The Share Market Crash and Australian Agriculture

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The 20 to 45 per cent fall in indexes of share market prices in mid-October 1987 was a world-wide phenomenon. It represented a sharp reversal to a five-year period of sustained increases in stock prices. It is important to assess the implications of the crash for Australian agriculture in the context of the world scene, because of the world-wide stock market crash, because of the interdependence of world financial markets and because of Australian agriculture's dependence on world markets for 60 per cent of its sales. This note looks at the likely implications of the stock market crash on Australian agriculture in terms of direct effects on land prices; direct effects on world economic activity; effects of lower economic activity on commodity markets; and some associated implications for the stance of government policies.

The Crash in Perspective

Table 1 provides a picture of movements in indexes of share market prices for some of the world's major financial markets over the period January 1985 to January 1988. Between January 1985 and September 1987 most indices increased in value between two-fold and three-fold. Over the nine months to September 1987 the indices rose between 30 and 50 per cent. By any criteria these gains were substantial. On 19 October 1987 stock market prices collapsed. General indexes declined by 20 to 45 per cent. Since then these indexes have made no systematic movements although there has been considerable volatility. Certainly the October 1987 crash was sharp and dramatic but, however, current prices are at around levels ruling in October 1986 and are well above those ruling as recently as January 1986.

Thus, while the stock market crash of October 1987 was large and rapid, prices fell from an historical high and still are high relative to trend and to prices in 1985 and 1986. One might ask also, how did the rapid growth in share prices over the years leading up to October 1987 favourably affect agriculture at the same time as we ask how will the crash of October 1987 adversely affect agriculture?

A second issue of perspective is the relative importance of shares in personal wealth. In Australia less than 10 per cent of the population directly owns shares, although a much higher proportion indirectly owns shares via investments in life assurance and superannuation. The market capitalisation of listed equities in 1985 represented just under 10 per cent of Piggott's (1987) estimate of Australian personal wealth; the biggest wealth item being residential land, followed by agricultural land. The ownership of shares is more widespread and important in the US and the UK, where just over 20 per cent of the population directly owns shares, but is less important in Japan. That is, the ownership of shares represents only a relatively small part of world wealth, and for the majority of people the share market crash has no direct implications for their personal wealth.

Direct Effects on Agricultural Land Prices

There are two ways in which the share market crash could directly affect agricultural land prices. First, the loss of aggregate personal wealth would reduce the demand for all types of assets, including shares, residential property and agricultural property. Second, there could be a substitution effect whereby residential land, agricultural land and other assets become to be seen as more attractive investments than holding wealth in equities. The substitution effect would operate to increase the demand for agricultural land. The net outcome of the negative wealth effect and the positive substitution effect on agricultural land prices only can be resolved empirically.

A simple comparison of agricultural land prices before and after the crash does not allow us to resolve the relative importance of the wealth and substitution effects. This is because other factors influence asset prices, including expected returns from agriculture and from other investments, and changes in other asset prices such as interest rates. Many of these other factors have

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Table 1: Share Market Price Indices for Selected World Financial Markets

	Jan 1985	Jan 1986	Jan 1987	Sept 1987	Nov 1987	Jan 1988
Australia	736	1034	1528	2292	1336	1266
USA	1227	1544	1930	2568	1903	1983
United Kingdom	986	1126	1330	1832	1268	1382
Japan	n.a.	12985	18600	24866	23095	22416
Hong Kong	1329	1781	2460	3696	2145	2221
Singapore	775	617	890	1366	829	801
France	189	271	395	422	300	282
W. Germany	1149	2018	1640	1964	1406	1313

Source: *The Economist*, various issues.

changed between the pre- and post-crash periods. Even granting these qualifications, it is difficult to detect over the past five years a systematic relationship between stock market prices (both the increases over the 1984 to October 1987 period and the subsequent crash) and Australian agricultural land prices.

Effects on Economic Activity

A number of arguments suggest that the stock market crash will reduce the level of aggregate economic activity throughout the world below what it otherwise would have been. First, the fall in wealth of those households with investments in the share market is likely to lead to some reduction in aggregate private final consumption expenditure. Second, private investment also might be expected to fall. To the extent investors base estimates of expected sales on current sales and that expected sales influence investment decisions, the above noted fall in consumption outlays will have a depressing effect on investment. This line of causation is most easily understood as the operation of the accelerator model of investment. The fall in stock market prices makes it more difficult and more costly to raise equity capital via new share issues to finance investment. That is, the crash is likely to reduce the expected returns from investment and to increase the cost of investment. Third, and fortifying the previous two effects, the stock market crash has adverse effects on market sentiment, on consumer and investor confidence, and on certainty about the future. These psychological effects are revealed as more cautious decision making and holding back of expenditure plans. While there seems little doubt that the crash will, of itself, reduce the level of economic activity, the extent of the reduction must remain a matter of speculation.

Nevertheless, some brave souls have rubbed their respective crystal balls. The OECD, for example, recently has revised downwards its estimate of world economic growth for 1988 from 2.75 per cent to 2.25 per cent primarily because of the crash (*Australian Financial Review* 1988). Most Australian economic forecasters surveyed by the Fairfax press in December 1987 indicated that they had revised their economic growth forecasts downwards on account of the stock market crash (*The Age* 1987). Most available estimates imply reductions in economic growth as a direct consequence of the crash of no more than one percentage point—not trivial but far from a catastrophe.

Economic Activity and Commodity Prices

There is a growing body of theoretical argument and supporting empirical evidence that primary commodity prices are significantly influenced by changes in levels of world economic activity. In part this is due to the direct effect of lower growth of per capita incomes and positive income elasticities of demand for many agricultural products, especially in the developing and centrally planned economies. The price effect tends to be exaggerated by the flex-price or auction market nature of primary commodity markets as opposed to the fix-price or customer market nature of most manufacturing goods and services markets. Domestic agricultural and trade policies reinforce the volatility of world market prices. This means that most of the reduction in demand for agricultural products is absorbed as sharp reductions in world market prices.

A likely effect of the stock market crash induced fall in world economic activity is therefore a fall in world agricultural (and mineral) commodity prices below what they otherwise would be. It is important in this context to remember the *ceteris paribus* assumption. Recent favourable movements in many commodity prices can be traced to improvements in the underlying supply, demand and stock level positions. The point being made here is simply that commodity prices will be somewhat lower than otherwise as a consequence of the stock market crash. But again, the magnitude of the effect is difficult to assess.

Over the intermediate and longer run the adverse effects of the stock market crash on the agricultural sector will be felt most importantly as a fall in commodity prices. In Australia, such an adverse price movement would add to the country's current account deficit and overseas debt problems. While further currency depreciations would cushion some of the adverse world price effects on Australian farmers the offset would be partial only; imported input prices would rise, interest rates probably would rise, and inflation would be higher.

Government Policy Reactions

It is likely that the world stock market crash will act as a catalyst to a number of economic policy changes by governments around the world and in Australia. Some of the possible changes, such as a deliberate slowing down of US economic activity in order to help reduce its government deficit and overseas deficit, and shifts to more protectionist trading arrangements, would have adverse effects on Australian agricultural export markets. In a more optimistic view, some have argued that the crash will induce governments to face up to underlying structural problems necessary to sustain continued world economic growth. Only crude assessments can be made of the extent and speed of policy reactions, particularly those motivated by the stock market crash, and of the effects of these policy changes for agriculture.

Concluding Comments

Most arguments point to the stock market crash of October 1987 having adverse implications for the agricultural sector. However, it is doubtful that the effects will be large. Agriculture did not gain a great boost from the long bull market over the early 1980s. Current stock prices, while sharply below mid-1987 levels, still are high when compared with 1985 and 1986 levels. And, finally, shares represent only a small fraction of private wealth.

References

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