TITLE PAGE

" THE BEHAVIOUR OF THE STOCK MARKET, LEADING UP TO, DURING AND IN THE AFTERMATH OF THE CRASH OF OCTOBER 1987, AND THE IMPLICATIONS FOR THE THEORIES OF STOCK MARKET VALUATION "

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Introduction and Objectives

It can be argued that the value of a share in a company should represent the consensus view of the future stream of profits that are expected to accrue to the company and hence to the shareholders who hold those shares. This belief - that share prices are fundamentally under-pinned by the underlying performances of companies - we shall call the 'fundamentals' theory. It has increasingly come to dominate thinking over the last thirty years. And its ideology of the 'market knows best' has come to provide the underpinning for many of the 1980's government and corporate initiatives around the world - from privatisation and the liberalisation of financial markets to the acceptance of takeover mechanisms.

But the alternative possibility is that, in their investment decisions, investors are not actually too much interested in likely future company performances. Rather, they are concerned, by observing market trends, to anticipate 'which way the market is going'. So for example, any observed trend of rising prices attracts further investors and so further sustains the price rise trend, which attracts further investment, etc. And similarly for falling prices. John Maynard Keynes, describing the market in the 1940s, was convinced that it was this 'psychology' of investors that was most important in moving stock

market prices. As he put it, 'the object of most skilled investment today is to outwit the crowd'.

The objective of this project is to assess the balance of influences between these two forces, which we shall refer to as the 'fundamentals' and the 'psychology' of investment. The period in stock market history that we have chosen to analyse is the period around the stock market crash of October 1987. Through this period, we can observe movements in market prices which are distinctive and of dramatic character : sharp rises in equity prices that escalated through 1987, the crash in October 1987, and the subsequent behaviour of the markets: stabalisation of prices in the West and strong upward recovery in Japan. The view taken here is that this period of stock market history might therefore present a particular opportunity to identify the fundamental influences that determine price. Periods of less dramatic price movements would be more difficult to analyse.

Because we are attempting to identify the concern of investors for economic fundamentals, it is necessary to relate the economic environment not as it might now be viewed, but rather as it was viewed and reported at the time. To this end, we have utilised the reporting of the Financial Times, and to a lesser extenct, The Economist and the Investors' Chronicle. The three periods : (i) the world wide bull run in equities (1982 - 1987), (ii) the October crash of October 87, and (iii) the aftermath of the crash (over a six month period) are described in Chapters 1 - 3. The 'Report of the U.S. Presidential task force on market mechanisms', chaired by Nicholas Brady is used to gain insight into the mechanics of the Wall Street crash(in Chapter 2). Comparisons are made between the October crash and its aftermath and the Great Crash of 1929 and its aftermath - the Great Depression of the 1930s(Chapter 3). For this we have relied on the work of the economist, J.K. Galbraith, 'The Great Crash 1929'. In Chapter 4, we assess the basic 'fundamentals' model and set it against the evidence of Chapters 1 - 3. Most of the important conclusions of this project follow from the discussion in this chapter. The conclusions of the project are summarised in Chapter 5.

Chapter 1 : The Bull Market (1982 - 1987)

1. A brief overview of the bull market and its origins.

The U.S., Japan and U.K. market closing prices over the period 1982 - 1987 are displayed in Figures 1- 4.

(for this section, see Ref E4 unless otherwise stated)

In October 1987, the worldwide bull market was in its fifth year. Goldman Sachs, the New York investment bank, calculated that in this period there had been a real tripling in the value of the stock market(Ref FT 9).

(i) The bull market in the U.S.

One reason for the start of the bull market may have been the realization that share prices had been overly cheap in the past. In the years just before the start of the bull market, stock prices in America were so low as to undervalue some companies in terms of their assets.

Speculators had been able to buy up shares in such companies, get control, and then resell them at a profit. Following on from this, risk arbitrageurs had been able to create an industry that was devoted to mergers and acquisitions and which successfully increased share prices in those companies in which they held a strategic interest(Ref E4). In an era of lower inflation, a fundamental upwards adjustment in valuations took place world wide. This along with the strength of corporate earnings underpinned share valuations(Ref FT 9).

The steep decline in U.S. interest rates - reflected in a drop in U.S. prime rates from 17 percent in early 1982 to 7.5 percent in the third quarter of 1986 - was also a powerful factor behind the increases in U.S. share prices. The interest rates had been raised initially by the Reagan administration in order to squeeze out inflation, but for the farming community of middle America and borrowers in the developing world, it had threatened financial disaster. In response to this debt crisis, interest rates were brought down to help the borrowers to cope. The effect of lower U.S. interest rates had then spilled over into the world's other stock markets as the gap between long bond yields and the return on equities narrowed(Ref FT 9). Added to this, the U.S. Federal Reserve was anxious that central banks, when they realized that money might be lost on loans to Latin America, should not then withdraw other money from the market, which, they feared, might precipitate a world recession. And so after the Mexico crash in 1982, it started to pump up world money suppy. This new money in the hands of the investment banks was directed at the world's stock markets and thereby helped to send security prices higher(Ref EC 22).

In addition, Wall Street was helped by a substantial reduction in the number of shares outstanding, caused by takeovers, leveraged buyouts and share buybacks. The would-be predators needed to build up enough stock from which to mount a bid, and existing owners were buying up their own stock in defence. The result had been an effective removal from the market of large blocks of shares, and the reduction in supply obviously helped to sustain price increases. Between 1984 and the October crash alone, it was esimated that some $300 billion of equity had been taken out of the market, with the result that the supply of equities had been shrinking at an annual rate of about 3 percent(Ref FT 12).

Another factor which forced share prices higher in Wall Street was the large amount of money attracted into the U.S., particularly from Japan. As cross-border investment grew, so did investors' sensitivity to foreign equity performance, and Japan's higher valuations seemed to offer justification for investment in the lower valued U.S. market(Ref A2). Traditionally, net foreign investment in U.S. equities had never topped the $5 billion mark. However, in 1986, more than $18 billion flowed into the market led by the Japanese. In the first half of 1987, foreign investment in U.S. equities was running at an annual rate close to $40 billion(Ref FT 12).

(ii) The bull market in Japan

There were two essenial reasons behind the huge rise of the Tokyo stock prices in this period. One. was the outstanding success of Japan's companies at selling products to a world market. Two, was the surge of liquidity brought about by the tendency of Japan's people to save rather than spend. The result of this saving was that the return on Government bond yields had dropped from about 8.5 percent in 1982 to half that by the beginning of 1986. As investment in government bonds and bank account deposits came to look increasingly unattractive, savers began to invest directly in the stock exchanges.

(iii) The bull market in the U.K.

The start of the bull market in Britain is more accurately traced back to 1974(see Figure 2). Against a decidedly bleak background of inflation, what was seen as ominous trade union strength, and secondary banking failures in the City, the stock market had fallen under self-fullfulling pessimism as investors in the City had taken to going short on stocks; that is, selling stocks they did not have in the belief they would be able to buy them back cheaper at a later date. In 1974 stocks lost 25 percent of their price and the FT 30-shares Index crashed to 146 on January 6th having been as high as 543 in May 1972(Ref D2). Eventually, seeing prices so low, investors began to judge that shares were undervalued in terms of fundamentals, and the braver ones began to buy. Quite soon, as share prices began to move upwards, it again seemed

sensible to invest in the market. When the government concluded a deal with the International Monetary Fund in 1976, which held out real prospects of bringing inflation under control, prices began to move ahead confidently.

The early years of the 1979 Conservative government, however, were particularly severe on British business. High interest rates - a function of the government's attempts to bring down inflation - meant higher borrowing costs. Higher levels of unemployment slowed down domestic demand. And the high price of sterling as a result of the North Sea oil-based trade surplus, made exporting difficult. But after a period of slimming down or going bust, British business did emerge looking more confident and claiming higher profits that supported increases in their share prices. The Conservative government's policy of privatisation provided share prices with a further boost as more investors were coaxed into the market by state sell-offs that were priced so as to offer immediate gains.

2. America's dollar exchange rate, its budget and current account deficits and the achievements of international economic co-operation in the the bull run period up to end 1986.

(for this section, see Ref EC 1)

A phenomenon of the period 1980-1984 had been the sharp rise in the value of the U.S. dollar. Up to 1985, the American administration's public stance on the dollar was that its strength was a sign of confidence in the U.S. economy and as such, was a good thing. Foreign confidence in the strength of the U.S. economy, which had made the dollar an attractive asset for foreign investors, does go some way to explaining the dollar's rise. But the rise was also a function of America's high interest rates : since the early 1980s its government had combined an expansionary fiscal policy of cutting taxes combined with increased spending - that is, bigger budget deficits - with a tighter monetary policy. The mixture had meant sharply higher interest

rates. The main consequence of which had been not to discourage domestic investment, but to attract a flood of foreign capital which forced up the exchange rate of the dollar. And 'Reaganomics' had increasingly become an economics of convenience : the Reagan administration was against tax increases, while at the same time, Congress was refusing to make cuts in Federal spending. A budget deficit supported by an influx of foreign capital became the short-term solution to the disagreement. As long as it was less painful to go on borrowing from foreigners and central bankers than it was to take action to reduce the budget deficit, President and Congress were able to remain deadlocked. It is also likely that the rise of the dollar became self sustaining as it rose because the markets expected it to.

The other consequence of the rise in the U.S. budget deficit and the attendant rise in the value of the dollar, was the rise in the current account deficit. Dollars that purchased foreign goods were being returned to the U.S. economy not by foreigners buying U.S. goods, but by the U.S. Administration's borrowing requirement. American people, in their buying of foreign consumption goods, now found themselves able to turn their dollars into foreign currencies at an attractive rate, - and this without the need to export an equal value of U.S. goods to sustain the demand and hence the value of their dollar. Domestically, the budget deficit (over $150 billion in 1987) was also fuelling demand and thereby encouraging output and increasing employment. Added to this, the ever increasing current accout deficit (of the same order as the budget deficit) was increasingly making the American economy the train that was pulling the economies of the other industrialised nations.

Such was the world of 'Reaganomics'. But America's spending was as we have said, based on borrowed money, and as such could hardly be relied on to endure. Mr James Baker who replaced Mr Donald Regan as the U.S. Secretary of the Treasury in 1985, realised that the high dollar was adding to America's current account deficit at an unsustainable rate. Sooner or later, America would have to pay for its imports by trading its own goods. The required mechanism would have to be a lower dollar. As soon as foreign investors anticipated that foreign support for the U.S. currency had peaked, they would desert it. The dollar's fall might then become as self-sustaining as much of its earlier rise had been.

The dollar, which was bound to fall eventually, began its decline in early 1985 (Figure 5). At their celebrated meeting in New York's Plaza Hotel on September 22 1985, the financial ministers of the five main industrialised countries proclaimed an era of macroeconomic co-operation. For the first time, they agreed in public that the dollar was over-valued, and said they planned to drive it down by concerted intervention in the foreign exchanges and other means. Perhaps as great a significance of the meeting (given that the dollar was already falling before the meeting and didn't fall any faster as a result of it), was the simple fact that governments - including America - had begun to realise that the rest of the world impinged on their economies and that through basic co-operation, international policies should be co-ordinated and at least be made compatible. The details of the policy changes agreed on at the Plaza meeting were never specified, but there could be no doubt about their overall shape : America needed to make its economy more export driven and West Germany and Japan - the countries which had the largest surplusses with America - needed to increase their budget deficits,- that is, they needed to increase their demand. In this way they would both assist America's export drive and take over the impetus of world economic growth from America.

America's 1985 current account deficit of $116 billion had been more than covered by inflows of private foreign capital. In contrast, the 1986 current account deficit of $141 billion had been partly financed by a $29 billion rise in American liabilities to foreign governments - in other words, a rise in foreign governments' holdings of dollar assets in their reserves. This was the much vaunted 'soft landing' of the dollar taking place. It was also evidence of the inter-dependency of the industrialised nations : too steep a fall in the dollar would be inflationary for America as its imports were made more expensive, and would also cause other countries to lose the thrust of their exports to America. It seems that the Bank of Japan in particular, feared that the dollar was falling too fast. So it intervened in the market, selling yen to buy dollars.

The united front of the Group of Seven(G7) members(America, Japan, West Germany, France, Britain, Italy and Canada) reassured the markets. The interpretation of the markets seemed to be that all the G7 members had to do was to agree on the most basic of policies (the controlled fall

of the dollar and the expansion of the German and Japanese economies) and the world economy would be based on an even surer footing than it had been previously. Further beneficial to the markets had been the collapse of the oil price at the beginning of 1986. In addition, global inflation was on its way down and nominal interest rates were falling. So it was possible to predict a period of faster, non-inflationary growth, together with an unwinding of the trade balances that were seen to pose the only real threat of an economic setback.

Unfortunately, due to the well understood J-curve effect along with the tenacity of non-U.S. companies in holding onto their foreign markets, America's trade deficit proved more difficult to unwind than might have been expected. Added to this, the drop in the price of oil had proved to be less influential than had been hoped for - the oil importing companies that had benefited had not passed on their savings to their customers, and so demand in those countries had not been greatly affected, while demand had been much reigned back in the oil exporting countries. And so America's trade deficit for 1986 widened in dollar terms, to $147 billion from $124 billion in 1985. The first signs of narrowing however did appear towards the end of 1986. Things finally were moving in the right direction.

3. The economic events and debate through 1987 up to October 19th.

(for this section, see Ref EC 1 unless otherwise stated)

By early 1987, the persistence of the trade deficit was already creating tensions between America, West Germany and Japan, and there had been open squabbles over exchange rates and economic policy(Ref EC 2). America began to criticise West Germany and to a lesser exten t Japan for lack of supporting expansionary policies. Mr Baker was urging that if America was left to deflate single-handed, it would create a downward spiral everywhere. Domestic demand in other countries must therefore be raised at least as fast as it was cut in the U.S. (Ref FT 8). But West Germany and Japan claimed that America's trade deficit was

proving stubborn not because America was unable to expand its exports but because it carried on buying imports(Ref EC 4). They claimed that the underlying problem was that the U.S. did not generate nearly enough savings to finance its own investment needs(Ref FT 8). America would therefore have to cut its budget deficit as promised. The Financial Times in its leader of October 10th(Ref FT 5), recognised the conflict between the instinctive Keynesianism of the Americans, especially Mr Baker, and the equally obdurate monetarism of the Bundesbank. Both parties it observed were right : 'the Germans were right to emphasise the inflationary risks of present U.S. policy; and the Americans were right to chide the Germans for their caution with inflation'. America threatenened to let the dollar drop further. Japan and West Germany were now suffering a squeeze on their exports as a consequence of the rising value of their currencies and they wished to control the damage to their exporting industries.

The U.S. dollar had kept falling - by early 1897, by some 40 percent from its peak against the currencies of the strongest industrial economies. In February 1987, the finance ministers met again in Paris and agreed that the prevailing exchange rates - at the time the dollar was Y153 and DM 1.82 - was about right. In the first quarter of that year, private capital flows to America had fallen quite sharply. So much so that official intervention was now financing the whole of America's current account deficit. Reflecting this, Ameica's G7 partners had all seen large increases in their reserves : Japan's went up by $16 billion and West Germany's by $3 billion in that quarter. Altogether, the dollar reserves of the main industrial countries went up by $28 billion : nearly as much in that quarter as in the whole of the previous year. At the meeting in Paris, Mr Baker was understood to have agreed to stop talking the dollar down. His counterparts Mr Gerhard Stoltenberg and Mr Kiichi Miyazawa responded with somewhat vague remarks about their plans for fiscal relaxation. At their Venice summit in June, the finance ministers reaffirmed their Paris agreement(the 'Louvre Accord'). Japan attempted to diffuse the ever-mounting threats of protectionist laws from America's Congress by promising to stimulate its economy with a $35 billion dollar package of extra spending and tax cuts.

The intervention in the foreign currency markets - by West Germany and Japan in particular - to support the dollar continued. Since 1985, private investors had been fleeing from the dollar into other assets(Ref FT 1), and since the Louvre accord, central bank intervention had now totalled some $90 billion. This had a well understood follow-on effect : the selling of their own currencies to support the dollar, increased the domestic money supply in those countries, feeding liquidity into the world markets. This expansion 'through the back door' was exactly what America was calling for. But the inflationary effect was of increasing concern to these countries. In effect, they believed that America was trying to export the inflationary effect of its budget deficit. To combat this, they began to drive up their intrest rates. This created a 'sterilizing effect' on their domestic money supplies : studies have shown that intervention in the money markets that are combined with such a sterilizing change in interest rates have no lasting economic effect(Ref EC 3). Not that all of the intervention was sterilized, and thus by mid-1987, some slowing of monetary growth in America was being matched by faster growth in Japan and West Germany.

The rises in interest rates of these counties were not only contradicting their own dealings in the currency markets, but they were frustrating America's own increases in interest rates. The U.S. dollar was not being allowed to create its desired premium rate over that offered by other countries. The U.S. had needed to raise interest rates to i) to support the dollar and avoid the inflationary consequencies of its further decline, ii) to attract foreign lenders - who increasingly were judging that a currency so heavily supported by foreign central banks was high risk, and iii) to put a break on the growth of U.S. nominal demand - to assist the lowering of the trade deficit. Since the beginning of the year to mid-October, short-term U.S. interest rates had risen by 150 basis points and long-term government bond yields by 250 basis points, putting them about the 10 percent mark. The rises in interest rates by West Germany and Japan could in fact be viewed as a dramatic demonstration that the G7 countries were now prepared to act without any real economic co-ordination. Their interest rate policies were not in fact in harmony but in a direct conflict.

Interest rates were being pushed up also by the bond markets, which through 1987 had been in a bear market of their own. They feared that the international commitment to currency stability combined with the continuing U.S. commitment to domestic growth would indeed lead to the exporting of the inflationary effect of the U.S. budget deficit(Ref FT 1). Added to this, was the fear that a government with large and growing debts in its own currency might actually prefer inflation to continuing service of its debts at the initially anticipated real rates of interest. By October 1987, it had become more obvious in the monetary statistics of Japan and to a lesser extent of Germany, that the markets had become more nervous. Not least, dollar stability looked increasingly uncertain in such an environment(Ref FT 1). Through August and September, interest rates began to rise around the world almost as if a single hand was conducting the movements(Ref D4).

The Times leader of October 17th also noted that rates of interest had been rising sharply in all markets(Ref FT 5). The redemption yield on ten year U.S. treasury bonds for example, was 1 percent higher than a month ago. This it interpreted as a reaction to the cross-purposes of the G7 countries and the cautious reaction of the representatives of Japan and West Germany to the plans for long term macroeconomic co-ordination announced by Mr Baker and Mr Lawson at the recent meeting of the G7 countries in Washington. It considered that that meeting 'may herald proceedings for a divorce'. It also noted that nervous about the intentions of the G7 countries, currency dealers had been marking down the dollar.

The sense of nervousness was being reinforced by the latest U.S. trade figures released on October 14th - the August deficit was less than for June and July, but still well up on all other months in 1987. The deficit for the first eight months of the year was already $114 billion. In European financial markets, the trade gap was seen as undermining confidence that the dollar had fallen enough to enable the U.S. deficit to be gradually eroded(Ref FT 3). There were now doubts that the G7 agreement on currency stability would be able to prevent another dollar fall, and that the U.S. could fund its budget without a further rise in interest rates. On October 14th, there was a renewed upturn in West German short-term interest rates. Although this increase in the Bundesbank's repurchase rate was relatively small - from 3.75 to

3.85 percent - it was the third rise in recent weeks. These increases suggested that just when the dollar faced another bout of downward pressure, the Bundesbank was unwilling to intervene in its aid because of domestic monetary considerations(Ref FT 12).

The official West German view was that their slow growth reflected their fiscal and monetary prudence and adjustment to the appreciation of the Deutsche Mark in 1985-86(Ref FT 5). The aim of monetary policy, they claimed, should be the stabilization of the domestic price level and that was precisely what had been achieved. In their view, the American boom had been the consequence of unsustainable and irresponsible fiscal policies. The only thing that must be avoided, the Germans would argue, was a resurgence of global inflation which was being threatened by the American fixation with targets for real rates of growth(Ref FT 5). Other countries, it was reported, were simply not prepared to import America's inflation problem(Ref FT 10).

Samuel Brittan in his economic viewpoint for the Financial Times of October 15th weighed in strongly against the West German and Japanese standpoints(Ref FT 2). The article sharply attacked the 'copycat' increases in interest rates by West Germany's and Japan's central bankers. It considered that West Germany and Japan had in common a growth of demand which was below the inflationary threshold, and well below that required to keep output growing in line with capacity. A fall in the U.S. dollar could not be considered appropriate since the margin of unused resources in America had shrunk to the point that a fall in the U.S. dollar would simply worsen inflation without being able to noticably affect the balance of payments. Germany's demand management had been more cautious than Japan's and had caused the more damage. It warned that the lack of intellectual leadership by West Germany would continue to be dangerous both for West Germany itself and for its neighbours.

In fact, on that afternoon(15th October), danger sparked: Mr James Baker emerged from the White House with President Reagan to deliver a stinging attack on the economic policies of West Germany. Increases in West German interest rates engineered by the Bundesbank were not, he said, 'reflective of the spirit of our recent consultations'. In Saturday's Washington Post, Mr Baker's remarks appeared again and the

report quoted a 'key Administration official' as saying that the U.S. would not raise interest rates in response to West Germany and would tolerate a lower dollar 'if the markets took it there'. An article in the Financial Times on the morning of Monday 19th, identified Mr Baker's pronouncements as a gamble(Ref FT 10). Mr Baker, it seemed, already had a reputation as a gambler(Ref D7).

In the face of higher interest rates and tensions about the world economy, the New York stock market had, in fact, been losing ground since August 25th. It had fallen modestly at first, but in the two weeks before October 19th, the descent had gained pace - falling some 10 percent - and culminated on Friday October 16th, with a record daily fall - it was the first day on which the Dow moved by more than 100 points. The Dow had now fallen 17.47 percent from the peak of 2722.42 on August 25th(Ref FT 4). Equity markets generally (with the exception of the Tokyo market) had also been weakening.

Although there was no sense of out and out panic in the newspaper reports over the week-end of October 17-18th, the stock market decline did prompt a fair amount of concerned debate. The Financial Times considered that whether the market's party resumed, hung delicately on investors' anxious mood over the next few days(Ref FT 7). The sell off could be seen as either a severe correction or the start of a ferocious bear market. Over the week-end, it reported, many analysts were hanging doggedly onto their hopes that stock market fundamentals justified a return to higher prices. Enough investors might be persuaded to go bargain hunting to stop the rot. After all, the economic outlook remained good. Growth was picking up, inflation would rise, but not rampantly and corporate profits were accelerating rapidly. The article in the Monday Page of the Financial Times on October 19th also found itself able to endorse the cheery outlook. It was able to report that the U.S. National Assoiation of Business Economists, the members of which advise most of the U.S. companies, had met earlier in the month, and the news could hardly have been better: it was the biggest improvement in the corporate outlook NABE members had ever reported. Besides this, the volume of U.S. exports had risen at a quite remarkable 14 percent annual rate in the first half of the year; and so if had paused for breath, that was hardly surprising. Meanwhile, U.S. consumer demand, supported for so long by seemingly reckless borrowing,

was at last levelling out, which would in due course reduce the demand for imports. The celebrated Federal deficit was sharply down, and would be further reduced by the Gramm-Rudman act. The article felt happy to quote the new Chairman of the Federal Reserve, Dr. Alan Greenspan. He had made a speech earlier in the month supporting the cheery view. The real economy, he said, was responding powerfully to the exchange rate adjustment, and the effect of the nominal current account balance would appear in due course.

The sympathetic view of the latest high interest rates was that the world's central bankers were touching the brakes at an early stage to curb inflationary expectations which had been fuelled by the surprising strength of industrial raw materials. If all went well, the brakes would be relaxed next year. It could be argued that there were few signs so far that world inflation was accelerating and if this continued to be the case, the world's bond markets had in fact been over-reacting(Ref FT 9). Regarding the U.S. deficits, it could be argued that even a quite high deficit was not necessarily unhealthy and could be problem free. The argument was that the U.S. is a rich developing economy. Savings are low because the population is relatively young, while investment demand is high because the labour force is still growing, and because industry has much outdated plant. The funds would be willingly provided by older, less dynamic economies. The Organisation for Economic Co-operation and Development in Paris had calculated that a deficit of $50 billion - one third of the present size - might be quite appropriate, while others put the figure even higher(Ref FT 8).

Standard and Poors, the U.S. investment rating agency, had concluded in a survey of the U.S. stock market shortly before October, that share prices were 'liberally priced' relative to corporate profits, assets and dividends. It noted also that the spread between stock and bond yields was 'exceptionally wide'. Japan, however, was viewed as being in a league of its own and was continuing to trade on P/E ratios of well over 50. Other markets were nowhere nearly as higly valued as Japan's, but by historical standards they were 'very fully valued' (Ref FT 9). Goldman Sachs calculated that if Japan was excluded, world stock markets were trading on a prospective 1987 P/E ratio of 16.2 compared with an average of 12.3 between 1982 and 1986(Ref FT 9).

Figures 6 to 9 display the trend in P/E ratios against long term government bond yields for the U.S., London and Japanese markets leading up to the crash.

4. Summary of the chapter

Through the bull run period, the world economy was fuelled by America's prosperity and by its thirst for imports - which increased the profits both of America's own companies and those in the rest of the industrialised world. Against this background, equity share prices increased confidently and consistently. But America was not balancing its imports with exports(the trade deficit), and so the cycle of dollars that allowed America to continue importing was dependent on members of foreign countries wanting every year to invest an amount equal to the trade deficit in dollar assets. The American Administration's borrowing requirement(the budget deficit) - equal roughly to the trade deficit - had greatly encouraged foreign lending. Therefore, dollars were being returned to the American people either by the foreign buying of America's real assets or in the form of foreign loans. Americans thereby continued to enjoy the consumer goods of Japan and West Germany and the rest of the industrialised world, while these other countries took satisfaction in their companies' profits and their increasing assets. The flaw in this arrangement was that, foreign capital might not continue to be forthcoming to invest in America's assets at a rate sufficient to satisfy America's thirst for imports(over and above its exports). The flaw was a fatal one in that, a devaluation of the dollar(or dollar assets) at any time might lead to a self-fuelling run on the dollar. The basis for economic well-being among the industrialised nations could then be shattered in an extremely short time. The industrialised nations had begun to be aware of this and attempted to co-ordinate a 'soft landing' for the dollar's decline. This would allow America to smoothly decrease its imports and to increase its exports so as to bring them into balance. The other half of the strategy was that West Germany and Japan should reflate their economies at a rate sufficient to take up the slack on world economic demand caused by America's reduced imports. Thus the world

economy long-term would be put on a more confidently sustainable basis. The policies began to have success, but less quickly than was hoped for. Increasingly, the dollar was being supported, not by private investment, but by official intervention by other countries. International co-operation therefore was encouraging America to keep its consumption high for the benefit of the world economy. By early 1987, tension between the industrialised nations was leading to disagreements on policy. Basically, West Germany and Japan resented having to take chances with the inflationary consequencies of reflating their economies, and in the run up to the Presidential election, America was unwilling to choke back its imports by means of any deflationary policies. Each side began to blame the other. Bonds entered a bear market of their own to reflect the increased probability of a dollar collapse followed by inflation and subsequent higher interest rates. Interest rates rose further as each country - in spite of supposed economic co-operation - tried to obtain for its currency a desired premium in the interest rate(West Germany and Japan to contain inflation, and America to contol the dollar's slide). In October 87, the U.S. Treasury Secretary, Mr James Baker, made a public outburst of complaint to the West Germans. This was against the background of somewhat disappointing American trade figures released that month. The New York stock exchange had in fact now been losing ground since August 25th, and in the two weeks prior to October 19th, it made a severe slide. Over the week-end of October 17-18th, the financial press viewed the situation as 'a test of the bull market's resolve'.

Chapter 2 : The October Crash

1. The crash

From the close of trading on Tuesday October 13th, 1987 to the close of trading Monday October 19th, the Dow Jones Industrial Average declined by almost one third, representing a loss in the value of all outstanding U.S. stocks of approximately one trillion dollars. It was estimated that every American family was now $14 thousand poorer. On Monday 19th, London fell 249.6, a fall of 10.8 percent. The next day, it fell further, 250.7 points, making a fall of 22 percent in two days. The two days had therefore wiped off £94 billion from share values, and this meant that Britain's private wealth had been reduced by something like 10 percent on paper. The reaction of the Japanese market to Wall Street's crash came on Tuesday when the Nikkei index fell by 15 percent.

What made the market break extraordinary, was the speed with which prices fell, the unprecedented volume of trading and the consequent threat to the financial syatem. The human drama of the events on October 19th - Black Monday - were described vividly on the front pages of the Financial Times(Refs FT 13-15). What we are concerned with particularly in this chapter is to obtain an accurate answer to the question, What primarily motivated the investment and portfolio

decisions of the market players during the stock market's decline, fall and crash? We focus our attention on the U.S. markets since we believe that they led the rest of the stock markets downward at the time of the Crash(Ref H1).

A U.S. Presidential Task Force was set up to determine what had happened and why, - as well as to provide guidelines in helping to prevent such a break from happening again. Their report, 'Report of the Presedential Task Force on Market Mechanisms'(Ref A), concludes that the economic/political tensions as described in the preceding chapter were responsible for 'triggering' certain price-insensitive mechanisms in the U.S. markets. Thereafter, these mechanisms assumed a devastating independence of their own. The most important category of reactive selling that was identified by the investigation was known as 'portfolio insurance'. The portfolio insurers stayed with the market so long as it was rising. In the event of a market dip, their computers were programmed to dictate sales that would protect a proportion of the gains obtained already. In this way, portfolio insurers sought to stay with a rising market but to avoid being locked into a decline. The technique was not actually to sell the stock itself, but futures for the stock, these being both cheaper and faster to sell/buy. In other words, the futures market represented an efficient proxy for the stock itself.

The report illustrates the extent to which downward selling would be made to feed on itself : one portfolio insurance client had followed exactly the instructions of its advisor during the Wednesday to Friday period. Over the week-end, the advisor informed the client that, based on Friday's market close, it should sell on Monday, 70 percent of its remaining equities in order to conform to the parameters of the insurance model. This was an extreme example. But in response to a 10 percent decline in the market, the typical portfolio insurance model called for stock sales in excess of 20 percent of a portfolio.

The report indicates that as much as 60 - 90 billion dollars of equity assets were in fact under portfolio insurance administration at the time of the market break. The portfolio insurers had been very active during the Wednesday to Friday period : in the futures market where, as we have said, they concentrated their activity, they had sold the

equivalent in stocks of approximately $530 million, $965 million and $2.1 billion through Wednesday, Thursday, Friday. And still the portfolio insurers approached Monday with a huge amount of selling already dictated by their models. With the market already down ten percent, their models dictated that, at minimum, $12 billion (20 percent of $60 billion) of equities should already have been sold. Less than $4 billion had in fact been sold.

Adding to the enormous selling pressures building up over the week-end, a small number of mutual fund groups were also confronted with an overhang. These funds had designed strategies which made it easy for customers to redeem their mutual fund shares. On Friday alone, customer redemptions at these funds exceeded fund sales of stock by $750 billion. Over the week-end, these funds would receive further substantial redemption requests.

The activities of a small number of agressive trading-orientated institutions both contributed to the decline during the week and posed the prospect of further selling pressure on Monday. These traders understood the strategies of the portfolio insurers and mutual funds. In other words, they could anticipate the selling those institutions would have to do in reaction to the market's decline. They could also see those institutions falling behind in their selling programmes. The situation therefore presented an opportunity for these traders to sell in anticipation of the forced selling by portfolio insurers and mutual funds, with the prospect of repurchasing at lower prices.

Throughout Monday's decline, trading volume and price volatility increased dramatically. And this record volume was concentrated among relatively few institutions. On October 19th, out of total New York Stock Exchange(N.Y.S.E.) sales of just under $21 billion, sell programmes by three portfolio insurers made up just under $2 billion. Block sales of individual stocks by a few mutual funds accounted for another $900 million. In the futures market, portfolio insurer sales amounted to the equivalent of $4 billion of stocks, which was equal to over 40 percent of futures volume exclusive of local transactions; and of this, $2.8 billion was attributed to just three insurers. In the stock and futures markets together, one portfolio insurer sold stock and futures with underlying values totaling $1.7 billion. And as huge

as the selling pressure from portfolio insurers had been on the Monday, it was still a small fraction af the sales dictated by the formulas of their models.

Normally, selling pressure in the futures market is transmitted to the stock market by the mechanism of index arbitage - the computers of traders are programmed to spot any gap between the price of a stock index future and the stock itself , and make opposite transactions in each to lock in a risk-free gain. But the N.Y.S.E. automated transaction system ('DOT'), used by index arbitrageurs to link the futures and stock markets was rapidly overwhelmed and the backlog was such that it ceased to be useful after midday on October 19th. The concern - although it didn't materialise - that some clearinghouses and major market participants might fail further inhibited the intermarket activities of other investors. The futures and stock markets became disengaged - in effect, giving contradictory prices for the same stock - as they both hit a freefall. Everyone had showed up on the same side of the market at once.

In the face of such overwhelming selling pressure, market makers were unable to manage smooth price transactions. These specialists are meant to stabilise the market by buying when there are no buyers and selling when there ara no sellers. They assume the obligation in return for an exclusive franchise in the particular stock. But by the late afternoon of October 19th, market makers on the major stock exchanges appear to have largely abandoned serious attempts to stem the downward movement in prices. They no longer possessed the resources or the willingness to absorb the extraordinary volume of selling that had materialised.

Although Monday was the day of the dramatic stock market decline in the U.S. markets, it was midday Tuesday that the securities markets and the financial system approached an actual breakdown. First, the ability of securities markets to price equities was in question. The futures and stock markets were disconnected. There were few buyers in either market and individual stocks ceased to trade. Investors began to question the value of equity assets. Second, and more serious, a widespread credit breakdown seemed for a period of time to be quite possible. Amid rumours, subsequently revealed to be unfounded, of financial failures by some clearing-houses and several major market participants, and

exacerbated by the fragmentation and complexity of the clearing process, the financial system was close to breakdown. Intermarket transactions required fund transfers and made demands for bank credit almost beyond the capacity of the system to provide them.

The extreme volatility of market prices on October 19th and 20th had subjected all market participants and particularly small investors, to capriciously different treatment. As an example, an investor selling stock or futures contracts near the close on Monday suffered a loss of 10 to 12 percent compared to investors who sold either an hour earlier or the next morning. In contrast, an investor who bought at or near the open on Tuesday morning, paid from 10 to 20 percent more than one who bought either at the previous afternoon's close or two hours later. In addition to these discrepancies, small investors were at a disadvantage in speed of execution. Their problems had ranged from not being able to reach their retail brokers to delays and failures in the automated small-order systems on both the N.Y.S.E. and over the counter markets.

The price level of the Dow Jones industrial one minute chart over the period 14 - 20th October is shown in Figure 10. The loss of value of the U.S., Japan and London markets can be seen in Figures 1, 3 and 4 alongside the previous five year rises in these markets.

2. Summary of the chapter

The report of the U.S. Presidential Task Force describes the behaviour of the U.S. markets around the period 19 - 20th October 1987. On October 19th, selling pressures - concentrated among relatively few institutions - caused selling panic to feed on itself. In response to a decline in share price, these institutions triggered price-insensitive selling mechanisms which pushed the decline ever further. There were almost 'no buyers' as everyone showed up on the same side of the market at once. Prices went into freefall. On October 20th, the technical, human and financial resources of the system were exhausted and brought to near collapse.

Chapter 3 : The Aftermath of the October crash, the Great Crash of 1929, and the Great Depression of the 1930s

1. Brief overview of the rest of the week

Throughout Monday 19th, Howard Baker, the White House Chief of Staff, had been talking to the exchange officials and, as the markets closed, the White House asked John J. Phelan, Chairman of the New York stock exchange, how they might be able to help. Phelan who had previously described Monday's events by, 'I call it the nearest thing to a meltdown I'm ever likely to see' (Ref FT 14), now is reported to have said, 'If you have one silver bullet then fire it and indicate that interest rates are coming down' (Ref D9). That evening, it was announced that James Baker was extending his brief stop-over in Frankfurt to meet West German Finance Minister, Gerhard Stoltenberg and the Bundesbank President, Karl Otto Pohl. The talks lasted several hours and they issued a statement saying efforts would be made to stabilise all interest rates and the Germans would lower theirs(Ref FT 18).

Just before Wall Street opened on the Tuesday, Alan Greenspan, the Chairman of the U.S. Federal Reserve, assured the banks that fresh

funds would be available. The Fed, said the statement, was willing to affirm its 'readiness to serve as a source of liquidity to support the economic and financial system' (Ref FT 19).

Later President Reagan ordered talks with the Democratic controlled Congress aimed at cutting the U.S. Federal budget deficit and hinted that he might even consider some tax increases to achieve reduction(Ref FT 21). West Germany announced a small cut in interest rates and reaffirmed its absolute commitment to the Louvre accord(Ref FT 21). The 'Group of Seven' nations agreed that each would act to ensure sufficient liquidity in their financial markets and that contributed to a general downward trend in interest rates(Ref FT 21). President Reagan and Britain's Chancellor, Nigel Lawson, both emphasised the soundness of their economies and Lawson described the crash as 'an absurd over-reaction' (Ref FT 23).

The reaffirmation of the Louvre Accord and the perception that national monetary policies might once again be made complementary rather than confrontational, appeared initially at least, to have some effect(Ref FT 22). On the Wednesday, traders took heart from the sharp falls in U.S. interest rates engineered by the Federal Reserve Board, and share prices surged in hectic business on all leading stock exchanges, with Wall Street, Tokyo and London making record one-day gains(Ref FT 19). On Thursday in Tokyo, the market recouped 65 percent of the ground it had lost in Tuesday's record fall. But other world markets swung nervously. Wall Street lost almost half of Wednesday's gain and London slumped again. On Friday, London slipped a little, and Wall Street was relatively quiet, closing just fractionally ahead of its Thursday close. The explanation for the calm on Wall Street was that, 'the market makers had become just too exhausted to care' (Ref D12).

In summary, at end of the week, a comparison with October 9th, when the markets appeared secure, showed that Tokyo had fallen 8 percent, London 22 percent, New York 20 percent, Canada 20 percent, and Australia 25 percent. Japan was about 12.5 percent of its peak compared to Wall Street which was nearly 25 percent down from its August 25th peak(Ref D11).

2. The immediate reactions to and rationalisation of the October crash in the British press

The leader article if the Financial Times(Ref FT 11) on Tuesday morning did not presume to have all the explanations. 'But is there a real basis for the equity market's hysteria?' it asked without feeling confident of any answer. It remarked on the economic tensions prior to the crash - as described in our Chapter 1 - and the mounting concerns over the money supply and the chance of renewed inflation which had been faithfully reflected in the bond markets but of no real concern, it had seemed, in the equity markets. 'Perhaps, equity markets had simply, and suddenly, now come down to earth.' It wondered whether it could be that 'a critical mass of big investors has concluded that a major U.S. recession is now becoming inevitable'. But the 'puzzle' still remained as to why the above should have dawned so suddenly on Wall Street and even more suddenly on the London equity market. It concluded that in spite of their tremendous technological capacity, the 'markets were too narrowly obsessed with predigested opinions' and their process of analysis turns out to be 'clumsy and even alarming.'

The other contributions in the Financial Times were not so heart searching. 'Classic Speculative Bubble Bursts' headlined one article(Ref FT 16). It began, 'What is it that can cause the world's equity markets to lose more than a quarter of their value in less than a day and a half? Certainly nothing to do with economic fundamentals.' It informed that, 'the characteristic signs of a bubble are to be found when investors cease to pay attention to the fundamentals and lay out money on the assumption that prices can only go up - an apt enough description of what has been happening in the larger markets around the world.' A second article that day(Ref FT 17) had the same essential message and developed the 'Bigger Fool Theory.' Monday morning was when the Bigger Fool refused to turn up.

The Investors Chronicle(Ref IC 2) also insisted that shares had been bought by people because they believed that their price was going up. Share prices, therefore, were a function of the psychology of investors. Many of the younger dealers today, it believed, would have regarded the term 'fundamental values' as something from a foreign

language. The British government had encouraged the idea that shares offered instant profits. Prospective buyers of B.P. and other state sell-offs, it pointed out, had hardly been wooed with details of profit prospects, yield, P/E ratio or other measures of fundamental value. Instead, they had been served up 'television fantasies which could equally well have been used to market soap flakes.' And now the market had turned and fundamentals would be unable to have anything to do with it - since even sophisticated institutional investors who reasoned that shares now looked cheap, would not risk buying if they thought they might be ten or even twenty percent cheaper still in a week's time. As for its advice in previous weeks for readers to buy certain shares, it defended that its comments were always 'relative to the market.' Its statistics therefore were not wrong - they had quickly become 'wildly out of date.' The distinction between 'wrong' and 'wildly out of date', may or may not have been lost on its readers.

The Economist(Ref EC 6) declared 'it was the madness of crowds that had sent the bull market ever upward this year', and it was, 'mob psychology that has now sent investors hurtling for the exits.' The whole business, it decided, deserved a chapter in Charles Mackay's book, 'Extraordinary Popular Delusions and the Madness of Crowds', alongside the Dutch tulip bulbs and the South Sea bubble affairs. The leader article(Ref EC 5) possessed an attitude of condescension : As for why the markets had crashed, it would 'start with some simple arithmetic,' and then pointed out that two weeks ago investors were buying shares at dividend yields averaging 3 percent in London, 2.6 percent in New York, and 0.5 percent in Tokyo, compared with borrowing rates 15, 16.5 and 5 percent, respectively in these places. The gap between a share's cost and yield had become double its normal size in the three previous decades. 'When those reasons dawned on lots of investors at once, shares crashed.' Further down it prompted us, 'P/E ratios of 20 had always been a little crazy, hadn't they? Crash.' At least one reader was left wondering, Why, if all of this had 'dawned on' The Economist so much earlier, it had not chosen to warn its readers of the crash(Ref EC 15).

3. The lessons from the Great Crash of 1929 and its aftermath; the policy response to the October crash

Inevitably, comparisons were made with the Great Crash of 1929. After the Great Crash had come the Great Depression, which had lasted, with varying severity, for ten years. In 1933, Gross National Product was nearly a third less than in 1929. Not until 1937 did the physical volume of production recover to the levels of 1929, and then it promptly slipped back again. Until 1941, the dollar value of production remained below 1929. Between 1930 and 1940, only once, in 1937, did the average number unemployed during the year drop below eight million. In 1933, nearly thirteen million were out of work, or about one in every four in the labour force. In 1938, one person in five was still out of work(Ref F1).

Writing in Atlantic Monthly in January 1987, the economist J.K. Galbraith had stressed the similarities between the 1929 boom and the present one. He had warned, 'As a stock market boom continues, the same can be true as regards a boom in real estate or even art : there is an increasing participation by institutions and people who are attracted by the thought that they can take an upward ride with the prices and get out before the eventual fall. This participation, needless to say, drives up prices. And the prices so achieved no longer have any relation to the underlying circumstances'(Ref D6). Writing in 1954, he had said, 'The collapse in the stock market in the autumn of 1929 was implicit in the speculation that went before. The only question concerning that speculation was how long it would last. Sometime, sooner or later, confidence in the short-run reality of increasing common stock values would weaken. When this happened, some people would sell, and this would destroy the reality of increasing values. Holding for an increase would now become meaningless; the new reality would be falling prices. There would be a rush, pellmell, to unload. This was the way past speculative orgies had ended. It was the way the end came in 1929. It is the way speculation will end in the future'(Ref F2).

The fact that the scenario of the October crash was uncomfortably reminiscent of 1929, was not lost on the financial community. The cover picture of The Economist showed a 1930s unemployed queue waiting for

free soup. And the editorial article began, 'The crash of 1987 could lead to the slump of 1988. That much is clear' (Ref EC 7). Around a photograph of the Jarrow marchers, The Investors' Chronicle printed : 'It is irresponsible to play down the gravity of the present situation. We face a moderate recession. If not there is a serious possibility of recession becoming depression' (Ref IC 3). The Financial Times began its editorial article on the 21st October with the comment that the crash of 1929 inevitably came to mind, and ended by stating that how the authorities faced up to the challenge would 'decide whether historians end up by discussing October 1987 in the same way as October 1929'.

Galbraith had written in 1953, 'Far more important than rate of interest and the supply of credit is the 'mood'. Speculation on a large scale requires a pervasive sense of confidence and optimism and conviction that ordinary people were meant to be rich(Ref F2). Now, it seemed, the all-important 'mood' had changed. The markets were nevous. Even when there was a sharp revival of share prices on the Wednesday(21st October), institutional investors reacted by urging caution, pointing out that the recovery was similar to that which the market managed to achieve after the crash of 1929, before resuming its downward course a few days later(Ref FT 24). It was observed that the politicians' protestations that 'the economy is fundamentally sound' were also an echo of the aftermath to the 1929 crash(Ref FT 30).

The 'cycle theories' of economics - that economies must necessarily wax and wane by their own momentum - brought the suggestion that there was an inevitability to decline. The largest of these cycles, known as the 'Kondratieff cycle', predicted that economies rise and fall with a cycle of approximately 54 years. This cycle is referred to in two post-crash publications, both of which, in early 1988, remained pessimistic for the future : 'The Crash' by Mihir Bose(Ref D6) and 'The Crash and the Coming Crisis' by Guy Galletly(Ref E1). Kondratieff wrote that 1789 marked the beginning of an upswing from the depression of the 1790s; this peaked in 1814 and the cycle was completed with the slump of the 1840s; - a cycle of 60 years. The rise of the second wave begins in 1849 and ends in 1873; the decline from 1873 ends in 1896; - a cycle of 47 years. Thus the upward movement of the third wave begins in 1896 and ends in 1920(Ref G1). Kondratieff didn't live to experience his model beyond this time. He died in a Siberian concentration camp. But

the price cycle did actually peak in 1920 and as if on cue, came the great depression of the 1930s(Ref G1). In 'The Crash and the Coming Crisis', the author calculates(not altogether convincingly) that the cycles theory shows 1987 to be a crisis point(Ref E2). The same cycles had been used by the economist Robert Beckman in 1983 to calculate that the depression period had begun in that year(Ref G2). He had written his book('Downwave') to advise people how to survive(Ref G). However, in 'The Great Crash 1929'(first published 1954), Galbraith strongly scorns the idea that economic life might be governed by such inevitable rhythms(Ref F3). Samuel Brittan writing in the Financial Times also denies that the Kondratieff cycles are any kind of inexorable rhythm(Ref FT 30).

In 'The Great Crash 1929', Galbraith argues instead that the depression that followed 1929 occured because 1) the economy at that time was in fact fundamentally unsound, and 2) economists had insisted on implementing policies that almost consistently made matters worse :

1) The economy of 1929

The economy was unsound for several reasons. The more important reasons given by Galbraith(Ref F4) are :

(i) The mal-distribution of income. In 1929, the five percent of the population with the highest incomes received as much as one third of all personal income. The economic growth rate was therefore heavily dependent on these people making a high level of investment or a high level of luxury consumer spending or both. The investment opportunities at this time may in fact have been near to a peak anyway - so that some downturn in investment spending was due. But the crash dramatically affected these people's propensity to invest along with their propensity to spend extravagantly. For this reason, the Crash of 1929 would indeed have acted to push the economy towards some form of recession.

(ii) The bad corporate structure. The craze to own shares with borrowed money had led to a proliferation of holding companies and investment trusts that borrowed in order to purchase the actual

operating companies. These holding companies and investment trusts could be owned by other such companies, further increasing the gearing effect. These companies hoped to pay back the interest on their bonds with the anticipated dividends from the operating companies. As the ediface strained after 1929, pressure was put on the operating companies to release their profit as dividend rather than to re-invest. The result was a sharp deflation in investment, reducing the earnings and dividends of companies that revolved around investment. As increasingly, income became earmarked for debt repayment, a reverse leverage effect worked to devastate the whole corporate structure.

(iii) The bad banking strucure. The large number of independent units led to some inevitable failures. These transmitted a warning to people with other banks to go and ask for their money. Thus one failure had led to other failures, and these had spread with a domino effect.

2) Economic policies in the late twenties and early thirties

The economic policies of this time, according to Galbraith, proved to be almost uniquly perverse(Ref F5). Rather than attempt to think out the problem anew, an unthinking belief in 'sound money' came to dominate. True, unsound money had fuelled the speculative rise that was now seen as the precursor of the crash. But the problem now, was not to prevent a crash. Rather, the problem was to prevent a depression. . The 'sound money' policy led to strait-jacket fiscal and monetary policies. A balanced budget was called for. As the budget was already far out of balance, this meant increases in taxes, a reduction in spending, or both. Fears of inflation were also stressed although in these years 1931 or 1932, the danger of a boom in prices was nil. But a fear of inflation actually reinforced the demands for a balanced budget. It also limited any efforts to make interest rates low and credit and borrowing as easy as possible under the circumstances. In short, just when the economic system needed some transfusion of money to compensate for the abrupt loss of liquidity brought about by the crash, economic policy had concentrated itself to further choke the system's finances. The 'strait-jacket' mentality was also effective in bringing to an end the foreign lending by which America maintained a trade surplus. This, in particular, hurt farmers. And any attempt by other countries to

maintain their purchases of American goods by increasing their exports to America was eliminated when America's Congress chose to sharply increase its import tarrifs. 'Sound money' was the equivalent of shutting the stable-door after the horse had bolted : it ensured that the horse wouldn't find its way back into the stable.

The important conclusion by Galbraith is that the crash of 1929 was not of itself responsible for the depreesion that followed. He wrote, 'Had the economy been fundamentally sound in 1929 the effect of the great stock market crash might have been small. Alternatively, the shock to confidence and the loss of spending by those who were caught in the market might soon have worn off'(Ref F6).

Fortunately, the above lessons were not lost to 1987. Lest the finance ministers and central bankers needed any reminder, the 'liquidity' requirement was swiftly and emphatically emphasised by the financial community(Refs FT 20, FT 25, EC 7, IC 3, , for example). The otherwise deflationary effect of the drop in share prices was described in the editorial article of the Financial Times on 21st October : first, a sharp reduction in financial wealth and, correspondingly, a likely reduction in consumption expenditure; second, a similar deflationary effect on investment, because of the increased cost of equity finance; and third, some insolvencies among those engaged in financial markets. This time around, it seemed, these things were better understood. Almost as if to compensate for the mis-management of the 1930s, America's Federal Reserve acted decisively:

As we have seen, even before the markets opened on Tuesday 20th, Mr Alan Greenspan, the Chairman of the U.S. Federal Reserve, had issued a statement assuring the markets that it was ready to pump money into the U.S. economy. The Federal Reserve's Funds rate fell to 6 percent from a high of 7.5 percent the previous week(Ref FT 24). The Bundesbank retreated on its pre-crash rise in interest rates(October 14th) by fixing a marginally lower interest rate on its repurchase pact, and it re-affirmed its absolute commitment to February's Louvre accord. The Group of Seven countries indicated that each would act to ensure that there was sufficient liquidity in their financial markets, and this, we have seen, had contributed to a general downward trend in interest