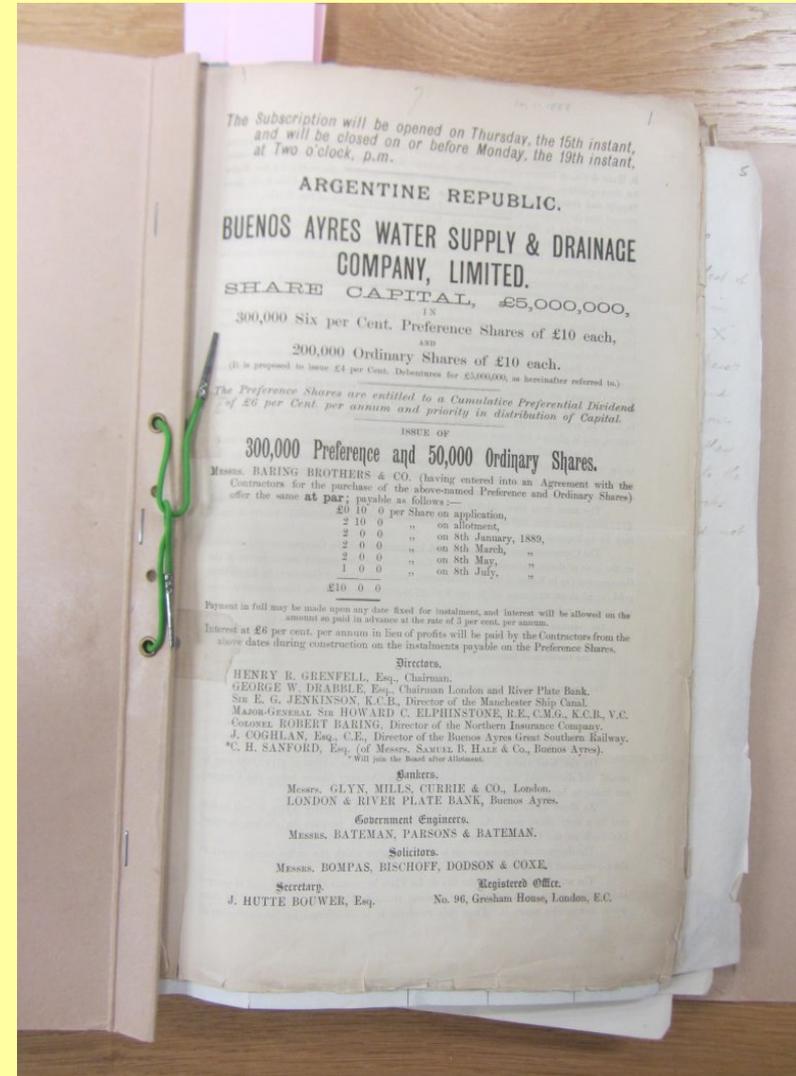
- **1866 Crisis: Overend-Gurney**
 - The bank fails, no bailout. Bagehot-Rule lending with a Chancellor of the Exchequer's letter to suspend gold reserve rule for the Bank of England. Deep recession
- **1890 Crisis: Baring Brothers & Co.**
 - Sovereign debt crisis in Argentina. Bagehot-Rule lending. Barings is illiquid....so Bank of England provides a loan to Barings collateralized by all of its assets, organizes a syndicate of largest banks to backstop any losses....panic avoided, no recession.....Crisis is pronounced "minor"
- **No Panics after 1890.....Bagehot-Rule Works.**
- **But.....1890?.....this is a violation of Bagehot! Something is Missing.**
- **Time to Visit the Archives!!!**

Archeological Road Map

- Historiography---Censored Success?
- Traditional story line
- Is Barings illiquid or insolvent?
- Would the failure of Barings have caused a panic?
- Why a guarantee syndicate? Rational design?
- Moral hazard?
- Effects on the banking system. Successful in the long-run?

Origins of the Barings Crisis of 1890

- Barings is second to Rothschilds in merchant/investment banking, unlimited liability partnership
- Huge boom in Argentina 1880s, capital import of £140 million 1885-1890.
- Barings originated and underwrote large number of Argentine securities.
- Last big IPO: Buenos Ayres Water Works and Drainage Company
- Inflation rising, bad harvest 1889, political unrest-----coup summer 1890→sovereign debt crisis



Stop the SIFI from precipitating a panic:

- **Friday November 7, 1890**
 - Bank of England raised discount rate from 6 to 7%.
- **Saturday November 8, 1890**
 - Tipped off by BoE director Everard Hambro, Governor Lord Lidderdale met with Lord Revelstoke (E.C. Baring), Francis Baring. Four item balance sheet. Requests Monday meeting with Chancellor of the Exchequer Goschen.
- **Monday, November 10, 1890**
 - Goschen: if it is Barings “1866 would be a trifle to it.” No Treasury aid for “an insolvent house”
 - Gold reserves of £10.8 million “entirely inadequate” Goschen offers a Chancellor’s letter. No. Fear of announcement will incite a panic. Lidderdale asks for Rothschild to negotiate a Banque de France gold loan (swap) and to form a committee to negotiate haircut with the Argentine Government

Stop the SIFI from precipitating a panic

- **Tuesday November 11, 1890**
 - Goschen refuses again any government aid
- **Wednesday November 12, 1890**
 - Discounts rising but no increase in discount rate.
 - Swaps: BoE borrows £3 million in gold from the BdF, with Treasury bills; exchange of £1.5M in gold million from Russia for Exchequer bonds
 - Lidderdale explained to Gov. Magnin that although the Bank could induce gold to flow to England by raising the bank rate, such a measure “would have been too severe,” alarming the City and “preferred not to adopt the course usually taken”
- **Thursday, November 13, 1890**
 - After visiting Barings the day before, two BoE Directors verify Barings balance sheet Declare it solvent but need £8 to £9 million loan to meet maturing acceptances

Stop the SIFI from precipitating a panic

- **Friday, November 14, 1890:** Lidderdale threatens to halt discounting; Goschen agrees to temporary aid while Bank forms lifeboat/syndicate
- **Saturday, November 15, 1890**
 - Barings is split into BB & Co. (bad bank) with the Argentine” assets, and a recapitalized BB & Co. Ltd. (good bank) to carry on merchant banking.
 - Bank of England provides £7.5 million in advances to BB & Co. to discharge all liabilities as of November 15, 1890.
 - Syndicate formed of leading banks to cover any loss that would occur from a final liquidation of BB & Co. with all contributing ratably. Syndicate to run to 1894
- Clapham (1945) “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.” Except for the Economist: Moral Hazard

Puzzles with Traditional Story

Minor Crisis or Preemption of Panic?

- Why the need to rescue a solvent bank?
- Why did the Barings give in to the BoE and allow their firm to be liquidated?
- Was there (Would there have been) a panic? Would the Bank of England have to intervene? (Aggregate liquidity, Operation of the Interbank market)
- Did the Bank of England/Treasury use the French intervention example of the previous year?
- Rational Design of guarantee syndicate? Why did banks join the syndicate?
- Moral Hazard?
- Consequences for bank behavior?

Was Baring Brother & Co Solvent or Insolvent?

- Absence of any public information about the condition of BB. BB is biggest issuer of Argentine securities
- Argentine bond prices falling: Sept. 25 → Oct. 31, Buenos Aires Great Southern Limited falls 8% and Central Argentine Limited falls 16%
- In the Bank of England's discount books, rising number of rejected discounts Sept → Nov 1890, almost all are So American related.
- IPOs are financed by a mix of capital and bankers acceptances. Leverage? BB has borrowed around the market, lenders not fully aware of exposure (shades of LTCM)--- problem of finding a record of who lent

Discounts
pounds thousands

1890	Accept	Reject
Jan	157	41
Feb	484	32
Mar	254	3
Apr	221	0.4
May	221	3
Jun	1473	32
Jul	1346	171
Aug	482	19
Sep	2423	132
Oct	1415	402
Nov	4492	366
Dec	719	76

Was Baring Brother & Co Solvent or Insolvent?

- Four item balance sheet delivered on Friday---BoE sends two directors to visit Barings
- On the visit to BB, Greene and Currie produce a more complete balance sheet that is valued according to the Course of the Exchange for October 31, 1890.
- On Friday November 14, Currie met Greene at the bank at 2 pm who was “uneasy in his mind about the value of the securities” and whether they would be sufficient to meet their liabilities, of which bills payable alone amounted to £15,750,000. After 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.” (History of Glyn’s bank)
- Surprisingly high level of acceptances. The balance sheet they produce:

	10/31/1890		10/31/1890	
Acceptances Running	15,755,000		1,000,000	Cash with Brokers
Martin & Co	300,000		7,350,000	Bills R. ,Cash with Bankers
Kidder Peabody	218,000		4,815,000	Remittances, List A
Russian Govt	2,440,000		2,275,000	Debtors List B
Winans	750,000		252,000	Due from BB&Co.Liverpool
SundryDep'tors	1,500,000		4,155,382	BB & Co. Secs
			4,157,946	Secs against Arg. Accounts
			1,000,000	Land Houses and Contents
Total Liabilities	20,963,000		25,005,328	Total Assets
"Surplus"	4,042,328			

Was Baring Brother & Co Solvent or Insolvent?

- Why the need to rescue a solvent bank?
 - It wasn't solvent. Greene used stock exchange list—but most of BB's securities not listed..so...
 - Appears solvent because use face value of the securities
 - Appears solvent in subsequent records because of unlimited liability for partners---forced to put up homes and contents plus additional securities added to the bank's balance sheet giving ex post appearance of solvency. Losses only recorded when securities are actually sold.
- Why did the Barings give in to the BoE and allow their firm to be liquidated?
 - Alternative is quick liquidation of firm, potential bankruptcy. Deliver powers of attorney (huge stack) to BoE. Worse off if there is a fire sale—recognized by Bank and all others. All parties worried about effects of a fire sale.

Different Sets of Books

	Book 1	Book 2
	12/31/1891	12/31/1891
Total Assets	10,490,574	6,914,918
Argentine Securities	7,950,766	4,154,950
Total Liabilities	7,143,751	7,143,751
Bank of England	7,028,600	7,028,600
Surplus	3,346,823	-228,833

What was the Resolution (Liquidation) Process?

- Powers-of-Attorney delivered by BB partners to Bank of England.
- After recapitalized “good” bank Baring Brothers & Co. Ltd set up to continue merchant banking business, BoE manages the “bad bank” still called Baring Brothers & Co.
- Ledgers reveal that as assets slowly sold off, BoE loan is slowly paid---when the assets are sold for a long the BB partners must contribute personal, stocks, bonds, and property to the balance sheet---so that it maintains the appearance (most of the time) of a solvent entity.

Statement showing the amount of the Liabilities and the Assets of Messrs Baring Brothers & Co. Ltd at the end of each month from 31st March 1891 and at the end of each month 1891

	1890	1891	April	May	June	July	Aug	Sept
Liabilities								
Acceptances remaining	15,725,000	1,000,000	627,193	578,824	287,124	127,754		62,491
Due Messrs B & Co	500,000							
- Under Authority of Special Co	515,000							
- Provision Government	2,200,000	2,133,350						
- Loans	750,000	20,000	30,000	27,700	24,000	23,000		
- Funding Operations	1,500,000							1,570
- Bank of England		7,220,300	2,888,000	5,088,000	7,556,600	7,378,600	7,210,000	7,042,000
- Baring Brothers & Co. Ltd. (with London & Lancashire 1891)		556,125	703,300	287,824	252,097	203,183	150,000	118,220
- Government of Portugal - Balance				35,000	240,000	39,000	15,000	
- Provision for Arrangement with Credit of 1891								
- Bills to be drawn for Baring by the Bank of England								
- Securities of S. S. Rodriguez Amount in Advance								
Total	20,475,000	9,522,000	8,729,993	8,238,974	8,221,824	7,778,534	7,382,754	7,160,711
Assets								
Cash with Bankers	1,000,000	25,000	95,000	206,600	215,000	20,000	62,000	62,000
Bills Receivable and Cash with Bankers	7,250,000	5,720,000	2,413,220	2,067,250	2,655,580	1,812,700	1,500,000	1,500,000
Remittances to come forward & Bills for List B	2,815,000	1,041,215	606,900	288,088	379,108	378,002	209,988	209,988
Due from Baring Brothers & Co. Liverpool	252,000	60,720	28,700	10,924	11,400	20,000	8,400	8,400
Securities against Argentine Accounts and Bonds and Stocks	4,155,382	2,028,000	2,004,840	1,773,565	2,537,366	2,535,270	2,170,200	1,840,000
Argentine & Co. Securities to be deposited	1,000,000	982,150	982,150	982,350	982,350	982,350	982,350	982,350
- Securities of S. S. Rodriguez Amount in Advance		127,000	170,000	182,000	203,000	222,000	222,000	222,000
Total	25,002,382	13,002,385	13,809,810	11,822,287	11,822,287	11,822,287	11,822,287	11,822,287



BULL and BEAR LODGE and GATES



The offices of Baring Brothers Co and the partners' country homes, town houses and their contents were delivered. Lord Revelstoke gave up Membland and his Charles Street House and Mr. Mildmay Flete, Shoreham, Coombe Farm, and 46 Berkeley Square. The initial estimated value of the properties was £979,700 and the contents £262,000. The contents had brought in £207,350 by January 31, 1894, of which the trustees were paid £25,000. The value of the property was reduced by "charges" of £203,000, leaving a grand total of £776,700 available to the creditors, but apparently the sale of the land was proceeding slowly. Baring Bros. & Co. Land and Houses. Bank of England Archive, 9A240/4

Was there (Would there have been) a panic?

- Schwartz: Pseudo-Crisis, no threat to payments system
- Turner: Not a real crisis, no data on bank runs but on bank share prices: 1890 return on crisis period 1.97%, excess bank returns for year 4.58%; 2007: -80% and -62%
- Many banks were private banks---BB and even commercial banks
- But he is looking at full-blown crises not ones handled pre-emptively.
- Sharp rise in discounts at the bank during November, before Hambro meeting on Friday November 7th, discount rate raised from 5 to 6 percent.....standing ready to supply liquidity a la Bagehot.
- Generally agreed that only a small number of insiders fully aware of BB condition before the announcement of the Bank's loan and the guarantee syndicate.

Some Qualitative Evidence

Was there (Would there have been) a panic?

- A history of Martin's Bank:
- Thursday, November 13th, rumors began to circulate about Barings and other banks. J. B. Martin "Nothing certain was however known, and the object of a mysterious conference, said to have been held in Rothschild's office was a major of conjecture"
- Morning of Saturday, November 15, the papers announced that Barings Brothers had placed themselves in the hands of the Bank of England. J.B. Martin: "The general surprise was of course very great." Martin's deposits fall 18% in November, mostly 15th onwards.
- A panic almost broke out on November 19th when the joint stock banks let it be known that they would call in their loans on the Stock Exchange. Governor told the bank managers that if they did not provide normal accommodation for their customers, the Bank would not accommodate them. J.B. Martin "a general improvement all round took place immediately. This seemed to be the turning point, and the crisis was at an end." Deposit outflows ceased,

More Qualitative Evidence

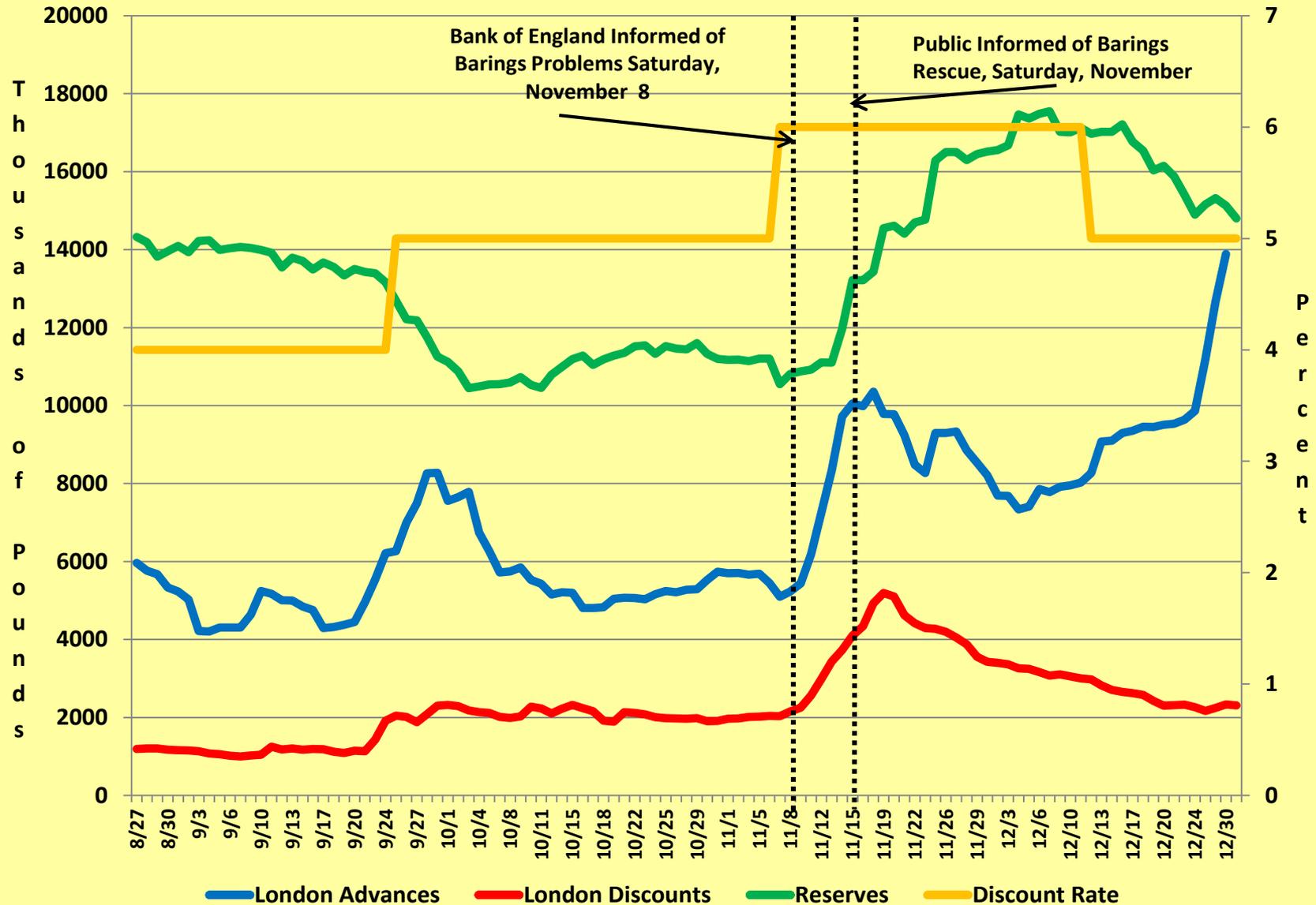
Signs of an initial panic

- Sayers (1957, p. 155, 213) does not believe that there was an incipient panic. He is categorical: “the episode lacked all element of panic in the streets. But there were black moments enough in the inner sanctums of the City.”
- It is starting in the private banking sector not the limited liability sector (Turner looks at stock prices) Martin’s bank
- Lloyds Bank (Sayers own account!):the City of London office manager, Edward Hoare had noticed that “an excessive amount of Barings’ bills were being presented.” In response he “called” Lloyd 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.”

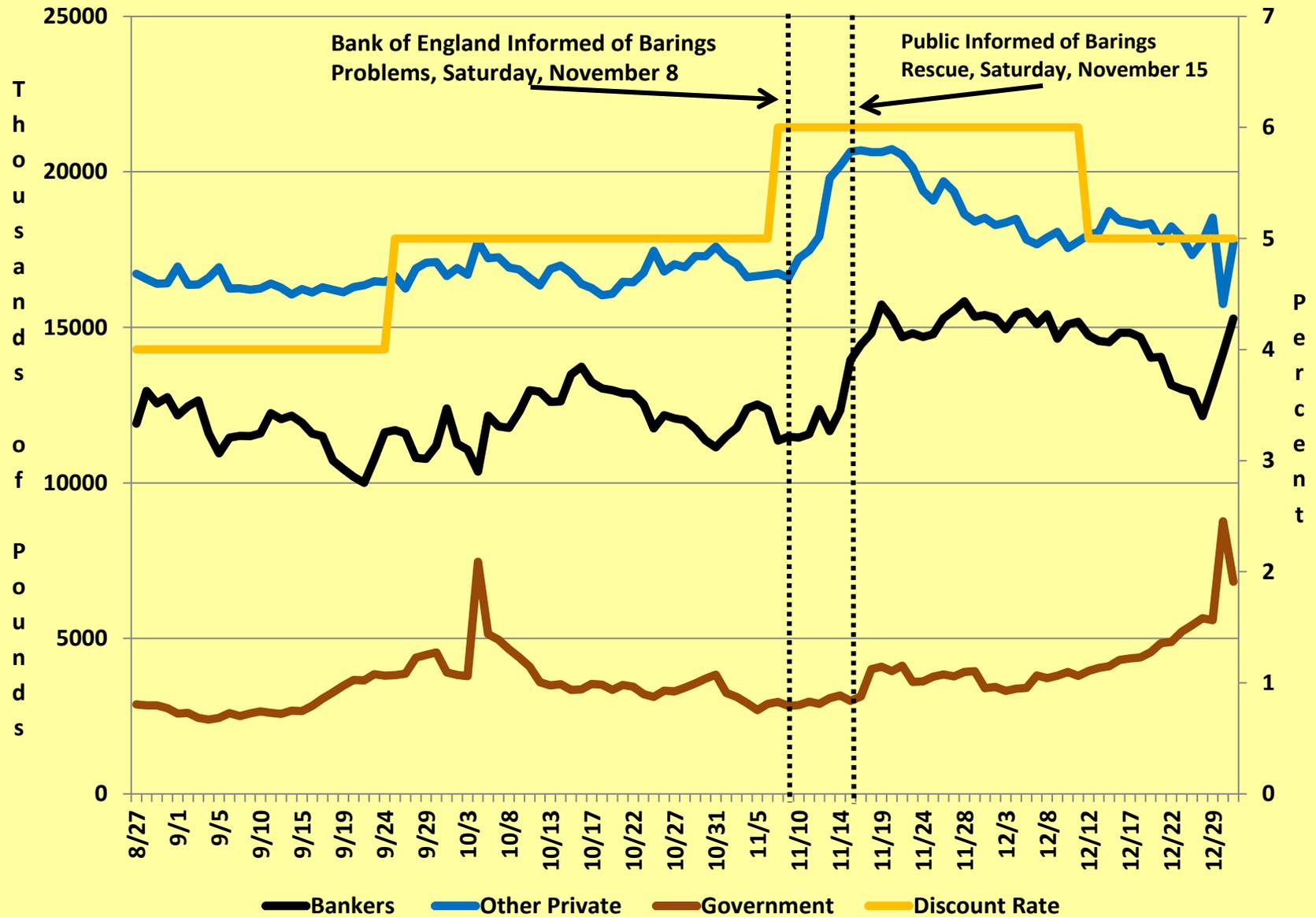
Was the Bank of England Worried about a Panic.....Yes

- Obtains £3 in gold from swap with Banque de France and £1.5 from sale of Treasury bills to Russia to add to gold reserves of £10.8 million.
- Only wants to announce rescue of Barings when it is a done deal and reserves are in place.
- It can see rising discounts and poor quality bills coming in.

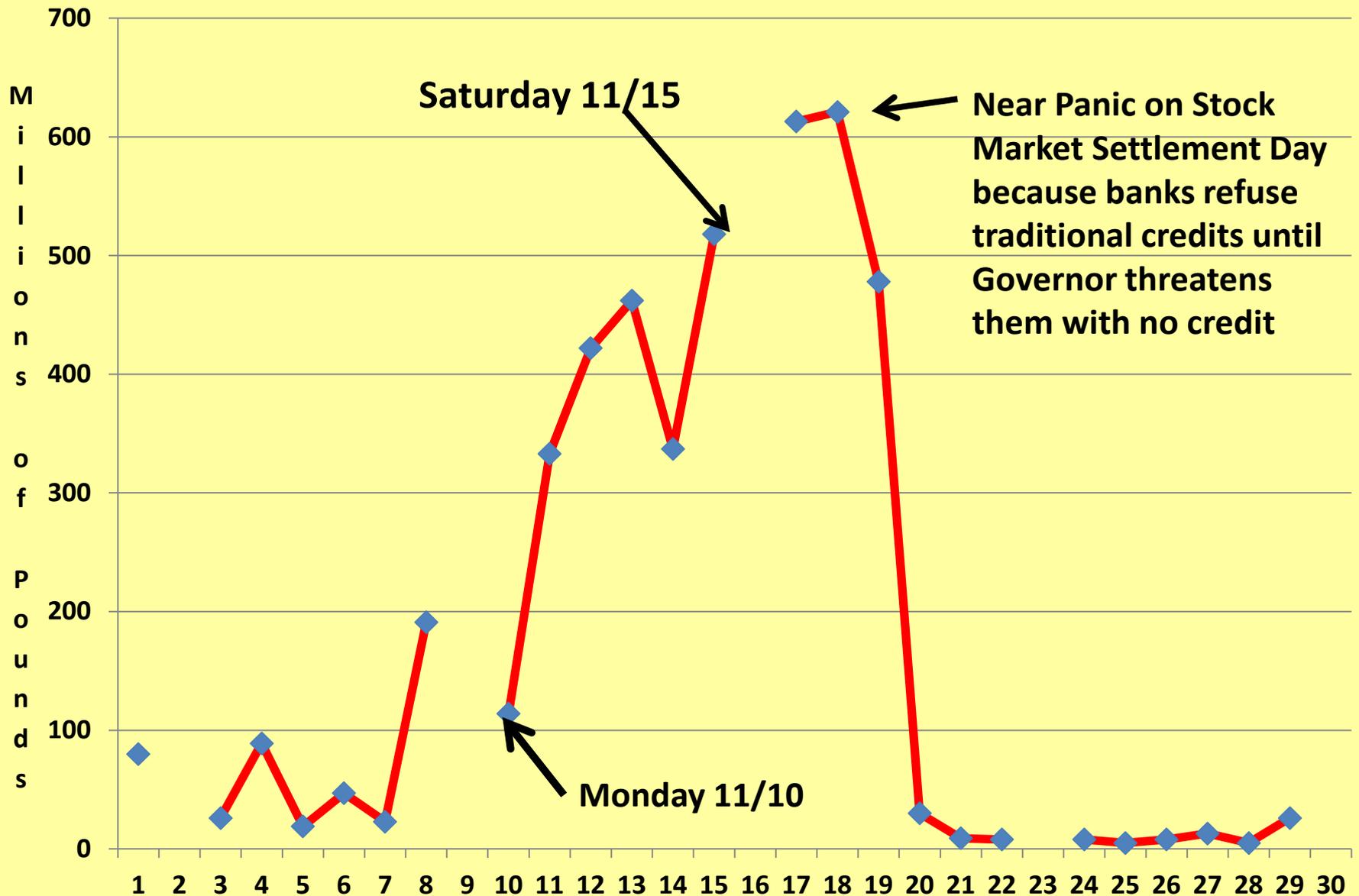
Panic Seen from the Daily Balance Sheets of the Bank of England



Panic Seen from the Daily Balance Sheets of the Bank of England



Daily New Bank of England Discounts November 1890



But, if partners don't have enough: the "Bad Bank" has a Guarantee Syndicate

- Why? The Treasury refuses to provide any funds----except to provide initial confidence.
- Bank cannot absorb large losses because of modest capital.
- Goschen emphatic that it must come from "the City."
- Guarantee fund is over-subscribed at £17.1 million. Members to contribute ratably for any losses.
- Syndicate membership related to un-vigilant lending.
- Glyn's Bank had lent £750,000 to Barings---maximum direct loss if BB collapsed but gets a deal: £750,000 repaid in exchange for a pledge of £500,000 for the syndicate plus no panic.
- "Toxic Assets" Slumped prices for emerging markets debt---slow liquidation---unfinished----syndicate renewed. In 1894 a "salvage company" formed to take over and liquidate remaining assets with a £1.5 million payment to BoE.

Guarantee Syndicate + other firms = £17.1 million

Contributing Bank	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

BUT WHERE DID THIS IDEA FOR RESCUING A SIFI COME FROM???????

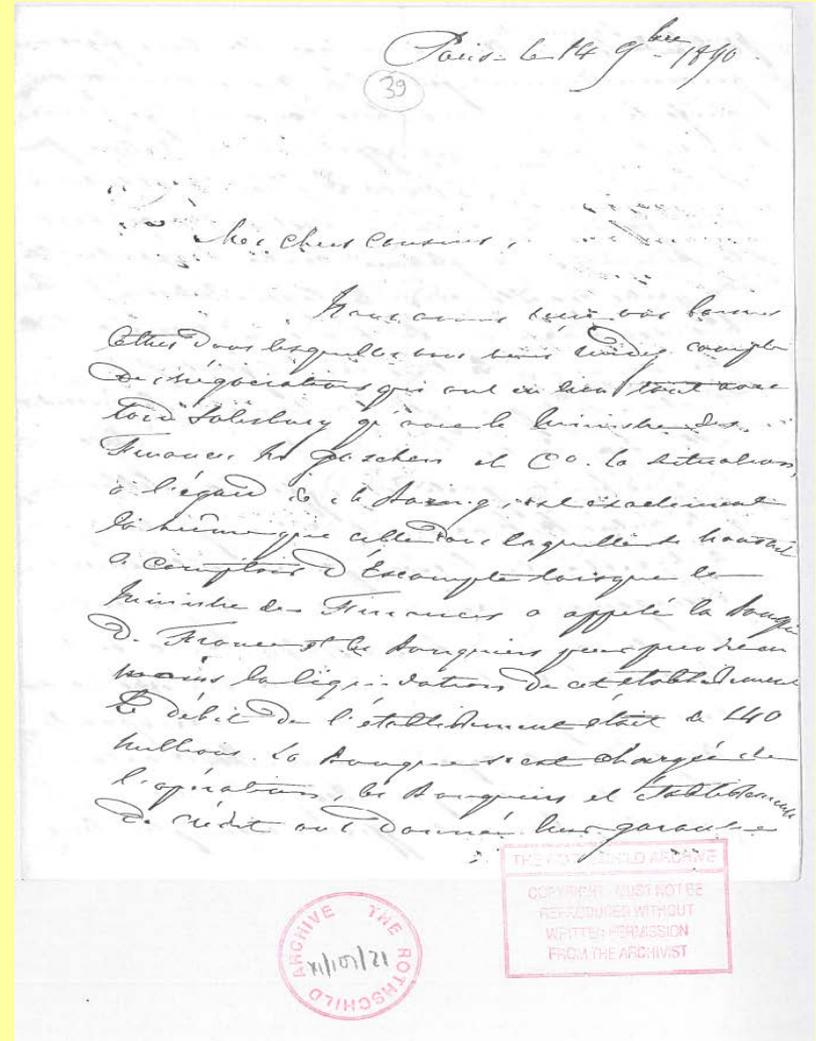
A French Lesson for the Old Lady

(Hautcoeur, Riva and White, 2014)

- Nothing in any archival record at the Bank of England!
- Only eight months before, the Comptoir d'Escompte, a limited liability universal bank, was in imminent danger of failure
- CdE supported a corner of the copper market with loans & off-balance sheet guarantees of forward contracts but prices fall; CEO suicide; run on the bank.
- In March 1889, the Banque de France: 140 million franc loans to CdE against all of its assets (hors statuaire) to meet withdrawals. Plus some Bagehot-style lending. Bad bank/Good bank.
- Loan guaranteed by all of the bank's assets---both good and bad; syndicate of banks that guaranteed to absorb the first 40 million francs of losses-----based on ability to pay and contribution to crisis. Huge legal penalties for BoD and officers of the CdE.

A French Lesson for the Old Lady

- British press, including the Economist had chronicled the events Paris in considerable detail
- What Lidderdale initially thought of this advice is not known; but the House of Rothschild, asked to arrange gold loans and negotiating with Argentina
- Was there a link? A “smoking gun”?
- The letters between the Rothschild cousins—
London Archives



A French Lesson for the Old Lady

- Rothschilds Archives: Letters of Alphonse to Natty
- Nov. 11, 1890: Points to example of Comptoir
- Nov 14, 1890: Although the English House was not responsible for the crisis, need to form a guarantee syndicate to prevent a full scale panic. Points out that the Paris House provided 6 millions FF (£240,000), now London must provide £250,000.
 - “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. à cause de la rareté des chèques, les maisons françaises ne voulant plus tirer sur leurs correspondants »



“SAME OLD GAME!”

OLD LADY OF THREADNEEDLE STREET: “YOU’VE GOT YOURSELVES INTO A NICE MESS WITH YOUR PREVIOUS
‘SPECULATION!’ WELL—I’LL HELP YOU OUT OF IT,—FOR THIS ONCE!”

**MORAL
HAZARD?
Punch
Misleading?
“You’ve Got
Yourselves
into a nice
mess with
your precious
speculation.
Well, I’ll help
you out of
it...for this
once.**

Moral hazard?

- The Economist (November 22, 1890):
 - “rather too far reaching”
 - A big finance house had only “to over-commit itself to the extent of a sufficient number of millions” for a rescue to be mobilized “to tide them over their difficulties”
 - Bank boards would be induced to take on excessive risk at the expense of their shareholders.
- Barings partners while not bankrupt---lost huge fortunes---securities, townhouses, country estates--and social opprobrium.
- Barings private fortunes, “including much on which creditors had no legal claims, were thrown into the gulf.” (Clapham)

Moral hazard?

- 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.”
- Pressures by Goschen for regular publication of audited balance sheets. Howard Lloyd fought against more disclosure especially the practice of issuing public monthly statements. He believed that this induced banks to value their investments on a monthly basis and manipulate their end-of-month cash and was concerned that this behaviour would lower profits.
- May speed up amalgamations and switch to limited liability by private banks. Martins switches to Ltd.

Consequences of Discretionary Intervention with Actions to Mitigate Moral Hazard?

- Increased conservatism of British banks 1870-1914?
- Baker and Collins (1999) find structural breaks in composition of bank assets in 1879 and 1891. Find significant breaks in ratios of private sector credit/assets and investments+cash+near cash/assets for 1891.
- Result more liquid balance sheets (can't break down loan classes to assess risk mixtures)
- Imply that scramble for liquidity made bankers wary.
- Alternative hypothesis---reaction to penalties assessed on Barings (and earlier from unlimited liability on partners of City of Glasgow Bank in 1878) and all classes of banks being induced to join guarantee syndicate.

Lessons for pre-emptive actions by a LOLR?

- 19th century crises erupt because one or a few institutions take excessive risk, no system-wide incentives (TBTF or DI) to take risk.
- Pre-emptive lifeboat for a SIFI supported by Bagehot-LOLR to calm the market, SIFI liquidated in an orderly fashion
- No government funds promised—guarantee syndicate
- Actions consistent with attempt to mitigate moral hazard,
- 1907 Rothschild letter----if the Americans had only managed Knickerbocker Trust the same way we managed Barings, there would not have been a panic.
- Why was Benjamin Strong so keen on Bagehot's Golden Rule?
- Friedman and Schwartz (1963): Believe that the panic of 1930 could have been averted if the Bank of United States had been rescued with a lifeboat by the Clearing House.
- Dodd-Frank (2010) mistaken? A reason for discretionary intervention?