

## **Peter Swan AM FASSA**

Scientia Professor Peter Swan AM FASSA is currently in the School of Banking and Finance Faculty of Commerce and Economics, University of New South Wales and is an ARC Australian Professorial Fellow.

In the Queen's Birthday Honours List 9 June 2003 he was appointed as Member of the Order of Australia (AM). Citation: "For services to academia as a scholar and researcher and through contributions to public policy in the fields of economics and finance".

The University Council, UNSW, appointed him to the title of Scientia Professor in January 2003 in recognition of international eminence in research. The appointment is for five years. Peter was elected as a Fellow of the Academy of Social Sciences in Australia in 1997 and appointed as a Reader for the ARC in 2001. In January 2002 he took up an Australian Research Council Australian Professorial Fellowship for a five-year period to develop and test his new theory of asset pricing based on liquidity rather than risk and return. Twenty-three scholars were selected from all disciplines and all universities for this honour in 2001.

He has been the Chief Investigator for twelve ARC Large Grants, Discovery grants and Infrastructure Projects totalling approximately \$3.8 million in the last few years with the most recent awarded in October 2002. In August 2004 the ARC awarded \$1.75m over five years to establish the Financial Integrity Research Network (FIRN). Peter was a member of the ten-person executive committee. He was the National Australia Bank Foundation Professor of Finance from 1993 until January 2002 in the Finance Discipline, School of Business, Faculty of Economics and Business, University of Sydney. Prior to him joining Sydney University in 1993 he was the Freehill, Hollingdale and Page Professor of Management in Law and Economics at the Australian Graduate School of Management, UNSW. He was the founder, Foundation Professor and Head of the Department of Finance at the University of Sydney from its inception in 1994 until the establishment of the School of Business in 2000. Over this time the Department grew from nothing to an enrolment of over 700 in the introductory program to over 450 majors pa, a large MCom Program in Finance and a successful 4<sup>th</sup> Year Honours and PhD Program. As well as being Head of Department he introduced and taught new undergraduate programs in corporate governance with about 300 enrolments as well as being very active as a supervisor and researcher.

From 1974 until accepting a chair at AGSM in 1982 he rose from Lecturer to Reader/Associate Professor in Economics in the Economics Department, The Faculties, ANU. As Visiting Assistant Professor at the Graduate School of Business, University of Chicago and Associate Professor at the GSB, University of Rochester in 1973 he taught both economics and finance under the tutelage of George Stigler, Merton Miller, Eugene Fama and Mike Jensen. In 1985 he was a Visiting Professor in Industrial Organisation at the Hebrew University and Visiting Professor in Economics at Stanford. In 1993 he was visiting Professor of Accounting, the Accounting Department, University of Sydney. This application of the economics paradigm to several fields indicates a breadth of vision. He has over 100 publications including 48 articles in refereed academic journals, many of which are articles in major journals such as the *American Economic Review*, *Journal of Political Economy* (three articles), *Econometrica* (two including a Comment) *Review of*

*Economic Studies*, *Bell Journal of Economics*, *Quarterly Journal of Economics* (two including a Comment), *Journal of Business* (two) and *Journal of Finance*. Of the 28 articles included in the Social Sciences Citation Index the weighted score using the latest journal impact factors from the SSCI is 37. According to Fische (*Journal of Finance*, 1998, p.1065) the average full professor of finance in the top 20 Finance Departments in North America included in his sample had authored or co-authored 8 articles in the very top finance journals and 18 altogether. Peter also has 8 in the same top journals. Due to the international citation impact of his research with over 400 citations in internationally refereed publications according to the Social Sciences Citation Index (SSCI), he is one of the most prominent researchers in Australia and globally. According to Mark Blaug's definitive *Who's Who in Economics: A Biographical Dictionary of Major Economists, 1700-1986*, 2<sup>nd</sup> ed., Wheatsheaf, 1986 pp. 819-820 and 3<sup>rd</sup> ed., 1700-1996, Edward Elgar, 1999, pp.1082-1083, he is within the top ten in Australia based on the SSCI. A ranking of the SSCI citations of the 24 Australian economists, financial economists and econometricians included in the third (1999) ed. of *Who's Who in Economics* carried out in June 2001 also places him in the top ten. His impact has been particularly high in the very top-tier economics and finance journals included in *Jstore* with a considerable number of citations.

He was appointed to the Research Board of the Centre for Independent Studies in 1983 and to the Board of Economic Advisers, the Hong Kong Centre for Economic Research, The Chinese University of Hong Kong, in 1988. He was appointed to the editorial board of the *Economic Record* since its inception in 1990. For the period 1990-1992 he served on the Research Board of the Electricity Supply Association of Australia. He gave seminar presentations at most major schools of finance in 1998 (including London Business School, Stern School, NYU, Wharton at Penn, Ohio State, Anderson School at UCLA and at USC). In 2000 and 2001 he was appointed to the Program Committee of the European Finance Association Conference, which was held at the London Business School in August 2000 and Barcelona in 2001. Two papers were selected for presentation after a double-blind refereeing process and rejection rate of over 75%. He was appointed to the Program Committee of the New York Stock Exchange to organise the Global Equity Markets in Transition Conference, which was held in Hawaii in February 2001. He has been an invited plenary speaker at major international conferences, for example, the 11<sup>th</sup> World Congress of the International Economic Association in Tunisia in 1995.

Numerous leading textbooks in industrial organisation devote chapters to his work on market structure and the economics of durable goods. See, for example, Oz Shy, *Industrial Organisation*, MIT Press, 1995, pp.315-322, and Jean Tirole, *The Theory of Industrial Organization*, The MIT Press, 1989-2002, Chapter 1 and elsewhere.

Two ARC-funded projects designed to explain the equity premium and examine the impact of different trading strategies draws largely on a relatively new area of research in financial economics known as security market microstructure. Even the project on executive compensation and the effects of stock liquidity draws heavily on microstructure. Peter has published in most of the major finance journals such as the *Journal of Business* and *Journal of Finance* on security market microstructure issues. His research with Professor Aitken in this area has also been particularly significant in the transaction cost/policy area. Research undertaken by Peter for the Queensland

Treasury resulted in Queensland's decision to half stamp duty on all Stock Exchange trades in 1995. All other States followed suit. Investors in the top 90 stocks alone benefited by over four billion dollars within three trading hours of the announcement. The Commonwealth Government benefited by over one billion in additional capital gains tax revenue. In keeping with the success of the halving in 1995 it has been abolished altogether in Australia from 1st July 2001 as part of the introduction of the GST.

Peter has actively participated in a whole range of finance and related industry activities. His advice as a major consultant to the Campbell Committee paved the way for the deregulation of the financial sector in Australia in the early 1980s and the adoption of full integration of personal and company taxation in 1987. With his former PhD student, Professor Michael Aitken, he helped to set up SIRCA, the Security Industry Research Centre of Asia-Pacific, which provides security market data from the ASX and Sydney Futures Exchange (SFE), programming and super-computer facilities to close to 30 participating universities. The ARC has played an outstanding role in assisting this co-operative process. Peter is also the director in charge (together with Professor Michael Aitken) of the MEMLab DEC 8400 series supercomputing centre which was funded by an ARC Research Infrastructure grant worth in total over \$900,000. It is the MEMLab facilities and provision of detailed intra-day data that enables SIRCA to collaborate with so many other universities.

He has also played a very influential role in corporate governance issues. His submission to the ASX (with Gerald Garvey) led to the listing of News Corporation's non-voting equity shares. He wrote and presented the News Limited submission to the Parliamentary Inquiry into the Print Media and had a major impact on the final report. He was appointed by the Victorian Premier as one of two Commissioners who made major recommendations on the future of Tattslo. He also undertook a major study for the NSW Government which led to the inclusion of poker machines in the proposed casino and hence to the establishment of the Sydney Casino at Darling Harbour. He and Gerald Garvey also undertook a significant Report for the NSW Treasury on Fiscal Equalisation. He has also played an influential role on behalf of the Victorian Government in the Australian Competition and Consumer Commission's (ACCC) inquiry into the cost of capital in the gas and utility industry in Australia and in numerous investigations and court cases involving the ACCC and competition issues. He was the major economic witness for the players in the trade practices case that led to abandonment of player conscription in Australian Rugby League (ARL) and for Superleague in its successful case against the ARL. As a result of the widespread dissemination of his research results to the general Australian community he features in over 70 articles downloadable from the Dow Jones Interactive website with about 100 citations listed in his CV. These are almost entirely from the *Australian Financial Review* and *Sydney Morning Herald*. The coverage is also very high in other newspapers such as the *Australian*. In addition to these citations of his research he has over 20 articles and contributions to the popular press.

### **Some Significant Research Contributions**

Peter is best known internationally as an economic and industrial organisation theorist who made major breakthroughs in providing an understanding of how firms compete, both in terms of prices and qualities such as the durability of the product. When he proved for the first time that under quite general conditions, and irrespective of market

structure such as monopoly or competition, that profit-maximising firms will choose product characteristics of most value to the consumer, this came as an enormous shock to the economics profession at large. Pervasive notions such as "planned obsolescence" and degradation of product life or quality by a monopolist were shown to have no theoretical foundation (Swan, 1970). This research was on the theory of the firm and how industry is organised. It has had a huge impact. His work is cited many hundreds of times. It is also incorporated in numerous textbooks still in use today.

In undertaking this research he made use of advances in microeconomics and the new field of game theory. Since undertaking this early research he have helped to pioneer the application of these techniques to a number of new and developing areas including corporate governance and control and the microstructure of securities markets. Unlike industrial organisation, these new fields are endowed with enormous data sets making thorough testing of theories much more feasible. Governance relates to the provision of the appropriate incentives and structures to ensure that organisations are run appropriately while microstructure deals with the way securities such as equities are traded on stock markets. The following examples refer to some of his more recent work.

He has developed an entirely new theory which is gaining recognition for explaining why the yield on equity securities is on average 6 to 8% in most markets over the last 100 years and why the yield on the closest substitute, government bonds, has on average been about zero in real terms. A number of theoretical and empirical studies such as (Swan, 2002) and Swan and Westerholm (2001 and 2002) have set out to develop and test the new theory. The theory gains strong empirical support from his finding that in most countries such as the US and Australia the turnover of government bonds is about 20 times higher than that of equities with the bond market far more liquid than the equities market. Another pathbreaking paper sets forth and tests a new theory of the firm based on internal monitoring utilising bonuses and external monitoring by informed sharemarket traders (Garvey and Swan, 2002). Consistent with the theory the allocation of options to executives is shown to be explained by the liquidity of the market in which the firm's stocks are traded. This research is likely to have an even greater impact than the earlier work on monopoly and durability.

Brokers can trade as an agent and earn a commission or as a principal dealer by making a market and earning a profit. While these two roles seem to invite the charge of conflict of interest, he and two colleagues showed that broker-dealers actually systematically *lose* money in this role by facilitating large trades for their most loyal clients. He was puzzled by this finding that supposedly profit-maximising brokers make sizeable losses. The market is kept open at a loss when it should really be closed. However, his biggest discovery is that brokers claw back these "losses" by charging these same clients higher commission on agency trades (see Aitken, Garvey and Swan, 1995) but at the same time captured 90% of this market. Having loyal clients pays!

Investors on the ASX sell shares they don't own. Because it is difficult to "short-sell" these are rare. He showed for the first time that the market reacts adversely to these trades within seconds. They are "bad news". This explains a major puzzle confronting market researchers over decades: why markets react much more to announcements of stock "buys" than "sells". Many buyers are informed and have "good news" but because of the difficulty of short-selling, most ordinary sellers do so in the absence of "bad news" and

sell to meet ordinary commitments (see Aitken, Frino, McCorry and Swan, 1998). By being “tough” on short-sales, exchanges globally discriminate against “bad news”.

In 1995 he and his colleague, Mike Aitken, was asked by the Queensland Treasury to predict what would happen if the Queensland Government cut by 50% the stamp duty tax on trading shares. they predicted that trading volume would rise significantly, volatility would fall and that Australian investors would gain via higher share prices with negligible effect on tax revenue. When the Queensland Government accepted the advice nearly \$5 billion in value was added to the top 90 stocks within hours of the announcement. In the following months, volume went up by close to 25% and volatility fell substantially. The Commonwealth gained \$1 billion via capital gains taxes and the fall in State revenue was very small because of rapidly increasing volumes which doubled in the next few years (see Aitken and Swan, 1997, 1999).

Peter and Gerald Garvey set out to explain the basis on which boards allocate cash bonuses, stock options and restricted stock to a significant sample covering 80,000 executive years for over 2000 major companies, 1992-1999. They find that firms with liquid stock markets in the form of a high rate of share turnover, low transaction costs in the form of the bid-ask spread and high information content in the share price make far more use of incentives with a high-pay-performance sensitivity such as options. Firms with “illiquid” stock prices, by contrast, make more use of bonus payments. This is a startling conclusion and it is supported by far the largest data set of its kind. A total of 12 explanations are investigated. Some of the more prominent researchers in this field, like Professor David Yermack at NYU, are sceptical that economists’ explanations for option allocations have validity. These findings indicate that boards delegate monitoring of senior managers to the external stock market when the stock price is of sufficient quality. They do so by issuing stock options to their senior executives. Informed traders in the stock of the company concerned are able to successfully hide in the crowd given that there are large number of "noise traders" when the market for the stock is highly liquid. Boards of companies with less liquid stock prices are shown to make a great deal more use of bonus payments based on accounting returns and thus adopt internal monitoring schemes. These results are significant because they provide a rationale for the efforts of regulators to improve the functioning and liquidity of stock markets. Moreover, allocation of options to executives has an incentive or monitoring purpose and does not necessarily indicate that the executive has captured the compensation committee. They also explain for the first time why we don't see just one company with thousands of divisions dominating the world. The link between executive performance at the level of the division and the external monitor provided by informed traders would be lost. Consistent with these findings, in 94% of cases following equity carve-outs, stock-based pay is allocated to managers (see Garvey and Swan, 2002).

He adopts five major firm performance measures and find that market returns, the market to book ratio and accounting returns can be explained for 80,000 executive years, 1992-2000 for over 2000 major companies. He uses the components of total pay up for five years previously and a variety of controls which are known to influence stock returns such as size and other factors which influence returns. That is, the components of incentive pay and their magnitudes are highly influential in terms of enhancing future performance. This significant impact of executive incentives on future performance

means that it constitutes an important factor explaining stock market returns. The findings suggest that it is the proportion of total pay, including the value of options and restricted stock, which is “at risk” in the event of poor performance that is crucial to future performance. These spectacular findings are likely to impact the lively debate on executive options world-wide.

**ARC Grants Awarded, 1983-2004.**

- 1983 ARGC award as first chief investigator to do research on electricity pricing and investment (\$60,000 over three years) with Professor J. Stringer.
- 1991 First chief investigator for a Large Grant by the Australian Research Council (ARC) for a project on “Simultaneous trading by stockholders as principal and agent: implications for market efficiency and investor protection”, jointly with Dr. Michael Aitken. Grant of \$148,000 over three years.
- 1994 First chief investigator for a \$150,000 ARC Large Grant with Michael Aitken on dual trading in securities markets.
- 1995 First chief investigator for an ARC Large Grant of \$147,000 to investigate executive compensation and other corporate governance issues with Gerald Garvey and Stephen Taylor.
- 1996 Project Leader for the National Micro Economic Modelling Laboratory, MEMLab. ARC Research Infrastructure funding of \$700,000 supplemented by \$300,000 from the University of Sydney.
- 1997 ARC Collaborative research grant of \$452,908 plus funding from the Sydney Futures Exchange over three years making \$759,000 in total (with Michael Aitken, Terry Walter and Alex Frino).
- 1998 ARC Large Grant of \$139,000 awarded for the project: “A quantification of the company performance benefits from detailed executive compensation disclosure and related corporate governance issues”.
- 1999 First chief investigator for ARC Large Grant: “The Profitability of Trading Strategies Adopted by Australian Investors: Implications for Stock Market Liquidity, Stability, Efficiency and Investor Protection”, \$183,000 over three years (with Tro Kortian).
- 2000 ARC Large Grant of \$257,676 awarded for project: “Can the equity premium be explained by expected transaction costs?”
- 2001 Specified as Project Leader for “Market design” in the successful \$15 million CRC for Technologically Enabled Markets led by Michael Aitken.
- 2001 Awarded ARC Australian Professorial Fellowship for five years commencing January 2002 and a Discovery Grant totalling \$757,749 over the five years. Title: “Illiquidity, momentum traders, incentives, and book to market: explaining and testing the factor drivers of stock market returns”. One of 23 AFP fellowships awarded nationally in all fields in 2001.

2002 Awarded First Principal Investigator, ARC Discovery Grant: "Evaluating the Performance of Active Australian Equity Managers Utilising their Daily Portfolios and Trades"; \$193,000 over three years, 2003-2005, with David Gallagher.

2004 Member of the ten person committee for the Financial Integrity Research Network (FIRN) awarded \$1.75m by the ARC over five years.  
Excluding his involvement with the CRC and FIRN Applications, this totals \$3.8 million.

Peter Swan has been the recipient of a number of other sizeable grants besides ARC grants totalling in excess of \$500,000. Most recently, he was awarded \$191,000 by the Commonwealth Government in 1998 as part of its *Institutional Links with China* initiative.

Websites providing some information about working papers and articles of Peter Swan are at:

<http://ssrn.com/author=136389>

<http://authors.repec.org/pro/psw4/>