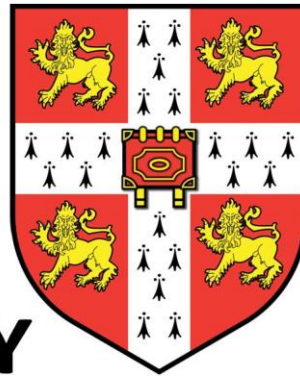


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*Working Paper No. 21 – 2014:*

**FINANCIAL CONTAGION AND  
MARKET INTERVENTION IN THE  
1772-3 CREDIT CRISIS**

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*Abstract:* The 1772-3 credit crisis impressed its contemporaries for its suddenness, geographical range, and for arising during a time of relative peace and robust economic growth. It also arguably displayed an early instance of a Lender of Last Resort (LLR) in action, some thirty years before the classical articulation of the concept. This paper investigates whether financial contagion was at work in 1772-3, and describes its possible routes of transmission. It furthermore identifies the agents of market intervention, and discusses whether theirs was a conscious policy to limit systemic risk, or ad hoc improvisation in response to other considerations.

**KEY WORDS:** Monetary economics, Financial markets and institutions, Financial crises.

**JEL CLASSIFICATION:** B12, E58, G01, N13, N23.

On 9 June 1772, Alexander Fordyce, the Scottish leading partner of the London bank of Neale, James, Fordyce, and Down, absconded to the Continent after being caught wrong-footed in his speculations in East India stock.<sup>1</sup> His flight and eventual surrender the following September was the first act of a multifaceted financial crisis which lasted for about a year.<sup>2</sup> The initial distress in London peaked on June 22 with a series of bank runs, when ‘a universal bankruptcy was expected, and the stoppage of every banker looked for’.<sup>3</sup> The simultaneous impact in Scotland was even more spectacular, particularly when the ambitious and experimental Ayr Bank (Douglas, Heron & Co.) was forced to stop payment on June 24 with over £1.2 million in liabilities.<sup>4</sup> A second phase of the crisis centred on Amsterdam in the winter of 1772-3, with the collapse of the bank of Clifford & Sons among others.<sup>5</sup> Ripples were felt across Europe and in the North American colonies,<sup>6</sup> and the crisis closed its circle in London when Sir George Colebrooke, Chairman of the East India Company and a notorious speculator in his own accord, became its last prominent victim in March 1773.<sup>7</sup> On the breakout of the crisis, the Bank of England intervened by increasing bills discounts, advancing credits to selected bankers, and facilitating private sector rescues like that of the London bank of Glyn & Hallifax. The Bank also advanced a large Government loan to the East India Company as part of the Regulating Act of 1773, which helped tidy over the latter’s insecure finances at the price of some loss of independence.<sup>8</sup>

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<sup>1</sup> *London Evening Post*, 9-11 June 1772

<sup>2</sup> *Bingley’s London Journal*, 5-12 September 1772

<sup>3</sup> *Scots Magazine (SM)*, XXXIV (1772), pp. 304-18

<sup>4</sup> Checkland, *Scottish banking*, 124-35, Hamilton, ‘Ayr Bank’, and *Economic History*, 317-25, Munn, *Provincial banking companies*, 36-9, Saville, *Bank of Scotland*, 156-66

<sup>5</sup> Wilson, *Anglo-Dutch Finance*, 169-88, Koudijs and Voth, ‘Leverage and beliefs’

<sup>6</sup> Price, *Capital and credit*, 124-39, Sheridan, ‘1772 and the American colonies’

<sup>7</sup> Sutherland, ‘Sir George Colebrooke’s corner’, Colebrooke, *Retrospection*, I, 205-13

<sup>8</sup> Sutherland, *East India Company*, 222-9

Although neither Horace Walpole's fears that 'one rascally and extravagant banker [had] brought Britannia, Queen of the Indies, to the precipice of bankruptcy',<sup>9</sup> nor James Boswell's prediction that '1772 [would] ever be remembered as a year of confusion, dismay, and distress' proved accurate in the end,<sup>10</sup> the episode possesses several aspects that merit continued attention. Adam Smith's references to the Ayr Bank in Book II of the *Wealth of Nations* have attracted most of what academic interest persists,<sup>11</sup> but the affair as a whole is notable for being one of the first endogenous financial crises caused by growth itself, rather than war or government policy.<sup>12</sup> Its traditional narrative is of a period of rapid expansion in the real economy turning to "over-trading",<sup>13</sup> excessively ambitious infrastructure projects, conspicuous consumption, monetary fallacy, and speculation filled with 'roguery' and 'stupidity'.<sup>14</sup> Contemporaries and posterity alike have occasionally used the contentious word "bubble" to describe the period leading up to the crash.<sup>15</sup> Scotland features prominently in this narrative. Following the final defeat of Jacobitism, its economy had entered an expansionary phase which peaked just before 1772. The growth of the tobacco trade with America was especially noteworthy,<sup>16</sup> and gave impetus to those industries which supplied the manufactured goods demanded by the colonists.<sup>17</sup> There was increased demand for banking services as tobacco importation was a particularly capital intensive business,<sup>18</sup> and as growth outstripped the meagre credit facilities and narrow monetary base of the country. The

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<sup>9</sup> *Walpole Correspondence*, 1 July 1772, pp. 395-6

<sup>10</sup> *Boswell Reflections*, p. 1

<sup>11</sup> Adam Smith, *Wealth of nations (WoN)*, II.ii.73-7, Checkland, 'Adam Smith and the bankers', Rockoff, 'Parallel Journeys'

<sup>12</sup> Hoppit, 'Financial Crises', Price, *France and the Chesapeake*, 639. The earlier Amsterdam crisis in 1763 has a better claim to being *the first* such crisis: see Schnabel and Shin, 'Liquidity and Contagion, Quinn and Roberds, 'Lessons of 1763'

<sup>13</sup> *WoN*, II.ii.57

<sup>14</sup> Hoppit, *Risk and Failure*, 134

<sup>15</sup> *Middlesex Journal*, 28-30 January 1773, Sheridan, '1772 and the American colonies', 172 Price, *Capital and Credit*, 131, Hoppit, *Risk and Failure*, 99

<sup>16</sup> Hamilton, *Economic History*, 255-6, Price, *France and the Chesapeake*, 608-9

<sup>17</sup> Devine, 'Colonial trades', Hamilton, *Economic History*, 262

<sup>18</sup> Price, *Capital and Credit*, 124

Ayr Bank was established in 1769 with the support of prominent landowners, merchants, and professionals throughout the Lowlands, and the express purpose to provide the capital that the chartered Edinburgh banks would not, and could not, supply themselves.<sup>19</sup> The bank has been strongly (but not always justly) criticised by posterity for incompetent and venal management, and for fanning the flames of the credit mania.<sup>20</sup> Alexander Fordyce in London has been described as a central figure in this credit structure, and his failure the ‘spark that set off the mine’.<sup>21</sup>

The rapidity, geographical extent, and apparent sequential nature of the crisis’ progress can easily give the impression of causal relationships existing between its various episodes, and promote talk of financial contagion. Contemporaries were quick to do just that, using the very word on at least one occasion,<sup>22</sup> and marvelling at the speed with which news of Fordyce’s flight was brought to Edinburgh by ‘a gentleman who came down [from London] in 43 hours’.<sup>23</sup> In the same passage quoted above, Boswell described the shock in Scotland as just that: ‘like a company connected by an electrical wire’, he wrote, ‘the people in every corner of the country have almost instantaneously received the same shock’. Conversely, it was felt that ‘such [were] the connexions of trade that the English could not feel complacent about the distress of Scottish bankers’.<sup>24</sup> The failure of Clifford & Sons caused much anxiety in England, where it was recognised that the earlier failures in London were

in no way as alarming as the late bankruptcy at Amsterdam is now; the C[lifford]s were generally considered as the second house in Europe, and France, we hear, will be particularly involved in their misfortunes. Commerce is of so extensive a nature, that the failure of a great house in another country is very little different to a failure in our own, and the distrust already occasioned by the late unhappy accident in

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<sup>19</sup> *SM XXXIV*, pp. 304-5, National Archives of Scotland (NAS) GD224/178/1/9

<sup>20</sup> Smith, *WoN*, II.ii.73-7, Kindleberger, *Manias*, 44, Wilson, *Anglo-Dutch Finance*, 171

<sup>21</sup> *Forbes Memoirs*, pp. 39-44, *SM XXXIV*, p. 311

<sup>22</sup> *Public Advertiser*, 8 July 1772

<sup>23</sup> *London Evening Post*, 18-20 June 1772

<sup>24</sup> *Bingley’s Journal*, 20-27 June 1772. This also uses the ‘electric shock’ parallel for the crisis.

Holland, will, in the course of a single month, create many capital insolvencies in this metropolis.<sup>25</sup>

This assumption of the international impact of the Dutch failures was not confined to Britain. The Russian consul in Amsterdam connected a big bankruptcy in Genoa in February 1773 to the earlier troubles in Amsterdam, ‘the centre from which... almost all derive their movement’,<sup>26</sup> and a January 15 letter to the Hague correspondent of the *Paris Gazette* reported how news of the Dutch bankruptcies had caused consternation in St Petersburg.<sup>27</sup>

No other contemporary reaction underlined such fears better than the speed and decisiveness with which the financial establishment intervened to interpose the ‘shelter of the Castle of Public Credit’ to protect the financial system from the storm.<sup>28</sup> The actions of the Bank of England in particular have been proposed to constitute an early instance of a Lender of Last Resort (henceforth: LLR) in operation, some thirty years before the classical formulation of the concept by Henry Thornton.<sup>29</sup> This view as it applies to Scotland has been strongly (if controversially) challenged from the side of the “Free Banking” theory, which has argued that the country’s banking system before 1844 operated wholly free from the interference of a privileged central bank, including its role as a LLR in a crisis.<sup>30</sup>

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<sup>25</sup> *General Evening Post*, 2-5 January 1773. Similar sentiments were expressed in the *St James’s Chronicle*, 7-9 January 1773. The *Morning Chronicle* 28-30 January 1773, dissented in that it considered ‘of all the Countries in Europe, France [to be] the least affected by these alarming Failures’

<sup>26</sup> Braudel, *Civilization and Capitalism*, 268-9

<sup>27</sup> *Gazette de France* (Paris. 1631), 5 March 1773 (available online <http://gallica.bnf.fr/ark:/12148/bpt6k62360397/f5.image>)

<sup>28</sup> “Ship News Extraordinary”, *Morning Chronicle*, 29 June 1772

<sup>29</sup> Kindleberger, *Manias*, 162. Thornton, *Paper credit of Great Britain*. For a review of the very extensive literature on the classical LLR see in general Freixas et al., ‘LLR: a review of the literature’, and more specifically Goodhart, *Evolution of central banking* and ‘Myths about the LLR’, Humphrey and Keleher, ‘LLR: A historical perspective’, Humphrey, ‘LLR: the concept in history’, Kaufman, ‘LLR: a contemporary perspective’, Bordo, ‘LLR: alternative views’ and ‘LLR: some historical insights’.

<sup>30</sup> White, *Free Banking in Britain*, with criticisms by Dow and Smithin, ‘Free banking in Scotland’, Rothbard, ‘Myth of free banking in Scotland’, Sechrest, ‘White’s free-banking thesis’ and “A Dissenting View”, Munn, “Comment on Chapter 2”, Cowen and Kroszner, “Scottish Banking before

Quite apart therefore from providing a satisfyingly causal narrative for this crisis, its contagious propagation would support the presence of systemic risk in the financial system of the 1770s, particularly as it occurred in the absence of obvious common external impulses such as European war or a continent-wide poor harvest. Similarly, a *conscious* LLR-like response to alleviate the discredit in the markets, and even to rescue specific “systemically important” participants, would demonstrate that much of what Thornton (and later Walter Bagehot) explicitly advocated as theory was already established practice in 1772.

### FINANCIAL CONTAGION THROUGH DEBT DEFAULTS

As defined for this article, contagion is a *strong systemic event that arises from a narrow idiosyncratic shock*, in which the initial failure of a small number of institutions, or simply the release of adverse news on them, causally leads to the failure of others.<sup>31</sup> The term *strong* implies that these subsequent casualties also fail in consequence, while a narrow, *idiosyncratic*, shock (as opposed to a broad, *systematic*, one) is limited to a small set of initial victims, and any further failures concern players who were originally insulated from it. Therefore such events as the breakout (or end) of war, bad (or bumper) harvests, and new (or repealed) legislation with broad effect such as regulations or tariffs, can be causes of a broad systemic crisis but typically *not* of contagion. Financial contagion should moreover be distinguished from the effects of economic recession or the disruption of international trade, even if they have directly arisen from a financial shock, as these are usually too slow and

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1845”, and responses to the criticisms by White, “Reply to dissenting view” and “Scottish banking and the Legal Restrictions Theory”.

<sup>31</sup> The definition is adapted from De Bandt and Hartmann, ‘Systemic risk’, pp. 251-6. This review article is also a good starting point for approaching the vast literature on financial contagion. For other reviews on the subject see Allen and Carletti ‘What is systemic risk?’, Kaufman ‘Bank contagion’, Moser, ‘Financial contagion’

open to other external impulses over the lifetime of the crisis.<sup>32</sup> Therefore, contagion mechanisms are not only causal and sequential but also comparatively rapid.

Although the sparseness of the surviving record for 1772-3 does not allow for contagion to be rigorously quantified according to the numerous models available in the literature, some of the credit relationships through which it was transmitted can be demonstrated. Its most obvious route is that of dishonoured debts between the initial victims and their creditors, leading to cascading defaults as more debts are dishonoured in turn.<sup>33</sup> If such a mechanical (“domino”) contagion mechanism were active in 1772, one would expect creditors to be interconnected, particularly so with London bankrupts since this was the original centre of the crisis. The size of problem debts outstanding in the system after the crisis would indeed appear to be substantial. The number of English bankruptcy commissions rose appreciably in 1772, reaching their highest level since 1706, and would only be surpassed again in the war year of 1778.<sup>34</sup> The proven debts admitted by the commissions for whom reliable figures survive were likewise substantial, typically running between £150,000-250,000 (Table 1). The Ayr Bank stands at the high end of this range; the story of its debts is long and convoluted,<sup>35</sup> but a good representative figure for the credit exposure of the market to it is the £500,000 of transferrable bonds it sold in 1774 to consolidate its liabilities. Naturally, not all this money was irretrievably lost. Recovery rates varied widely from very low (2.5% for the case of the Anglo-Dutch trading house of John Daniel and Maurice Dreyer) to full repayment (for the Ayr Bank). More significantly, however, the resolution of these debts, whether through bankruptcy dividends, compositions, or windings-up, often took a long time to

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<sup>32</sup> Kindleberger, ‘The experience of 1888-93’, Van Rijckeghem and Weder, ‘Sources of contagion’

<sup>33</sup> Allen and Gale, ‘Financial contagion’, Jorion and Zhang, ‘Credit Contagion from Counterparty Risk’, Marshall, ‘Systemic risk as coordination failure’

<sup>34</sup> Hoppit, *Risk and Failure*, Appendix I, 182-3

<sup>35</sup> Kosmetatos, ‘Winding-up of the Ayr Bank’



conclude. For the short time scales for which contagion is relevant, it is safe to conclude that substantial debts remained unpaid.

The figures become even larger if one considers debts not accepted by bankruptcy commissions, debts contracted by individual partners separately, and “debts of honour”, i.e. stockjobbing losses. For instance, several claims that were rejected by Alexander Fordyce’s commission of bankruptcy are mentioned in petitions to the Lord Chancellor,<sup>36</sup> including one for £50,000 by the great Amsterdam house of Hope & Co.<sup>37</sup> Fordyce’s stock trading losses were said to have exceeded £150,000;<sup>38</sup> one of his partners later estimated the firm’s short positions in East India stock to a notional £800,000,<sup>39</sup> while the press alleged that he had also been short the 3% Consols to a notional £400,000.<sup>40</sup> The press estimated total stock losses throughout Europe at sixty million French livres in early 1773, though with what degree of accuracy remains uncertain.<sup>41</sup>

There were furthermore sizeable transatlantic debts owed by North American tobacco planters to British counterparties. These arose from the chronic deficits that planters typically ran with their suppliers, and from credit balances run up on the Scottish tobacco factor-owned store networks that increasingly dominated colonial trade after 1750.<sup>42</sup> Store credit typically consisted of numerous small sized debts that were costly to collect, and being short dated (up to twelve months) required periodic rolling-over. Total American debts outstanding just

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<sup>36</sup> The National Archives (TNA) B1/61, fos 23-8, B1/62, fos 74-6, B1/65 fo 136, 305

<sup>37</sup> TNA B1/62 102-3, B1/65 fos 262-3

<sup>38</sup> *General Evening Post*, 18-20 August 1772

<sup>39</sup> BM Add 38208, fos 176-7, William James to Charles Jenkinson, 14 September 1775

<sup>40</sup> *Middlesex Journal*, 30 June – 2 July 1772

<sup>41</sup> *Middlesex Journal*, 28-30 January 1773

<sup>42</sup> Soltow, ‘Scottish traders in Virginia’

before the Revolution have been estimated between £2-6 million, and projected as high as £4-5 million for the peak of the boom, assuming a retrenchment of credit after 1772.<sup>43</sup>

Demonstrating that these debts consistently and rapidly led to other bankruptcies is not straightforward. Of the over 500 claims made in the bankruptcy commission proceedings against Alexander Fordyce and his partners,<sup>44</sup> just 22 came from persons identifying themselves as “broker” or “banker”, of whom only 3 certainly stopped payment as well.<sup>45</sup> Some of those names central in the traditional crisis narrative, like Glyn & Hallifax or the Ayr Bank, do not appear either among the commission claimants or in any petitions to the Lord Chancellor. Fordyce’s connections with the Ayr Bank in particular are at best tenuous. He was certainly *not* its London correspondent as he has been sometimes described,<sup>46</sup> and there is no evidence whatsoever that the bank was a counterparty in his trading in Exchange Alley.<sup>47</sup> If Fordyce ‘[broke] half the bankers’, as Walpole exclaimed, he probably did not do so by dishonouring bilateral debts to them.<sup>48</sup>

That said, some interesting connections do remain. The £86,000 claimed by these 22 potentially “systemically important” creditors was a substantial amount, and they included a claim for £4,550 by Sir George Colebrooke, and another for almost £60,000 by John Fordyce – of whom more will be said in the following section. Furthermore, the rejected £50,000 claim by Hope & Co. is a connection between Fordyce and the Netherlands, although the

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<sup>43</sup> Sheridan, ‘1772 and the American colonies’, 166, Devine, ‘Sources of capital’, 117, Gipson, ‘Virginia planter debts’

<sup>44</sup> TNA B3/3675-6

<sup>45</sup> Specifically, Sir George Colebrooke, John Fordyce and Adam Wood. It must be stressed, however, that people active in finance could have been otherwise identified, for instance as merchants or legal professionals

<sup>46</sup> Clapham, *Bank of England*, I, 245, Sheridan, ‘1772 and the American colonies’, 171

<sup>47</sup> Wilson 1941, p. 170, reverses the direction of this supposed relationship and attributes Fordyce’s troubles on his ‘acceptance of dubious bills for the Ayr Bank’, an assertion that has no support in the primary record. Ashton 1959, pp. 136-7, similarly dissents from the traditional narrative in that he sees contagion travelling from Scotland to London and not the other way round, also without further elaboration. Brady 1973, p. 29, claims that Fordyce owed ‘£40,000 apiece to Charles Fergusson and Fordyce, Grant’, but also gives no source.

<sup>48</sup> *Walpole Correspondence*, as footnote 4 above

Hopes survived the crisis unscathed. The information contained in the Dreyers' bankruptcy commission records hints even more strongly at close debt connections between London and the Netherlands. Most of their 128 proven claims originated from apparently Dutch sources,<sup>49</sup> and included almost £54,000 from Clifford & Sons, over £22,000 from such other major (but surviving) bankers as Martin's Bank, Hope & Co., and Coutts & Co., and even £18,000 from the Bank of England.

Among tobacco traders only the London Scottish house of Bogle & Scott and their correspondents Simpson, Baird & Co. went bankrupt during the June crisis, while there were no notable failures among the big warehousemen who supplied the transatlantic trade with goods.<sup>50</sup> The only equivalent in America was the stoppage of an unnamed Carolina tobacco house.<sup>51</sup> A second wave of failures followed the Amsterdam crisis and included several big tobacco houses, but other factors may have also been at work by that point, such as the fall in the price of tobacco after a series of bumper harvests.<sup>52</sup>

#### ASSET-SIDE CONTAGION VIA BILLS OF EXCHANGE EXPOSURES

A major proportion of credit exposures did not arise from simple bilateral debts, but rather from bills of exchange. It's in these instruments that the main vector of "domino" financial contagion should be sought. The bill drawn on London or Amsterdam bankers (and, increasingly, on aggressive Scottish newcomers like the Ayr Bank) was the long-established cornerstone of both inland and international trade, as well as the main instrument used in the money markets.<sup>53</sup> A common transaction was the acceptance loan, under which borrowers paid commissions to their local bankers for them to draw bills accepted by their London (or

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<sup>49</sup> Barclays Group Archives (BGA) 9/87. It is not possible to be any more precise than this: 92 of the claimants do "appear to be" of Dutch or Jewish origin based on their names, but there is no evidence, such as claimant addresses, to corroborate this.

<sup>50</sup> Price, *Capital and Credit*, 135

<sup>51</sup> *Johnson letterbook*, 41e, 22 June 1772, 40

<sup>52</sup> Price, *Capital and Credit*, 130, Sheridan, '1772 and the American colonies', 177

<sup>53</sup> Ashton, *Economic history*, 186, Neal, *Rise of Financial Capitalism*, 5-9

Amsterdam) correspondents, in effect renting the established credit of international banks. The bills were subsequently sold on to other investors, who at maturity would present them to the international bank for repayment of their par value (Figure 1).

One of the advantages of this system, apart from safety and convenience as specie did not have to be remitted, was transferability through endorsement, and therefore increased liquidity and lower cost. As bills were short dated (typically 50-70 days after date), the maturity of accommodation loans was extended through the notorious practice of “swivelling”, that is the drawing of new bills as “payment” for maturing ones. Furthermore, since it was not practical, or indeed possible, to remit large amounts across the country (or across the Channel, or the Atlantic) in specie or local bank notes to repay the loan amount at maturity, what was often remitted were *even more* bills. Banks therefore held bills as liquid assets, which they either sold on, discounted for cash, or swivelled for longer-term bills. None of this was an innovation particular to this period, nor was 1772 the first time accommodation loans had been associated with a financial crisis.<sup>54</sup> Sources are nonetheless almost unanimous in asserting that the practice had exceeded previous experience in 1772, particularly for the likes of the Ayr Bank whose financing was founded on such short-dated money market transactions (Figure 2).

Much has been made of the practice of drawing “fictitious” bills, that is fiat financial instruments that did not correspond to real underlying commercial transactions, ever since Smith’s analysis of the Ayr Bank failure.<sup>55</sup> Fictitious bills were certainly used in the money markets, but the bills employed in the tobacco and other colonial trades were very much

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<sup>54</sup> 1763 was the pioneering crisis in this matter as well: Schnabel and Shin, ‘Liquidity and Contagion’

<sup>55</sup> Smith was not alone, nor indeed the first, in addressing this. A very early contemporary instance of identifying the ‘drawing [of] bills on London on fictitious credit for the purpose of raising money’ as the reason for severity and wide extent of the crisis can be found in the *London Chronicle*, 30 June - 2 July 1772. Glasner, ‘Real Bills doctrine and the Law of Reflux’, Mints, *History of Banking Theory*, 9-30, Perlman, ‘Paternity of the real bills doctrine’

“real”, arising from the voluminous trade of real commodities. Indeed, the fact that the booming colonial trade created so many *genuine* bills which could be also used as monetary instruments may have even fed the financial boom, by providing increased quantities of the instrument that was its signature.

The dangers inherent in bills finance were manifold. One was that cost could become heavy for habitual users. Bankers in major financial centres were happy to oblige requests for swivelling since commission income could be lucrative. Smith’s back-of-the-envelope calculation for the Ayr Bank was for six such operations annually at an average commission of 0.5% each, leading to a aggregate cost of 3%.<sup>56</sup> Another problem was that there were no controls on the total amount of outstanding bills in the financial system, which was particularly dangerous for those bankers who ran supposedly “netted” positions displaying very small (or even zero) apparent exposure, but who in fact ran large credit risks. The stoppage of any of the bill’s signatories would drive its value downward, leaving the current holder with a sharply devalued (or even worthless) asset. A supposedly netted position would then suddenly blow out to a large credit exposure that could easily break a firm.

There are several instances in the primary record which demonstrate these issues, as well as link some of the failed companies of 1772 through bills transactions. Swivelling is documented in legal cases involving Arbuthnot & Guthrie, the Ayr Bank, Fordyce & Malcolm and Fordyce & Grant, Bogle & Scott, Andrew Sinclair & Co., and William Alexander & Sons.<sup>57</sup> One of the most interesting cases that demonstrates the way through which credit exposure could arise from supposedly netted bills positions, is that between Glyn & Hallifax in London and Francis Garbett & Co. of Carron Wharf in Scotland (Table

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<sup>56</sup> *WoN*, II.ii.73. Estimates put this cost as high as 7% per annum at the peak of the credit crisis in early 1773, after the bank had already temporarily stopped payment. Letters by George Home to Henry Dundas, NAS GD224/178/2/22 (15 January 1773) and GD224/178/2 (15 March 1773)

<sup>57</sup> NAS CS237/F/3/13, Court of Session, Fordyce, Malcolm & Co. vs. Arbuthnot, Guthrie, & Co., 10 June 1778. Royal Bank of Scotland Archives (RBS) EQ/23/35-6, RB/12/12, fo. 277

3). The latter were intimately connected with the Carron ironworks which David Hume famously described as ‘reeling’ from the crisis.<sup>58</sup> Glyn’s had allowed Garbett & Co. to draw bills on them for over £62,000, for payment of which they had received bills on London including, but not confined to, bills drawn on the Garbetts themselves. When the crisis struck, over £50,000 of these remitted bills were dishonoured, as either their drawer, or their acceptor, or both, stopped payment. The supposedly netted position therefore grew to a credit risk incurred by Glyn & Hallifax of over £51,000.

The same effect is demonstrated in the transactions of John Daniel & Maurice Dreyer with the Amsterdam houses of Clifford & Sons, J & H van Seppenwolde, and Abraham ter Borch & Sons. Through drawers, acceptors, or endorsers of bills stopping, the Dreyers found themselves with a credit exposure of over £265,000 against ter Borch alone (Table 4). It comes as no surprise that the small partnership, whose equity was only £4,000, quickly failed when the December crisis hit Amsterdam, or that its creditors recovered the smallest amount of all known 1772 failures.

The most notorious example was the Ayr Bank, which was purchasing such great amounts in bills to refinance its immense balance sheet that at the time of the crisis it held over £400,000 (Table 4). The stoppage of so many London merchants (and not just Alexander Fordyce) led to no less than £180,000 of these to become dishonoured, and although some of this money was eventually recovered, for the short time scales for which contagion is relevant there is little doubt that a large portion of the bank’s assets were devalued. These bills exposures include the one link between the bank and the originator of the crisis in London that can be firmly established: John Fordyce, Receiver General for Scotland, and a distant cousin to

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<sup>58</sup> *Smith Correspondence*, Letter 131, David Hume to Adam Smith, 27 June 1772, p. 161-2, Campbell, ‘The financing of Carron Company’ and *Carron Company*

Alexander. Like other officers of the Revenue in this period,<sup>59</sup> he was a banker active in both London and Edinburgh, and was involved in swivelling with several of the failed firms of June 1772, including the Ayr Bank (Table 2). Alexander Fordyce served as his sometime trading counterparty, although he was never quite his ‘London branch’ as he has been described.<sup>60</sup> In 1770, in a reversal of the usual operation of Receivers General, John Fordyce was tasked by Parliament to discharge £72,000 of ‘debts on forfeited estates in Scotland’.<sup>61</sup> A year later he came to an arrangement with the Ayr Bank to provide them with London bills accepted by his cousin Alexander, in exchange for the bank undertaking to pay some of the Government’s debts in its banknotes (Figure 3). The transaction was on paper mutually beneficial. Since almost half the bank’s liabilities by that time consisted of short-term bill debt which required continual remittances to their London correspondents, it was buying up as many good bills on London as it could. As for John Fordyce, although the terms of the arrangement have not survived, it can be safely assumed that he received a good commission for providing bills accepted by a reputable London banker, as Alexander Fordyce was very much at the time. When the latter absconded however, those bills he had accepted were dishonoured, leaving John Fordyce in the Ayr Bank’s debt.<sup>62</sup>

The turmoil in the bills market also affected tobacco traders who saw the protest rate of their (“real”, lest we forget) bills reach 25%.<sup>63</sup> As there had never been enough specie available in the colonies, and as colonial paper money was not readily accepted in Britain, tobacco factors either drew or purchased existing bills and remitted them to their parent firm in Britain. Independent American “cargo traders”, i.e. those not affiliated with British factors or

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<sup>59</sup> Pressnell, *Country banking*, 36-44, and ‘Public monies’

<sup>60</sup> Saville, *Bank of Scotland*, 161

<sup>61</sup> *Fordyce Letter*, p. 5

<sup>62</sup> John Fordyce claimed a total of £59,513 from his cousin’s bankruptcy commission. He later claimed that through his own offered composition to his creditors the Ayr Bank ended up losing a mere £1,367 from the transaction, but this was disputed by the bank’s new management (*Precipitation*, Appendix X, 123),

<sup>63</sup> Price, *Capital and Credit*, 132

consignment agents, were equally dependent on the London money markets and they could not benefit from long term store credit, or supply tobacco in part payment of their debts.<sup>64</sup> Any disruption to the bills network could therefore severely affect them, as would any retrenchment on the part of their London banking correspondents on whom their liquidity depended.

### LIABILITY-SIDE CONTAGION

Contagion also proceeded along the liability side of banks' balance sheets. The wave of bank runs already mentioned is an obvious mechanism (Diamond and Dybvig 1983), but credit retrenchment and the drying-up of liquidity were as important, particularly so in Scotland where the Ayr Bank's £224,000 of now non-convertible banknotes represented a major part of the paper currency of the country.<sup>65</sup> The tightness of credit is a recurring complaint in both press reports and private correspondence throughout the crisis period, and is corroborated by the banks' own customer correspondence.<sup>66</sup> An analysis of the surviving ledgers of four London private banks displays some evidence of a flight to cash, with total assets falling and the cash-to-liabilities ratio rising (Figures 4 and 5). Unfortunately, balance sheet data are too coarse in that they only reflect end-of-year results, and do not contain sufficient fine detail for the crucial June and December periods. Data from the daily cash ledgers of the British Linen Bank and the Aberdeen Bank in Scotland are more convincing and of fine enough detail (Figures 6 and 7). In the former case there is a clear pattern of the bank hoarding cash when the June crisis broke out, and maintaining a level in the till that was more than double that of its long term trend to that point. In fact, the pattern almost exactly mirrors the lifespan of the crisis, as the bank relaxed its policy and reverted to its long term trend after March 1773. The

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<sup>64</sup> Price, *Capital and Credit*, 127-9

<sup>65</sup> Munn, *Provincial Banking Companies*, 31

<sup>66</sup> For instance RBS CH/229, Child's Bank to Mrs. Elizabeth Prowse, 12 December 1772, and Child's Bank to Rev. Dean Coote, 21 July 1773. *Smith Correspondence*, 10 April 1773, Letter 136, David Hume to Adam Smith, p. 167-8. NAS GD 267/12/8, George Home to Patrick Home, 23 March 1773



policy of the Aberdeen Bank was more gradual at the onset of the crisis, but its relaxation in April 1773 was if anything even more dramatic.

This hoarding of cash in banks' tills, combined with the increase in the rate that bills were being protested (i.e. not accepted by risk averse banking correspondents), made it very difficult for those banks who depended on short-term money market loans to refinance their balance sheets. Once again it was the Ayr Bank which stood above all others in the magnitude of the problem it faced. Almost half its liabilities (£600,000) consisted of bills that needed to be rolled over every two to three months. When the London crisis broke out, its correspondents became increasingly reluctant to accept any new drafts (Table 6).<sup>67</sup> This inability to refinance its balance sheet was ultimately more dangerous to the bank than devaluing assets, or even the drama of a bank run and stop of payments, as it could rapidly and conclusively lead to a legal bankruptcy.

Similar troubles befell the East India Company. The disruption in the bills market made it difficult to satisfy drafts on it by its servants in India, or to discount bills altogether. The Company furthermore depended on rolling loans from the Bank of England, both as working capital ahead of its seasonal September sale, and to satisfy the Treasury's demands for a cut of its Indian revenue windfall.<sup>68</sup> With the credit crisis at its peak, the Bank refused to roll over the Company's loans, thus opening the way for the Government's eventual intervention in its affairs through the Regulating Acts of the following year.<sup>69</sup>

The North American colonies suffered a drain of cash during the crisis, driven by the recovery of British debts that would have normally been rolled forward by the tobacco stores, remittances sent in support of bills, and the repatriation of specie to Britain by merchants who

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<sup>67</sup> Lloyds Group (Bank of Scotland) Archives (BOS) 20/30/3, RBS EQ/23/35-6

<sup>68</sup> Sutherland, *East India Company*, 150

<sup>69</sup> Bank of England (BOE) Archives, Minutes of the Court Of Directors, G4/21, fos. 286-7, 290, 292, 294-7, 307, 309, 311

needed to support their credit there. One contemporary report put the total amount of cash shipped out of the colonies at £100,000 for the nine months preceding June 1773.<sup>70</sup> The discount in the rate of exchange between sterling and local currency rose from 20 to 30 percent between October 1771 and May 1773, both due to this cash drain and also the bidding up of increasingly scarce good London bills.

### INFORMATIONAL CONTAGION

Bank runs, asset devaluation, credit retrenchment, and capital repatriation, can also arise from investors adjusting to newly available information. Such “informational contagion” for 1772 has been usually attributed to psychology, and more specifically to panic, sometimes even “spreading panic”.<sup>71</sup> Contemporary press reports and private correspondence do suggest an emotional outburst in the market and society at large when the June crisis erupted. The *Scots Magazine* reported the ‘whole city [of London] in uproar, and many of the first families in tears’. ‘Public calamity’, ‘tragedy’, ‘catastrophe fatal to thousands’, ‘horror and confusion’, are some of the statements found in only one newspaper report.<sup>72</sup> The same correspondent warned of suicides arising from this sense of desperation, and lurid tales abounded in the press for a time of merchants cutting their throats, shooting or hanging themselves, and jumping out of the now proverbial window ‘in agony of mind arising from the failure of the Bankers’.<sup>73</sup> Some of these reports were not entirely fantasy either: Robert Bogle of Bogle &

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<sup>70</sup> Sheridan, ‘1772 and the American colonies’, 175, 178

<sup>71</sup> Hoppit, ‘Financial Crises’, 54, Sheridan, ‘1772 and the American colonies’, 172, Price, *France and the Chesapeake*, 639 and *Capital and Credit*, 131

<sup>72</sup> *Middlesex Journal*, 2-4 July 1772

<sup>73</sup> *Morning Chronicle*, 24 June 1772, *Bingley’s London Journal*, 4-11 July 1772, *London Chronicle*, 17-19 November 1772, *General Evening Post*, 2-4 July 1772

Scott *did* jump out of the window ‘in a phrenzy’ when his firm stopped payment - although he survived.<sup>74</sup>

Whatever the importance of psychology was in truth, bankers were sufficiently impressed as to publically protest the health of their finances and prudence of their operations. The Ayr Bank described ongoing rumours about its liquidity as slanderous,<sup>75</sup> while Colebrooke threatened to sue those ‘circulating false and scandalous reports and letters, with a malicious intent of injuring [him] and imposing on the public’.<sup>76</sup> Child’s Bank repeatedly made a point in their customer correspondence of their policy to never discount third party bills, or accept ‘any drafts [without] cash in hand to answer them’.<sup>77</sup> In the middle of the run that finished them off, Clifford & Sons announced that they possessed more than 2.7 million florins in cash reserves,<sup>78</sup> while Hope & Co. reassured the public that they had

an invariable rule to have from 30,000l to 40,000l in the hands of their cashier; to give no man a credit to the extent of any sum, the loss of which can hurt them, and to advance no money whatever, without having a sufficient security in hand.<sup>79</sup>

Bank runs were sometimes described as coming from the lower strata of society, who lacked the mental fortitude and understanding of finance as to maintain their composure. According to the *Scots Magazine*, it was ‘the common people [who] ran in crowds to draw specie for their notes’ during the Ayr Bank run, while the bank itself claimed that it ‘had an immense demand for specie from the lower class of people in exchange for [its] notes’.<sup>80</sup> Drummond’s Bank, who like Child’s prided themselves on their blue-blood clientele, differentiated

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<sup>74</sup> RBS GM/1357, Robert Oliphant to William Putney, 22 June 1772. Robert Bogle Jr. to George Bogle, London, 19 November 1772, quoted in Price 1973, p. 640, *Norton letterbook*, George F. Norton to John Hatley Norton, 8 July 1772, p. 254

<sup>75</sup> *SM XXXIV*, p. 313

<sup>76</sup> *Morning Chronicle*, 4 July 1772

<sup>77</sup> RBS CH/229, 20 April 1773, 19 June 1773, 19 February 1774

<sup>78</sup> “Philo-Veritas”, *Public Advertiser*, 8 July 1772

<sup>79</sup> *General Evening Post*, 2-5 January 1773

<sup>80</sup> *SM*, as Footnote 45 above

themselves from parvenus like the Ayr Bank by claiming that *their* customers were all liquid gentry who invested with the long view in mind.<sup>81</sup>

It can also be argued that bank runs, fire sales, credit contraction, and business retrenchment during crises are in fact only too *rational*, as investors acquire previously unavailable information, and reassess their risk accordingly.<sup>82</sup> Rather than “panic”, experienced operators like the W. Cunninghame & Co. tobacco concern actually showed much hard-headedness in responding to the 1772 crisis, and immediately retrenched their operations while restricting the leverage of their American stores. Although they paid lip-service to the usual hyperbole about ‘amazement, terror, astonishment, and suspicion [being] visible in every countenance’, they also showed no little *schadenfreude* in observing that though ‘the shock must have been terrible, it will show who has and who has not a foundation, and will make everyone be much more on their guard in what manner they trade beyond their bottom’.<sup>83</sup>

The “wake-up call” that set off this rational informational contagion sequence in June 1772 included the stoppages of systemically important players like the Ayr Bank, the increase in the rate at which bills were being dishonoured and protested, and the suspicion that the behaviour of the financial establishment had drastically altered.<sup>84</sup> Perhaps no other episode illustrates this better than the actions of London banker Thomas William Jolly on the outbreak of the June crisis. According to a petition by Glyn & Hallifax to the Lord Chancellor, on the morning of June 10 Jolly was presented with a Scottish bill drawn on him that had been remitted to Glyn & Hallifax by a third party:

Whereupon [Jolly] took it up in order to accept it and wrote thereon “Accepted Thomas William”, but before he had completed writing “Jolly” his surname, a person came into the compting house and informed him that the banking house of

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<sup>81</sup> *Morning Chronicle*, 25-27 June 1772

<sup>82</sup> King and Wadhvani, ‘Transmission of Volatility’, Pritsker, ‘Channels for Financial Contagion’

<sup>83</sup> *Cunninghame Letterbook*, To J. Neilson, 19 August 1772, p. 58.

<sup>84</sup> The term originates with Goldstein, *The Asian Crisis*

Neale James Fordyce and Down had stopped payment and that Mr. Fordyce one of the partners therein was gone away. Whereupon... Jolly threw the said Bill of Exchange into the fire and burnt it.<sup>85</sup>

Although Jolly's reaction might be put down to "panic", it also demonstrated how market participants almost instantaneously assessed new information as it became available. It was not just that Fordyce was rumoured to have been deeply committed in the bills trade and in Alley speculations, but that his failure was attributed by many to ongoing –though unsubstantiated– rumours that the Bank of England was refusing to discount bills drawn by Scots and Amsterdam Jews.<sup>86</sup> The very fact that the Scot Fordyce had absconded could have been seen as proof enough of such a policy change by the ultimate discounting power in the land.

Added to this was the sheer confusion that surrounded the affairs of many of the firms involved. Uncertainty on what the exposure of bankers *might* be could include in the wider discredit those who had otherwise been insulated from the original shock. Hume wrote of 'endless Suspicions' prevailing in Edinburgh, a sentiment that was echoed almost verbatim by the London tobacco trader Joshua Johnson.<sup>87</sup> Even experienced operators were sometimes bewildered by the complexity of transactions which made the precise liability of the various counterparties difficult to establish. The Amsterdam house of Pye, Rich & Wilkinson, who had been given power of attorney from the Dreyers' bankruptcy commissioners to represent their affairs in Holland, wrote that the debts between Dreyers' and ter Borch arose from 'a multiplicity of confused transactions such as never existed in the commercial world before',

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<sup>85</sup> TNA B1/62 fos 144-7, petition by Thomas Hallifax vs Thomas William Jolly, 2 August 1773

<sup>86</sup> *Middlesex Journal*, September 3-6, 1772, *Bingley's Journal*, 6-13 June 1772, *General Evening Post*, 20-23 June 1772, NAS GD44/43/70/7, James Balfour to James Ross, 21 July 1772

<sup>87</sup> *Correspondence*, as footnote 37 above. Johnson letterbook, 41d, 22 June 1772, 40.

and even in 1775 could not say with certainty exactly who was legally liable for the Dreyers' accommodation loans.<sup>88</sup>

Further risk aversion arose from the potential liability of the signatories of bills of exchange. Under normal circumstances accommodation loans diversified credit risk, as bill holders could have recourse on multiple counterparties: not only were the original drawer and acceptor of the bill liable for the loan principal, but so were any endorsers who might have signed on in its path to the ultimate creditor's hands. Under crisis conditions, however, this multiplicity of claim entitlement could lead to credit contraction, as merchants were unsure whether they would be called upon for repayment of bills they had drawn, accepted, or endorsed to counterparties. Johnson repeatedly alerted his American factors to potential bill endorsers who might be under a cloud of suspicion, or were already having their drafts protested in London. Since 'almost every merchant notes the bills drawn on them', he warned, 'it requires you use the utmost caution on your parts that you have good endorsers to those bills you purchase'.<sup>89</sup>

Suspicion could encompass whole classes of market participants, assigning to them guilt by association. No other category in 1772 was suspected more than the Scots, already the subject of a virulent campaign in the Wilkite press for some years.<sup>90</sup> The concurrent failures of the two Fordyces and Charles Ferguson & Co. in London led to general consternation about the quality of Scottish bills, particularly as 'the foundation of them [was] very little understood, though of late much the topic of conversation'.<sup>91</sup> The stoppage of the Ayr Bank made such fears even more acute. The tobacco trader John Norton specifically warned his associates that

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<sup>88</sup> BGA 392/135, Pye, Rich and Wilkinson to Stone & Mainwairing, 12 November 1773

<sup>89</sup> *Johnson letterbook*, 47a, 20 August 1772, p.45 and 52a, 7 October 1772, p. 49

<sup>90</sup> 'A view of the Deluge of Scotch Paper Currency for English Gold', anonymous satirical print, 1 August 1772 (*BM Satires* 4961)

<sup>91</sup> *SM*, as footnote 45 above. Parts of this argument are repeated almost verbatim in the *Morning Chronicle*, 25 June 1772

he was ‘credibly inform’d that Virginia Bills drawn payable in Scotland are now discharged by drafts on the Heron & Douglas Bank which lately stopt, for which reason those who purchase Bills ought to be carefull of whom’.<sup>92</sup> Johnson similarly cautioned his American correspondents to take particular care in purchasing any bills that might be tainted by any Scottish connections, as he had no doubt that

the ones I have by me will [be protested]; indeed no one will do anything with them; they are all so frightened, and I assure you that it is not only my opinion but everyone’s else that there will be a total bankruptcy with the Scotch in most countries.<sup>93</sup>

Unfamiliarity with the country’s legal system in England led to a deterioration of the perceived security of Scottish collateral. In May 1773, George Home, the factor who oversaw the unwinding of the Ayr Bank between 1773-93, wrote from London that ‘although [Scots] security is generally understood to be unquestioned, great objections are made to our Law of Deathbed and to our heritable bonds not being deviseable by will’.<sup>94</sup>

Market rumours also surrounded the East India Company, whose fluctuating fortunes throughout the preceding decade form the background to the crisis, and are the connecting thread between its two phases. Ever since the granting of the *diwani* of Bengal in 1765, India stock had been transformed into an object of volatile speculation. A typical asset bubble had developed between 1766-9, and even afterwards the stock remained in play for speculators like Fordyce or insiders like Colebrooke. The proceedings of the ‘Little Parliament’ of the Company’s Court of Proprietors attracted huge press interest, while the Government sought a way to influence its affairs and extract benefit for the Treasury (Bowen 1987, 1991). In June 1772, Exchange Alley was filled with rumours of military reverses in India and cashflow problems at home, while Colebrooke was engaged in an elaborate attempt to corner the world

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<sup>92</sup> *Norton letterbook*, John Norton to John Hatley Norton, 6 August 1772, p. 266

<sup>93</sup> *Johnson letterbook*, 42, 1 July 1772, 40-1

<sup>94</sup> NAS GD267/22/7/81, George Home to Patrick Home, 1 May 1773

market in alum and hemp. Although bearish speculators like Fordyce proved premature, the share price *did* eventually start to slide as the Company's difficulties were exacerbated by the credit crisis, which made it unlikely that its dividend could remain at the high levels it had reached in previous years. When Dutch investors finally realised the 'pitiful condition' of the Company's affairs,<sup>95</sup> those Amsterdam "longs" like Cliffords, van Seppenwolde, and ter Borch were brought down in short notice.

### MARKET INTERVENTION IN RESPONSE TO THE CRISIS

The response of the financial establishment to the crisis was prompt, substantial, and multi-varied. At its centre was the classical LLR operation of the Bank of England "lending to the market" by greatly increasing the volume of its bills discounts (Figure 8).<sup>96</sup> The peak discounting week of the whole 1771-3 period was 22-27 June 1772, when £1,263,645 worth of bills were discounted at an unprecedented daily average of over £250,000. On the peak date of June 25 alone, three days after the London bank runs, the Bank discounted over £500,000, or nearly as much as the busiest *week* during the 1763 crisis. The daily average again rose above £100,000 during the January crisis, before falling back below £50,000 for the rest of 1773. Its bullion reserves accordingly fell to the point of a large stock of Spanish pieces of eight having to be pressed into service (Clapham 1944, pp. 247-8). The Bank was joined in its winter 1772-3 intervention by the City of Amsterdam, which capitalized a Loan Chamber with 'two million guilders (about £180,000) taken out of the City Treasury, to be advanced on goods, or good bills, to such persons as may be in immediate want of money, at

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<sup>95</sup> Wilson 1941, p. 176, quoting *De Koopman*, IV, 298-9

<sup>96</sup> For other presentations of the same discount data see Clapham 1944, I, 247, Price 1992, Lovell 1957



a moderate interest'.<sup>97</sup> This facility was managed by six city commissioners and guaranteed against loss by the city's principal merchants.

The Bank did not confine itself to lending to the market as a whole by discounting (presumably) good bills, but also targeted specific individual banks in an operation more akin to a modern central bank "bailing-out" systemically important firms. Specifically, it advanced £263,000 in direct short-term loans to ten bankers, £200,000 of which were disbursed during the crucial June 23-24 period (Table 6). Assistance was even extended to firms that were arguably insolvent, rather than just illiquid. Specifically, £160,000 of long term loans were provided for the benefit of the major Scottish trading house of William Alexander & Sons, who had once held the exclusive tobacco export license with the French Farmers-General,<sup>98</sup> and who were connected with such central players of the crisis as Glyn & Hallifax and the Ayr Bank. This loan is notable for having been secured on mortgages, which contravened the Bank's usual practice,<sup>99</sup> and for being the one known occasion in all its 1772-3 intervention where the Bank possibly lost money. This was in fact not a direct loan to William Alexander & Sons, but rather an undertaking by the Bank to discount bills drawn by the former on the London firms of Walpole and Ellison, and Walpole, Clarke and Bourne. In exchange for this undertaking, which in effect rescued the two Walpole firms rather than the Alexanders themselves, the Bank received the securities on two sugar plantations in Grenada and to a Scottish estate that had been associated with the original loan. Despite further favourable – and contentious – loans and guarantees from the Ayr Bank and from no less a figure than Benjamin Franklin, William Alexander & Sons could only fend off bankruptcy until 1775, and the last surviving partner absconded to France and finally the newly independent United

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<sup>97</sup> *London Chronicle*, 23-26 January 1773. Braudel 1992, pp. 271-2

<sup>98</sup> Price, *France and the Chesapeake*, pp. 608-9, Hamilton, *Economic History*, pp. 255-6

<sup>99</sup> Clapham, *Bank of England*, p. 114

States.<sup>100</sup> The entry of France into the American war and its temporary capture of Grenada complicated the case even further, and eventually only £100,000 were received from the sale of the mortgaged estates in 1790.<sup>101</sup>

The Bank was also prepared to help the ailing Ayr Bank by offering to double the size of its discount facility to £300,000.<sup>102</sup> The Ayr Bank directors eventually declined this offer, instead opting for the disastrous alternative to issue life annuities in London at an exorbitant rate of interest.<sup>103</sup> If this abortive loan is included, the Bank was prepared to directly lend over £570,000 in addition to increasing discounts, of which £423,250 were actually disbursed. It finally made a government-guaranteed loan of £1.4 million to the East India Company,<sup>104</sup> which replaced the rolling short-term loans of £400,000 (on average) that the latter had hitherto depended on.

The Bank's ledgers also bear witness to an apparent private sector bank rescue.<sup>105</sup> Glyn & Hallifax suffered a run during the general discredit of all Scottish-connected business, and was forced to suspend payments on June 22; a commission of bankruptcy was set up against its partners on the same day.<sup>106</sup> Glyn's had numerous friends in the City however, while its partners were politically influential: Thomas Hallifax stood as ministerial candidate for election as Lord Mayor only a few months after his firm's stop,<sup>107</sup> and was knighted in

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<sup>100</sup> Price, *France and the Chesapeake*, pp. 693-700

<sup>101</sup> NAS CS181/6942 (sequestration proceedings in England) and CS222/278 (sequestration proceedings in Scotland – particularly the September 1777 petition to the Court of Session by these two creditor firms), and *Thomas Walpole Letter*. Although the Walpole firms claimed that 'exclusive of the Bank debts they were in advance for [Alexanders'] in upwards of £60,000', there is no evidence that the Bank considered this second amount part of their obligations, and hence should not be considered as part of the rescue. See also Acres, *Bank of England from within*, pp. 202-4

<sup>102</sup> BOE, Minutes of the Court of Directors, G4/21, fo. 260

<sup>103</sup> Kosmetatos, 'Ayr Bank', pp. 176-9

<sup>104</sup> BOE G4/21, fo 359

<sup>105</sup> This is mirrored in the surviving ledgers of Glyn & Hallifax, RBS GM/136

<sup>106</sup> TNA B4/21

<sup>107</sup> On that occasion unsuccessfully. He had to wait until 1776 to finally get elected. See Charles Welch (rev. M. J. Mercer), 'Hallifax, Sir Thomas (1722–1789), mayor of London', *Oxford Dictionary of National Biography*, 12017

February 1773 while the crisis was still progressing. A Bank of England account was set up under the names of John Woodhouse (a known associate of Sir Richard Glyn), James Calvert, and Peter Hodson (both listed as City merchants in the London directories for 1772),<sup>108</sup> and disbursed £89,138 between July 8 and August 6 (Figure 8). Excepting two block payments to banker John Smith for a total of £38,681, the other 502 payments were made in much smaller amounts (all below £1,000), with daily totals averaging between £2,000-4,000. The regular denominations, moderate payment sizes, and names of beneficiaries (which included several known City bankers) give a strong impression that this was a bridge facility set up to satisfy maturing bills. Private loans of £38,500 have been mentioned in the literature as part of the assistance given to Glyn's by their various friends in the City, though whether this was included in this apparent bridge facility remains uncertain.<sup>109</sup> Glyn & Hallifax fully settled this account with two block payments on August 6-8 and resumed payment, after which the commission of bankruptcy was superseded and the firm survived well into the 20<sup>th</sup> Century as Glyn, Mills & Co.

Similar private sector rescues were attempted outside England.<sup>110</sup> The Edinburgh chartered banks provided the Carron Company with short-term credits, after the collapse of the Ayr Bank and Francis Garbett & Co. denied it its usual sources of liquidity.<sup>111</sup> The Duke of Argyll announced that Ayr Bank notes would be accepted as part of his estate business,<sup>112</sup> while the Dukes of Buccleuch and Queensberry personally guaranteed the £450,000 of its ruinously expensive annuities in the summer of 1772, and later provided mortgages to secure the transferrable bonds that were issued to redeem them. During the winter 1773 Amsterdam crash, the Russian consul wrote that Horneca, Hogger and Co. 'who do everything for France

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<sup>108</sup> *London directory* (1772), *Public Annuitant Society announcement* (1771)

<sup>109</sup> Fulford, *Glyn's*, 32-4

<sup>110</sup> Another English private sector rescue of an unnamed bank is reported in *Middlesex Journal*, 16-19 January 1773

<sup>111</sup> RBS RB/12/11, fo. 75. Saville 1995, p. 164

<sup>112</sup> Saville, *Bank of Scotland*, 165

and Sweden' were first saved by 300,000 florins that were collected for them in one night, and subsequently by 'a coachload of gold coin' worth a million florins that arrived from Paris. Pye, Rich & Wilkinson reportedly arranged for the dispatch of 2 million florins in silver from England,<sup>113</sup> while the press rumoured that 'Sir Joshua Vanneck [...] sent over 500,000l. in order to support the credit of [Holland]'.<sup>114</sup> All possible efforts had been similarly made to support the Cliffords at Amsterdam 'by their Dutch and English friends', though to no avail.<sup>115</sup>

Throughout the crisis, the Treasury did not directly rescue any firms or individuals; even the East India loan was technically made by the Bank of England. The Government's influence was political and legal rather than financial in nature. Apart from the Regulating and other Acts concerning the new arrangements of the Company's affairs, in 1774 Parliament also passed by a wide margin an Act to enable the Ayr Bank to issue £500,000 in transferrable bonds at legal interest (i.e. 5%), and thus free itself from its crippling annuity burden.<sup>116</sup> Both these Acts were enacted in a timeframe that is beyond the short time scales required by the contagion definition used here, but nonetheless demonstrate the political will to support the biggest victims of the crisis.

#### CONTEMPORARY DISCOURSE ON INTERVENTION

The facts of intervention are hard to dispute, particularly as they pertain to the Bank of England. Although it did not quite use all the instruments in Bagehot's famous quote about the 1825 crisis, in 1772-3 the Bank also came close to lending money 'by every possible means and in modes [it] had never adopted before'.<sup>117</sup> What is not as straightforward is how

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<sup>113</sup> Braudel, *Civilization and Capitalism*, 271

<sup>114</sup> *Morning Chronicle*, 6 January 1773

<sup>115</sup> NAS GD267/3/3/1, George Home to Patrick Home, 11 January 1773

<sup>116</sup> 14 Geo III, c. 21

<sup>117</sup> Bagehot, *Lombard Street*, 51-2

much (if at all) this represented the concerted policy of a conscious LLR, and whether its chief motivation was the preservation of the financial system from contagion. There is also the Free Banking challenge to be considered, according to which the Bank's actions did not conform to the classical LLR prescription in that they were ad hoc and not pre-announced. Specifically for the case of Scotland, it is disputed that there was ever an implicit assumption that the Bank was to serve as a "backstop" of Scottish credit, while the terms of the proposed Ayr Bank rescue are held up as much too strict for it to be a true LLR action.<sup>118</sup>

It is true that there survives little evidence, such as resolutions by the Court of Directors or internal correspondence, that directly illustrates the Bank's decision making. This is as true of discounting policy, as it is of the authorisation of the targeted short term loans.<sup>119</sup> The only official decisions concern the abortive Ayr Bank loan which was authorised by the Court of Directors on 18 June 1772, and an announcement on 10 January 1773 that specie withdrawals were to continue free.<sup>120</sup> The rejection of the loan offer by the Ayr Bank is particularly hard to comprehend. The terms, which included mortgages on estates to the value of £150,000, as well as the personal bonds of the most prominent backers of the project, were certainly thought of as very severe by some contemporaries,<sup>121</sup> but were in fact much less so compared to those achieved by the open market fundraising it opted for instead. Rather than the maximum legal interest of 5% per annum that would have been due to the Bank of England, the Ayr Bank paid up to 14% per annum for its annuities, as the latter were not subject to usury laws.<sup>122</sup> Moreover, the personal security of its most prominent backers was still

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<sup>118</sup> White, 'Banking without a Central Bank', 53-6

<sup>119</sup> The only documented change in Bank official policy is a 13 May 1773 resolution to increase the discount rate on foreign bills to 5%, starting on 24 June that year (BOE, Extracts from court minutes relating to discounts, G29/1, fo. 6), well after all the various interventions had been completed.

<sup>120</sup> Wilson, *Anglo-Dutch Finance*, 176

<sup>121</sup> Smith *Correspondence*, Letter 133, David Hume to Adam Smith, [October 1772], p. 165, 'An Englishman', *Craftsman or Say's Weekly Journal*, 18 July 1772.

<sup>122</sup> Campbell, 'Usury and annuities'

required to issue them,<sup>123</sup> so it is hard to understand why this was considered less onerous than the Bank's terms, especially as the annuity sums guaranteed were three times as great. It is however inconsistent to view the loan's severe terms as an argument *against* the Bank's posited LLR role, when one of the very requirements of the classical prescription is exactly *to only lend money at high or penalty rates* to prevent moral hazard.<sup>124</sup>

In the absence of direct documentary evidence, one must turn to the general discourse surrounding the Bank's actions. Press commentary and the correspondence among insiders indicate that not only was the Bank assumed to be the most suitable agent of intervention, but that it was also 'the stronghold of public credit, which it [behaved it] well to fortify amidst the present shocks'.<sup>125</sup> In "free" Scotland, Home complained that the June crisis had been allowed to spread from London to Edinburgh when

the Bank of England, *who alone could stem the torrent by a liberal discount*, withheld even the usual supplies which increased the evil. They saw their error when too late, and found millions insufficient to remedy what a few hundred thousands would have prevented.<sup>126</sup>

By contrast, there were no equivalent expectations that the conservative and undercapitalised chartered Edinburgh banks could play a larger part than the reluctant and minor one they actually did. The small assistance they gave the Carron Company seems to have been the limit of their capabilities and appetite for intervention. Both the Bank of Scotland and the Royal Bank rejected the Ayr Bank's modest pleas for a loan of £20,000 from each on 15 June 1772, when the Bank of England showed itself prepared to double its own support to £300,000 only a few days later.<sup>127</sup> These rejections do not imply that the public banks eschewed intervention out of ideological conviction about the superiority of free banking, but

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<sup>123</sup> *Precipitation*, Appendix VIII, 93-6

<sup>124</sup> Bagehot, *Lombard Street*, Humphrey-Keheler, LLR: A historical perspective'

<sup>125</sup> *Bingley's Journal*, 20-27 June 1772

<sup>126</sup> NAS GD267/22/7/57, George Home to Patrick Home, 29 June 1772. Emphasis added.

<sup>127</sup> RBS RB/12/11, fos. 50-1 & 58-9. BOS 20/30/4, 15 June 1772

rather point out that the task was beyond their limited means. If anything, the view among some insiders rather leant towards the need to strengthen the central role of the Scottish public banks in the financial system. In 1777, George Home and Henry Dundas privately debated an expanded role for them through a capital increase, looking for a way to solidify their position of ‘as guardians in some measure of the Public Credit in Scotland’. Both Home and Dundas were intimately connected with the resolution of the Ayr Bank, one as the bank’s legacy manager for twenty years, the other as the most prominent Scottish politician of his time;<sup>128</sup> both had also owned shares in the scheme. It was perhaps with its much maligned managerial and credit practices in mind that they agreed

That public Banks established by authority, with real solid and known Capitals, and under a management liable to Inspection & Controll, afford better security and will obtain a more General extensive & less fluctuating Credit for their notes than those of Private Companies can receive or are entitled to... [Their] Capital was well known, and their constitution such as that no sudden danger was to be apprehended from their management... [By contrast] the Public was and must necessarily continue in the dark as to the extent of [Provincial Banks’] Capitals, and the propriety of their management.

This made provincial banks more vulnerable to a ‘sudden check given to Credit’, and also to contagion that could affect both the broader financial system and even society at large:

A proportional check would be given to the Industry of the Country, the consequences of which would be severely felt by all Banks in a diminution of their revenue, and might even for a time effect the peace and good order of the Society, by the number of People that would be thrown out of employment, rendered desperate by their wants if they remained at home, or obliged to leave their Country in search of subsistence.<sup>129</sup>

Scottish “Public Credit” was furthermore dependent on the health of the London money markets. The convertibility of Scottish paper money to specie had always been more a fiction

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<sup>128</sup> Dundas was Solicitor General in 1772 and afterwards became Lord Advocate

<sup>129</sup> BOS Melville Papers, MEL/1, ‘Observations by Geo. Home on Bank & Circulation’

than a rigid rule, as what backed the various country bank note issues had been a mixture of a little bullion and rather more bills on London (Checkland 1975a, pp. 184-5). Not only had the various bank runs in Edinburgh drain the monetary system from what little cash was available, but the disruption to the London bills market damaged what was arguably its senior component. By rescuing the London bills market and supporting the one instrument that was both liquid and broadly accepted, the Bank of England really *did* act as the backstop of Scottish credit.

The implicit assumption of the Bank's unique role extended to unfriendly commentary. Though it was generally lauded,<sup>130</sup> complaints kept surfacing about it being overly selective in its discount policy, and for supposedly precipitating the crisis in the first place by refusing to discount Scottish and Dutch Jewish bills. After news of the Dutch failures became public in January 1773, Home again criticised the Bank for being

more backward in their discounts than ever... If they continue to withhold [them] from the great Merchants, they must in turn withhold the credit they are accustomed to give the smaller, and so the mischief goes round in a Circle.<sup>131</sup>

Some even hinted darkly that the Bank had purposely broken the private bills market with a view to assume a monopoly in it.<sup>132</sup> Such allegations are anecdotal; modern literature has dismissed them as 'ill informed' (Hamilton 1956, p. 413), and they are indeed disproved by the evidence presented in the previous section. Complaints over the Bank's choice of beneficiaries seem to be better founded. Some of these, like Archibald Stewart who was the "Douglas" of Douglas Heron & Co., can be characterised as insiders, and some, like Sir George Colebrooke, even *undeserving* ones. William James of Neale, James, Fordyce, and

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<sup>130</sup> The *General Evening Post*, 25-27 June 1772 opinion that 'no body of gentlemen ever behaved better in a public calamity' than the Directors of the Bank was typical.

<sup>131</sup> George Home letter as footnote 83 above

<sup>132</sup> For instance *Réflexions*, Bogle letter as Footnote 45 above.



Down complained in 1775 that by its ‘uncustomary interposition’ during the crisis the Bank had interfered with the fair market in shares:

The Bank Directors... ventured to advance immense sums to Sir George [Colebrooke] and other bankers... Sir George had against me £110,000 India Stock, which by the Bank supporting him did not come to market... Had not [he] and several other Bankers been supported I would have recovered my fortune... [He] and a few friends were saved at our expense.<sup>133</sup>

Colebrooke’s “systemically important” status was assumed by many, including Hume, Home, and the King himself,<sup>134</sup> but it is still legitimate to wonder whether such a quintessential insider was assisted solely out of systemic concerns. Rescue loans were advanced to him even as his ongoing attempt to corner the world commodity markets was public knowledge, while his insider trading in India stock had been a minor scandal since 1771.<sup>135</sup> His critics admitted that ‘there was nothing illegal in all this’, but still wondered whether ‘its legality only aggravated the crime... [as] it is indecent and ungenerous for a Director to take advantage of his official knowledge to appropriate to himself the stock of his constituents and to thrive upon their ruin’.<sup>136</sup>

That said, the favouritism argument can only be taken so far. Despite all the aid he received or his apparent clout, Colebrooke could only fend off bankruptcy till 1778.<sup>137</sup> The experience of the Ayr Bank was similarly equivocal, belying both press rumours of anti-Scottish bias,<sup>138</sup> and objections in the Commons that it was receiving ‘a greater privilege than ever was

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<sup>133</sup> BM Add 38208, fos 176-7, William James to Charles Jenkinson, September 14, 1775

<sup>134</sup> George Home letter as footnote 83 above, *King George III Correspondence*, Vol. I, Letter 154, The King to Lord North, 1 January 1773, p. 121, NAS, Duke of Gordon Papers, GD44/43/88/46, Charles Gordon to the Duke of Gordon, 31 March 1773, *Smith Correspondence*, as footnote 41 above.

<sup>135</sup> *Shah Allum in Distress and the India-man wrecked*, anonymous satirical print (1773), *BM Satires* 5100, NAS GD44/43/43/89/42, John Balfour to James Ross, 12 April 1773

<sup>136</sup> *General Evening Post*, 17-19 December 1771. “Publicus”, *Public Advertiser*, 24 January 1772 has a longer and more eloquent attack.

<sup>137</sup> TNA B6/5, fos 126, 212

<sup>138</sup> *SM XXXIV*, pp. 315-6, ‘An Englishman’, *Craftsman or Say's Weekly Journal*, 18 July 1772

granted before' through the 1774 Ayr Bank Act.<sup>139</sup> In the end, it too was wound up, albeit in a more orderly fashion than Colebrooke's bankruptcy. The likeliest interpretation remains that the financial establishment did what was required to save systemically important players while contagion was still a danger, but left them to fend for themselves when the crisis was firmly in the past.

## CONCLUSIONS

The evidence presented here supports the contagion hypothesis for the 1772-3 crisis. There was no common shock affecting all the various distressed parties simultaneously, and the crisis propagated rapidly and in an apparently causal manner. Mechanical "domino" contagion affected both the asset and liability sides of banks' balance sheets, with exposures arising from bills of exchange being by far the most important vector of transmission. Informational contagion was also very likely at work through the rapid reassessment of risk, even if the traditional "panic" narrative is not employed. The evidence furthermore supports the hypothesis that the June London shock was transmitted to Scotland through credit relationships and the general discredit of Scottish finance in London, which in turn denied firms the ability to refinance their debt there. The London failures also reduced or eliminated the value of London bills that Scots financiers might be holding as part of their acceptance loan financing operations, or as a monetary surrogate in a specie starved country. There is some evidence that the June London crash causally led to the winter Amsterdam one via bills exposures and the fall in the price of India stock. Contagious relationships between the American colonies and the distressed European money markets are also plausible, but the surviving evidence is much sparser and the time scales somewhat longer for the definition of contagion used in this paper. Capital repatriation to Britain on the part of distressed traders is an appealing hypothesis, but there is at present little archival evidence to corroborate it. It is

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<sup>139</sup> *SM XXXVI* (1774), p. 196

more likely that the disruption in the bills market transmitted financial distress more decisively than the removal of even £100,000 in specie. There are furthermore other possible explanations for the difficulties faced by tobacco traders after 1772, such as the fall in the price of tobacco, and the rapidly deteriorating political situation between Britain and its colonies.

Contemporaries showed good awareness of the danger of contagion, and quickly identified systemically important players whose failure might exacerbate it. They equally quickly focused on the Bank of England as the likeliest agent of effective intervention. The Bank assumed the functions of LLR for the whole of Britain, and displayed a breadth of scope and efficiency of operation that makes it unlikely that its actions were either ad hoc, or mainly motivated by political considerations. It not only injected liquidity to the market as a whole, but also targeted specific firms through substantial direct lending, even going to the unusual for it extent of lending on mortgage. Going beyond the actual facts of intervention, contemporary discourse (even in supposedly “free banking” Scotland) leant on the side of intervention being desirable rather than unfortunate. Although the first articulated LLR theory still lay thirty years in the future, the Bank’s practices were already developed enough that they were implemented quickly and without controversy. The complete absence of internal Bank debate could indeed be taken as an indication that intervention was not considered a particular novelty, nor especially contentious. If anything, it is the conscious *free banking* ideology that is entirely absent in the crisis discourse. By contrast, the Government in itself was not thought of as an appropriate agent of intervention, and certainly less so than those members of the aristocracy who might be involved in the distressed companies, such as the noble backers of the Ayr Bank. Private sector intervention such as this certainly took place in 1772-3, but there is nothing to preclude this even under a formally established modern LLR system. In any event, it was the comparative scale of the Bank of England’s intervention, as

well as the almost universal contemporary acknowledgement of its unique position and resources, that put it in a league of its own.

The 1772-3 crisis cannot be included among those seminal upheavals, like 1825, 1857, or 1866, that punctuated the discourse on central bank action, and which even led to changes in the legal and monetary framework governing banking practice. But this earlier experience demonstrates that many of the intervention techniques used in those more famous episodes were already well in place in the late Eighteenth Century, and that banking practice was governed by practicality rather than theoretical fixation. This was particularly so in the case of Scots bankers, who were not the ‘desperate adventurers in trade and commerce’ of the hostile London press,<sup>140</sup> but neither merited the approval they have received from some modern commentators for practicing a conscious libertarian philosophy they probably never espoused.

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<sup>140</sup> *London Evening Post*, 23-25 June 1772

Table 1. Comparison of major failures from the crisis of 1772

	<i>Location</i>	<i>Debts (£)</i>	<i>Recovery</i>	<i>Year Resolved</i>	<i>Form of resolution</i>
Neale, James, Fordyce & Down	London	146,402 <sup>a</sup>	72.5%	1794 <sup>b</sup>	bankruptcy dividends
John Daniel & Maurice Dreyer	London	172,904	2.5%	1776	bankruptcy dividends
Johnston & Smith	Scotland	unknown	75%	unknown	unknown
Charles Ferguson & Co	Scotland	unknown	25%	1772	composition
John Fordyce (all debts) <sup>c</sup>	London & Scotland	>240,000 <sup>d</sup>	32.5%	1772	composition
Francis Garbett & Co.	Scotland	>150,000	95% <sup>e</sup>	1827	bankruptcy dividends
William Alexander & Sons <sup>f</sup>	Scotland	220,000	47.6%	1790	bankruptcy after failed rescue
Douglas, Heron & Co.	Scotland	500,000 <sup>g</sup>	100%	1793 <sup>h</sup>	winding up
Clifford & Sons	Amsterdam	unknown	25% <sup>i</sup>	1773	composition (offered)

<sup>a</sup> Proven debts accepted by the commission of bankruptcy on the joint estate only. Total claims exceeded £450,000

<sup>b</sup> 62.5% was recovered by March 1777

<sup>c</sup> Includes personal debts, as well as those by Fordyce, Grant & Co and Fordyce, Malcolm & Co.

<sup>d</sup> *Letter to the Partners of Mess. Douglas, Heron, and Company* by 'A Partner', p. 10, appended to the *Precipitation*

<sup>e</sup> Joint debts only. Personal debts of Sir Charles Gascoigne (included in total) were recovered at 90%

<sup>f</sup> Bank of England loans only. Resolution concerns only the sale of their West Indian estates for £100,000

<sup>g</sup> Transferrable bonds issued under Act of Parliament, 1774

<sup>h</sup> Final bond repayment

<sup>i</sup> Terms offered to creditors, 31 March 1773

Sources (except noted above): Row 1, TNA B3/3675-6; Row 2, BGA 9/87; Row 3, Saville 1995, p. 181; Rows 4-5, *Precipitation*, Appendix X, pp. 116-23; Row 6, NAS CS44/132/64, Row 7 NAS CS181/6942, Row 8, BOS 20/30/3, Row 9 BGA 392/135, Pye, Rich and Wilkinson, Amsterdam, to Stone and Mainwairing, London, 30 March 1773 and 2 April 1773

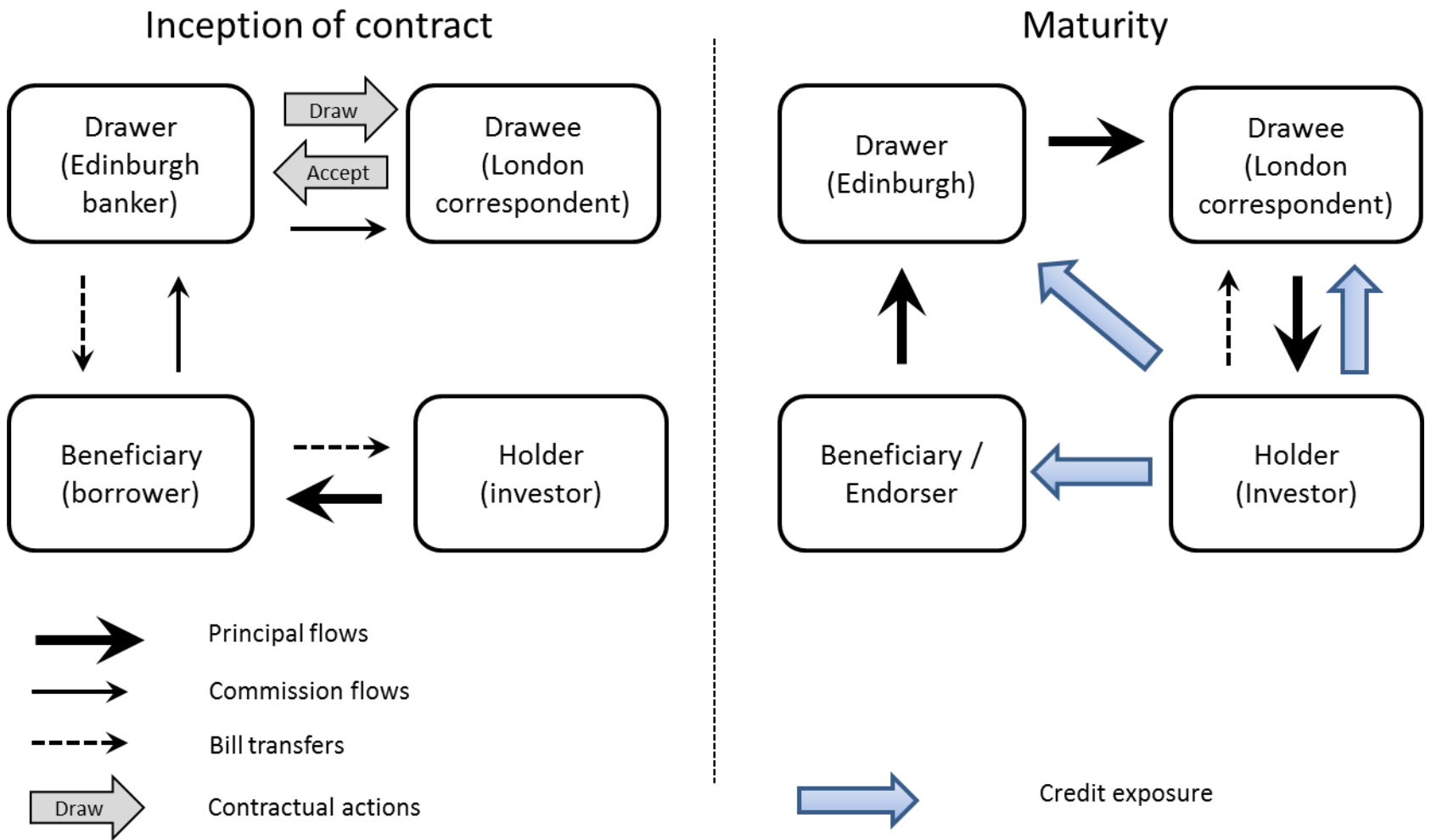


Figure 1. Outline of an international acceptance loan at inception and maturity. The interest payable to the investor is reflected in the discounted price paid by the bill holder at inception. Principal flows at maturity are at the bill's par value. Adapted from Schnabel & Shin 2004

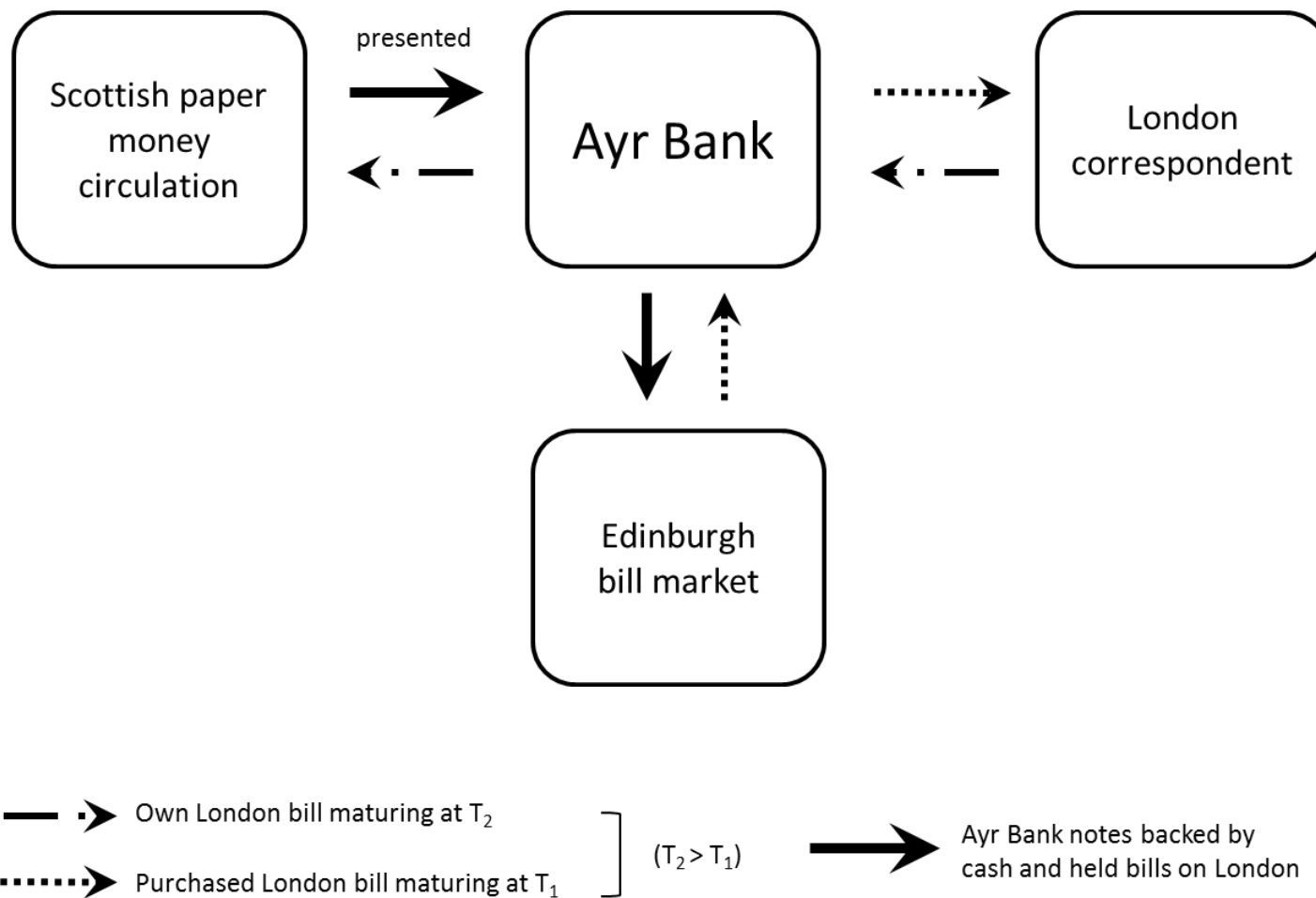


Figure 2. Diagram of the Ayr Bank's liability management. For simplicity, discount interest and commissions are omitted. Note that specie was partly used in all operations, and that the bank's own bills were used interchangeably with purchased ones to support its note circulation

Table 2. Credit risk incurred by Glyn & Halifax, London, arising from “netted” bills positions with Francis Garbett & Co., Carron Wharf, Scotland

	<i>Drawer/Endorser</i>	<i>Drawee</i>	<i>Stopped?</i>	<i>Amount (£)</i>
1	John Adam	Adam & Co.	Both	10,169
2	H. Galloway	R Campbell	Unknown	4,500
3	A[lexander] Whyte	R. Adam	Drawee	4,460
4	R. Wingate	Adam Wood	Drawee	9,250
5	Alexander Whyte	Adam Wood	Drawee	1,000
6	Gibson & Balfour	Sundries	Drawer	4,130
7	T & W Parkers	Charles Broughton	Unknown	2,290
8	Garbett & Co.	Adam & Wiggin	Drawer	14,500
9	Garbett & Co.	Dick Coney & Co.	Drawer	500
10	Garbett & Co.	Dick Coney & Co.	Drawer	400
11	Alexander Davidson		Unknown	900
12	Sundries			10,452
	Sum of bills remitted by Garbett & Co. to Glyn & Halifax			62,551
	(less) Garbett & Co. drawn bills accepted by Glyn & Halifax			(62,811)
	Balance of bills in advance (arrears) by Glyn & Halifax			260
	Non-Accepted bills by Glyn & Halifax marked as paid			70
	Balance of Garbett & Co. cash account at Glyn & Halifax			479
	<b>Supposed net exposure by Glyn &amp; Halifax on Garbett &amp; Co.</b>			<b>809</b>
	But remitted bills dishonoured/houses stopped			50,799
	<b>Actual exposure</b>			<b>51,609</b>

Source: NAS CS96/1327-8



*Table 3. Bills position of John Daniel & Maurice Dreyer, London, versus Abraham ter Borch & Sons, Amsterdam. "Our", "ours", "us" refers to J.D & M. Dreyer. "They", "their" to A. ter Borch. All amounts in pounds sterling*

Balance [of bills] 31 December 1771	63,731
Bills drawn to own order and endorsed by us, remitted for their accommodation	11,000
Bills drawn by John Craven to our order and endorsed by us [remitted to them?]	11,000
Bills drawn by us on them falling due after their stop and unpaid	13,739
Their drafts to order John Craven accepted by us	35,973
Ditto to Lucken & Luden	1,400
[Their?] drafts on John Craven [remitted to us?]	36,028
Drafts of Clifford & Sons on us [accepted by A. ter Borch]	57,977
Ditto of ours on Cliffords	35,000
<b>Total credit exposure</b>	<b>265,849</b>

Source: BGA 392/72

Table 4. Ayr Bank balance sheet at the time of its stop of payments, 22 June 1772

<i>Liabilities</i>		<i>Assets</i>	
Deposits	300,000	Cash & Fixed Capital	No Record
Banknotes in the circle <sup>a</sup>	224,000	Debts at main branches	694,175
Drafts on London correspondents	600,000	(of which self-dealing	400,000)
Paid-up capital	104,413	Debts at agencies	133,788
<i>"Profit" put in to make up balance</i>	<i>8,630</i>	Bills on London	409,079
		(of which dishonoured	180,000)
	<hr/> 1,237,043		<hr/> 1,237,043

Amounts in pounds sterling. Author's estimated figures in italics

<sup>a</sup> 1773 estimates (NAS GD224/178/2/22). The *Precipitation* (written in 1778) rounds this to £220,000

Source (unless otherwise noted): *Precipitation*, pp. 86-7

Table 5. Example of swivelling of bills of exchange between two failed Edinburgh banks, 1772

Bill #	Amount (£)	Date (1772)	Maturity (days)	Drawer (Edinburgh)	Acceptor (London)	Beneficiary (Edinburgh)
1	300	13-Apr	55	Arbuthnot & Guthrie	Fordyce & Grant	Fordyce & Malcolm
2	750	13-Apr	60	Arbuthnot & Guthrie	Fordyce & Grant	Fordyce & Malcolm
3	500	13-Apr	65	Arbuthnot & Guthrie	Fordyce & Grant	Fordyce & Malcolm
19	350	18-Apr	55	Fordyce & Malcolm	Charles Ferguson & Co	Arbuthnot & Guthrie
20	300	18-Apr	60	Fordyce & Malcolm	Charles Ferguson & Co	Arbuthnot & Guthrie
21	400	18-Apr	55	Fordyce & Malcolm	Fordyce & Grant	Arbuthnot & Guthrie
22	300	18-Apr	50	Fordyce & Malcolm	Fordyce & Grant	Arbuthnot & Guthrie
23	200	18-Apr	60	Fordyce & Malcolm	Fordyce & Grant	Arbuthnot & Guthrie
Total Fordyce & Malcolm on Arbuthnot & Guthrie				£1,550		
Total Arbuthnot & Guthrie on Fordyce & Malcolm				£1,550		

Source: NAS CS237/F/3/13, Court of Session, Fordyce, Malcolm & Co. vs. Arbuthnot, Guthrie, & Co., 10 June 1778

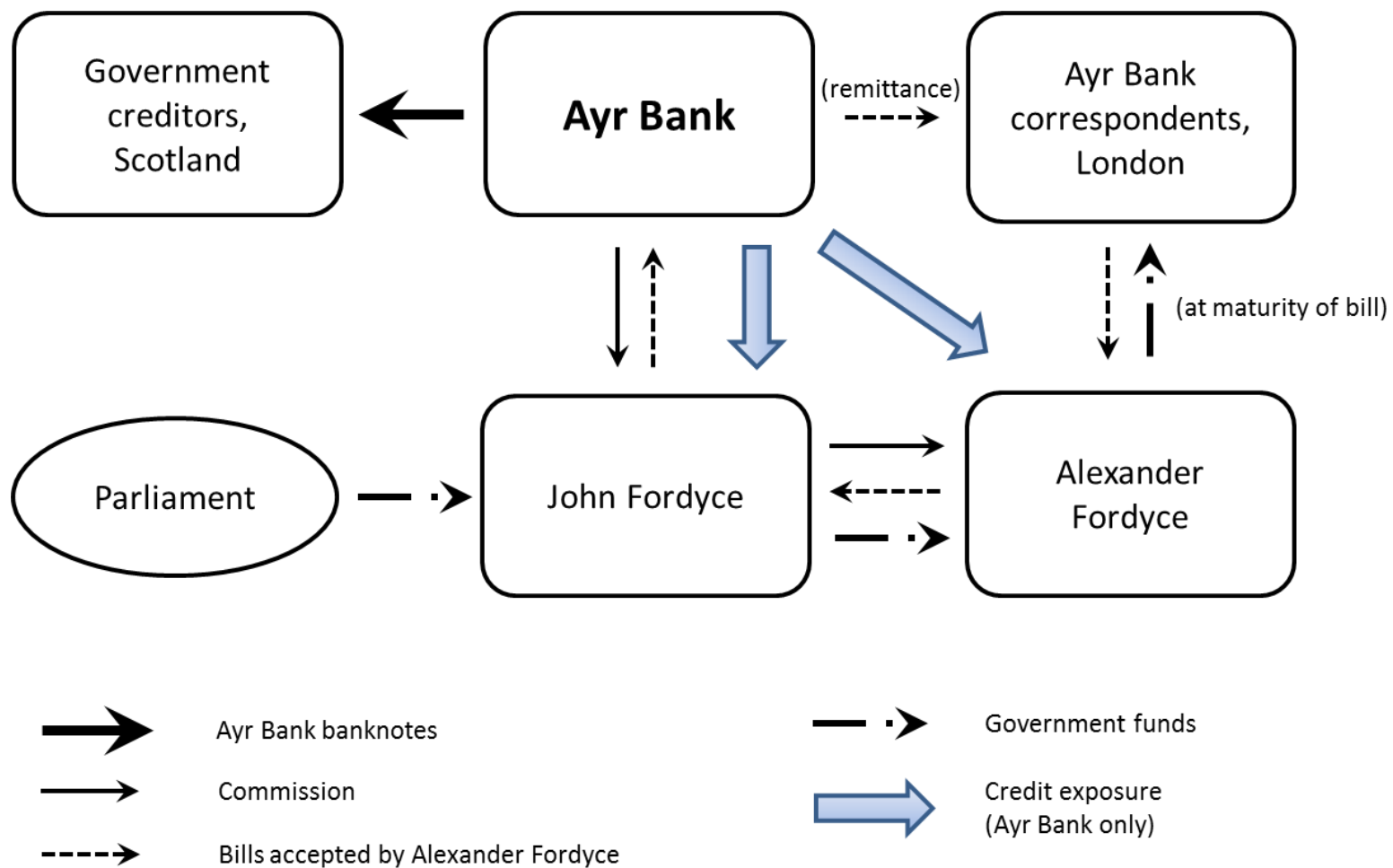


Figure 3. Transaction between the Ayr Bank, John Fordyce, and Alexander Fordyce, demonstrating the Bank's credit exposure to the originator of the London crash. The distinction between John Fordyce's companies (Fordyce & Malcolm, Edinburgh, and Fordyce & Grant, London) have been omitted for simplicity. Source: *Fordyce Letter*, p. 5

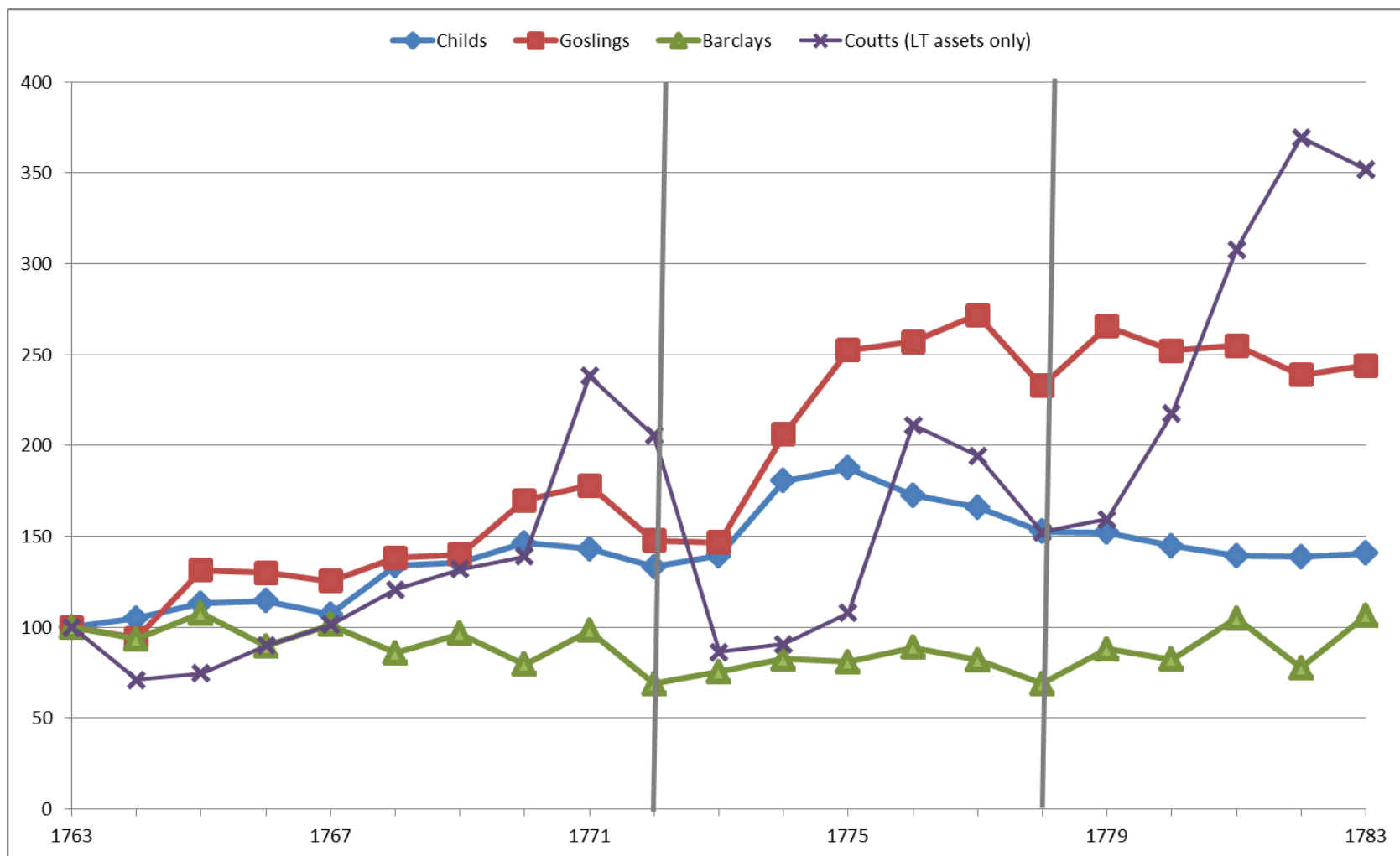


Figure 4. End of year normalised assets (1763 = 100) for Childs' Bank, Goslings Bank, Barclays Bank, and Coutts Bank, 1763-83. The figures for Coutts include only long-term assets, for the others they represent total assets. The crisis of 1772 and the entry of France in the American war (1778) are approximately marked by vertical lines. Sources: RBS CH/206/1-3, BGA 130/665-671, 130/719-24, 364/1-40 & 78-84, COU 1763-1783

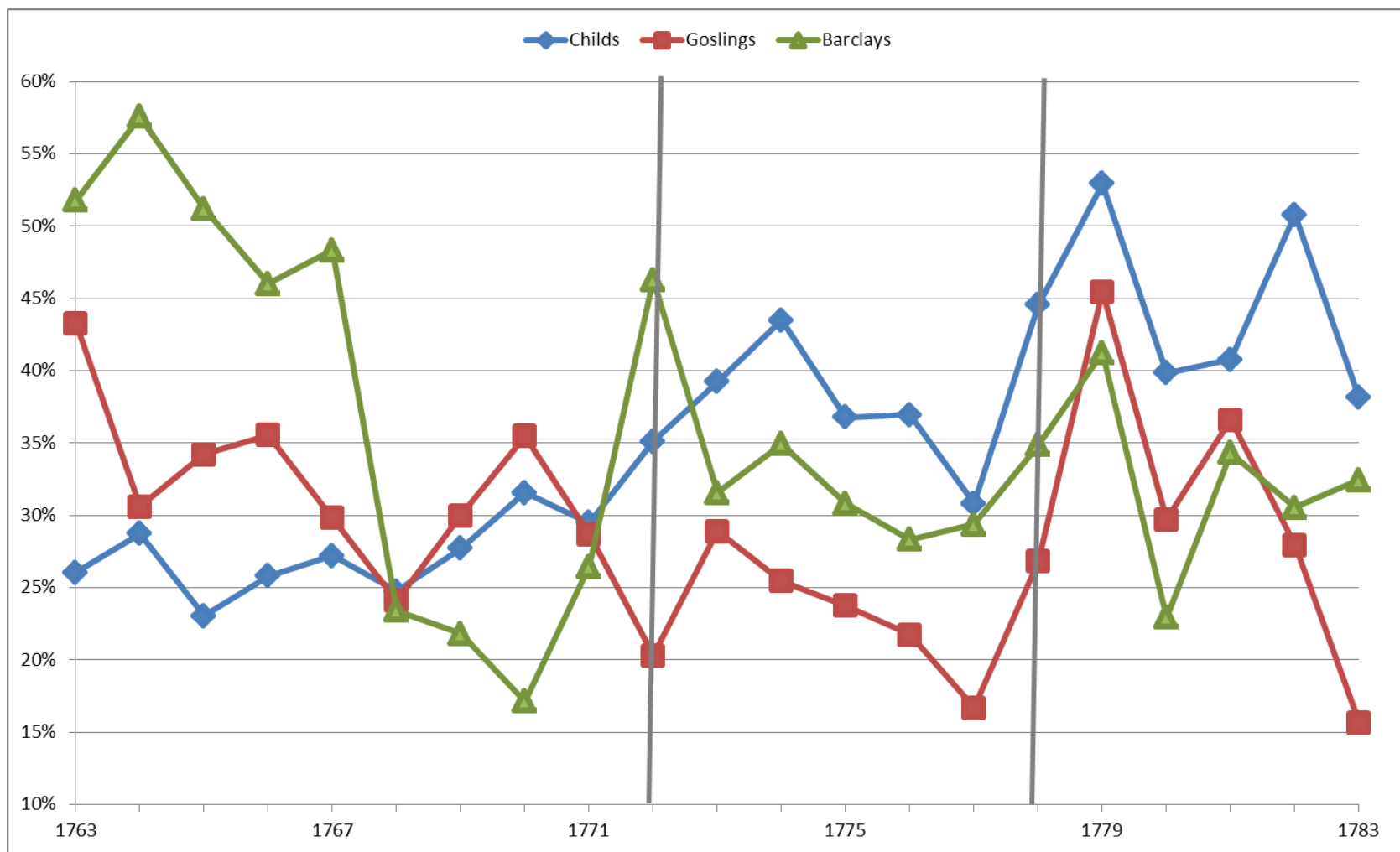


Figure 5. End of year cash-to-liabilities ratio for Childs' Bank, Goslings Bank and Barclays Bank, 1763-83. The crisis of 1772 and the entry of France in the American war (1778) are marked by vertical lines. Sources: as per Figure 4



Figure 6. Weekly cash balances of the British Linen Bank, 1771-4. The outbreaks of the June and December 1772 crises are approximately indicated by vertical lines. Amounts in pounds sterling. Source: BOS BLB 1/5/1/22-27

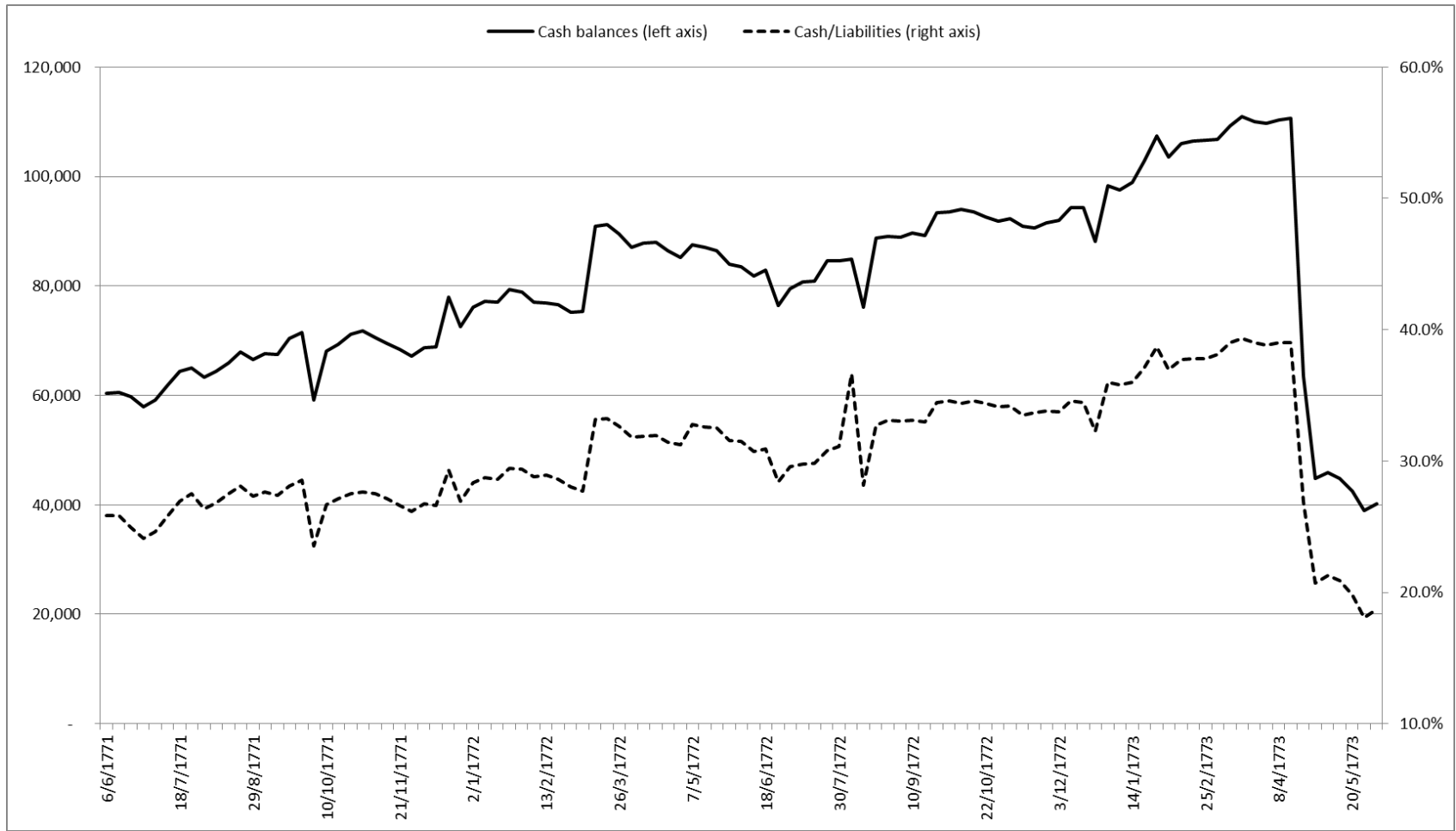


Figure 7. Weekly cash balances and weekly cash to liabilities ratio of the Aberdeen Banking Company, 1771-3. Amounts in pounds sterling. Source: BOS ABC 3/1/2-3



Table 6. Ayr Bank bills protested for non-acceptance in the hands of Hogg & Kinloch, London, and net position versus corresponding firms, August 1772. Arranged by date drawn (top) and corresponding firm (bottom).

<i>Date Drawn (1772)</i>	<i>Amount protested</i>	<i>Number of bills protested</i>
18-Jun	250	1
20-Jun	3,100	6
22-Jun	2,500	7
23-Jun	1,800	5
25-Jun	2,000	6
26-Jun	600	2
27-Jun	1,300	4
07-Aug	2,600	5
08-Aug	6,600	17
10-Aug	600	3
12-Aug	2,000	6
14-Aug	2,000	6
Total	25,350	68

<i>Corresponding firm</i>	<i>Amount protested</i>	<i>Net debt position 13 August 1772</i>
Dimsdale, Archer & Byde <sup>a</sup>	10,250	-
Sir George Colebrooke & Co. <sup>b</sup>	9,700	10,054
Boldero, Carter & Co	5,400	15,248
Mayne & Needham <sup>c</sup>	unknown	50,000

Amounts in pounds sterling. Net debt position: Ayr Bank owes to corresponding firm.

<sup>a</sup> Regular correspondents to February 1771

<sup>b</sup> Failed, March 1773

<sup>c</sup> Main correspondents for the firm. Both were partners in the Ayr Bank, for one share each.

Sources: BOS 20/30/3 (Hogg & Kinloch bills); *Precipitation*, Appendix IX, p. 110 (net position)

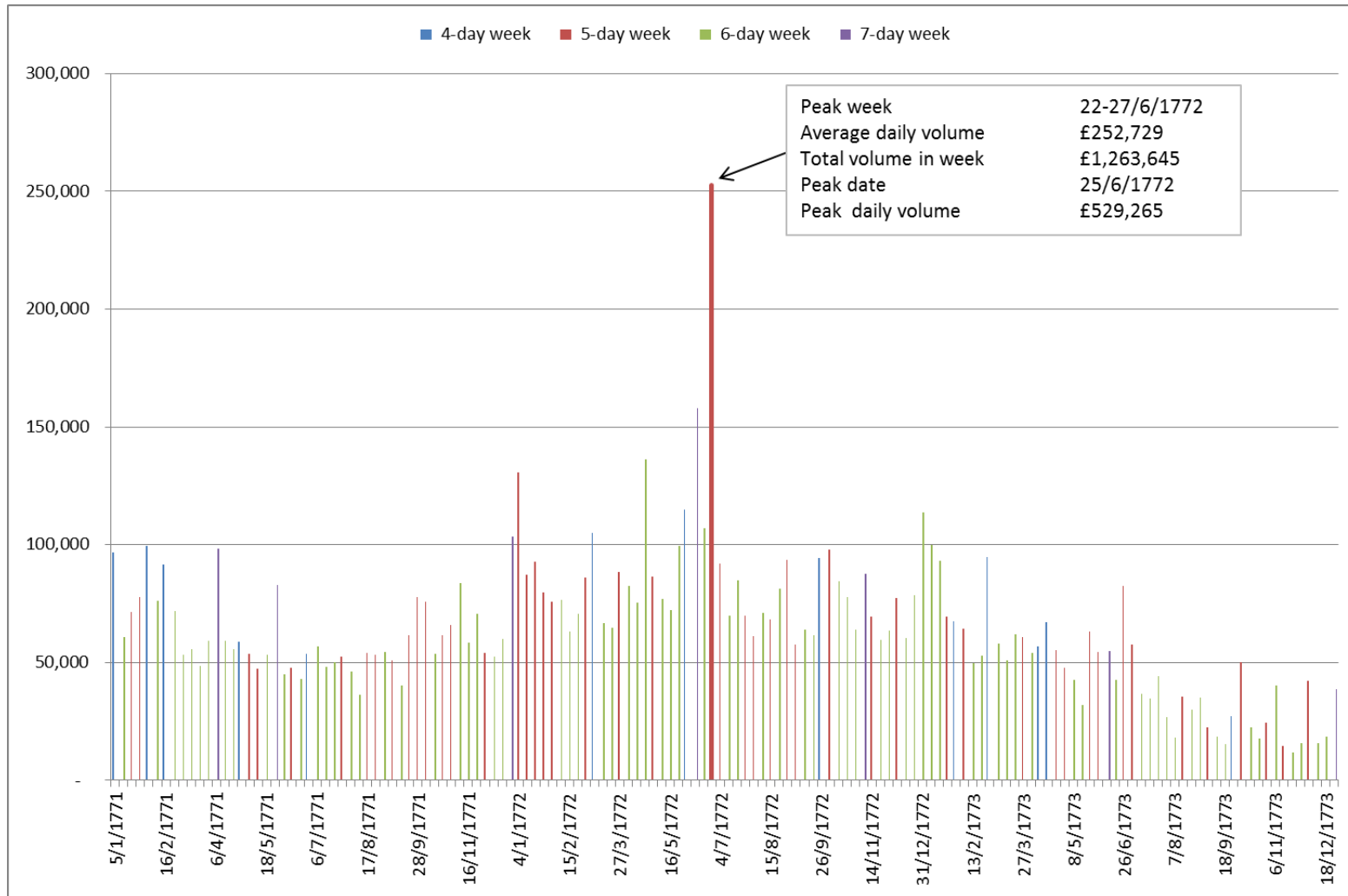


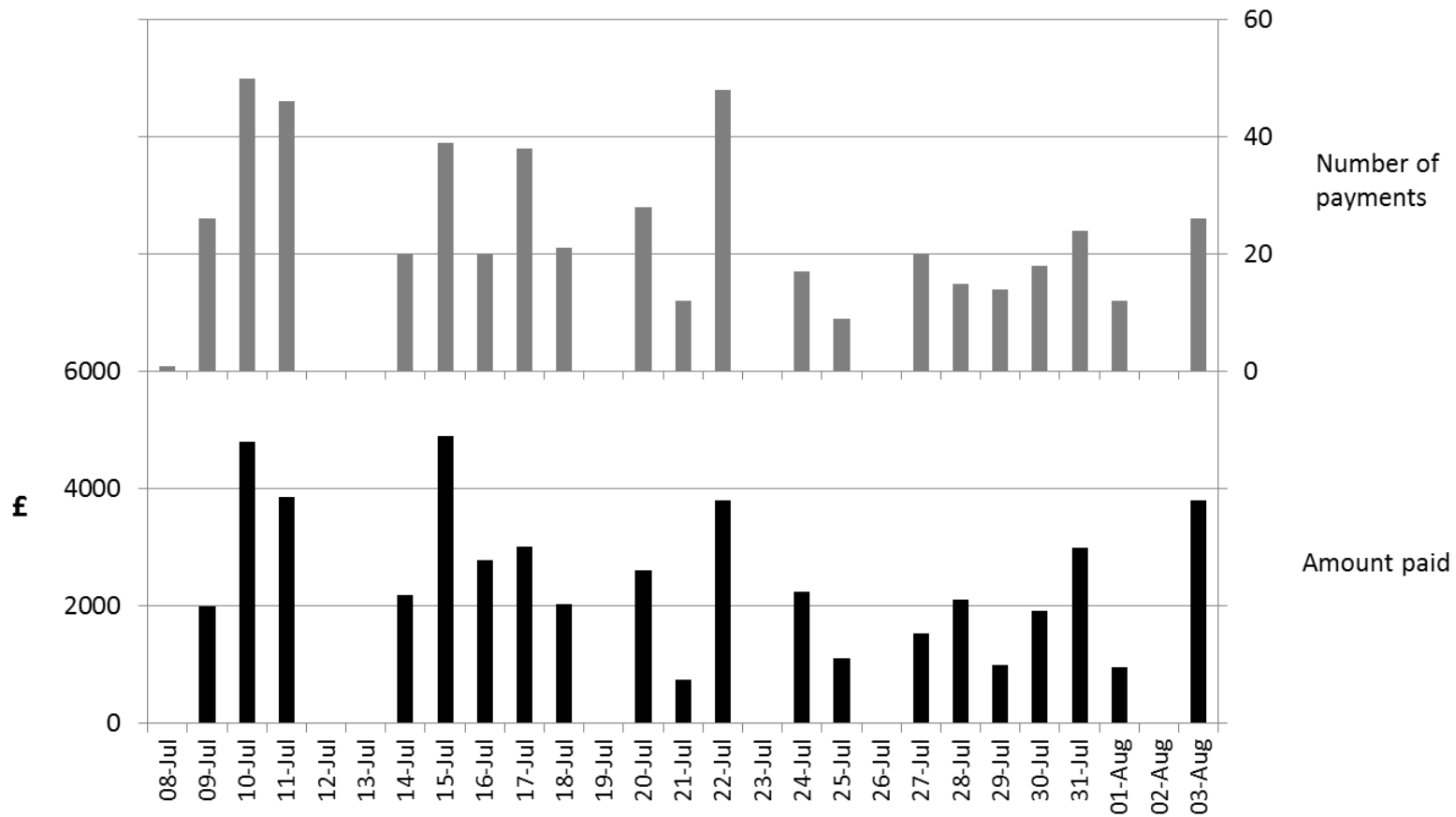
Figure 8. Weekly histogram of average daily volume of bills discounted by the Bank of England, 1771-3. Work weeks are according to the indication of the Bank’s own ledgers, with the exception of a few composite 7-day “work weeks” around major holidays created by the author for better clarity. Amounts in pounds sterling. Source: BOE, Banking Department General Ledgers, ADM7/20-22

Table 6. Bank of England targeted emergency liquidity, 1772. Amounts in pounds sterling

<i>Recipient</i>	<i>Date of Loan</i>	<i>Loan Amount</i>	<i>Date of Repayment</i>	<i>Repayment amount</i>
Robert Ladbroke & Co.	23/6/1772	30,000	11/7/1772	10,000
			25/7/1772	10,000
			30/7/1772	10,000
Charles Asgill & Co	23/6/1772	25,000	1/7/1772	25,000
Joseph Chaplin Hankey, Esq	23/6/1772	10,000	19/8/1772	10,000
Boldero, Kendall & Co	23/6/1772	9,000	16/2/1773	9,000
Snow, Denne & Co.	23/6/1772	50,750	21/8/1772	50,750
John Robert & Henry Drummond	23/6/1772	40,000	21/8/1772	30,000
	24/6/1772	30,000	24/12/1772	40,000
Archibald Stewart & Co.	23/6/1772	8,500	1/7/1772	8,500
George Shergold	7/6/1772	20,000	8/9/1772	20,000
Dorrien, Rucker & Co.	8/9/1772	20,000	11/11/1772	2,000
			13/1/1773	3,000
			3/2/1773	15,000
Sir George Colebrooke	16/10/1772	20,000	20/4/1773	20,000
<b>Total short-dated advances</b>		<b>263,250</b>		
(of which made only on June 23-24 1772			203,250)	
Assistance to William Alexander & Sons		160,000		
<b>Total direct loans made</b>		<b>423,250</b>		
Proposed augmentation of Ayr Bank discount facility (not concluded)			150,000	
Bank's readiness for committing directly			573,250	
Government's East India Company commitment through Regulating Act		1,400,000		
(less) Bank's rolling pre-crisis East India Company loan, now suspended (average)		(400,000)		
<b>Total direct public injection of capital</b>		<b>1,423,250</b>		

1772-3

Sources: BOE ADM7/20 fos. 691-4



Not shown: block payments of £30,000 and £8,681 to John Smith on 8 July and 15 July respectively

Figure 9. Daily debit activity of joint account of John Woodhouse, James Calvert and Peter Hodson at the Bank of England, apparently on behalf of Glyn & Hallifax. Sources: BOE C98/2766 fos 5985-93 & 6758-61, RBS GM/136

## CONTEMPORARY SOURCES ON 1772-3

### *Manuscript*

Bank of England Archives, London

Drawing Office, Customer Account Ledger: C98

Minutes of the Court of Directors: G4

Banking Department General Ledger: ADM7

Barclays Group Archives, Manchester: BGA

The British Library, London

Additional Manuscripts: BM Add

Coutts Bank Archives, London: COU

Lloyds Group Archives, Edinburgh:

Aberdeen Bank papers: ABC

British Linen Bank papers: BLB

Bank of Scotland papers: BOS

Melville papers: MEL

The National Archives, Kew, London: TNA

Order Books relating to Petitions against Declarations of Bankruptcy: B1

Bankruptcy Commission Files: B3

Bankruptcy Commission Docket Books: B4

Registers of Documents Filed in Bankruptcy Proceedings: B6

The National Archives of Scotland, Edinburgh: NAS

Duke of Gordon papers: GD44

Buccleuch Papers: GD224

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