

The Global Securities  
Market

*A History*

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## Crisis, Crash, and Control: 1914-39

### SECURITIES MARKET'S DURING THE FIRST WORLD WAR

Despite the possibility that a major European war could have broken out at any time in the 10 years before 1914, neither national governments nor financial markets had made any provisions for such an eventuality.<sup>1</sup> Governments had no plans to deal with a financial crisis resulting from the imminent threat of war or with the complex international transactions that linked national securities markets together on a minute-by-minute basis.<sup>2</sup> They had certainly not consulted those running the stock exchanges even though they could not have been unaware of how integrated such markets had become, as exhibited by the global nature of speculative booms, collapses, and crises. Consequently the approach to war and its actual outbreak came as an enormous shock to those dealing on the securities markets, and one for which all involved were totally unprepared. An expert on stock exchange law, Schwabe, writing in 1915, recounted what had happened from the perspective of an observer in London.

During July, owing to the European crisis and the great demand for money, enormous selling orders were received on the stock exchange, prices fell heavily, and many persons, including a large number of foreign clients of London, brokers with large accounts open, defaulted. On July 28th war was declared between Austria and Serbia. In the last three days of the month several foreign exchanges were closed, and there were several failures on the London Stock Exchange. Unless steps had been taken to prevent it, there would have been a number of further failures among the members of the stock exchange, and a large number of other persons would have been inevitably ruined. The stock exchange met the situation by closing its doors on July 31st and keeping them closed, and by passing emergency regulations and rules. On August 3rd there was passed the Postponement of Payments Act, giving power to His Majesty by Proclamation to declare a moratorium. On August 4th Great Britain notified the German Government that a state of war existed between the two countries. Since that date the moratorium has been extended, the Courts (Emergency Powers) Act has been passed, trading with the enemy has been dealt with by statutes and proclamation, and the Government has propounded a scheme for the assistance of both lenders and borrowers of money on the stock exchange. The Committee of the stock exchange has

postponed settlement, has inaugurated a new method of dealing with members unable to meet their engagements, and has taken steps to prevent speculation, forced sales, and undue depreciation of prices, and generally has made effective arrangements to alleviate the position of members and non-members alike who find themselves owing to the war involved in unexpected difficulties by reason of their stock exchange engagements.<sup>3</sup>

Behind this rather bland account the outbreak of the First World War meant a rapidly unfolding drama for the global securities market and especially the main players in it, as they tried to cope with a crisis that threatened to destroy both their institutions and members. This was done against a background where little support was received from their respective governments. This is clear from the diary of Sir R. W. Inglis, Chairman of the London Stock Exchange.

Thursday 30 July 1914

Dealings in the House practically nil and markets all flat. About 7 p.m. Mr Satterthwaite (Edward Satterthwaite, Secretary of the London Stock Exchange) called and said war was certain and that to prevent a panic and widespread failures we ought to close the House at 10 a.m. tomorrow for which hour the Committee was summoned. He also outlined the proposal for postponing the impending settlements. We got a motor, drove to Town and saw Mr Koch (William M. Koch, member of the Committee) (arranged by telephone before we left) and heard such news that I agreed with Mr Satterthwaite's suggestion and drove back home. Friday 31st July 1914.

Went up by 8.15 (train) and was with Mr Satterthwaite by 9.15 and agreed his Resolutions. Committee met at 10 and passed and confirmed them. It is believed this action will save the House from great disaster but whatever happens I wish to place on record that Mr Satterthwaite is entitled to the credit. He thought out the idea from first to last and drew up the Resolutions before he came to see me on Thursday night and I agreed that at once as I saw what would be the result of taking no action at all.<sup>4</sup>

Prior to that decision being taken there had been no consultations between the authorities at the London Stock Exchange, the officials at the Bank of England or those in government. The London Stock Exchange was left to fend for itself. The decision to close the market was taken in the face of collapsing prices and problems of payment for and delivery of securities, especially on international account. The enforcement of deals to buy or sell securities would bankrupt many members operating on credit provided by the banks and would have serious implications for the entire financial system. Such a crisis was not confined to the belligerent nations in Europe but was worldwide in scope. In New York a similar situation produced a similar response, judging from the views expressed by Noble, the President of the New York Stock

Exchange in 1915: 'The crisis had developed so suddenly, and the conditions were so utterly without historic parallel, that the best informed men found themselves at a loss for guidance.' When the news reached New York that the London Stock Exchange was not to open on 31 July 1914, an emergency meeting was held in New York. The Governing Committee of the exchange were called to meet at nine o'clock (the earliest hour at which they could all be reached, for it was summer and many were out of town), and at that hour they assembled in the Secretary's office ready to consider what action should be taken. In addition to the Committee many members of prominent firms appeared in the room to report that orders to sell stocks at ruinous prices were pouring in upon them from all over the world and that security holders throughout the country were in a state of panic.

Though some members saw this as an opportunity 'to make New York the financial centre of the world', most felt that any gain would be purely temporary and not worth the risk that the members of the New York Stock Exchange would be exposed to if it stayed open when all others had closed. Many members were holding securities on borrowed money or had made purchases on behalf of foreign clients and so were very exposed to the sudden and dramatic collapse in prices. As in London there was no confidence that the banks would support them by not calling in their loans. Under these circumstances closure appeared the only option. The brokerage house of Merrill Lynch was close to failure at this time. According to Noble, 'the Exchange' closed itself on its own responsibility and without either assistance or compulsion from any outside influence.<sup>5</sup>

All over the world there was a financial crisis caused by the realization that a major European war was imminent. This caused panic conditions on securities markets from Japan to Italy as well as in Europe and north America. Banks recalled loans and brokers were bankrupted because they were unable to deliver or pay for securities, or meet their borrowings because of the collapse in prices. The universal response was the closure of stock exchanges in order to avert a crisis which threatened to engulf the entire market and all those who bought and sold securities. Each stock exchange was forced to respond in this way to the wave of selling that had begun in the epicentre of the crisis in Europe. Such were the interconnections that news and orders were transmitted almost instantaneously around the world, forcing down prices and leaving brokers and bankers highly exposed. The Madrid, Montreuil, and Toronto stock exchanges closed on 28 July 1914; Amsterdam, Antwerp, Berlin, Brussels, Budapest, Rome, and Vienna on the 29th; St Petersburg and all the South American stock exchanges on the 30th; and on the 31st the London and New York stock exchanges closed. The Paris

Bourse had suspended all forward transactions as early as 25 July and was followed in that by the Couillisse on the 27th. That left only a nominal cash market, which was closed on 3 September. Within seven days the world's stock exchanges had ceased to function, such was the power and integration of the global securities market. Even minor stock exchanges, such as those in Barcelona, Shanghai, Vancouver, and Zurich had closed by 31 July. The Johannesburg Stock Exchange closed on 1 August, faced with an avalanche of foreign selling of South African mining stocks, which threatened to ruin their members as prices fell precipitously.<sup>9</sup>

These closures would not be brief, considering the worldwide nature of this intense conflict. Modern warfare required the mobilization of all resources available to each nation state, with implications for the domestic and international operations of securities markets. Consequently, there was a general reluctance among governments to condone a quick reopening. The securities market could provide rival attractions to investors for the use of savings, which belligerent governments wanted to monopolize for their own use. Moreover, speculative trading on the stock exchanges, with prices responding to military success or defeat, was considered a potential threat to both national morale and the stability of the national financial system and the foreign exchange rate. Conversely, the existence of a functioning securities market could be of advantage to those governments seeking to finance their war effort through successful bond issues. Governments thus had to weigh up the advantages and disadvantages of allowing stock exchanges to reopen in the months after the outbreak of war. In the meantime, stock exchanges themselves had to find ways of resuming trading that would avoid bankrupting members holding on borrowed money securities that had greatly depreciated in price, or who had agreed such purchases.

However, though stock exchanges were closed, buying and selling still took place elsewhere, on the street, in offices, or via the telephone. The longer the exchanges were closed the more active this unregulated market became. In New York the existence of a long-established and active curb market forced the New York Stock Exchange to create a limited market in stocks operating under minimum prices. By 28 November 1914 a cash market in bonds was re-established on the floor of the New York Stock Exchange. Stocks were added on 12 December, and the New York Stock Exchange formally reopened. This was either followed or even preceded by other US stock exchanges, indicating that the panic caused by the outbreak of war was over in that country by the end of 1914.<sup>7</sup> Similarly, the Shanghai Stock Exchange had reopened in November to counter a growing outside market, but only with minimum prices and no forward market. The Johannesburg Stock Exchange reopened in January 1915 in line with the London Stock Exchange, as both

were major markets for gold mining securities. In the meantime a street market had developed.<sup>8</sup>

In Europe the situation was more complex as the cost and disruption of military conflict continued to create problems and uncertainties for the securities markets. As an active inter-bank market had long existed in Germany, the need to reopen the stock exchanges in order to bring some order and regulation to buying and selling was less urgent or even necessary there. The Berlin Stock Exchange did not reopen until October 1917 and not fully for stocks until 3 December of that year. Dealing in bonds was not restored until 1 September 1919, after the war was over. Elsewhere in Europe the need to reopen the stock exchanges was more urgent, due to growing competition from outside markets and the need to provide a market for government debt. Few countries other than Germany possessed a well-established inter-bank securities market or the ability to tap the public directly for funds through the savings banks that traditionally placed their money in government bonds.<sup>9</sup> Accordingly, both internal and external arrangements were made that allowed stock exchanges to reopen towards the end of 1914 or in the course of 1915, as with Paris in December 1914, London in January 1915, and Amsterdam in February. These were only partial reopenings, with operations severely restricted by government control or supervision over the conduct of business or by internally agreed restrictions. The particular securities to be traded and the type of business that could be undertaken were all monitored and controlled, whilst minimum prices were often introduced to provide a floor to the market. Term dealing and short selling were all restricted or prohibited for long periods, being regarded as highly speculative and likely to disrupt the financial system. This was as true of exchanges in the main belligerent countries of Britain, France, and Germany as of those on the fringes such as Milan and Montreal. In many cases it was several years after the end of the war before such operations were again permitted. Paris saw a resumption of short selling on 2 January 1920, London on 22 May 1922 but Berlin not until 1 October 1925. In many cases the normal methods of trading in securities did not resume until the early or mid-1920s. Even when the Paris Bourse did reopen *ratios* could not be dealt with for time. Such restrictions even applied to the inter-bank market for securities in Germany, where forward transactions were also banned until 1925.<sup>10</sup>

Long before stock exchanges gradually reopened there was a recovery in the global securities market. Belligerent governments were quick to issue securities in order to tap the savings of their populations for use in the war effort. Between 1913 and 1919 the German national debt rose 20-fold from 4.9 billion marks to 92.8 billion, that of Britain rose tenfold from 50.7 billion

to £7.5 billion, and that of France rose fivefold from 33 billion francs to 151.1 billion. In Italy, a late entrant to the war, the national debt rose fivefold from 15.1 billion lira to 74.5 billion, whilst in Japan, a marginal participant, it almost doubled from 2.7 to 4.1 billion yen. Even neutral nations experienced a rapid rise in their national debt as governments took advantage of the inflationary environment to borrow funds to finance increased expenditure caused by the war, such as the disruption to trade and resulting economic distress. The long-term debt of the Dutch government doubled from 1,140 guilders in 1914 to 2,183 in 1919. It was not only in Europe that government borrowing came to dominate the issue of securities, throughout the British Empire dominion governments sold securities to their own people in order to support the war effort in Europe.<sup>11</sup> The New Zealand government issued a loan for £2 million in 1915, which was absorbed by local investors.<sup>12</sup> Similarly, between 1915 and 1918 the Canadian government raised \$2.1 billion domestically.<sup>13</sup> Although the United States did not enter the war until 1917 the increase in its national debt was one of the most spectacular, reaching \$25.5 billion in 1918 compared to \$1.2 billion in 1914.<sup>14</sup>

The result was an enormous and rapid expansion in the supply of government bonds around the world. As most of these were issued and held domestically their existence contributed to the growth of national securities markets rather than the global market. However, trading in these national debts was relatively subdued as they were often bought and held by individual and institutional investors for patriotic reasons. Consequently, activity on many securities markets around the world remained low for most of the war years, even when the stock exchanges did reopen. In Canada there was little interest in mining and oil stocks, for example, as investors placed their savings in government debt.<sup>15</sup> Contributing to this low level of activity were the restrictions imposed by governments and the actions of the stock exchange authorities themselves. These were designed deliberately to reduce market volatility and in this they were successful, especially in stock exchanges in London and Paris, financial centres of two of the main countries at war. Here money that would previously have been lent out to those holding securities as collateral was now absorbed by governments. The French government made particularly heavy use of short-term treasury notes to finance the war.<sup>16</sup> Under these conditions banks either lent directly to governments or bought short-dated bonds, so depriving the securities markets of much of their traditional business. In contrast, many smaller securities markets in neutral countries or those only on the fringes of the war did experience prolonged speculative booms. Their economies benefited enormously both from purchases made by nations at war and from the removal of foreign competition. Italy enjoyed great prosperity due to the demand for war

materials and the need to replace imports from belligerent nations. This fuelled much speculative activity based on abundant bank lending on easy terms.<sup>17</sup> A similar situation prevailed in Norway where there was a stock market boom between 1915 and 1920, as banks lent liberally to customers using securities as collateral.<sup>18</sup> In Japan there was also a boom as investors borrowed heavily from banks at low rates of interest to subscribe to new issues in the hope of making large capital gains.<sup>19</sup>

Consequently there was a reordering of stock exchange business as the smaller and more peripheral securities markets benefited at the expense of the larger and more central. However, the greatest casualty of the war was the global securities market itself. In order to subscribe to the securities issues made by their own governments to finance the war, British, French, and German investors all sold international securities. Furthermore, western European governments then took control of what remained of these securities and disposed of them as they sought to obtain the foreign exchange, especially US dollars, required to wage a war. The German government persuaded, and then forced, German investors to surrender their foreign securities in exchange for mark-denominated government debt, leaving little still in their hands when the war ended. By the end of the war all foreign securities had disappeared from the lists of German stock exchanges.<sup>20</sup> Similarly, over the period of the First World War there was considerable liquidation of French holdings of foreign securities, though this was mainly due to repudiation of their debts by both the Russian and Ottoman governments. As the main external holders of these debts French investors experienced the total loss of these investments.<sup>21</sup> In Britain, it was largely sale not repudiation that accounted for the massive liquidation of the holdings of foreign securities. By the end of 1915 British government sales in New York of US\$ securities, purchased from British investors, had reached \$23 million. Eventually in May 1916 British investors were forced to surrender such securities to the government. Overall, by 6 April 1919 a total of 2,027 different securities with a value of \$655 million had been purchased for resale by the UK government, whilst another £400 million US stocks and bonds were sold by UK investors themselves during the war.<sup>22</sup> This seriously undermined the status of both London and Paris in the global securities market as they lost the very securities that had been traded internationally. As the Netherlands was neutral throughout the war, Amsterdam benefited greatly from being conveniently located for investors in Germany, France, and Britain. The considerable inflow of funds in search of a safe haven helped to place the Amsterdam Stock Exchange, when it reopened, at the centre of an active international market in securities. There was an enormous increase in business on the Amsterdam Stock Exchange, which became the interface between the

belligerent nations themselves and with the United States, which was neutral until 1917. By selling US\$ securities on the Amsterdam Stock Exchange, which were then resold in New York, the German government gained access to the foreign exchange it required despite attempts by the Allies to prevent this happening.<sup>23</sup>

Nevertheless, even on the Amsterdam Stock Exchange domestic business became increasingly important as a result of the war. The number of foreign securities quoted on the Amsterdam Stock Exchange fell from 840 in 1914 to 746 in 1918 whilst issues of Dutch government debt and domestic industrial expanded rapidly. Much of the international securities business transacted on the Amsterdam Bourse had been underpinned by the *prolongate* system of finance. However, this was frozen at the outbreak of war and the suspension of the market. Even when the Exchange reopened it was impossible to revive the *prolongate* system because of the collapse of confidence. Instead, investors placed their savings with commercial banks and switched their investments to domestic securities, selling some of their holdings of US railroad stocks and bonds in the process.<sup>24</sup> The increasing repatriation of securities both contributed to the development of securities markets and gave them a strongly domestic focus. Swedish investors, especially the banks and insurance companies, repurchased all the country's external debt during the war and traded it domestically, boosting the local securities market. Other neutral nations in Europe such as Greece, Norway, and Switzerland did the same.<sup>25</sup> The Spanish case exemplifies the effects of this. Spain benefited from the war through supplying both France and Britain. This caused inflation and expansion, with a rapid increase in the number of banks and their lending. In the process Spanish investors were able to buy back securities held abroad, especially the government debt and railway stocks and bonds held in France. The Spanish national debt held abroad fell from 1,028 million pesetas in 1914 to 78 million in 1925. In addition, there were substantial re-purchases of Spanish railway securities held abroad. More than 1.5 million shares of the Compañia del Norte flowed back to Spain, as did shares in various Spanish banks such as Banco Hipotecario and Banesto. The substantial German participation in the largest Spanish electrical firms was also liquidated. The Spanish government itself issued new public loans totalling around 3.8 billion pesetas. The result was a substantial increase of business on the Madrid Bolsa, rather than Barcelona, as that was where the government debt and railroad stocks and bonds were traded.<sup>26</sup>

Elsewhere in the world securities markets benefited from the activity produced by the trading in repatriated securities and the issues made by national governments and domestic businesses. Such was the increased volume of business in China that an additional stock exchange was established

in Peking in 1917 to provide a domestic market for the bonds issued by the Chinese government.<sup>27</sup> Though Japan was involved in the war militarily, as an ally of France and Britain, the main theatre of activity was far away, and its economy benefited enormously from the removal of external competition in the Asia/Pacific region. The resulting economic and financial boom in Japan led to the repatriation of externally held securities and increased domestic issues, financed by greatly increased by credit.<sup>28</sup> Nevertheless, not all securities markets outside Europe benefited from the war. In neither Australia nor Canada was there much speculative activity in their tightly controlled stock exchanges, with available savings largely absorbed in financing their share of the imperial war effort. There was rather a greater domestic focus as their own governments increasingly sought to borrow domestically, now that access to London was either difficult or impossible. Trading in bonds on the Montreal and Toronto stock exchanges rose from \$6.1 billion in 1913 to \$132.1 billion in 1919. This favoured the major stock exchanges, giving an impetus towards the centralization of both the Canadian and Australian securities markets.<sup>29</sup>

However, the greatest beneficiary of distress sales of European holdings of foreign securities was the United States, as the largest pre-war debtor nation. On 1 July 1914 an estimated \$5.4 billion in US securities were held abroad. By 31 December 1919 that amount had shrunk to \$1.6 billion. Investors in the United States bought back almost \$2 billion worth of securities in the first three years of the war, often at sizable discounts, from sellers in Europe or from governments desperate for dollars. The British, the largest holders of US corporate stocks and bonds, were the major sellers. A total of \$2.6 billion, or 70% of their holdings, had been sold by 1919. Railroad securities and those of major industrialists like US Steel led the disposal. Business revived on the New York Stock Exchange, where the largest and most liquid of stocks were traded. Turnover rose from 48 million shares in 1914 to 213 million in 1916 before falling back slightly. Reviving again, it reached 313 million shares in 1919, propelled by a domestic investor boom due to the inflationary environment, easy bank credit, and rising confidence. This booming activity spread. The cash market in New York flourished during the war whilst turnover on the Boston Stock Exchange rose from 3.5 million shares in 1914 to 13 million in 1916 before falling back to 3.9 million in 1918 and then recovering to 9.2 million in 1919. Expansion in the securities market encouraged major US banks to extend their operations in that direction, not only through increased lending with stocks and bonds as collateral but also in issuing and trading. In 1916 National City Bank acquired the investment banking firm of N. W. Halsey. The boom in US securities was given a further boost in 1917 when the United States entered the war and government debt rose sharply. The number of US investors holding government bonds grew from 350,000 in

1917 to 11 million in 1919 due to patriotic subscriptions to war loan issues. These raised \$21.5 billion between 1917 and 1919. The US bond market, which had been the poor relation of London and Paris before the war, was transformed. Turnover in bonds on the New York Stock Exchange rose from \$469 million in 1914 to \$1,052 million in 1917 and then to \$3,772 million in 1919 due to US government borrowing. In addition, though there was no bond market of any significance outside New York, there was substantial trading between the major banks and via specialist bond houses. New York was now on a par with the major European financial centres.<sup>30</sup>

#### SECURITIES MARKETS AND THE LEGACY OF THE FIRST WORLD WAR

The consequences of the First World War for the global securities markets were profound and permanent. A major shift had occurred in the location of the central players in this market, with the greatly increased importance of the United States being only one of the most obvious consequences. However, it took time for a new balance to emerge, reflecting the diminished importance of London, Paris, and Berlin and the increased importance of New York, Amsterdam, and Tokyo. This was not simply due to the repatriation of securities during the war but to a switch among borrowers, especially those in Canada and Latin America, away from European financial centres towards New York and wealthy US investors. By the end of the war the German securities market had lost its international orientation, and became wholly focused on domestic stocks and bonds.<sup>31</sup>

A period of instability was inevitable. The global securities market had lost most of those securities that had constituted an international currency, namely Russian and US stocks and bonds. Russian government debt and corporate securities had ceased to have value whilst US railroad and industrial stocks and bonds had flowed back to the United States and were now much more closely held at home. Between 1914 and 1918 foreign holdings of the common stock of the US Steel Company shrank from 1.3 million to 0.5 million, or from 25% to 10%, and then declined further after 1918, dropping to 0.2 million (4%) by 1923. As this had been a core arbitrage stock, widely held and actively traded across north America and Western Europe, its disappearance was a major blow to the global securities market.<sup>32</sup> New securities issued during the war were no real substitute as they were largely government debt held by national investors. Even where securities had been issued externally they tended to revert to national investors fairly quickly. The

French government had made four issues in London between November 1915 and November 1918 raising £54.5 million. However, these were denominated in francs and depreciated enormously in the early post-war years when the franc was devalued against the £, and were bought back at low prices by French investors.<sup>33</sup> Again, it took time for new securities to appear to replace those which had served as liquid stock before 1914.

The war therefore boosted national securities markets rather than the global market. However, four years of conflict had created a highly unstable financial position in numerous countries, and national markets themselves were affected. The belligerent nations had spent enormous sums of money, financing their expenditure not only by taxing and borrowing but also by printing money, creating an inflationary situation at home and abroad. Advances to the French government by the Bank of France rose from 6% of total assets in 1914 to 62% in 1918.<sup>34</sup> As this money had been spent in waging a war with no productive results for those involved, there were no income-generating assets to service the debts created or to match the vastly increased purchasing power of populations around the world. Once hostilities ended and government spending ceased, national banking systems found themselves vulnerable to a collapse in the value of the assets acquired during the war and in the brief flurry of post-war prosperity. No matter whether these assets were physical plant and machinery or stocks and bonds used as collateral; in many cases they no longer generated the income required to service the loan or possessed a redemption value. One measure of how wartime inflation had undermined the stability of national financial systems was the fact that in all major economies the ratio of bank reserves and capital to bank liabilities worsened between 1913 and 1920. The ratio fell from 10% to 7% in Britain, 20% to 12% in France, 39% to 4% in Germany, 53% to 29% in the Netherlands, 24% to 15% in Belgium, 31% to 15% in Denmark, and from 20% to 12% in the United States. Regardless of the different nature of these banking systems, all were left highly exposed in the immediate post-war years when the spending boom came to an end and inflation turned into deflation. This in turn had serious implications for the national securities markets.<sup>35</sup>

Finally, a long-term consequence of the First World War was to greatly enhance the level of government intervention in securities markets. The suspension of trading and the subsequent gradual resumption of business under conditions controlled, supervised, or permitted by governments had made central bankers and treasury officials aware of the power they possessed over organized stock exchanges. Even after the termination of hostilities government intervention continued, if only as a means of policing the abuses that had characterized the pre-war years, whether it was the perceived evil of speculation or the more warranted problems associated with fraud, insider

dealing and market manipulation. However, self-interest was also at work as governments, faced with a volatile foreign exchange situation and the need to finance huge debt overhangs from the war years, saw control over the securities market as one of the tools available to them. Consequently, there was no rapid return to the pre-war situation of unsupervised self-regulation, where it had prevailed. In Britain the government exercised informal control over the London Stock Exchange well into the 1920s, as it tried to cope with the international weakness of the £ sterling and the domestic need to refinance short-term borrowings. Similarly in Canada, under government influence, the self-regulation of the securities market was considerably tightened. Only in the United States was intervention not attempted, with the Capital Issues Committee, only formed after the United States entered the conflict in 1917, being discontinued in August 1919. States had long been active in maintaining orderly markets in continental Europe, and this was often translated into further controls during and after the war. As early as 5 August 1914, the Spanish government legislated to give itself increased direct control over the stock exchange, and this was reinforced with additional controls in 1918. In Denmark in 1919 the government acquired legal control over the Copenhagen Stock Exchange whilst in Belgium the government appointed a commissioner to oversee the stock exchanges. One result of this increase in government intervention was to restrict foreign access to national securities markets, desired by governments faced with crippling debts to finance during and after the war. In France the securities market was practically closed to foreign issues during the war and a law of 1916 banning foreign issues remained in force until the late 1920s. Similarly, in Spain in 1918 government controls restricted foreign access to its securities market, despite the growing popularity of Latin American issues among investors.<sup>36</sup>

Global securities had thrived when government intervention was minimal and the level of confidence among investors was high. The war itself shattered that confidence as those holding Russian securities lost everything whilst those holding Austrian, Bulgarian, and Turkish securities also suffered large losses. Post-war inflation in Germany and France then caused substantial further losses. The trust in international investment that had flourished in the decades prior to 1914 had been greatly undermined and would take years to rebuild. Compounding this lack of trust was an operational difficulty as the centres through which these financial flows took place had also been badly affected. Berlin had been destroyed as an international financial centre whilst Paris did not begin to recover its position until after the stabilisation of the franc in 1927. This left London, though without much of the resources of the past, whilst New York was not immediately able to play a full role. The position of New York had always rested upon foreign interest in US

securities not US interest in foreign securities, which left it with a rather passive role in the global securities market. Though this did change with the war, and New York's position was helped by the arrival of foreign bankers and brokers, a rapid reversal was not easy to achieve, given the preference among US investors for domestic assets. Within Europe financial centres in neutral countries had benefited from the war but none were in a position to occupy the place of either London and Paris, or even Berlin, in the global securities market. The Swiss were very domestically focused and made no attempt to develop an international presence. Dutch financiers focused on replacing London in terms of European trade finance rather than becoming an international centre for the trading of securities. Stockholm did become a more important component of the global securities market but only played a regional role for Scandinavia. With trust absent and operational efficiency impaired governments could have intervened to help restore confidence and repair the trading system but their actions only compounded the difficulties. Faced with more pressing domestic problems governments frequently intervened to hamper the international mobility of securities and payments. Einzig probably reflected the prevailing thinking of the post-First World War governments in observing that '[a]lthough the existence of a certain amount of securities that have free access to several markets is desirable, an excessive amount of such international counters may endanger international monetary stability. Here was ample justification for control rather than freedom.'<sup>37</sup>

The First World War thus caused a major disruption in the operation and structure of securities markets around the world and the domestic and international financial systems within which they operated. Its consequences were wide-reaching and long-standing. It totally transformed the basis upon which the global securities market had operated before 1914. The integration of national securities markets was now hindered by government intervention, often aimed at restricting external access or discouraging foreign investment. There was a shortage of internationally mobile securities, as these had been largely liquidated and replaced by inter-allied debts that did not possess active markets in numerous financial centres (see Table 6.1). Finally, there was now a high degree of fragility inherent in both national and international financial systems leaving them highly vulnerable to any economic difficulties. Even alone each of these problems would have been a serious blow to the global securities market. Together they threatened its entire existence if it was not given the time and the freedom to adjust to the fundamentally different circumstances.<sup>38</sup> Though unrecognized at the time the details on Russian securities and the reduction in US securities held abroad, from \$5.4 billion to \$1.6 billion, represented a major disaster for the world economy. It removed, at a stroke, the most mobile assets that had played such an

Table 6.1. Inter-allied war debts in 1919: Lending and borrowing (£ million)

Borrower/Lender	UK	France	US	Total borrowed
UK	—	—	842	842
France	508	—	550	1,058
Russia	568	160	38	766
Italy	467	35	325	827
Others	197	160	135	492
Total lent	1,740	355	1,890	3,985

Source: Derived from C. P. Kindleberger, *A Financial History of Western Europe* (London, 1984), p. 307.

important role in maintaining international equilibrium at a time of fixed exchange rates, and replaced them with nationally held assets. Between 1913 and 1920 the nominal value of the National Debt quoted on the London Stock Exchange rose by £5.4 billion or from 9% of all quoted securities in 1913 to 33%. Also, capital markets became much more nationally orientated. At the institutional level stock exchanges now operated within a much more restricted environment whether imposed externally by governments or a product of the regulatory regime imposed during the war.

#### THE 1920s

The effects of the First World War extended far into the 1920s. Immediately after the end of the war there was a boom during which wartime shortages were filled. This, in turn, created a mood of optimism that underpinned both further lending by banks and speculative conditions in securities markets. Eventually, however, in the early 1920s there was a stock market collapse in the major European centres, Japan, and the United States.<sup>39</sup> As many banks had made loans with securities as collateral this stock market collapse endangered both them and the entire financial system. A greater proportion of bank assets than before the war were tied up in loans and investments that would be difficult to liquidate quickly, whilst a greater proportion of funds were deposits that could be easily withdrawn. Though a number of banks did collapse or were left with a portfolio of unsaleable assets it did encourage greater caution in making loans and a demand for more marketable securities as either investments or collateral. In some countries, especially Italy, the initial response to the stock market collapse was for banks to buy even more securities in order to support their value as investments and collateral. This prevented a widespread collapse in confidence, and thus averted a financial

crisis, but it also left banks with large holdings of securities that could not be sold in the late 1920s.<sup>40</sup>

A more common response to these financial crises was government control of some kind. Rampant speculation and bank collapses were seen as linked and so governments took steps to prevent the latter by checking the former. In Sweden much bank lending during the war had been to companies with securities as collateral. When the market began to fall in 1918 the banks faced serious trouble as the loans could not be repaid, the securities could not be sold, and depositors started to withdraw their money. Faced with a looming crisis the government began to regulate the stock exchange as early as 1919, and again after a series of crises between 1920 and 1923. It intervened to forcibly separate deposit and investment banking, believing that to be the root cause of the problem. Similar developments unfolded elsewhere in Europe, such as Spain and Norway, as well as further afield. In Japan steps were taken to separate investment and commercial banking after a financial crisis in 1927, whilst in 1925 the British government in India started to exert some control over the Bombay Stock Exchange. The Mexican government and then the Turkish government placed their stock exchanges under government control in 1928 and 1929 respectively. One long-term consequence of the First World War was thus a readiness among governments to intervene in their domestic securities markets when they felt threatened by crises. They attempted to prevent speculation and to create a division between banking and the securities market. What concerned governments most was a collapse of the banking system, which would pose much more of a threat to economic and social stability than the rise and fall of speculation on the securities market.<sup>41</sup>

The national financial systems most endangered were in central Europe, particularly Germany and Austria, where the post-war financial legacy was made more difficult by rampant inflation. Currency in circulation in Germany rose from 6.3 billion marks in June 1914 to 33.1 billion in December 1918, or a fivefold increase during the war, but then grew to 17.393 billion by June 1923, an increase that was over 100 times greater. This inflation destroyed the value of fixed interest securities denominated in marks, including government debt, and much of what remained of banking capital. The major Berlin banks lost c.30% of their capital and c.40% of their reserves due to the 1920s' hyperinflation. This left these banks highly vulnerable to any failures among their major customers. In Austria many smaller banks either collapsed or merged as they no longer had the capital and reserves to survive defaults, having overextended themselves during the speculative boom on the Vienna bourse during 1923-4. Consequently, in both Germany and Austria banks were driven to operate on the basis of deposits rather than

capital, leading them to develop branch banking. Between 1914 and 1924 the Diskonto-Gesellschaft took over thirty-six smaller banks whilst Deutsche Bank absorbed twenty-one others and Dresdner fourteen. By 1925 the seven leading Berlin banks were dominant but they still remained weak as they had been unable to rebuild their assets. Though they attempted to restrict long-term lending this proved particularly difficult given the established traditions within German and Austrian banking and the need for funds from their business customers in the aftermath of the rampant inflation of the early 1920s. The largest companies in these countries issued securities abroad in the 1920s, in both London and New York. However, that still left the banks provided by accepting deposits from both home and abroad. Increasingly in the 1920s German and also Austrian banks used short-term funds borrowed from foreign banks to finance local lending. The Frankfurt Bourse became an important market for the issues of German chemical companies.<sup>42</sup> Though this lending was, nominally, short term it could not at once the sums they had borrowed. Whilst the securities market was buoyant this strategy worked, as loans could be repaid through public issues. However, this was a much more dangerous situation than in the past when the Universal banks had compensated for a more illiquid lending and investment policy by employing a much higher level of capital.

By 1929 the ratio of capital to deposits in German banks was 1:1, around the British level, and German bankers were well aware of the risks they were running. During a British inquiry in 1929-31 into the relationship between finance and industry, the German banker Jacob Goldschmidt of the Darmstädter und Nationalbank was asked whether 'the German banker, like the English banker, does not like to have his money tied up permanently in industry'. He replied emphatically, 'No, the German banker dislikes that as much as any banker anywhere else in the world'.<sup>43</sup>

With the stock exchange crisis in Germany on 13 May 1927 German bankers, faced with loans they could not recall, financed long-term loans out of short-term deposits, which could be easily withdrawn, whilst the weakness of the stock market made it impossible to sell portfolios of securities. On this occasion they were lucky as the market recovered but any prolonged collapse would have exposed the banking system's vulnerability.

In France and Britain the condition of the securities market was less precarious as their financial systems had been less damaged by the war and subsequent monetary turmoil and had firmer foundations. In France, after the loss of a large proportion of the outstanding international holdings during the war, there was an understandable reluctance to invest abroad. This was

compounded by continuing government restrictions on overseas investment. Various taxes and laws biased the French market against foreign issues and prevented the revival of Paris as an international financial centre. Paris ceased to be a central component in the global securities market for most of the 1920s despite the rising prosperity of the French people after the economic difficulties of the early 1920s. Part of this wealth was absorbed by the French government, which issued bonds to the value of 16 billion francs in the 1920s. However, by the late 1920s French banks were awash with money and desperately looking for ways to employ deposits. Investment banks sought opportunities in commercial banking whilst commercial banks invaded the territory of the investment banks, such was the shortage of profitable openings in their traditional business. Advances against securities made by banks expanded enormously, peaking in 1929. One outlet was the stocks and bonds issued by a growing number of French joint-stock companies. The Coulisse, in particular, replaced foreign securities with the shares of French companies operating in such new sectors as cinema, photography, and automobile manufacture, generating a very large turnover. However, even the Parquet, which was dominated by activity in French government bonds, quoted 663 French companies in 1929 compared to 338 in 1921. The Coulisse quoted 334 compared to 139. In addition the provincial bourses in such cities as Lyons and Lille provided active markets for local industrial securities. There even developed in Paris an additional and unregulated curb market, the *Marché Hors Cote*, to cater for growing investor interest in such securities. By the late 1920s there was a limited recovery of the role played by Paris within the global securities market. Once again it became a market for government bonds with issues by Bulgaria, Hungary, Poland, Romania, and Turkey between 1927 and 1929. However, there remained a strong reluctance to become involved in external investment, apart from the repatriation of that part of the national debt held abroad. Consequently, despite the growing activity in domestic stocks and bonds, the overall importance of the securities market within the French economy roughly halved during the course of the First World War and the 1920s.<sup>44</sup>

Unlike Paris the London securities market remained a major international market in the 1920s. This was despite continuing intervention by the Treasury and the Bank of England to ensure its operations met the government's perceived national needs, especially in the early years after the war. A particular aim of government policy was to restrain investment abroad as this provided competition for its own financing requirements and put pressure on the sterling. It was not until late 1922, eight years after the outbreak of war, that some semblance of normal trading practices were restored on the London Stock Exchange. However, there remained one major

casualty in the London Stock Exchange's international business, which was now taking place at a much reduced level due to the long period of control and the disposal of so many foreign securities. In addition, increasing enforcement of the rules on minimum commission rates and the refusal to admit banks and foreign brokers as members meant that much of what remained of the international market in London in the 1920s was undertaken outside the London Stock Exchange. A growing band of American brokers opened London offices to provide direct contact to the New York market for the numerous British and foreign banks still in London. There was also a revival of interest among British investors in foreign securities despite government restrictions and taxes. Over the period 1920-9 securities worth £1.2 billion were issued in London on behalf of overseas borrowers. However, this was noticeably lower than before 1914, both absolutely and as a proportion of the total. Whereas between 1910 and 1913 overseas loans had comprised 71% of all new issues, during the 1920s their share was only 37%. London now faced far greater competition for international business and was largely deserted both by overseas railway companies seeking new finance and by foreign governments. There remained colonial governments, whose securities found favour in London because of the imperial links, and companies involved in such activities as oil production, metal mining, and rubber plantations. In addition, central European enterprises turned to London as a means of rebuilding their capital after the financial and monetary turmoil of the early 1920s.

One factor undermining the attractions of the London market for foreign securities issues was the weakened links with the money market. It took time for lenders to recover sufficient confidence to begin lending extensively to those providing securities as collateral. Loans to members of the stock exchange, by British banks, for example, grew from only £18 million in 1921 to £48 million in 1928, whilst foreign and overseas banks were attracted to better rates in New York. This weakened relationship was due partly to the nature of the securities to be found in London. Though British investors did retain large foreign holdings in 1918, such as Argentinian and Indian railways, few commanded the international appeal of the pre-war American securities. A few north American securities still continued to be widely held and actively traded, as with US Steel and Canadian Pacific Railway. A small number of large mining companies, especially those involved in South African gold but including International Nickel of Canada, attracted worldwide interest, as did the Anglo-Dutch oil company, Shell. However, compared to the billions of dollars worth of securities traded in London before 1914, these were but little compensation. Though the growing interest of US investors in British corporate stocks, matched by the attractions of minor US industrials for

British investors, did boost the Anglo-American trade in securities, there was no longer the volume of business to support the really active markets that had previously been so attractive for the employment of short-term funds in London.

In contrast to the weakened position of foreign securities in the London market those issued by domestic borrowers grew enormously. The principal cause was the great growth of UK government borrowing in order to finance the war effort. The British government entered the war with debts of around £0.7 billion and finished it with £7.5 billion, of which over £6 billion had come from British savers. A large proportion of the British people had become investors for the first time through buying War Bonds. A 1918 estimate suggested that the number of investors stood at 13 million compared to 1 million at the outbreak of war. In the 1920s these investors were attracted to the stocks and bonds issued by prominent British industrial and financial companies. With many of these companies firmly entrenched in the domestic market, and dominating particular branches of the economy, they offered some immunity from the problems of the world economy that affected both foreign government bonds and British companies operating overseas, like Argentinian railways or Far Eastern rubber plantations. In 1926 the collective number of shareholders in seven of the largest British companies was 385,500. Clearly, a consequence of the First World War was to shift the London securities market towards a much more domestic focus leaving it with a rump of foreign stocks and bonds for which it was, largely, the sole market, namely the debt of imperial governments and Argentinian and Indian railway stocks and bonds. This was far removed from the position it had occupied before 1914.

At a national level much activity took place in the global securities market during the 1920s, despite the problems of financial instability at home and abroad (Table 6.2). Securities continued to be regarded as a cheap and convenient way of raising finance by both government and business across the world, with the exception of the Soviet Union where state ownership and self-reliance were now the preferred options. Elsewhere, securities markets continued to evolve, boosted by the repatriation of assets previously issued and held abroad. This was especially true for the various Latin American stock exchanges such as those in Asunción, Buenos Ayres, Lima, Mexico City, Montevideo, Rio de Janeiro, Santiago, and Valparaiso, all of which had benefited from the acquisition by local residents of the securities once held by British investors of British companies operating there. In 1921, the transfer of ownership of Bolivian mining stocks from British to local investors generated a great deal of business on the local exchanges. Across the world there now existed a much larger basis for national securities markets as domestic investors held many securities that had previously been traded in

Table 6.2. Securities as a proportion of national assets, 1927-30

Country	Government debt (%)	Corporate bonds (%)	Corporate stocks (%)	Domestic securities (%)	Foreign assets (%)	Total (%)
Belgium	7.6	0.5	7.9	16.0	6.1	22.1
Denmark	3.0	1.04	13.0	16.4	-0.4	16.0
France	14.6	1.7	2.7	19.0	0.8	19.8
Germany	2.4	0.5	3.0	5.9	-1.3	4.6
India	3.4	0.6	0.6	4.6	-4.1	0.5
Italy	11.7	0.5	3.8	16.0		16.0
Mexico	0.2		6.4	6.8		6.8
Japan	5.0	1.7	6.8	13.5	1.0	14.5
Norway	7.4	0.6	4.7	12.7		12.7
Russia	0.6			0.6		0.6
South Africa	7.3	—	12.0	19.3	—	19.3
USA	5.7	1.4	10.6	17.7	4.0	21.7
UK	18.3	2.6	15.7	36.6	10.8	47.4
USA	3.4	3.9	19.4	26.7	1.3	28.0

Source: R. W. Goldsmith, *Comparative National Balance Sheets* (Chicago, 1963), National Tables.

such centres as London and Paris, or Berlin and Vienna. The holdings of securities by Japanese commercial banks, which had already reached 0.8 billion Yen in 1918, grew to 3.3 billion in 1929, for example.

The result was growing activity on securities markets in Africa, Asia and Latin America. The number of companies quoted on the Shanghai Stock Exchange rose from 97 in 1920 to 113, with most being either rubber plantations or involved in local manufacturing, especially in cotton textiles. This led to the formation of additional stock exchanges in new centres such as Beirut and Madras in 1920, Bogotá in 1928, and Casablanca in 1929. Also in 1929 brokers in Buenos Ayres acquired a dedicated trading floor within the mercantile exchange. However, there was no dramatic transformation of these national securities markets despite the transfer of some business from western Europe. The New Zealand securities market continued to be dominated by mining shares despite the fact that more of the New Zealand government's borrowing was done locally. It was often the smaller and less traded issues that were made in New Zealand, such as the Wellington City Council issue of 1929, and London remained an active market for the largest and most active New Zealand securities. Though there was a bigger securities market in Australia for its national debt the various stock exchanges continued to reflect local or regional specialities rather than national securities. Only slowly did a national market emerge through the trading of the national debt and the securities of companies either operating across the whole continent or attracting investors throughout the country. London continued to provide a deep and broad market for Australian securities whilst the market in Australia and

New Zealand remained fragmented between the different cities. This fragmentation was intensified by the stock exchanges themselves with their restrictions on sharing commission and the banning of dual membership, as these prevented the creation of nationwide firms and the centralization of trading. In Canada the securities market took time to recover from government controls that lasted until 1919. However, beginning with the main market in Montreal and then extending to Toronto and finally the mining exchanges in Calgary and Vancouver, there was a gradual revival in business culminating in a speculative boom in the late 1920s. This focused especially on mining and oil shares though there was a steady turnover in utility and industrial stocks. In addition there was a large market in government debt, which had risen to \$2.6 billion in 1919 as a result of the war, but much of this was traded in an OTC market rather than on the stock exchanges.<sup>45</sup>

Regardless of the vitality of the global securities market at the national level in the 1920s, it possessed serious problems at its core. The war had considerably undermined the importance of the twin centres of the global securities market, London and Paris. Though London recovered much though not all of its previous role, Paris ceased to be important for global securities and instead turned inward to operate increasingly as a national securities market. Other centres that had been of major importance before 1914 also suffered. Both Berlin and Vienna lost their position through the direct effects of the war and the subsequent economic turmoil that hit their countries. Both cities now served a substantially diminished hinterland, as their empires had disintegrated, as well as being located in countries temporarily dependent on borrowings from abroad. Other financial centres rose to prominence such as Amsterdam and the Swiss stock exchanges. However, the Amsterdam Bourse never recovered the international position it had possessed before the First World War as the 1920s lacked the stable monetary and financial conditions within which it could flourish. It was impossible to recreate the *protogonic* system whereby operations on the stock market were financed through short-term loans, especially after the financial crisis of 1921-3. Both individual investors and banks adopted a much more cautious lending policy, depriving the Amsterdam market of much of its pre-war vitality. Though German companies turned to Amsterdam in the 1920s as a source of finance it was much more domestically orientated than before the war. Similarly, though the Swiss exchanges did well in the 1920s, with Zurich achieving a record turnover in 1928, they did not play a central role in the global securities market. This left an opening for Luxembourg where the government attempted to create a central position in the global securities market itself with the establishment of a stock exchange in 1927. However, that was hardly operational by 1929.<sup>46</sup>

Consequently, the First World War and its repercussions had not only had a dramatic effect on the global securities market through the destruction and repatriation of international securities, it had also removed Paris, weakened London, and destroyed Berlin and Vienna. More generally, the once strong links which had existed between the global securities market and the global money market had now been undermined because of the greatly increased risks run by banks and individual investors. A League of Nations memorandum of 1931 noted that '[t]he risks involved in immobilising a large proportion of short-term funds in long-term credits became very patent during the difficult periods of shaken confidence through which most countries passed after the war.'<sup>47</sup> This warning was also applicable to lending with securities as collateral as it was now apparent that such collateral could either evaporate in value or become unrealizable. The outcome was to leave only one major financial centre where such confidence had not been shaken and where there existed an abundance of short- and long-term funds. That place was New York.

#### WALL STREET CRASH<sup>48</sup>

New York was the principal gainer from the financial tumult caused by the First World War as it was now the dominant market for all US\$ securities. This position was sustained in the 1920s with a continuing liquidation of foreign holdings of US railroad securities. In turn the volume of US\$ securities had been enormously boosted by the huge issue of government bonds to finance its war effort. Consequently, by 1918 the New York securities market was in a position to challenge London and Paris and had displaced Berlin. This position was further bolstered by subsequent events at home and abroad. Domestically, the First World War had made the United States a nation of investors. There had been an enormous increase in numbers of the investing public through the patriotic subscription to war bonds, creating a lasting legacy for the 1920s. Possibly as many as 20 million Americans had some involvement in the securities market in the 1920s compared to at most 2 million before 1914, though the number of serious investors was very much smaller at around 5 million. The buying and selling of securities became a mass activity as these investors were ready to invest in other types of securities. With the reduction of US government debt by almost \$9 billion, from \$25.5 billion in 1919 to \$16.9 billion in 1929, investors sought alternative homes for their money. The stocks and bonds of major industrial and commercial companies, most of which had been closely held before 1914,

became especially popular, offering attractive rates of return and the prospect of rapid capital gains. Between 1924 and 1930 the number of investors holding corporate bonds grew from 1.3 million to 6 million whilst those owning stocks increased from a maximum of 6 million in 1927 to 9 million in 1929 and then 11 million in 1930. Between 1910 and 1930 the number of shareholders in American Telephone and Telegraph rose from 35,823 to 469,801, in US Steel from 22,033 to 167,951, and in Pennsylvania Railroad from 65,283 to 196,119.

This enthusiasm for securities reflected the fact that bank deposits paid low rates of interest whilst stock prices were on a steadily rising trend. In turn this enthusiasm met a ready response from US business with the conversion of established firms into public companies and the issue of ever more stocks and bonds. The number of new stock issues grew from 1,822 in 1921 to 6,417 in 1929, by which time they comprised 62% of all securities being issued compared to 15% in 1921. The major US banks also played an active role. During the war they had become increasingly involved in selling Victory bonds to the public with government support. Faced with a decline in lending in the 1920s the major New York banks sought alternative forms of business, one of which was selling bonds to the greatly enlarged investing public as well as lending extensively to those holding securities, whether financial intermediaries like brokers or individual investors. This function was officially sanctioned by the McFadden Act of 1927 which allowed national banks to issue bonds. A growing number of the largest commercial banks did just that either directly or through specialist subsidiaries. Altogether, in bonds alone a total of \$50 billion were issued in the United States between 1921 and 1929, with 80% being domestic and 20% foreign, and by 1929 commercial banks handled 82% of the issues. At the same time loans with securities as collateral rose strongly during the 1920s. By 3 October 1928 such loans had reached \$12.4 billion and then increased by almost another \$5 billion in the following year, peaking at \$17 billion on 4 October 1929. Much of this went directly to members of the New York Stock Exchange who were borrowing extensively to finance both their own speculative operations and also those of their clients, who numbered 1.4 million by 1929. Members' borrowings, with securities provided as collateral, grew from \$1 billion on 1 January 1929, to \$3.5 billion on 1 February 1926 and then to \$8.5 billion on 1 October 1929. Inevitably, lending on this scale to support purchases of securities fostered a speculative boom, though the ratio of loans to the market value of securities remained constant between 1926 and 1929, indicating that it was speculative enthusiasm driven by constantly rising prices and easy money that lay behind the boom, rather than profligate credit from brokers. There was also a rapid increase of business on the Curt market in the 1920s driven by investor

enthusiasm for US industrials and a developing market in foreign bonds, especially those issued in Europe and Latin America. Volume though not value of trading on the Curb even overtook that of the New York Stock Exchange, leading the Curb to rename itself the New York Curb Exchange in 1929.

Behind these easy money conditions lay a deliberate policy of the Federal Reserve Bank from 1924 onwards to maintain low interest rates in the United States in order to help the  $5/8$  exchange rate. This encouraged an outflow of capital and credit and aimed to meet the dollar shortage of the 1920s which resulted from the disruptive effects of war on the European export economies and the reversal of financial flows. A chronic financial imbalance between the United States and Europe lay at the heart of the world's economic problems. The solution adopted was not a fundamental realignment of economies to reflect post-war realities but the maintenance of easy borrowing conditions in New York. It was assumed that short-term dollar credits would suffice until stability could be restored through a return to the gold standard. However, the international financial system no longer possessed the fundamental equilibrium necessary to cope with the instability created by huge outflows and inflows of money in the absence of a large mass of securities capable of floating between highly integrated financial centres. The flows were too great and the means of cushioning them too small. Previously significant financial centres were no longer functioning adequately. Berlin and Vienna had been destroyed by war and hyperinflation. Paris had been crippled by war, defaults, and government restrictions and then contributed to undermining the international financial system as the instability of the franc drove short-term funds abroad in the early 1920s whilst its stabilization in the late 1920s attracted them back. London was weak throughout the 1920s due to the poor performance of the economy, the unrealistic valuation of sterling against the dollar, especially after the return to the gold standard in 1925, and the removal of the safety net provided by the vast holdings of dollar securities largely liquidated during the war. The result was a concentration of financial flows through New York in the 1920s as the only financial system capable of propping up the system. However, the US financial system could not do that alone. The Federal Reserve System had only come into being in 1913 and was less experienced in responding to periodic financial crises compared to the longer established European central banks. Even if it had been it is doubtful whether that would have made much difference given the magnitude of the crisis that began unfolding in 1929.

Until then the policy was successful because it did promote an outflow of dollars and placed New York at the very centre of the global securities market for the first time. Only the American investor could meet the needs of

borrowers worldwide in the 1920s. Encouraged by low US interest rates foreign borrowers made extensive use of the New York market to raise funds whether they were sovereign governments or major corporations. With Paris, Berlin, and Vienna no longer international capital markets, London favouring imperial countries, and Amsterdam and Madrid unwilling to come forward, New York was the only option for many borrowers, especially those from central Europe and Latin America. They met a ready response from US investors flush with savings generated in a booming economy but faced with a lack of attractive openings because of low interest rates. Excluding intergovernment debt US holdings of foreign securities had already reached \$2.6 billion by 1919, grew to \$4.6 in 1914, and then peaked at \$7.8 in 1929, before falling back to \$3.6 in 1935. It was estimated that American investors absorbed \$3.6 billion in European securities between 1921 and 1926, split almost equally between those issued by governments, at all levels, and those issued by companies. In addition, foreign investors also flocked to New York to subscribe to the international issues that were no longer made in London and Paris because of explicit or implicit government controls. Currency instability in the early 1920s also added to the attractions of \$-denominated stocks and bonds, especially for French and German investors. In the 1920s buying and selling of US securities on the New York market by foreigners averaged around \$1 billion per annum. Though London did reclaim some standing this was largely within its own extensive empire. Liberal lending by US individual and institutional investors provided a partial replacement for London and Paris in the global securities market in the 1920s and so compensated for the absence of Paris, Berlin, and Vienna.

As long as this lending continued the world economy was provided with the dollars that now supported international trade and kept weakened banks in central Europe afloat. However, that outflow depended on the willingness of US investors to buy the foreign securities issued and US banks to make deposits abroad, and that was conditioned by the relative attractions of home versus foreign investment and lending. This relative attractiveness was endangered by the stock market boom in New York which provided an alternative use for the funds of US investors and banks as well as attracting in funds from abroad. The capital gains to be made in US industrial stocks, for example, attracted investors throughout the world but especially from Europe. Foreign holdings of US securities rose from \$1.6 billion in 1919 to \$1.9 billion in 1924 and then to \$4.3 billion in 1929. Foreign banks with temporarily available balances found that they could employ them remuneratively in New York. The speculative boom in New York was sustained by absorbing ever more funds which drove up prices and so encouraged reinvestment rather than profit-taking. However, by absorbing

funds that had previously flowed abroad, as well as sucking in foreign money, the speculative boom in New York was endangering the stability of the fragile post-war financial and monetary system. Without the funds flowing from New York many international borrowers would be unable to repay loans coming due, service existing loans, or sustain domestic lending policies. If that could not be done the conditions that had sustained economic recovery at national and international levels in the 1920s would unravel as defaults and bank collapses would create a worldwide crisis of confidence. A great deal rested upon the speculative boom in New York in the late 1920s, both for the United States and the world economy.

It was against this international background that the Wall Street boom and then crash took place. On 27 July 1927, with a speculative boom already underway, the Federal Reserve Bank signalled a further lowering of interest rates by reducing its discount rate from 4% to 3.5%. Rather than repel foreign lenders, this had the opposite effect on those with short-term funds to employ. As a report for the Bank for International Settlements in 1934 noted '[t]he boom on the American Stock Exchange had a special attraction for short-term foreign funds in the years 1927-9, not so much on account of the interest rates offered as on account of the prospect of profiting from the rise in the value of investments'. The attraction of the New York call market caused the Bank of England to raise its loan rate from 5.5% on 7 February 1929 to 6.5% on 26 September 1929. As the BIS report stated: 'In the first three months of 1929 the boom continued, draining Europe of floating funds and making the American market for capital unavailable to many countries who wished to borrow'. Whereas the proportion of capital raised on foreign account in New York averaged around 17% of the total between 1920 and 1928 it fell to only 6.6% in 1929, having begun to fall away in 1928. A reaction was inevitable and began when the Federal Reserve Bank raised interest rates to 6% on 9 August 1929, worried about the domestic situation. 'The crash came on 19 October, about ten weeks after the New York bank rate had been raised to 6 (after remaining at 5 for well over a year)'. 'When the boom on the New York Stock Exchange collapsed in October 1929, a backflow of short-term foreign funds set in immediately, in spite of rising interest rates'. It was all too late by then.<sup>49</sup>

Compounding the problems experienced by the US securities market by the late 1920s, due to the position it now occupied globally, were fundamental structural weaknesses, especially the divisions that existed between its various components. These had mattered little in the past when New York operated in a subsidiary capacity to the large European stock exchanges but that was no longer the case. The US securities market was not fragmented geographically despite the existence of numerous stock exchanges across the United States.

There were numerous established stock exchanges that developed from origins in mining and oil shares to become markets for local specialities as with motion pictures and aircraft in the case of Los Angeles, whilst new ones continued to appear, such as Seattle in 1927.<sup>50</sup> However, the market value of the issues they quoted was tiny in comparison to New York. One indication of the relative importance of New York is the fact that in 1930, when the market value of corporate stocks quoted on the twenty-three major US stock exchanges came to \$82 billion, 60% or \$49 billion was listed on the New York Stock Exchange and another \$20 billion (24%) on the New York Curb Exchange. That left only \$14 billion (16%) for all other exchanges. For that same year 65% of all transactions in stocks in the United States took place on the New York Stock Exchange and another 18% on the New York Curb market suggesting an equal degree of dominance whether assessed by quoted stocks or volume of transactions. In bonds New York was totally dominant. This dominance of New York was supported by the nationwide operations of the major US brokerage houses, with membership of many local exchanges. In 1929, forty-five members of the Boston Stock Exchange also belonged to the New York Stock Exchange, acting as channels to the New York securities market.

Where fragmentation did exist was within New York itself, most obviously with the Curb market. This catered for a much wider variety of corporate stocks than the New York Stock Exchange, especially those issued by banks, insurance companies, and investment trusts as well as many public utility, railroad, and industrial concerns. Such was the success of the Curb market that it acquired its own building and moved indoors in 1921. Much less visible but actually more important was the OTC bond market. By 1929 the value on the bonds in circulation in the United States was \$75 billion split roughly equally between government and corporate issues. This was close to the value of corporate stocks and though most were quoted on the various exchanges few were traded there, including the New York Stock Exchange which dealt with less than 10% of bonds. The level of fixed commission and the lack of dealers meant that US stock exchanges were poor markets for bonds, especially those issued by governments and public authorities. Instead, these bonds were largely traded directly between banks or specialist bond houses, where no commission was paid. This meant that there was no large and orderly market for bonds in the United States producing clear and unambiguous current prices. In consequence the speculative boom was focused heavily on the stocks traded on the New York Stock Exchange, and to a lesser extent those found on the Curb. These stocks possessed the most active organized market, with highly visible current prices via the ticker, and attracted those who operated on borrowed money, as their prices were always known and they could be easily sold if a loan was recalled.

Before the First World War US\$ stocks such as those issued by the railroads, possessed an international market. However, that was not the position in the 1920s. US\$ stocks were largely held in the United States and few possessed an international market on the pre-war scale. Even when held abroad trading took place in New York, now the dominant market where trading was solely in US dollars. Whereas before 1914 the effects of any buying or selling surge were quickly dissipated among a number of different exchanges, so preserving a high degree of price stability, that no longer happened in the 1920s as the integration between markets had been destroyed by the massive decline in international securities during and after the war, compounded by the post-war restrictions imposed by governments. What foreign interest there was in US\$ securities was focused on the industrial and commercial stocks traded on the New York Stock Exchange or on the rapidly growing Curb market.

During the 1920s domestic and foreign investors increasingly focused not on US railroad and utility stocks with relatively stable earnings, but on industrial and commercial corporations dependent on fluctuating sales in a competitive market and on the continuance of economic prosperity. This posed a risk to the market as stocks were much more volatile than bonds. Whereas the value of bonds was largely determined by prevailing interest rates, with an inverse relationship between the two, the price of stocks was a product of expectations about corporate performance. In a buoyant economy expectations regarding future dividend payments would be high, so pushing up the price of stocks, whereas the income generated by bonds would be static. In turn, rising stock prices would generate speculative activity which then developed a momentum of its own as the possible income to be generated from holding a stock became detached from its intrinsic value, which became a product of speculative supply and demand. Under these conditions stocks gained in value not because of the income they promised in the future but because they were expected to rise in price and could thus be sold for a profit.

As long as those expectations existed the price would rise, and so would the desire to buy rather than sell. However, a sudden change in these expectations would reverse the position, as falling prices would produce sales which further depressed prices and created more sales. With bonds there were floors and ceilings as the specific income was guaranteed unless there was a risk of default, and that also limited the risks being run by those who had borrowed money to finance their holdings. Even with the stocks of railroads and utilities such floors and ceilings existed for the level of demand for the services they provided was roughly constant. However, industrial and commercial stocks had no such guarantees as the current value was based on expectations about

the future and that was unknown. Whilst there always existed buyers for bonds when their prospective yield was sufficiently attractive compared to alternative homes for savings, no such situation existed for stocks as their future yield could easily be negligible given the situation of the issuer or the general economic climate. All this was rather unfortunate for the United States because the continually rising market from 1923 onwards had led many to expect its indefinite continuance, with the result that banks had extended a vast amount of credit with securities, especially stocks, as collateral. This was a highly dangerous situation as a precipitate decline in prices would leave these banks highly exposed, holding securities as collateral that no longer covered the amount of the loan. There was a lack of awareness of how the situation had altered from that prevailing before the war. In 1914 call loans of \$3.9 billion in New York were secured by stocks and bonds but those were stable securities that possessed large international markets in the main money market centres of Europe, especially London. In the 1920s the market on which the stocks and bonds used as collateral were traded was restricted to New York and the securities were very much more volatile in nature.

Consequently, a highly dangerous situation was building up in the United States in the 1920s and the longer the boom went on the more likely it was that the collapse would be sudden and steep, as it was based more and more on expectations that were becoming daily less and less realistic. In itself, that was not a problem as a correction in stock prices occurred regularly within any and all securities markets. The problem for the United States was the strong links between the securities market and the money market, through the extensive lending by banks with stocks as collateral. The call loan market had grown rapidly in the 1920s with money from the largest banks in the city who employed not only their own money but also the large balances maintained with them by correspondent banks from across the United States. One of the few outlets for such balances, upon which interest was paid, was to lend it out to those holding stocks as collateral, as the very volatility of the balances created a need for an active market where stocks could, if required, be immediately bought and sold. Though this had been taking place before 1914 the scale of the operation grew enormously in the course of the 1920s. By September 1929 a total of \$6.5 billion was lent out to New York brokers and dealers of which only 16% came from banks based in New York City. The rest had been collected from throughout the United States and even abroad, attracted by the high rates of interest. In the past any crisis in New York could call upon resources from around the world, as in 1907, whereas now the responsibility rested with the US Federal Reserve Bank, which had no relevant experience. The situation was worsened by the instability of the US banking

system due to legislative impediments to the creation of a nationwide branch banking system. Instead, there existed a vast number of individual banks that were aggressive in the pursuit of deposits and lending but lacked robustness in the face of financial difficulty. In any crisis it was inevitable that many of these banks would collapse, producing a contraction in the supply of credit and reversing any expansionary cycle.

Inevitably, the speculative boom came to an end as the cost of borrowing rose and the level of selling grew as investors sought to realize their gains. A knowledgeable insider like Charles Merrill, of Merrill Lynch, started to liquidate his personal holdings from late 1928 onwards, though he had difficulty in persuading his business partners to do likewise. During 1929, in response to a gradual tightening in the money market, the balance between investors seeking to realize gains began to outweigh those making new purchases. Faced with rampant speculation the Federal Reserve Bank began raising the interest rate charged on loans, and this was a signal to the market as a whole. Rising interest rates in London and elsewhere had already restrained the flow of funds to New York, reducing the wall of money that supported rising stock prices. Foreign deposits with Citibank in New York had risen from \$105 million in 1921 to a peak of \$256 million in 1927, fell back to \$172 million in 1928, and then recovered to \$214 million in 1929. Driven first by expectations of capital gain and then fear of capital loss, turnover on the New York Stock Exchange soared from 237 million shares in 1923 to 577 million in 1927, 921 million in 1928 and then to 1,125 million in 1929, before collapsing and reaching only 425 million in 1932. In contrast, turnover on the New York Stock Exchange in bonds was roughly constant over all these years. It rose from \$2.8 billion in 1923 to \$3.8 billion in 1924 and then ranged between \$2.8 billion and \$3.4 billion for the rest of the period. Stock prices peaked on 3 September 1929, when the Dow Jones Industrial Average reached 381. The inevitable fall prompted a build-up of sales as investors tried to realize their holdings. The Crash began on 24 October 1929 (Black Thursday) when sales reached almost 13 million on the day, with a sharp fall in prices. On 29 October (Black Tuesday) sales reached almost 16 million with another sharp fall in prices. Eventually the bottom of the market was reached in July 1932, when it was down 89% from the 1929 peak.

Many investors were left much poorer as their stocks collapsed in value. That would have been serious enough for the US economy for investors would have reigned in their spending to reflect the sudden downward adjustment to their wealth. Much more pervasive was the fact that banks were left holding both overvalued securities and loans with inadequate collateral and little prospect of repayment. Citibank alone had to accept losses of \$100 million. Even worse were the implications for thousands of weaker

banks. The failure of the Bank of the United States in December 1930, with deposits of \$200 million, was a major blow. Numerous small banks in the west and south were already in a fragile condition because of depressed agricultural conditions. A sequence of crises and banking collapses followed as depositors rushed to make withdrawals when the precarious situation of individual banks became known or rumoured. By the end of 1931 a total of 2,290 banks had failed in the United States with a further 1,450 in 1932. Savers were reluctant to trust banks. Banks restricted all types of investing and lending, concerned to ensure a high level of liquidity in order to meet sudden panic withdrawals. This severe credit contraction created temporary but serious difficulties both within the United States and abroad given the high dependency upon US funds. As each crisis came and went there was a slow unravelling of the complex web of financial links that had supported the international economy during the 1920s. Consequently, through the central role played by New York in the global securities market after the First World War, the Wall Street Crash had great significance not only for the US economy, through the domestic banking system, but also for the international economy as a whole. It was no longer possible to conceal the fundamental imbalances created by the war through temporary financial lows for these only worked in a situation of rough equilibrium, as had existed before 1914.<sup>51</sup>

#### SECURITIES MARKETS AND GOVERNMENTS IN THE 1930S

Despite the dramatic nature of the Wall Street Crash its immediate consequences were not particularly serious for the global economy. The crash had little immediate impact on US regional markets such as Seattle.<sup>52</sup> Elsewhere in the world a number of stock markets had already peaked, and were already falling when New York collapsed and so experienced only limited repercussions. This was especially so as the volume of internationally held securities had been dramatically reduced as a result of the First World War and there was much less integration between national securities markets than before 1914. Even before the Wall Street Crash of October 1929 the London securities market was in difficulty, having experienced its own domestic crisis in September. The financier Charles Harty had taken to creating additional securities on behalf of well-respected companies and public authorities whose issues he handled. This provided a simple and low-cost source of temporary finance. As long as he paid the interest and dividends due, this fraud escaped

detection. The problem came when he could no longer do so because of investment losses. This began to happen in February 1929 when the Bank of England raised interest rates and the market started to weaken. When Harry's fraud was exposed there was a sudden collapse of confidence in all securities, as there was no guarantee that this was not a widespread practice. Interestingly, the London Stock Exchange believed that the Wall Street Crash was due to revelations that came from the Harry scandal, as it had caused great uneasiness in the United States, and the confidence, which the public had in the stability of the stock markets was rightly shaken.<sup>53</sup> However, such was the fundamental and catastrophic nature of the Wall Street Crash that the Harry scandal was unlikely to have had a much greater effect there than in Britain, to which his activities were confined, no matter what the level of British selling. Certainly, when the Wall Street Crash did come in October it had little direct impact on London where prices were already falling.

Nevertheless, there was a worldwide relapse in national securities markets around the world in 1929, some of which may have been due to the Wall Street Crash. The main stock exchanges in Belgium, Britain, Canada, China, France, Germany, Italy, Mexico, the Netherlands, New Zealand, Peru, South Africa, Spain, Sweden, and Switzerland were all affected. However, in most cases there were no collapses; certainly not on the scale experienced in New York, whilst in others the falls were very mild indeed. Canadian securities markets did suffer as there had been considerable American investment in its mining securities whilst there existed some inter-listed stocks with New York, namely Brazilian Traction and International Nickel. In Paris, like London, prices had begun falling in September and continued to do so until 1934. Despite the steepness of the decline, with the index of French stocks rising from 100 in 1922 to 426 in 1929 and then falling to 195 in 1935, there was no extended financial crisis. This was despite the fact that Paris had received substantial short-term money flows between 1926 and 1933, that left French banks awash with money, and that there had also been a speculative boom in industrial stocks from 1927 onwards. In contrast to the United States the French banking system was, like the British, much more security based whilst lending had been focused on bonds as well as industrial stocks. Compared to the stock index, the index of French bonds had only risen from 100 in 1922 to 113 in 1929 and then only fell back to 111 in 1935. Similarly, in Spain banks had invested heavily in or lent upon public debt, which was much more marketable in a crisis than industrial stocks. This indicates that the Wall Street Crash was very much confined to the United States, certainly in terms of magnitude, due to the peculiar conditions of its securities market and the focus of short-term financial flows on its call money market. It also indicates that the ramifications of the Wall Street Crash for the United States was made

much worse by the nature of its banking system and its dependence on a call loan market focused on lending with stocks as collateral rather than the full range of securities, especially bonds. It was only in countries where similar conditions prevailed that the consequences of a stock market collapse were as serious. One such case was Italy. In Italy during the stock market boom between 1922 and 1925 banks lent extensively on industrial securities and were brought to the verge of collapse when the boom ended. They only saved themselves by buying up stocks in order to stabilize prices, giving the appearance that their liabilities were matched by assets. However, when the market again collapsed between 1930 and 1932 that fiction was exposed and they were only saved by government intervention.<sup>54</sup>

Thus, the world did not experience an all pervasive stock market crash in 1929 beginning in New York and then circling the globe. Instead, it experienced one major crash in New York and a series of relatively mild declines elsewhere. However, not all banking systems were sufficiently robust to resist a substantial and prolonged stock market decline. In addition to Italy, the highly vulnerable financial systems of Germany and Austria suffered the most. Deprived of the supply of foreign credits and then the decline of the securities markets, German and Austrian banks were in serious trouble by the early 1930s. They were faced with loans that their customers had no prospect of repaying as the securities market was too weak to absorb new issues, whilst the decline in prices reduced the level of capital and reserves available, as much was invested in industrial stocks. Banks could no longer meet such losses and the decline of securities markets abroad meant that they could not tap those through new issues, as had happened in the 1920s. In fact the reverse was taking place, with foreign investors beginning to liquidate their holdings so driving down prices further and draining banks of deposits. However, the existence of exchange controls and other government-erected barriers limited the use to which asset arbitrage could be used as a means of settling imbalances between economies. The price of the same security traded in different stock exchanges now exhibited wide differences due to the compartmentalization of national markets which arbitrage was powerless to remove. Austrian bonds were traded in both Vienna and New York, and their prices shared an average gap of only 1% before May 1931. Subsequently the gap widened to 30% between October and December 1931, and then averaged 27% for the whole of 1932.<sup>55</sup>

Under these circumstances governments intervened to protect their financial systems against external instability. On 13 July 1931 the German government imposed exchange controls and closed the stock exchanges. Though these reopened briefly between 3 and 20 September it was not until 12 April 1932 that they finally resumed business. As during the war an inter-bank market developed in the meantime.

Government intervention in Germany enforced the acceptance of exchange controls that cut off the country from normal international financial transactions, including the operation of the global securities market. There was also a high level of direct intervention involving control over the entire financial system extending from banks to the securities market. Whilst banks could continue to lend, the securities market was largely reserved for financing government debt. Corporate issues were virtually excluded in 1934 through a ceiling imposed on the amount that could be paid out in dividends. As a result corporate share issues, which had been running at around 1.3 billion marks per annum in 1927-8, fell to a low of only 91 million in 1933, and then only recovered to 0.4 billion in 1936-7. The government's aim was to make bonds more attractive and easier to issue at low rates of interest. Bond issues fell from 2.9 billion in 1927-8 to 0.3 billion in 1934 and then reached a high of 7.8 billion in 1938. Also in December 1934 the number of stock exchanges was reduced from twenty one to nine so that the government was better able to control the securities market. Many stock exchanges merged: Dusseldorf, Cologne, and Essen in 1934, and Bremen, Hamburg, Kiel, and Lübeck in 1935. The supervision of remaining stock exchanges was taken away from the separate states and made the responsibility of central government. As a result all but the Berlin Stock Exchange were marginalized, leaving inter-bank transactions to constitute the main component of the securities market in Germany in the second-half of the 1930s. That system was extended to Austria in 1938 when that country was absorbed by Germany. The Austrian government had also been forced to intervene in the 1930s in order to save the financial system from collapse. Consequently, by the end of the 1930s both Germany and Austria had experienced an emasculating of their domestic securities market and the severing of its participation in the global securities market.<sup>56</sup>

The experience of the securities markets of central Europe was representative of what took place throughout the world in the 1930s. Signalling the end of attempts to restore the liberal international environment prevailing before 1914 was the departure of Britain from the gold standard in September 1931. Even before the Wall Street Crash of 1929 the fastening was under pressure on international markets. This pressure was intensified by the problems in New York, the flow of funds to Paris, and Amsterdam, and then the financial crisis in Germany and Austria. It then became impossible to maintain the £ sterling on the gold standard at the prevailing exchange rates as the Bank of England simply did not have the gold and foreign exchange reserves necessary to support it against adverse speculation. Eventually on 20 September 1931 Britain left the gold standard. That event dealt a mortal blow to the stability of the international financial system and forced the closure of numerous European stock exchanges on 21 September, including London, Berlin,

Brussels and Vienna, and more distantly Tokyo. However, New York and Paris stayed open, encouraging those which had closed to resume business as quickly as possible, many from the 22nd. The London Stock Exchange reopened on 24 September though only on 18 December did normal business resume.<sup>57</sup>

For the global securities market the collapse of the restored gold standard in September 1931 was a much greater blow than the Wall Street Crash. The Canadian stock exchanges were much more affected by the 1931 crisis despite their proximity to New York. The 1931 crisis undermined the confidence of bankers in the entire financial structure whilst the 1929 crash was something of an unrepeatable market correction. Unlike the United States the Canadian banking system was robust, based on large banks operating through a nationwide branch system. Though the Wall Street Crash registered strongly with the public, it was the demise of the gold standard that made the greatest impact financially, for in its wake came a decade of currency turmoil and the introduction of government restrictions that greatly interfered with the operation of the global securities market. In particular, exchange controls of various forms proliferated around the world making it difficult to buy and sell securities internationally as delivery and payment could prove impossible, costly, or simply time consuming. The widespread introduction of exchange controls began with Iran and Turkey in 1930 and ran through to Poland and Venezuela in 1936. Many of these were deliberately aimed at curbing the international flow of capital in order to protect the value of domestic currency against fluctuations. Such controls were most extreme in countries where national financial systems were least robust, as in Latin America, and relatively mild where strong banks and markets existed, as in Britain and its empire. Even where formal controls and markets existed, as in Britain and its empire, there were informal controls in England, to limit purchases of foreign securities. In place of a relatively open international economy, where money and assets could flow between countries in response to supply and demand in the market, came a series of interventions and *ad hoc* measures that created relatively closed national economies or, at best, regional or imperial groupings. At worst it led to the economic autarky as practiced in Germany under Hitler. Within these new arrangements there was little room for the operation of a global securities market.<sup>58</sup>

#### SECURITIES MARKETS AND NATIONAL GOVERNMENTS

This decline in the global securities market occurred despite a continuing advance in telecommunications that permitted the creation of an ever more integrated market. The expansion of international telephony linked ever

more distant centres. In 1927 the radio-telephone was introduced on the North Atlantic route, offering immediate communication. However, though cost was a problem with the wireless, the real difficulty was technical. Short-wave radio had limited capacity and was subject to fading, blackouts, and extensive interference. It was simply not possible to base a business requiring rapid, clear, and guaranteed contact, on the service it provided. Thus, until physical telephone lines were laid the global securities market remained dependent on the telegraph. Nevertheless, the international telephone network was being continuously extended between the wars, as with the cable between London and Johannesburg in the early 1930s. That eliminated a delay of ten minutes by constant and immediate contact, with a resulting great growth in business. This was possible as both markets were in the sterling area and thus free of controls. Elsewhere improvements in communications were negated by government-imposed barriers. These were not simply on external links, as with exchange controls. The Wall Street Crash and its aftermath had forced governments to become more closely involved with their national financial systems in order to prevent a wholesale banking collapse. This was then followed by the widespread introduction of legislation in the 1930s aimed at controlling, directing, or regulating national financial systems. In Germany, Austria, and Italy the government took control of the entire system and reorganized it. Both banks and the stock exchange became servants of the state rather than responsive to the financial needs of the market economy. This was mirrored to a greater or lesser extent throughout the world. Countries as diverse as Argentina, Belgium, Canada, Denmark, Finland, France, Mexico, Portugal, Spain, Sweden, Switzerland, and the United States all experienced degrees of government intervention in the operation of their financial systems.

Inevitably this government intervention was extended to securities markets as well as banks, given the widespread belief that speculative boom and collapse lay at the heart of the financial crises and economic depression. The precedent for such intervention already existed from the 1920s when a number of countries had acted to curb market exuberance after earlier crises. In particular, the problems associated with close links between banks and the securities markets had already been identified whilst the dangers of rampant speculation were well known. The Wall Street Crash created conditions where government intervention in financial systems was not only considered acceptable but was also demanded by the public and by politicians of all political persuasions. Such demands had long existed and at times had produced results, as with the limitations placed on the pre-1914 securities market in Germany. However, before 1914 there had been a general tendency to leave financial markets alone, especially as the adverse consequences of

intervention were well documented. Such a policy of benign neglect ended with the Wall Street Crash. By the mid-1930s governments across the world were imposing increasing control over national securities markets, mostly through the organized stock exchanges.

In many cases the degree of government control was a direct consequence of the depth of the stock market crash and subsequent financial crisis. In Belgium the stock market collapse in the early 1930s endangered the entire financial system. Banks had lent extensively to those pledging securities as collateral, and as the crisis worsened their holdings of securities grew from 15% of assets in 1928 to 28% in 1933, bringing them to the verge of collapse. That was only averted by government intervention. The price was legislation to separate investment and commercial banking and to control the securities market. The commissioner overseeing the Belgian stock exchanges was given additional powers in 1934 leading to government control in 1935. In contrast, in the Netherlands, the financial crisis was relatively subdued, the degree of intervention relatively mild, and the securities market escaped government control. However, irrespective of the severity of the financial crisis governments took the opportunity to enact legislation covering the securities market, which usually took the form of the regulation and supervision of the stock exchange. A stock exchange law was adopted in Egypt in 1933, for example.

The result was a patchwork of legislation and control ranging from those countries where the stock exchanges were left to police themselves, though conscious of government monitoring, as in Britain and its empire, to those countries where the stock exchanges were subjected to a high degree of control, as in Mexico in 1933 and Argentina in 1937. Even where formal control was not imposed the activities taking place on their securities market were not ignored by national governments. In Canada, at both national and provincial levels, governments focused on preventing securities fraud, as that was the main public concern. Their efforts do not appear to have been particularly successful, apart from driving some business off the main stock exchanges, as a series of mining scams took place during the 1930s. Even though the London Stock Exchange escaped any form of legislative intervention, despite the Harty scandal, there was a noticeable shift in attitude to the business it hosted. Increasingly the London Stock Exchange saw itself not simply as a market for securities but also as a guardian of quality. Though this conservative stance meant that the London Stock Exchange lost some of its vitality as a market it did mean that it escaped government intervention.<sup>59</sup>

Naturally enough the arena for the greatest hostility to the securities market was the United States, with the New York Stock Exchange being the prime focus. Both the US government and the American public blamed the banks

and the stock exchange for the financial and monetary crisis which engulfed the country between 1929 and 1933. At the time it seemed much the most obvious explanation rather than the fundamental problems stemming from the conditions created during the war and the government policies followed thereafter. In a report on stock market control, published in 1934 in New York, the Twentieth Century Fund made the case for government intervention based on imperfections in the operation of the securities market.

[T]he unduly large volume of uncontrolled speculation, coupled with the frequent interference with the free play of supply and demand by manipulative activity, interferes with the performance of the proper functions of security exchanges and also has a serious disruptive effect on the national economy... public policy requires that speculative activities be brought under such control that they will add to and not detract from, the value of the functions which security exchanges are designed to perform, and so that such activities will no longer create credit disturbances and other maladjustments throughout our economic structure.<sup>60</sup>

It was easy to produce a catalogue of abuses that investors had been exposed to, stretching back to the First World War and beyond, and to suggest that the Wall Street Crash was simply part of an ongoing scandal that had to be tackled by the government.

Given the magnitude of the speculative boom and its collapse, the government had no alternative but to become involved despite attempts by members of the New York Stock Exchange, especially the president, Richard Whitney, to rebut the criticisms made.<sup>61</sup> The outcome was the Securities Exchange Act of 1933, followed by the establishment of the Securities and Exchange Commission (SEC) in 1934. These were designed to prevent market manipulation and to limit speculation by forcing all exchanges to register and to abide by a strict set of rules. Exchanges could be fined and their members suspended if any rules were broken. However, there were no measures to deal with the unorganized OTC market as its existence was largely ignored. There was also an acceptance that the long-term effect on the securities market as a whole was unknown, but such was the desire for some kind of control that this was regarded as of minor importance.<sup>62</sup> The result was a much more restrictive regime involving the separation of commercial and investment banking (Glass-Steagall Act, 1933) and the regulation of the stock exchange (SEC, 1934). These strictures were not just confined to New York and the New York Stock Exchange but applied nationwide. Though all US stock exchanges had operated on the rules and regulations of the New York Stock Exchange, as autonomous institutions they had been able to vary them as they wished, which they did regarding the securities they quoted, the members they admitted, and the charges they made. This ended with the acts of 1933

and 1934. As William Douglas, Chairman of the SEC, commented in 1937: 'Operating as private membership associations, exchanges have always administered their affairs in much the same manner as private clubs. For a business so vested with public interest, this traditional method has become archaic.'<sup>63</sup> A new order was now in place.

With the enactment of the Securities Exchange Act of 1934, on June 6, 1934, the 'New Deal' legislators finally brought all the country's stock exchanges under government supervision. This legislation marks the most important development in stock market practice in a century. It regulates not only the exchange as a body, but the practices of brokers and operators, and provides for the supervision of the broker-customer relationship.<sup>64</sup>

This represented a triumph for all those who had long regarded as unacceptable the operation of a securities market unregulated by the rule of law. This triumph was confirmed in the Securities Exchange Act of 1938. The US Congress specifically rejected self-regulation as inadequate protection for investors and insisted instead on public scrutiny of every stock exchange's rules and regulations and the overarching regulation of a government-appointed body. The self-regulated securities markets of the Anglo-American world were now converging with those of continental Europe where state regulation had long been important. This was a lasting legacy of the Wall Street Crash.

A major consequence of these government controls on the operation of stock exchanges was to circumscribe the way they conducted business, and to reduce their attractions as markets. Securities markets, including stock exchanges, were continually evolving in response to change whilst the creation of fixed rules and regulations governing their conduct, embodied in law and enforced by a government appointed commission, made that change both slow and difficult. In contrast the unregulated OTC market could respond much more readily to the needs of both issuers of securities and investors as well as those who traded in stocks and bonds, and so increased its market share throughout the 1930s. By the end of the decade it was recognized that the cost of compliance with government-imposed stock market regulation was discouraging US companies from making new issues of securities, and to trade on the OTC market rather than on a formal stock exchange. Whereas in 1920 the OTC market commanded only 6% of all trading in corporate stocks, and 14% in 1929, this had reached 23% in 1939. This reflected the perennial problem that excessive intervention would both drive the securities market underground and discourage its use as a means of raising finance.<sup>65</sup> According to Cherrington, 'Unless the government is to assume responsibility for directing the flow of capital into industry, there are limits to what it ought

to do for investors. It cannot safely act as their guardians: it cannot afford to become a bulwark of defense against all the hazards which exist in the securities markets.<sup>66</sup> The outcome was both a reduction in trading and a diversion from the organized markets. In 1920 the estimated turnover in outstanding stocks was put at \$39 billion and this had risen to \$157 billion in 1929. In contrast the figure for 1935 was \$17.5 billion, which fell even further to \$14.8 billion in 1939. Similarly, business on the New York Curb was depressed throughout the 1930s.<sup>67</sup>

A further consequence of government regulation of the US securities market was to centralize trading in New York to an even greater degree. Whereas an institution the size and importance of the New York Stock Exchange could cope with the legal requirements placed upon it, even appointing a full-time chairman in 1938, most other exchanges could not, especially the smaller ones, without a significant rise in costs and charges. Given the decline in business and membership in the 1930s it was difficult for these smaller stock exchanges to generate additional revenue in any other way. Thus, of the transactions conducted on organized markets in 1938, 88% were done on the New York Stock Exchange with a further 7% on the New York Curb. This left a mere 5% for all other markets. Faced with a shortage of new issues because of the regulatory burden, and the competition from the OTC market for what there was, the US regional exchanges were an endangered species by the late 1930s. By 1938 some 80% of the trading taking place on the Boston Stock Exchange was in stocks that were also listed in New York. What saved the US securities market from being stifled by government regulation and supervision was the dynamic nature of the New York brokerage firms. Given the exclusion of commercial banks from securities brokerage, because they could not gain admission to stock exchanges, and from investment banking, with the Glass-Steagall Act, members of the New York Stock Exchange were free to develop their business in different ways. Some specialized in investment banking where they could combine the issue of corporate stocks and bonds with the ability to make a market in the securities created either by selling directly to their clients or on the floor of the exchange. In contrast to that wholesale business others focused on the retail side by opening branches across the United States and becoming members of the various stock exchanges outside New York. They were able to offer a nationwide service for those investors still interested in stocks, and by generating a high turnover they could survive in an environment of fixed commission fees at a time of depressed prices. By 1940 Merrill Lynch had 50 offices staffed by 300 brokers. Overall, in 1936 the members of the New York Stock Exchange maintained a total of 1,185 branch offices, including sixty-eight overseas.<sup>68</sup>

Nevertheless, despite this prominence, the overall position of the New York Stock Exchange was in steady decline. In addition to the growing importance of the OTC market for the newer and smaller corporate issues, the Exchange was also losing its residual share of the bond market. The level of commission charged by New York brokers had long made them uncompetitive in transactions in government debt, and this grew substantially in the 1930s whilst overall corporate issues stagnated or declined. Federal government borrowing rose substantially in the 1930s, expanding from \$16.2 billion in 1930 to \$40.4 billion in 1939, as a result of New Deal spending.<sup>69</sup> This meant that the New York Stock Exchange was accounting for a falling share of the total securities market. Thus it was less the market provided by the New York Stock Exchange that was the underlying strength of the US securities market, circumscribed by government imposed controls, but the operations of the major brokerage firms and the active OTC markets in smaller stocks and government bonds.

What happened in the United States was replicated worldwide. Stock exchanges which had thrived when they were able to respond efficiently to the needs of the securities market found that was less and less possible in the 1930s. This both reduced the overall volume of business and drove part of that which remained off the exchanges. Trading on the Mexico City Stock Exchange fell from 104,484 shares in 1933, when government controls were imposed, to 13,695 in 1938.<sup>70</sup> This decline in trading on the organized stock exchanges not only undermined their power to dominate and control national securities markets but also reduced the importance of securities markets within economies. The effect of government regulations was not distributed evenly across the business transacted on stock exchanges. Curb were aimed at anything considered speculative, resulting in a tendency for the major stock exchanges in western Europe and north America to restrict themselves to trading the stocks and bonds of the largest and most established domestic companies, leaving the securities of smaller and newer industrial and commercial ventures to be traded on the OTC market, or to rely upon self-finance and the banks. New companies involved a high degree of risk because of the greater uncertainty regarding future returns. There could be a popular backlash if many investors lost money, and so risky securities were not provided with an organized market.

This also affected the shares of mining companies but they possessed alternative markets in the stock exchanges located where the exploitation and production took place. The authorities in these regions or countries were inclined to view such markets favourably as contributing to the local economy, and so did not restrict their activities. Thus, business in speculative mining exchanges thrived in the 1930s, especially after 1931. As the gold

standard collapsed so the price of the metal rose. One beneficiary was the Vancouver Stock Exchange where turnover fell from 143 million shares in 1929 to 10 million in 1931 and then recovered due to speculation in the shares of Canadian gold mining companies, with 100 million being traded in 1936. When that bubble burst it was followed by one in the shares of Canadian oil companies. There was even sufficient business to support a curb market in Vancouver. Elsewhere in Canada, such were the attractions of mining and oil stocks that the Toronto Stock Exchange and its local rival, the Standard Stock Exchange, which specialized in such securities, merged in 1934. A similar situation occurred in Australia and New Zealand, where there was also significant gold production. As both these countries were part of the sterling area and mining stocks were widely held, along with government debt, the speculative boom in the mid-1930s helped promote the integration of the securities market in that region. However, it was in South Africa, the world's largest producer, that the greatest impact of the booming gold mining market was felt. After South Africa went off the gold standard in 1932 there was heavy external buying of local mining shares from London and Paris, producing a speculative boom between 1934 and 1937. The Johannesburg Stock Exchange was a crucial part of the international market for gold mining stocks with brokers maintaining direct telephone contact with London. The boom collapsed when a rumour, later denied, spread that the US government was no longer willing to pay a fixed price for gold. The Johannesburg Stock Exchange was hit by a wave of international selling, that wiped £45 million from the price of shares and led to the failure of two members. Clearly there still existed a global market for gold mining stocks in the 1930s for those investors able to participate in it, which meant those in £3sterling or US\$ areas. For those outside these areas, exchange controls rendered buying and selling difficult.<sup>71</sup>

In the eyes of many the Wall Street Crash and related crises were a product of the way securities markets operated, especially the facility they gave to buy and sell both easily and for future delivery, and then reverse the deal before payment or delivery was required. This was seen as speculation rather than investment and when taken to excess was a destabilizing force within the entire financial system and a danger to the economy. The Wall Street Crash was considered to provide proof of this belief. However, within this there was no recognition that securities markets were as much part of the money market as the capital market and, in fact, provided an essential link between the two. The ability to buy and sell quickly was essential if operations were to take place upon borrowed money which could become available or be withdrawn at short notice. Banks, in particular, used loans to those operating in the securities markets as a means of employing their idle balances and upon this

lending rested a large mass of long-term debt.<sup>72</sup> However, this connection and these operations were seen to lie at the heart of speculative bubbles and their damaging consequences for national economies, and thus governments sought to restrict or even outlaw them. Hence the enforced split found in many countries between investment banking and commercial banking, and the attempt to limit buying and selling for future payment and delivery. However, in combination with the instability that pervaded both securities markets and entire financial systems from the early 1930s onwards, this legislative intervention discouraged banks from lending to those providing securities as collateral, whether businesses looking for additional funds, investors seeking to finance their purchases, or market professionals using short-term loans to finance portfolios of liquid securities. To be able to lend huge sums of money on the basis of irredeemable stocks and bonds, and minimize the risks involved, required the combination of both deep and wide money and securities markets. This is what London, and to a lesser extent Paris, possessed before 1914, and what New York, and to a lesser extent London, possessed in the 1920s. In the 1930s no major financial centre was in quite the position of any of these because of the collapse in confidence and the imposition of restrictive controls domestically and internationally.

With the controls imposed from 1933 onwards New York lost its international position as the securities market in which transactions could be most easily and cheaply financed by short-term bank borrowing. Security loans in the United States fell from \$13 billion on 31 December 1929 to \$5.4 billion by 31 December 1930 and remained at that lower level. By 1937 brokers' loans were down to \$1 billion and running at 1% or 2% of the market value of all listed stocks compared to 10% in the 1920s.<sup>73</sup> Meanwhile, London once again assumed the position as the securities market where short-term money was most abundant, though on a much reduced scale compared to before 1914. Loans to members of the London Stock Exchange by British banks fell from a peak of £48 million in 1928 to a low of £16 million in 1932 before starting to recover slowly. In France banks appeared even more reluctant to lend. Instead, in all three countries banks themselves started to hold securities directly, including government debt and corporate bonds, rather than lending to those that did. Bankers were now much more aware of the risks of using short-term funds to fund purchases of long-term securities. Also, with low interest rates the gap between long- and short-term interest rates left little scope for the market operator to profit from the differential. Thus, turnover on the major securities markets was hit by a reluctance of banks to lend with securities as collateral and a reluctance of brokers to borrow for such purposes because of the lack of potential profits. Turnover on the New York Stock Exchange fell from 1.1 billion shares in 1929 to 0.3 billion in 1939. That drove

down the level of business further as it became more difficult to buy and sell in large amounts both quickly and at current prices, because the markets had become shallower. Whereas in 1930 the volume of turnover on the New York Stock Exchange was equivalent to 72% of the total number of shares listed, by 1939 it was a mere 18%.<sup>75</sup> As Aldrich, Chairman of the Chase Manhattan Bank, noted in 1937, 'The recent demonstration that the stock market has been greatly reduced in breadth and in activity presents a problem of first importance.'<sup>76</sup> Consequently, one of the great casualties of the financial crisis that gripped the world between 1929 and 1932 was the close connection that had long existed between the securities market and the money market in the main financial centres. This had marked them apart from securities markets elsewhere and it was this that instability and controls had conspired to destroy. Neither New York nor London was in the dominant position that they had once occupied.

More generally, internal and external government controls, combined with currency instability, drove securities markets around the world to become more domestically focused. In the Netherlands Dutch investors preferred securities issued by Dutch companies, including those which operated internationally such as Phillips, or the Anglo-Dutch companies Unilever and Royal Dutch Shell. By 1939 the Amsterdam Stock Exchange quoted 424 Dutch companies with a paid-up capital of 2.3 billion guilders whilst also providing a market for the greatly enlarged national debt. In Switzerland the securities market remained depressed due to government measures, until the attempt to defend the international value of the franc was abandoned on 26 September 1936. In France the strong network of investment and commercial banks along with a state-controlled Paris Bourse, ensured that the 2-3 million French investors directed their savings towards the national debt and the securities issued by the major industrial and commercial companies, rather than into foreign securities. Only a few favoured foreign governments navigated the various levels of exchange control in order to raise loans in Paris, including Britain in 1931, 1933, and 1934, Belgium in 1932, Austria in 1933, and Czechoslovakia in 1937. Though the British securities market was much less isolationist in the 1930s, with a large empire to serve as well as the sterling area, its focus did become increasingly domestic. Not only did the government absorb much of the funds itself, as it refinanced short-term borrowings with long-term loans, but investors showed a marked preference for the shares of major domestic companies. The five largest British banks had attracted around 400,000 shareholders by the late 1930s. In contrast, the bonds of foreign governments lost their appeal and were shunned by British investors. Many other foreign corporate securities suffered similarly when a collapse in commodity prices or currency restrictions made

it impossible to remit dividends to British investors. In consequence even the London Stock Exchange, still the largest international market for securities, gave a greater focus to domestic securities in the 1930s. By 1939 the nominal value of foreign securities quoted was down to 34% of the total, whilst in terms of market value the proportion was very much less, at around 20%, reflecting the greatly depreciated value of many foreign government issues.<sup>75</sup>

Investors in western Europe and north America had lost faith in foreign securities because of the frequent defaults of the early 1930s, as governments found it impossible to either service their debts or obtain the foreign exchange necessary to make payments to investors living abroad. Of the £1.2 billion of sterling securities issued by south American borrowers, and outstanding in 1934, a total of £708m, or 59%, was estimated to be in default. Faced with such circumstances investors naturally gave priority to safety rather than return, preferring securities issued by their own government or by their own corporations, even those operating internationally. Consequently governments and companies from less-developed regions and economies lost access to the cheap sources of finance through the securities market which had been so important in funding infrastructure development before 1914. States had to undertake that role instead. The result of the 1929 crash, the 1931 crisis, and subsequent government controls during the 1930s was to destroy the international movement of capital, and thus greatly diminish those markets that had serviced these capital flows.<sup>76</sup>

Nevertheless, at a national level certain securities markets continued to thrive, especially in Asia. In Japan the combination of bank loans and new stock issues continued to provide the largest industrial firms with a substantial part of their new funds. In India there was also considerable activity on the securities market with new stock exchanges being formed in Lahore in 1934 and Madras in 1937 as well as additional exchanges in Bombay and Calcutta during a speculative boom in the late 1930s focused on the issues of new manufacturing companies. There was even a growing integration of those stock exchanges into the local financial system. In 1929 the Shanghai Stock Exchange admitted its first Chinese member and by December 1941 over a third of the membership was foreign. New securities markets also appeared in the 1930s, though under somewhat unusual circumstances. In the British mandate of Palestine, though there was some limited trading in securities in the 1920s, no market developed because both companies and the government drew most of the funds they required from abroad. This changed in the 1930s with the arrival of Jewish immigrants from Germany, among whom were bankers and brokers as well as wealthy investors. A securities market developed between 1932 and 1939 as the stock of corporate securities rose from EP 3.4 million to EP 12 million, although the largest

enterprises continued to tap the London market. Nevertheless, there was now sufficient domestic trading in securities to support the formation of an embryonic, though not particularly active, stock exchange in Tel Aviv in 1935. In contrast, in Europe, which had given birth to the global securities market, problems continued to mount that had serious effects on those stock exchanges still operating. Civil war in Spain, for example, between 1936 and 1939 led to the closure of the main stock exchanges until 1940, and then only after government reorganization.<sup>77</sup>

Despite all the difficulties it experienced the global market for securities was not totally destroyed in the course of the 1930s though the number of securities that could command an international market by the end of that decade was very limited (see Table 6.3). American interest in foreign securities evaporated in the early 1930s faced with a domestic financial crisis and the triple blow of defaults, falling prices and exchange losses as currencies were devalued against the dollar. Similarly, with the Wall Street Crash, foreign investors' confidence in speculative American securities largely disappeared. Though the recovery in US stock prices was slow in the 1930s there was some revival of foreign interest in US stocks and bonds towards the end of the decade, because of the attractions of dollar assets at a time of instability. However, this did not generate much international trading as orders flowed either directly to New York or via the overseas offices of north American brokers. By 1937 there were 25 branches of American and Canadian brokers in London. Instead, the lifeblood of the global securities market in the 1930s was the securities of a small number of companies held internationally either

because of their ownership structure or the appeal they had to investors worldwide. In the former category came such companies as the Anglo-Dutch concerns, Royal Dutch Shell, and Unilever whilst in the latter included South African and Australian gold-mining companies. These were traded between stock exchanges in Amsterdam, Brussels, Johannesburg, London, Montreal, New York, and Paris.<sup>78</sup> However, this category of securities was relatively small and not growing compared to those that commanded a purely domestic market. Even when international dealings in securities did recover somewhat after the early 1930s business was fraught with complications, controls, and risks. Instead of being conducted openly on organized stock exchanges, it became increasingly a business pursued privately between banks as they could internalize operations and employ staff to either comply with or evade the supervision and restrictions of government. Currency instability and exchange controls had made the whole process of buying and selling securities between countries, and remitting payment, either difficult or impossible whilst one of the objectives of the close government supervision exercised over stock exchanges was to restrict their field of operation to the domestic economy. The ability to effect automatic adjustments between economies through the constant buying and selling of securities had almost ceased to exist in the 1930s, with serious consequences for the stability and equilibrium of the world economy.<sup>79</sup>

#### CONCLUSION

By 1914 the global securities market held an established position as the essential interface between money and capital markets both nationally and internationally. It facilitated the mobilization of the vast sums of money required for the financing of the world's railway systems and continued significantly to the stability of the world monetary system. All this began to crumble with the First World War, which not only removed the internationally held securities that were vital elements in integrating national markets into an international network, but also ushered in an era of control and instability. Stock exchanges were increasingly identified as the causes rather than the symptoms of financial and monetary instability, particularly with the Wall Street crash of 1929 and the world economic crisis of 1931. These events encouraged governments to police and restrict market operations, either driving the business they had once conducted into the hands of others or preventing it being done altogether. The core of the global securities market provided by London, Paris, and then New York was destroyed. Even though

Table 6.3. Securities as a proportion of national assets, 1937-40

Country	Government debt (%)	Corporate bonds (%)	Corporate stocks (%)	Domestic securities (%)	Foreign assets %	Total (%)
Belgium	10.1	1.0	3.5	14.6	7.5	22.1
Denmark	3.0	0.4	7.2	10.7	-1.8	8.9
Germany	4.1	0.4	2.5	7.0	0.9	7.9
India	3.7	0.8	0.8	5.3	-5.1	0.2
Italy	14.1	0.4	3.0	17.5	0.3	17.5
Japan	8.0	1.0	11.8	20.8	21.1	21.1
Mexico	1.0	0.6	3.5	12.9	9.2	12.9
Norway	5.1	—	—	9.2	—	9.2
Russia	3.5	—	17.5	24.7	—	24.7
South Africa	7.2	1.1	9.5	17.2	2.0	19.2
Switzerland	6.6	2.5	17.6	36.6	9.0	45.6
UK	16.5	2.5	11.5	22.5	2.4	24.9
USA	7.7	3.7	—	—	—	—

Source: R. W. Goldsmith, *Comparative National Balance Sheets* (Chicago, 1985), national tables.

many national securities markets remained operational in the 1930s, with some playing an enhanced role within their national economies, the global market was hardly recognizable compared to the position it had once occupied.

Curiously, the declining importance of the global securities market occurred for the very same reasons which had led to its appearance and growth in the first place, namely war. Though the First World War did necessitate a huge increase in government borrowing it also radically altered the environment within which most securities markets operated. It brought in its wake a far greater degree of control by national governments whilst shattering the international links that had underpinned the global market before 1914. Such was the importance of securities within the financial systems of advanced economies, especially in the world's main financial centres, that these were very susceptible to war-related crises emanating from the money market. In turn, the close links between national securities markets meant that what happened in one centre had implications for all. This forced the temporary closure of all the world's major stock exchanges. When they reopened it was under conditions of government supervision or increased control, which greatly restricted their freedom to operate.

Nevertheless, the costs involved in waging a prolonged and extensive war did create a need by those governments most involved to raise funds by whatever means available. Though much of this was by way of taxation, printing money, and short-term borrowing, in many countries it also involved the issue of bonds. This immediately reversed the gradual decline in the relative importance of government debt as a proportion of the securities in circulation, and helped fuel activity in securities markets. Even in countries which remained neutral the war had profound implications for their financial systems. The wholesale disposal of foreign assets by the belligerent nations to raise funds, along with their huge purchases of vital war material, produced an inflationary environment around the world, encouraging investment and speculation on the securities markets. This was a temporary situation, lasting only as long as the fighting, but as that stretched into years the inevitable reaction, when the war ended and governments ceased to spend, was particularly acute. Many financial systems were left vulnerable to collapse on a grand scale. Thus, as a result of the First World War, the landscape occupied by securities markets was fundamentally altered both in the short and the long term, and both domestically and internationally. This necessitated not only the rebuilding of national securities markets in the post-war years but also the re-balancing of distorted relationships.

These problems were further compounded in the 1920s by continuing monetary and financial stability. This was particularly acute in some countries,

amounting to a destruction of national currencies and the collapse of banking systems. The national stability characteristic of the years before the First World War proved impossible to reaspire, forcing financial systems to be reorganized in view of the new circumstances. This was also true internationally with the return to the fixed exchange rates required by the return to the gold standard being impossible to sustain. National governments failed to recognize either the fundamentally altered economic relationship between countries resulting from the war or the necessity of a period of adjustment to allow markets to re-establish themselves. A series of unsatisfactory compromises ensued as governments and central bankers attempted in vain to re-establish a new international financial system after the fashion of the old. One crisis followed another until it became impossible for the international financial system to withstand the need for fundamental change. Twin crises finally destroyed the world within which the global securities market had operated so successfully before 1914. The first was the Wall Street Crash of October 1929. This destroyed the financial system of the world's leading economy, namely the United States, and enforced government intervention in order to stabilize the situation. The second was on the international front with the departure of the sterling from the gold standard in September 1931. This destroyed post-war attempts to rebuild a stable international monetary system. Combined with other crises around the world before, during and after these events, the outcome was to put an end to the liberal economic era that had prevailed before 1914 and to the environment which had supported the operation of a global securities market.

This liberal economic environment was succeeded by an era of government controls, interventions, and restrictions in the 1930s. Exchange controls cut across international markets by preventing flows of money and capital, thus separating one country financially from the next. This had inevitable consequences for the global securities markets as it prevented the high degree of integration that had once existed. National governments sought to exert increasing control by operating a process of divide and rule which insulated their own financial system from that operating globally, and then exerting a degree of control over that system so that it delivered the results that they judged to be in the best interests of their national economy. Internally, the same situation prevailed as governments sought to limit the volatility of the market place, and the instability of banking systems, by placing ever more restrictions on their freedom to operate. By the 1930s, the trust in the power of the market that was so evident before 1914 had evaporated, to be replaced by trust in government. The most extreme examples of this were to be found in communist Russia and Nazi Germany but manifestations of it appeared across the world, including the New Deal in the United States.

The global securities market was reduced to a series of compartmentalized marketplaces only loosely linked to each other rather than the fully integrated system that was in full flow before 1914.

Unfortunately, as few people before or after 1914 recognized the contribution that the global securities market had made to world prosperity and stability, unlike the perceived benefits of the gold standard, there was little outside pressure to recreate and maintain what was being lost. In the eyes of many, securities markets were associated with speculative excesses and fraud and so were better suppressed than supported. Such views were reinforced between the wars, especially in the wake of the Wall Street Crash of 1929. This was blamed by many for the world depression of the 1930s and the misery that had created for millions of people around the world. Consequently, securities markets were seen as rather marginal appendages within financial systems with pride of place being given to the actions of governments and banks.