APRA REVIEW OF UNIT PRICING PRACTICES

Unitisation is the process by which a pool of assets are broken into portions of ownership (units), which are conceptually similar to shares in a company. The process is applied to unit trusts, unit-linked life insurance products and many superannuation products. Instead of investors' / fund members' / policyholders' interests being expressed as a proportion of the underlying pool of assets in which they have invested, those interests are expressed in units, thus facilitating administrative simplicity and investor understanding. The unit price represents the value of assets per unit and, after adjustment for entry / exit expenses, is used in pricing buy / sell transactions.

Unit pricing is thus an issue of critical importance to superannuation fund members and policyholders as it determines the value of their investments. Accordingly, the risk of unit prices being calculated incorrectly and not being detected / remedied on time is a significant risk for regulated entities. This has been highlighted by recent public revelations of unit pricing errors and the large correction costs (as well as the related reputational impact) that follow from those errors. Important to note is that the risk of incorrect unit pricing does not represent the potential for direct loss for the fund as a whole. This is because an incorrect unit price will not lead to the fund, itself, losing money; it will only result in an incorrect distribution between members.[1] The fact that the unitholders of a fund will continually change over time does mean, however, that incorrect allocation has the potential to cause real loss where overpayment to exited members cannot be recovered. Also important is that unitholders may often be unable to detect unit pricing errors, particularly small errors or errors that compound over time.

For this reason, APRA has been focusing increasingly on unit pricing practices within regulated institutions. This article summarises our observations from the review in terms of common practices and issues, as well as outlining APRA's approach to the topic of unit pricing in the future.

Conceptually, calculation of a unit price is simple. The net assets (assets minus liabilities) of the fund are determined, necessary accounting adjustments relevant to the holding period are made (eg accrued management fees, tax adjustments), the effect of transaction costs (actual or reasonably estimated) is included; and the end result is divided by the number of units[2]. Despite this apparent simplicity, several practical matters combine to render the calculation process much more complex. These include, amongst other things:

- the reliability of methods used to estimate the unit price;
- the difficulties in obtaining, updating and aggregating price information from multiple asset classes to determine the value of net assets; and
- monitoring the number of units on issue as members contribute to, or redeem units from, the fund.

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[1] This is distinct from the case of a fund that has invested in another unitised fund which issues an incorrect unit price at redemption. In this case, the investing fund would be a disadvantaged investor, with the overall value of the fund reduced by this upstream error.

[2] The number of units on issue is maintained in the unit register. This is conceptually the same as a share register for a company.

These complexities could of course be exacerbated by issues common to all investment administration, such as incorrect mandate implementation, ineffective reconciliation processes or system defects.

PRACTICES

Of the institutions reviewed to date, APRA has observed a range of unit pricing practices.

For example, there exists considerable variation in the pricing methodologies employed, particularly the use of forward versus historic pricing. Forward pricing means that all unit acquisitions and redemptions that take place during the day will be transacted at the end of day price. By contrast, historic or backward pricing means that the same transactions take place at the price calculated at the end of the previous day. The latter exposes the fund to the risk of arbitrage induced by market movements. Although most institutions employ forward pricing, historic pricing is still relatively common, particularly among the smaller institutions that lack the resources to import data and calculate prices within the required time frames. Of those larger institutions employing historic pricing, most do so primarily because of legacy products and systems. These institutions are generally aware of the potential arbitrage risk and implement controls to mitigate this risk.

Another area of divergence in respect of pricing practices is the use of a buy/sell spread in the unit price. Buy/sell spreads involve calculation of a mid-price based on the net asset value of the fund. The buy and sell prices are then determined by adding or subtracting an allowance for transaction costs. Most funds reviewed employ buy/sell spreads in unit prices and it is regarded as good practice to do so. Where such a spread does not exist, the existing/remaining members are being forced to fund transaction costs caused by entries and/or exits.

There are also differences between institutions in the frequency at which unit prices are calculated, as well as the frequency at which actual or hard prices are used rather than soft or proxy prices. Hard pricing refers to the case where unit prices are calculated with current market prices on fully reconciled balances. Soft pricing, on the other hand, is any other means used to determine the unit pricing, such as using data that is not fully reconciled or using an older price that may have been adjusted by some estimate (for example, a movement in a market index).

Most institutions undertake daily hard pricing. There are some institutions that undertake hard pricing less frequently (say weekly or in some cases monthly), either because they lack the resources needed to facilitate rapid unit pricing calculations, as is often the case for smaller institutions, or because they hold a significant exposure to international assets[3] or illiquid assets (eg hedge fund options or some unlisted property funds). To determine the unit price between hard pricing dates an adjustment is made based on, for example, movements in the underlying benchmark

[3] Due to the time in Sydney when international markets close, it is not feasible to have the price released by the following morning using actual data.

index, such as the S&P/ASX200 index for an Australian equity fund, or on some discount interest rate, such as the cash rate.

There also exists a range of practices in respect of the processes surrounding the unit pricing framework. For example, there appear to be two methods used for fee collection: redemption of units on a regular basis, say monthly, from an investor's account, or incorporation of fees into the unit price. The latter approach is more common, especially amongst life offices and their related entities. Similarly, there are differences in respect of the application of taxation to unit prices. Taxation is typically estimated based on historic taxation rates (adjusted for known tax changes). However, some institutions have chosen to incorporate the effect of taxation into asset values. For example, in the superannuation environment, capital gains tax is accrued at 15 per cent on the unrealised gain on an asset for 12 months, at which time the accrued tax drops to 10 per cent. Some institutions specifically accrue the tax effect on investment income, and consider the impact of imputation credits when determining net asset values. Larger life offices use quite sophisticated estimation approaches. The issue of appropriate disclosure so the public can understand the implications is relevant here.

ISSUES IDENTIFIED

APRA has also identified a number of issues emanating from the unit pricing frameworks that institutions have in place. These issues are discussed in detail below and in many cases reflect: a lack of senior management attention to unit pricing processes; cost considerations resulting in adequate resources being allocated to unit pricing; the prevalence of older products (where historic pricing is more common), and legacy systems (which have limited functionality and are often unable to interface with other systems); and the existence of multiple systems and products (making it very difficult to have consistent practices and controls).

These issues are combined with the fact that there is an absence of effective market discipline – typically unit-holders have no way of detecting that errors have occurred except in the most extreme situations.

The main specific issues that were identified by APRA during the course of this review include:

Calculation errors

The majority of institutions that had monitoring systems in place had identified errors in the unit pricing process, reflecting the complexities of the estimation process, difficulties in updating and aggregating price information from a potentially large number of sources, as well as taking into account the impact of funds flowing into and out of the various products. There were, however, some institutions that did not even monitor unit pricing processes.

While in most cases these errors were relatively minor, there were also instances where losses were very large. The loss tends to be a function of the length of time for which the error has persisted, with both the error and the cost of correction compounding over time. This is because the incorrect unit price will lead to an incorrect number of units being issued/redeemed, which in turn results in an incorrect basis for all future calculations, thereby compounding the errors. This is further complicated by exits / entrants. Unravelling and correcting such mistakes requires extremely detailed analysis of the errors and is very time and labour intensive.

Risk Management Processes

The management of unit pricing is a good indicator of the overall framework for operational risk management in the organisation. Those institutions that had experienced significant unit pricing errors on a number of occasions were assessed as giving a low priority to operational risk management within the organisation and also had a higher frequency of other operational risk issues.

Inadequate segregation of duties, and a lack of independent management or Board oversight, allow errors to remain undetected. This is particularly applicable to smaller organisations where a small number of staff still closely control all activities.

In many cases, significant errors occur as a result of a number of failures in system and control processes. This includes situations where product development occurs outside the usual processes, where products are maintained on systems separate to those used for the normal administration and unit pricing systems, ineffective reconciliation processes, and failed compliance and risk management reporting. In many of these situations, internal and/or external audit have previously identified these issues but their recommendations had not been implemented.

The incidence of errors is higher when there are many different products operating under different rules and/or where several systems are in place. In these cases, the complexity of these systems increases the probability of human errors occurring, as well as making it more difficult to establish and maintain these systems. Multiple systems also prevent the application of standardised processes, thus increasing both the maintenance cost and the risk of programming errors.

Unit pricing errors also occur as a result of mergers and acquisitions, reflecting inadequate procedures when integrating systems.

Investment in External Unitised Products

Where a fund invests in a unitised product provided by an external fund manager, there is often a reliance on the external fund manager to provide the unit price in a timely and accurate manner. Some institutions appear not to have considered the implications of errors arising as a result of this process and often failed to accept the fact that the responsibility for all aspects of the unit pricing process, including upstream investments, remains with the Trustee / Life Company.

Outsourcing

Outsourcing of the unit pricing function is not prevalent. However where this has been done, common outsourcing issues have arisen. These include inadequate due diligence, a belief that outsourcing will solve a fundamental lack of understanding of the process by those outsourcing, not adequately considering exit strategies, failing to accurately specify and agree performance standards with the third party service provider, and a lack of processes for monitoring performance. There is also a lack of understanding of the impact when a third party service provider experiences a major problem, and some institutions were not aware of the business continuity plans of their service provider. Insufficient attention was also given to managing and monitoring the service provider.

Large organisations tended to manage the outsourcing arrangements relatively well, while some smaller organisations had managed the process poorly.

Business Continuity Planning

In most cases, business continuity plans (BCP) gave little or no consideration to unit pricing issues, focussing primarily on the recovery of IT systems. Little consideration appears to be given to how the business will be run until normal systems and processes can be fully restored. The findings raise concerns about the overall adequacy of BCPs across the whole of business operations and is not unique to unit pricing issues.

Valuation Processes

The need to ensure accurate valuation procedures is a major issue for unit pricing. While the risk is well recognised for untraded or illiquid assets, there appears to be less of an appreciation of the impact on unit prices of valuation procedures for thinly traded assets such as some listed equities and fixed income securities. In most cases, the last sale price is used (this may be days or even weeks old), with limited consideration given to the fact that if the asset is thinly traded it may be impossible to realise current holdings at that price.

The funds visited by APRA had little direct investment in private companies and hence it was not possible to form a considered judgement on the approaches used to value private equity.

In addition, APRA is aware that the use of structured securities within investment portfolios is increasing. With this trend, it is important that appropriate controls support the development, validation and maintenance of specialised valuation models.

Valuation issues tend to be handled better by larger institutions. This reflects the fact that they have more comprehensive procedures in place, including the use of in-house valuation teams or engaging external specialists such as property valuers. Furthermore, in the larger institutions, investment policies tend to be more focused on the liquid segments of the relevant markets.

Other Operational Risks

The review undertaken by APRA indicates that unit pricing is often dependent on one or two persons. This key person dependency was particularly evident in the smaller institutions. This often reflects the fact that these people are the ones who developed the spreadsheet models for unit pricing or who are the only users who understand the complex software used for unit pricing. Key person dependency was evident at both a staff and a management level.

There is a heavy reliance on customised spreadsheets in unit pricing, including amongst the larger institutions. As indicated above, this reliance on spreadsheet models is frequently associated with key person dependency, inadequate change control protocols around the spreadsheets, a lack of documentation, limited management oversight of the process and weak controls on access to the spreadsheets.

The review also found that manual data entry is still common (as opposed to automated data feeds). Reflecting this, data entry problems are relatively common, especially amongst the smaller institutions.

THE WAY AHEAD

APRA is responding in a number of ways to the issues highlighted by the unit pricing review.

APRA expects institutions to follow industry best practice and standards with respect to unit pricing practices. In this regard, APRA strongly encourages institutions to adopt the IFSA Standards Number 8.00 and 9.00 and Guidance Note Number 4.00 on unit prices. It should be noted that many institutions already accept and comply with these standards, so institutions that fail to do so are likely, over time, to find themselves at a competitive disadvantage.

APRA will take into account an institution's capability and risk management with respect to unit pricing when rating the institution and formulating supervisory strategies. Institutions that are considered to rate poorly in this respect will have targeted reviews undertaken.

APRA will also maintain a dialogue with the Australian Securities and Investments Commission, industry bodies and the accounting and auditing professions, to agree and implement best practice measures on unit pricing issues.