

New Zealand After Nuclear War

THE BACKGROUND PAPERS

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BACKGROUND PAPER
1 (A) LIKELIHOOD OF NUCLEAR WAR,
1(B) STUDY ASSUMPTIONS

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INITIAL IMPACT ON NEW ZEALAND'S FINANCIAL SECTOR

By Peter Rankin with contributions from Paul Tompkinson

*This is one of a set of background papers prepared in consultation with the Nuclear Impacts Study Team, from material provided by a wide range of contributors for a study of the impacts on New Zealand of a major nuclear war. Along with other sources the papers comprised the basis of the book **New Zealand After Nuclear War**, by Wren Green, Tony Cairns and Judith Wright, published by the New Zealand Planning Council, 1987. The assumptions that the study was based on are explained in Background Paper 1, note particularly the assumption that New Zealand is not a target, and the variable assumption involving an electromagnetic pulse (EMP - for an explanation, see Background Paper 5).*

This paper outlines possible effects on the New Zealand financial system of the nuclear war scenarios adopted for this study. It is based on contributions from people with experience in financial systems and in economic studies of those systems. It provides a preliminary indication of likely effects and a useful basis for further examination.

In this paper the financial system is defined as the system which provides and manages money as a medium of exchange between goods and services. An understanding of the nature and function of money is therefore essential as background.

Money overcomes the problem of having to arrive at mutual trade by acting as an intermediary unit of exchange. For example, two farmers planning to exchange meat for wheat over the back fence have little need of money. However those who wish to trade their skills as farmers, carpenters, doctors, teachers or computer technicians for food, shelter, energy, medicine or education, do need money and an operating financial system. They need: a reasonably reliable unit of account for measuring the relative value of what they have and what they want; a reasonable understanding of those relative values; and a system which can record their credits or debits against future income or spending.

Without a system that meets those needs, the range of likely exchanges between people is very limited. A society with complex exchanges requires and produces a complex financial system - the two are interdependent.

New Zealand society now has very pervasive and complex exchanges internally and internationally with a highly complex financial system to match. Disruptions to this financial system would effect the pattern of exchanging goods and services. In turn, disruptions to the pattern of exchanges would effect the financial system.

The financial system includes, but is much more than, a wide range of institutions, such as trading, savings and merchant banks, stock exchanges, investment and pension funds, insurance companies and building societies. It is closely linked with government which is the printer and guarantor of the money unit of account, the maker and enforcer of the rules of the system and the major

user of the system through its expenditure, taxation and borrowing. Since New Zealand's production and trading systems are highly interdependent with the rest of the world so is the financial system. But the most important element in the system and its fundamental determining base is the way individuals and groups organise their lives and exchange skills, goods and services with other people.

LIKELY IMPACTS OF NUCLEAR WAR

A nuclear war would cause massive disruptions to both the financial system itself and the social structure it reflects. From the perspective of the financial system four categories of disruption may be distinguished.

Personal

In the immediate aftermath of nuclear war all the personnel employed in the financial sector would be subject to the same horror and panic as other people: maintaining normal operations would be impossible and restoring them would be difficult.

Electronic

The financial sector is now extremely dependent on electronic calculation, transaction and recording systems. For example, 95% of cheques are cleared through the electronic accounting and information services of Databank. A high proportion of salaries and wages are paid by electronic transfer through the same system. With an EMP these would immediately be inoperable and the information they contain (about existing credits and debits, and transactions in process) may be irretrievably lost. Without an EMP, these systems would gradually, but irreparably, break down within about two years because of the loss of overseas sources of spare parts.

Past records

Even if the records of existing balances and current transactions remained accessible, they would have little meaning. Overseas assets and liabilities would in effect be cancelled, but there would also be considerable uncertainty about the real value of money and assets within New Zealand. What would be the value of shares, mortgages, commercial bills, government stock, pensions and insurance contracts? What would happen to the value of physical assets - large export meat processing works, city office blocks, a penthouse apartment - compared with an old house on a fertile quarter-acre section? Some previously valuable assets would be worthless (Northern Hemisphere investments), others would have become extremely valuable (cars able to run on CNG). It would be difficult to reconcile the balance sheets of particular financial institutions - banks, insurance companies, building societies, investment funds - and of their individual clients. Financial institutions would not be able to operate effectively on existing accounts: the choice would be between chaotic collapses resulting from a run on the banks, and the freezing of existing accounts until balance sheets had been adjusted.

Future operations

While financial institutions could open new accounts and offer at least rudimentary transaction services, the financial system as a whole would be fundamentally disrupted. The effectiveness of money as a medium of exchange for the transactions of a complex society depends on the adequate supply of sound money and a reasonably widespread understanding of the availability and relative value of different goods and services. Uncertainty about those underpinnings would increase sharply immediately after a nuclear war even if there was no physical evidence of change.

Production for export and all the services related to it would be seen as largely irrelevant for the foreseeable future. Supplies of imported goods would effectively be limited to stocks on hand. There could be no widespread knowledge of how long those stocks would last, which activities would turn out to be vitally dependent on them, and how long it would take to develop substitutes or alternative sources of supply. Virtually every activity (including the servicing of our homes) is affected directly or indirectly by imports or exports, so that the whole structure of where and how we live and what we do would be put in question.

It would not be possible for government or anyone else to determine or forecast what a sustainable new structure would be, and it could take many years for a stable new one to emerge. Those years would see continuing changes in shortages and surpluses of particular skills, raw materials and technologies as we developed new ways of doing things and making and exchanging products.

The prices people would be willing, and would have the means, to pay for skills, goods and services, the costs suppliers would have to meet, and the prices they would demand, would vary enormously according to individual preferences and local circumstances.

The wrenching changes to relative prices and the value of assets would be unlikely to produce fair distribution of vital goods and services and purchasing power; yet that fairness would be essential to the maintenance of order, cohesion and productive activity.

These conditions would create major problems for financial institutions, even once they had overcome the disruption of their past systems and instituted new ones. Demand for money would be unpredictable. Some people would seek to hold as much cash as possible, others would lose confidence in cash or their ability to retain access to it, and would seek to rely on direct barter exchange, or to hoard scarce goods as their store of wealth. Previous sources of income would lose their reliability.

These pervasive uncertainties would make lending and borrowing difficult and very risky. For a society which has come to rely heavily on credit, that change alone would be major. At the broadest level, New Zealand has been a net borrower from the rest of the world: that source of savings and investment would be closed immediately and for all practical purposes permanently.

POST-WAR ADJUSTMENTS

A new financial system would eventually emerge: people would find ways of exchanging what they have for what they want and of storing what they see as valuable assets for the future.

Two important areas of debate are: whether a financial system would be able to assist people in adjusting to the new conditions or whether its collapse would make adjustment more difficult; and, what would happen to the people and institutions in the existing financial system. It should be noted that the answer to the second question is vital to the first.

Without prior planning and co-ordination between institutions it is unlikely that each of them would make sound sustainable decisions in the first days after a nuclear war which would allow them to:

- retain and reorganise their staff;
- restore and maintain operational capacity;
- achieve smooth and equitable adjustments to existing balance sheets;
- provide confidence and flexibility in the monetary system through the profound changes in social and economic structure.

Given all the interconnecting uncertainties it is not possible to make a useful prediction of the adjustments that would occur but some likely ones can be imagined.

The staff of financial institutions - moved by concern for personal and family security, the collapse or degradation of the systems they use, and uncertainty about their employers' ability to provide work and income - could leave en masse. Restoration of the system would then be difficult. With introduction of manual systems the staff required to handle a given level of transactions would be much higher, but there is likely to be a major decline in the number of transactions.

Some institutions, e.g. the stock exchange, would be so massively affected by changing values and prices that it would be difficult to envisage anything other than collapse. Among others, e.g. banks, the positions of individual institutions would vary considerably, depending on their mix of overseas and domestic assets and liabilities, leading towards the collapse of some and the survival of others. In the absence of reliable information, a justifiable run on some banks would probably lead to a general loss of confidence in institutions and in money itself.

It is not difficult to envisage total collapse in the financial system. This would make impossible the complex exchanges we now take for granted. Adjustment in this case would occur by agonisingly slow steps through the development of effective barter systems and then back to some form of monetary system.

The high degree of interdependence between the financial system and government has been noted. Clearly if the government system maintained cohesion and effectiveness it might cushion collapse in the financial system. If not, the combined collapse of the two systems would exacerbate the downward spiral in economic and social activity.

PRE-WAR PLANNING OPTIONS

As in other sectors the options for pre-war planning range from doing nothing through the preparation of government directives for action in the event of nuclear war to the full-scale restructuring of the present system to make it more self-sufficient and less vulnerable to the impact of nuclear war.

The financial sector is well practised in risk assessment and therefore in determining what price or premium would be worth paying now against a relatively low probability of the occurrence of a pervasive disaster. In the case of nuclear war it is likely that the financial sector would regard the risk to itself as inseparable from the risk to other sectors and would look to government to take the lead, as it does through Civil Defence and Earthquake and War Damage for other possible national disasters. Certainly a decision to pay the premium of creating a more self-sufficient economy/financial system, which would impose major costs on all present and future New Zealanders, would need to be made through the political process.

It would be unwise to rely purely on detailed government directives to hold the system together after a nuclear war. The government system itself would be under considerable stress, could not be expected to retain easily the confidence of all the population, and would need to rely as far as possible on individuals, institutions and sectors to manage their own adjustments. In addition, as noted earlier, government would not be able to predict or determine the adjustment processes which would occur either in relative prices or in the structure and operation of markets. What would be needed most in the unprecedented restructuring would be the encouragement of initiative, the testing of a range of imaginative solutions and the facilitation of the processes of adjustments, not detailed controls based on experience with conditions no longer relevant. There would clearly be a role for government but the nature and scope of that role requires separate and careful study itself: it is not a simple panacea.

Agreement reached by financial institutions themselves on how to handle the particular problems of their sector would be more effective than a blind reliance on government decisions. The problems would be different in scale but similar to those arising from a "normal" financial crisis arising from a financial system collapse in New Zealand or in overseas trading partners. Pre-war planning among financial institutions, including government and the Reserve Bank, to reach agreement on a few co-ordinated immediate measures may be considered worthwhile. That immediate response might take the form of announcing:

- a financial institutions' holiday extending over several days to give time for records and operating systems to be sorted out;
- that all deposit liabilities would be jointly guaranteed by the institutions and the government;
- that bankers would be replenished with cash;
- that the treatment of assets and liabilities in balance sheets would be addressed in an orderly and uniform manner.

CONCLUSION

In a nuclear war which caused no physical damage to New Zealand, the financial system would nevertheless suffer immediate and pervasive disruptions. In part these would be specific to the financial system - severing of links with the international financial system, and major shifts in the value of financial assets; in part they would stem from the system's close interdependence with the structure and organisation of the rest of society. An EMP would cause failure of electronic systems.

The specific disruptions could easily result in a widespread collapse of the financial system which would in turn exacerbate problems of adjustment in the rest of society. A downward spiral to very simple levels of social organisation could ensue.

Recommendations on the extent to which pre-war planning and action would be worthwhile would require more extensive examination and public debate but two points should be noted.

First, not very much reliance should be placed on the capacity of government to avert disruption by the post-war imposition of detailed controls.

Second, there is scope for some relatively simple pre-war planning to reach agreement on a package of measures designed to allow more time for adjustment to initial disruptions.