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Updating *BPM6* Issues for Consideration—An Australian Perspective: The Treatment of Pension and Insurance Reserves

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Introduction

Insurance and pension reserves are liabilities held by insurance corporations and pension funds towards their policyholders or beneficiaries. Changes in the value of these reserves normally come about due to transactions such as claims being incurred or pension benefits being paid. However, their value can change for other reasons such as holding gains or losses on investment funded using the reserves or fluctuations in exchange rates.

This paper examines the treatment of these other changes in the reserves of four modes of insurance and pension provision: non-life insurance, life insurance, defined benefit pensions and defined contribution pensions. Clarification is required about how these other economic flows should be decomposed between Other Changes in Volume and Market Price Changes.

Changes in the value of financial assets and liabilities

Changes in the value of financial assets and liabilities between opening and closing balance sheets arise due to transactions or other economic flows. Transactions are actions undertaken by mutual agreement between institutional units while other changes arise due to other economic events. Other economic flows are further broken down between revaluations and other changes in the volume of assets and liabilities. Revaluations are broadly defined as follows:

> Revaluations occur because of a change in the monetary value of a financial asset or liability due to changes in the level and structure of its price. Revaluations may also be called holding gains or losses. As the term suggests, holding gains or losses are changes in the value of an asset that accrue purely as a result of holding assets over time without transforming them in any way. (BPM6, paragraph 9.25)

Revaluations are further classified into those that are due to exchange rate changes and those that are due to other price changes. All other changes are considered other changes in volume:

> Other changes in the volume of financial assets and liabilities are any changes in the value of these assets that are due neither to transactions nor to revaluation. These changes include those due to cancellation and write-offs, economic appearance and disappearance of assets, reclassification, and the changes in financial assets arising from entities changing their economy of residence. (BPM6, paragraph 9.25)

In other words, revaluations consist solely of changes in price while changes in quantity or quality are treated as other changes in volume. As such, the boundary between the two categories depends entirely upon the definition of price. In the balance of payments framework, the price of an asset or liability is its market price which refers to "current exchange value, that is, the values at which goods and other assets, services, and labors are exchanged or else could be exchanged for cash" (BPM6, paragraph 3.67). If an asset or liability is not regularly exchanged then it should still be valued as if it was acquired in a market transaction. However, a revaluation can only arise if a current exchange value for the asset or liability can be observed. As will be discussed, with the exception of those denominated in foreign currencies, this condition is rarely satisfied where insurance and pension reserves are concerned.

Non-life insurance reserves

The balance sheet entry for non-life insurance reserves represents the value of premiums paid but not yet earned plus the value of outstanding claims payable but not yet paid at a particular point in time. As each of the constituent flows is a transaction, the value of these reserves is generally unaffected by other changes. However, if they are denominated in a foreign currency then their value will be affected by holding gains and losses. They may also be affected by changes in model assumptions or indexation applied to the value of the constituent flows. For example, claims which payable at one point in time may be discounted in advance of their payment at a later date.

Except for those denominated in a foreign currency, other economic flows on non-life insurance reserves should be treated as other changes in volume. As noted, with the exception of exchange rate changes, revaluations can only arise due to market price changes.

There is no market which sets the price for non-life insurance reserves as they are non-tradeable liabilities of insurance corporations towards policyholders. Therefore, by definition, any other economic flows on these reserves can only be seen as changes in quantity or quality.

Life insurance reserves

The balance sheet entry for life insurance reserves represents the present value of all expected future claims at a particular point in time. Similar to non-life insurance, the value of life insurance reserves is normally affected by transactions alone either when premiums are set aside or benefits come due. Given this similarity, other changes in life insurance reserves again arise due to exchange rate fluctuations, changes in model assumptions and indexation applied to the value of the constituent flows.

Except for those denominated in a foreign currency, other economic flows on life insurance reserves should be treated as other changes in volume. As with non-life insurance, life insurance reserves are non-tradeable liabilities of insurance corporations towards policyholders without an observable market price. Therefore, by definition, any other economic flows can only be seen as changes in quantity or quality.

Defined benefit pension reserves

The balance sheet entry for defined benefit pension reserves represents the value of the amount of the pension agreed in advance based on an actuarial estimation of the liabilities of the pension provider. There are four main sources of change in these entitlements but the first three, i.e. current service increase, past service increase and payment of benefits, are transactions. The fourth source is changes to the formulas used to estimate the liabilities of the pension provider due to price escalation clauses and modelling variables. Furthermore, if they are denominated in a foreign currency then their value will be affected by holding gains and losses.

Except for those denominated in a foreign currency, other economic flows on defined benefit pension reserves should be treated as other changes in volume. Once again, this conclusion largely rests upon the fact that these reserves are non-tradeable liabilities without an observable market price. Furthermore, although the underlying logic may differ, it is largely consistent with existing guidance with the exception of price escalation clauses:

> Given these adjustments are funded in large part by holding gains which appear in the revaluation account, it seems reasonable to record the contingencies that they are assumed to cover in the other changes in the volume of assets account except for the price escalation factor which should appear in the revaluation account. (2008 SNA, paragraph 17.179)

The logic behind this exception stems from the fact that they are systematic adjustments to the value of the reserves *over time*. A similar exception applies where indexation is applied to the value of the constituent flows of insurance reserves. However, the distinction between these adjustments – particularly those made under price escalations clauses – and changes in other modelled assumptions is unclear. Furthermore, these adjustments are exogenous influences on the value of the reserves rather than their price per se. Besides their intertemporal nature, there is no substantive reason to treat these adjustments as anything but other changes in volume.

Defined contribution pension reserves

The balance sheet entry for defined contribution pension reserves represents the value of the amount of the pension depending on the performance of financial assets acquired with the future pensioner's contributions. There are three main sources of change in these entitlements but the first two, i.e. current service increase and payment of benefits, are transactions. The third source is the holding gains and losses on the investments made using the future pensioner's contributions. Furthermore, if they are denominated in a foreign currency then their value will be affected by holding gains and losses.

Except for those denominated in a foreign currency, other economic flows in the value of defined contribution pension reserves should be treated as other changes in volume. This conclusion again rests on the familiar basis that these reserves are non-tradeable liabilities without an observable market price. However, this argument is more difficult to make where defined contribution pension reserves are concerned as their value *is* actually linked to the market price of financial assets. The value of the reserves rises or falls depending upon the performance of the pension fund's investment activities. Yet it is this linked relationship between these changes, in that the other economic flows on the reserves is caused by a change in *quality* of the linked investment portfolio, which distinguishes their treatment.

In BPM6, the Compilation Guide provides the most explicit guidance on the decomposition of the other economic flows, however it is inconsistent in its treatment – paragraphs A2.113-114 refer to the other economic flows as holding gains (i.e., price change) while Table A2.1 and footnote 30 in Appendix 2 refer to other changes in volume.

Recommendations

To sum up, clarification is required about how other economic flows on insurance and pension reserves should be decomposed between price changes and other changes in volume. The Australian Bureau of Statistics offers the following interpretation of their treatment as revaluations or other changes in volume:

a. In general, other changes in the value of insurance and pension reserves should be treated as other changes in volume;
b. The only exception to this treatment is changes due to exchange rate movements which should be treated as revaluations.