

THE UNIVERSITY OF
NEW SOUTH WALES



Australian School of Business

**School of Economics
School of Actuarial Studies**

ECON3114/ACTL3005

SUPERANNUATION AND RETIREMENT BENEFITS

**COURSE OUTLINE
SESSION 2, 2008**

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1. COURSE STAFF

Lecturer-in-charge and lecturer

Associate Professor Geoffrey Kingston

g.kingston@unsw.edu.au

460

Telephone 9385 3345 Office ASB East Wing

Tutor:

Amandha Ganegoda

amandha_ganegoda@yahoo.com

1.1 Communication with Staff

Kingston's consultation times: 4-5 pm Tuesday, 2-4pm Thursday. (Emails answered only during these times, except in emergencies.)

2. INFORMATION ABOUT THE COURSE

2.1 Teaching Times and Locations

Lecture: Tuesday 1-3pm, Macauley Theatre (Quad 1027)

2.2 Units of Credit

Superannuation and Retirement Benefits is worth 6 units of credit. There are two (2) hours of lectures and a one (1) hour tutorial class each week.

2.3 Parallel Teaching in the Course

There is not parallel undergraduate/postgraduate teaching in this course.

2.4 Relationship of This Course to Other Course Offerings

The prerequisites are ECON1101 and ECON1203. ACTL3005/ECON3114 are part of the BCom and BEc degrees. ECON3114 is a recommended course in the Financial Economics specialisation.

3. COURSE AIMS AND LEARNING OUTCOMES

3.1 Course Aims

This course aims to instruct students in the economics and finance of retirement -- "superannuation" translates literally as "over-years". Reference will be made to retirement income provision around the world, with special reference to current Australian practice.

3.2 Student Learning Outcomes

After completing this course you will have mastered the bulk of the complex terminology surrounding the field of superannuation, will understand the superannuation industry and the regulations that govern it, and will have a sound grasp of the leading economic and

financial principles underlying the efficient accumulation and decumulation of retirement savings.

The broad approach to teaching and learning is to combine institutional analysis, theoretical analysis and practical examples. With appropriate guidance, students are encouraged to take responsibility for their own learning.

3.3 Approach to Teaching and Learning

Tutorials and assessments test your comprehension of the lectures and readings. The rationale is to help students become knowledgeable and effective communicators of superannuation concepts and rules.

3.4 Teaching Strategies

In addition to the usual activities of lectures and answering tutorial questions, students give a five-minute presentation in their tutorial, thereby gaining experience in public speaking. (Assessment of this component is based purely on the associated essay, however—see below.) Lectures and tutorials fit together so as to support learning.

4. CONTINUAL COURSE EVALUATION AND IMPROVEMENT

This course is continuously improved in the light of feedback from CATEI and other sources. Recent improvements have been concentrated on ensuring that non-actuarial students who pass this course, in conjunction with three courses offered by the School of Banking and Finance, qualify for RG146 status in offering financial advice.

5. LEARNING ASSESSMENT

5.1 Formal Requirements

In order to pass this course, you must:

- ☐ achieve a composite mark of at least 50; and
- ☐ make a satisfactory attempt at all assessment tasks (see below).

5.2 Assessment Details

The examinable content of this course is defined by the content of the lectures, the designated readings and the exercises and questions discussed in tutorials.

Assessment	Due date	Weight
Review Essay	Throughout	20%

Mid Session Exam	Week 7 (September 9)	20%
Final Examination	Exam period	60%
TOTAL		100%

Review Essay – 20%

The purpose of the review essay is to test your comprehension of a key article in the list of readings along with your ability to exercise both your sympathetic and critical faculties.

Writing your review essay means summarizing and appraising any one of the articles on the reading list with a dagger (†) against it. Before writing up your review article, you will have to present a 5-minute (three-overhead) summary of it to your classmates, thereby gaining helpful feedback. Articles will be allocated within each tutorial group on a first-come first-served basis. Presentations ideally are in the week following the relevant lecture on the topic. Type your review, and keep a copy. Hand in your review within three weeks of having presented it to your classmates. Your mark is based on your essay rather than your presentation. Length: 1400 words.

Mid Session Exam – 20% (To be held in class in week 7, 9th September)

The purpose of the Mid Session Exam is to assess your understanding of all material presented in the first 6 weeks of the course, including lectures and the exercises and questions covered in tutorials.

The Mid Session Exam will be of 1 hour in duration. It will be held in the normal lecture time in week 7. It will consist of half a dozen short-answer questions.

Final Examination – 60% (To be held in the formal exam period)

The purpose of the Final Exam is to assess your understanding of all material presented in the course, including lectures and the exercises and questions covered in tutorials.

The Final Exam will be of 2 hours duration, plus 10 minutes reading time. It will comprise both short answer and essay questions and will cover the entire course. Further information on the content of the Final Exam will be provided towards the end of session.

It is your responsibility to organise your affairs to take account of examination and other assessment dates where these are known. Be aware that your final examination may fall at any time during the session's examination period. The scheduling of examinations is controlled by the University administration. No early examinations are possible.

5.3 Assignment Format

Please type your review essay & make sure your name is on it.

5.4 Assignment Submission Procedure

Hand your review essay to your tutor. Please keep a copy.

5.5 Late Submission

Penalties for late submission will be determined by the lecturer in charge.

5.6 Special Consideration and Supplementary Examinations

A supplementary final examination *may* be offered to students who failed to attend the final examination for medical reasons, or whose performance during the final examination has been severely affected by illness, or other extraordinary circumstances that can be documented by the student. Supplementary examinations are not offered as a matter of course. The following conditions *must* be fulfilled before such an application to sit for a supplementary final examination will be considered:

- (i) the student's performance during the session (based on the student's Tutorial Assessment mark and Mid-Session Exam mark) must be deemed to be at a satisfactory level by the lecturer-in-charge, and
- (ii) the student has applied for special consideration which is made through **UNSW**

Student Central within 3 days of the final examination, and the application is supported with full documentation.

UNSW policy and processes for special consideration can be found at :

<https://myunsw.edu.au/student/atoz/SpecialConsideration.html>

Also, please note:

- If you are making an application for special consideration through UNSW Central Administration please notify your Lecturer in Charge.
- Please note that a register of applications for Special Consideration is maintained.

History of previous applications for Special Consideration is taken into account when considering each case.

ASB Policy and Process for Special Consideration and Supplementary Exams in Undergraduate Courses

In the ASB, requests for special consideration are determined by a Faculty wide panel which will advise the Lecturer in Charge of appropriate action.

If the Faculty panel (see above) grants a special consideration request, this may entitle the student to sit a supplementary examination. In such cases the following procedures will apply:

- Supplementary exams will be scheduled centrally and will be held approximately two weeks after the formal examination period. Actual date will be advised by mid-semester.
- Where a student is granted a supplementary examination as a result of a request for special consideration, the student's original exam (if completed) will not be marked and only the mark achieved in the supplementary examination will count towards the final grade.

Further information concerning supplementary examinations is available on the 'Policies and Guidelines for Current Students' page of the ASB website:

www.business.unsw.edu.au/currentstudents.

6. ACADEMIC HONESTY AND PLAGIARISM

The University regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. For full information regarding policies, penalties and information to help you avoid plagiarism see:

<http://www.lc.unsw.edu.au/plagiarism/index.html>

Plagiarism is the presentation of the thoughts or work of another as one's own.* Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty. It can be located at:

www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle

† Adapted with kind permission from the University of Melbourne.

7. STUDENT RESPONSIBILITIES AND CONDUCT

All students are expected to adhere to university policies in relation to class attendance and general conduct and behaviour. In addition, students are expected to understand their obligations in relation to workload and keeping informed. Information and policies on these topics can be found at: www.my.unsw.edu.au.

7.1 Workload

It is expected that you will spend at least **ten hours** per week studying this course. This time should be made up of reading, research, working on exercises and problems, and attending

classes. In periods where you need to complete assignments or prepare for examinations, the workload may be greater.

Over-commitment has been a cause of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

7.2 Attendance

Your regular and punctual attendance at lectures and seminars is expected in this course. University regulations indicate that if students attend less than eighty per cent of scheduled classes they may be refused final assessment.

7.3 General Conduct and Behaviour

You are expected to conduct yourself with consideration and respect for the needs of your fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class. More information on student conduct is available at: www.my.unsw.edu.au

7.4 Keeping Informed

You should take note of all announcements made in lectures, tutorials or on the course web site. From time to time, the University will send important announcements to your university e-mail address without providing you with a paper copy. You will be deemed to have received this information. It is also your responsibility to keep the University informed of all changes to your contact details.

8. STUDENT RESOURCES

8.1 Course Resources

The course website may be found among others of your courses at:

<http://vista.elearning.unsw.edu.au>.

Students should consult the Superannuation and Retirement Benefits website at least once a week as it contains important information about the course. It will be assumed that all students have seen any notice posted under 'announcements' on the course website.

7.2 Textbook and References

The main **textbook** for this course is:

CCH Australia Ltd, Australian Master Financial Planning Guide - 2007/08 edition.

Each week you will receive a copy of the lecture overheads. For this reason, along with the provision of many articles on vista, there is no compelling requirement to buy the text (which is expensive).

Other useful references include:

- Bateman H, J Piggott and G Kingston (2001), *Forced Saving: Mandating*

Private Retirement Incomes, Cambridge University Press.

- J. Randall, R. Higgins and L. Goddard, *Superannuation*, Australian Tax Practice, 1996,
- Z. Bodie, A. Kane and A. Marcus, *Investments* (current edition), Irwin.
- World Bank (1994), *Averting the Old Age Crisis – Policies to Protect the Old and Promote Growth*, Oxford University Press.
- Holzmann R and R Hinz (2005), *Old Age Income Support in the 21st Century*, The World Bank, Washington.

8.2 Other Resources, Support and Information

The University and the ASB provide a wide range of support services for students, including:

Learning and Study Support:

- **ASB Education Development Unit**

The Education Development Unit (EDU) provides learning support and assistance to all students in the ASB, to enable them to enhance the quality of their learning. The EDU services are free, and tailored to meet the academic needs of students in the Australian School of Business.

The role of the EDU is to provide

- A range of support initiatives for students from the Australian School of Business in relation to their transition to university;
- Learning skills development, resources and activities for Business students
- Academic writing and skills workshops throughout the session;
- Printed and online study skills resources, such as referencing guides, report writing and exam preparation;
- A drop-in EDU Office containing books and resources that can be borrowed;
- A limited consultation service for students with individual or small group learning needs.

The EDU website www.business.unsw.edu.au/edu contains information, online resources and useful links as well as providing information and dates for workshops. More information about the EDU services including resources, workshop details and registration, and consultation request forms are available from the EDU Office.

EDU Contact Details

Location Room G07 Ground Floor,
 West Wing, Australian School of Business Building

Telephone: 02 9385 5584

Email: Edu@unsw.edu.au

Website www.business.unsw.edu.au/edu

UNSW Learning Centre (<http://www.lc.unsw.edu.au>)

In addition to the EDU services, the UNSW Learning Centre provides academic skills support services for all UNSW students. The Learning Centre is located on Level 2 of the Library and can be contacted by phone: 9385 3890 or through their website.

Technical support:

For any technical support issues (difficulty logging in to websites, problems downloading documents, etc) you can contact the UNSW IT Service Desk at:

(02) 9385 1333 ; Email: servicedesk@unsw.edu.au

Counselling support - <http://www.counselling.unsw.edu.au>

Students experiencing problems of a personal or academic nature are encouraged to contact the Counselling Service at UNSW. This consultation service is free and confidential and run by professional counsellors. The Counselling Service also conducts workshops on topics such as 'Coping With Stress' and 'Procrastination'. The Counselling Service is located on Level 2, Quadrangle East Wing, and can be contacted on 9385 5418.

Library training and support services - <http://info.library.unsw.edu.au>

Disability Support Services – Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the Course Coordinator or the Equity Officer (<http://www.studentequity.unsw.edu.au/disabil.html>). Early notification is essential to enable any necessary adjustments to be made.

In addition, it is important that all students are familiar with University policies and procedures in relation to such issues as:

- **Examination procedures** and advice concerning illness or misadventure
<https://my.unsw.edu.au/student/academiclife/assessment/examinations/examinationrules.html>
- **Occupational Health and Safety** policies and student responsibilities;
<https://my.unsw.edu.au/student/atoz/OccupationalHealth.html>

9. COURSE SCHEDULE

Week	Date	Topic
1	July 29 th	Population Ageing and Saving for Retirement
2	August 5 th	Types of Superannuation Fund
3	August 12 th	Saving and Investing over the Life Cycle
4	August 19 th	Retirement
5	August 26 th	Taxation and Regulation before Retirement

6	September 2 nd	The Superannuation Industry
7	September 9 th	Mid Session Exam
8	September 16 th	Retirement income streams
9	September 23 rd	Investing internationally
	September 30 th	Mid Session Break
10	October 7 th	More on managing life cycle investments
11	October 14 th	More on Statements of Advice, Product Disclosure Statements & fees
12	October 21 st	Policy issues

Course Summary

- **Superannuation** is about saving towards retirement within a particular government-regulated vehicle. There is a worldwide movement towards compulsory but privately-managed superannuation.
- **Defined benefit** superannuation plans pre-specify a retirement benefit, whereas their **accumulation (defined-contribution)** counterparts do not. Australia's **Superannuation Guarantee** compels employers to contribute each quarter an amount equal to at least 9% of the wages of their employees to superannuation plans. In Australia and elsewhere, defined benefits are on the wane; most recipients of the SG are members of accumulation plans only.
- By 2008 total assets in super entities exceeded \$1 trillion, or over a year's gross domestic product. Members of accumulation funds should consider a **life cycle** or

'age-phased' exposure to risk whereby your portfolio becomes more conservative as you age.

- You are **retired** to the extent that you have permanently quit the labour force. According to one formula, you should retire if and when your accumulated assets have become equal to your wage multiplied by the ratio of your planned span of retirement to your "disutility" (dislike) of work. Recent survey data suggest that Australian males are retiring on average at age 61 and that Australian females are retiring on average at age 57. Payments made in consequence of retirement and payments to retirees from superannuation funds (excluding super fund pensions) are leading instances of **Employment Termination Payments**, which are usually taxed concessionally.
- In Australia, employer contributions to complying funds are generally **taxed at 15%**. Superannuation fund income during the accumulation stage is taxed at 15%, except for capital gains on assets held for at least 12 months, in which case the tax is 10%. One strategy for reducing your family's overall tax bill during the accumulation stage is to **salary sacrifice** whereby your employer contributes extra to super on your behalf. Another strategy is to make so-called **co-contributions** on behalf of family members who are in the paid workforce but in a low tax bracket.
- Australian super funds can be classified under the following headings: **corporate, industry, public sector, retail and self managed**. Retail funds especially have been criticised for imposing high fees and charges relative to useful services. Self-managed funds offer attractive flexibility, but are not cost-effective unless your super balance is \$200,000 +.
- Australian retirees have traditionally relied primarily on the **public age pension**, which is non-contributory and, in aggregate, Australia's most expensive social security benefit. A full public pension has recently been valued as being worth \$450,000 to an average individual retiring at 65, so this reliance on the state is not surprising. Private pensions nowadays are mostly described as **account based pensions**. These stipulate minimum amounts which must be drawn down each year, depending on your age. Self-funded retirees should consider allocating part of their benefit to **life annuities** in order to enhance their **longevity insurance**, i.e., protection from the financial repercussions of an unexpectedly long life. Retirement benefits paid from complying super accounts are taxed lightly or not at all.
- In mid 2007 the super funds administered by APRA (about three quarters of the total amount invested by Australians in super) allocated 24 % of their funds to international shares. Two issues in **investing internationally** involve tension between industry practice and academic findings. Specifically, managers have hedged less currency risk, and invested less offshore (especially in emerging markets), than would seem to be warranted on the basis of leading academic research.

- Although defined benefits superannuation is waning, clever designs of **investment guarantees** within defined contributions superannuation may deliver similar retirement benefits. Another emerging financial management technique is to choose an asset allocation that helps hedge out risks arising from the particular **occupation** of the contributor. For example, miners should consider underweighting resource stocks.
- Since 2005 there has been considerable **member investment choice**, meaning that around half of superannuation contributors are free to choose their own fund, with a somewhat higher percentage free to choose their own fund after retirement. Two key documents in the relationship between a financial adviser and her client are the **Statement of Advice** (SoA) and the **Product Disclosure Statement** (PDS). The SoA contains the adviser's recommendations, along with reasons. The PDS is prepared by the provider of a financial product. It must contain sufficient information for the client to make an informed decision about the product.
- The theoretical rationale for government intervention in the pensions business is strong, but particular interventions have often been disappointing. The public age pension will remain the mainstay of Australian retirement incomes for decades to come, notwithstanding compulsory private super, i.e., our second pillar, positioned between the public age pension and voluntary contributions to super. In international policy discussions there's been something of a backlash against the **three pillars** doctrine, notably the second pillar. Yet second pillars continue to be set up around the world, as policymakers grapple with population ageing.

10. DETAILED COURSE OUTLINE AND READING LIST

Week 1: Population Ageing and Saving for Retirement

Tuesday July 29.

Population ageing and superannuation

Bateman, H and G Kingston (2007), "Superannuation and Personal Income Tax Reform", in *Australian Tax Forum* 22, pp137-162.

Kingston, G. (2004), "Superannuation: A Guide to the Field for Australian Economists", *Economic Analysis and Policy*, pp203-226.

† Kelly, S and A. Harding. (2004), 'Funding the Retirement of the Baby Boomers', *Agenda* 11,99-112. [Go to the Natsem website].

†Australian Treasury (2007), 'Intergenerational Report', Budget Papers. [go to their website].

†King, A., A. Walker & A. Harding (2001), "Perspectives on Australian retirement Incomes", *Australian Economic Review*, 155-169.

Retirement income policy

As above, plus:

† World Bank (1994), *Averting the Old Age Crisis*, Oxford University Press.

† Disney, R. (2000), "Crises in Public Pension Programmes in OECD: What Are the Reform Options?", *Economic Journal*, 110 (February issue), pp.1-23.

†Bateman, H. (2002), "Retirement Income Strategy in Australia", *Economic Analysis and Policy*, 49-70.

Week 2: Types of Superannuation Fund

Tuesday August 5

Defined benefits and defined contributions compared

CCH ch4.

Randall *et al.*, chs 3 and 20.

† Bodie, Z. A.J. Marcus and R.C. Merton (1988), “Defined Benefit versus Defined Contribution Pension Plans: What are the Real Trade-offs”, in Bodie, Z. Shoven, J.B. and D.A. Wise (ed.), *Pensions in the US Economy*, University of Chicago Press, 139-62.

† Blake, D., “Does It Matter What Type of Pension Scheme You Have?”, *Economic Journal*, 110 (February issue), 2000, 46-81.

Case study: the retirement benefits of Ansett’s ex employees

† Ferris, S., “Ansett’s superannuation fund a case study in insolvency”, paper presented to the 11th Colloquium of Superannuation Researchers, 2003; in H. Bateman (ed.), *Scary Markets*, Edward Elgar, 2007.

Week 3: Saving and Investing over the Life Cycle

Tuesday August 12

Descriptive, institutional and administrative aspects

CCH ch 9

Randall *et al.*, chs 7 and 8.

Australian Prudential Regulation Authority, *Superannuation Trends*. Available at www.apra.gov.au

Managing life cycle investments: an introduction

† Bodie, Z. R.C. Merton and W.F. Samuelson (1992), “Labour Supply Flexibility and Portfolio Choice in a Life Cycle Model”, *Journal of Dynamics and Control*, 16, 427-49.

† Sharpe, W., & Perold, A., (1988), “Dynamic Strategies for Asset Allocation”, *Financial Analyst’s Journal*, Jan-Feb, 16-27.

† Barker, M.D. (1987), “Portfolio Insurance”, Institute of Actuaries of Australia.

† Hathaway, N. (1994), “Super Reserving Policies”, Paper presented to the Second Annual Colloquium of Superannuation Researchers, University of Melbourne, July 7 and 8, 1992.

† Bateman, H. (1997), “Risk Management Issues for Mandatory Private Retirement Provision: Roles for Options”, *Australian Journal of Management*, Vol.22, 175-97.

Kingston, G., J. Piggott and H. Bateman (1992), “Customised Investment Strategies for Accumulations Superannuation”, in Davis K. and I. Harper (eds), *Superannuation and the Australian Financial System*, Allen and Unwin, Sydney, 136-56.

† Blake, D. (2000) (see above).

† Viceira, L. (2001), “Optimal portfolio choice for long horizon investors with nontradeable labor income”, *Journal of Finance*, 43-73.

† Viceira, L. (2007), “Life-Cycle Funds” [easier than Viceira’s JFin article; downloadable from his website at Harvard].

†Shiller, R. (2005), “The Life-Cycle Personal Accounts Proposal for Social Security: A Review”, NBER working Paper # 11300 [downloadable from Shiller’s website at Yale]

†Wachter, J. and Yogo, M. (2008), “Why Do Household Portfolio Shares Rise in wealth?”, Wharton School. Available from Yogo’s website.

†Farhi, E, and Panageas, S. (2007), “Saving and Investing for early Retirement”, *Journal of Financial Economics*. Available from the website of Emmanuel Farhi (Economics, Harvard).

†Clare, R. (2007), “Are Retirement Savings on Track?”, ASFA Research & Resource Centre. [Available from ASFA’s website]

Week 4: Retirement

Tuesday August 19

The retirement decision

CCH ch 15.

Randall *et al.*, chs 10 and 11.

† Mitchell, O.S. and G. Fields (1984), “The Economic of Retirement Behavior”, *Journal of Labor Economics* 2, 84-105.

Kingston, G. (2001), “Efficient Timing of Retirement”, *Review of Economic Dynamics* 3, 831-840.

†Hurd, M., & Rohwedder, S., (2003), "The Retirement-Consumption Puzzle: Anticipated and Actual Declines in Spending at Retirement", NBER Working Paper #9586. Available at www.nber.org.

† Aguiar, M. and Hurst, E. (2004), 'Consumption vs. Expenditure', NBER Working Paper #10307. Available at www.nber.org.

†Hurst, E. (2003), 'Grasshoppers, Ants, and Pre-retirement Wealth: A Test of Permanent Income', NBER Working Paper #10098. Available at www.nber.org.

†Ameriks, J., Caplin, A. & Leahy, J. (2007), "Retirement Consumption: Insights from a Survey", *Review of Economics and Statistics*, pp265-274. Available at John Leahy's website at NYU.

†Warren, D. & Oguzalu, U. (2007), "Retirement in Australia: A Closer Look at the Financial Incentives", Melbourne Institute Working Paper No. 24/07. Available on the internet.

Employment Termination Payments
CCH ch 4

Week 5: Taxation and Regulation before Retirement

Tuesday August 26

Taxation
CCH chs 1 & 4

Bateman, H and G Kingston, "Superannuation and Personal Income Tax Reform", in *Australian Tax Forum*, 2007.

†Davis, E.P. (1995), *Pension Funds, Retirement Income Security and Capital Markets: An International Perspective*, Chapter 4 (Taxation).

† Clark, R. and E. Wolper (1997), “Pension Tax Expenditures: Magnitude, Distribution and Economic Effects”, in Schieber and Shoven (eds) *Public Policy Toward Pensions*, MIT Press.

Regulation

CCH Ch4

†Davis, E P (1995), *Pension Fund, Retirement Income Security and Capital Markets: An International Perspective*, ch 5 (Regulation).

Week 6: The Superannuation Industry

Thursday September 4

Structure, Conduct and Performance

CCH ch8

†Davis, E P (1995), *Pension Funds*, Oxford University Press, ch 5.

Luenberger, D., (1998), *Investment Science*, pp184-187 (“Performance Evaluation”), Oxford University Press.

†Bateman, H and S. Thorp (2005), “Decentralised Portfolio Management: Analysis of Australian Accumulation Funds”.

Costs, Fees and Charges

†Australian Securities and Investment Commission, (2003), “Survey on the quality of financial planning advice”, ASIC research report [downloadable]

†Drew, M., & J. Stanford, (2003), “Australia’s Compulsory Superannuation Scheme After a Decade”, University of Queensland Working Paper #322.

Week 7: Midsession examination

Thursday September 11

Replaces regular lecture

Week 8: Retirement Income Streams

Thursday September 18

Taxes and Regulations

CCH Ch.16

†Bateman, H. and Thorp, S. (2008), “Choice and Constraints over Retirement Income streams: Comparing Rules and Regulations”, *Economic Record* (forthcoming).

Financial Engineering for Annuitants

†Bodie, Z. (1990), ‘Pensions as Retirement Income Insurance’, *Journal of Economic Literature*, 38: 28-49.

†World Bank Pensions Primer – *Annuities: Regulating Withdrawals from Individual Pension Accounts*.

[http://wbln0018.worldbank.org/HDNet/hddocs.nsf/2d5135ecbf351de6852566a90069b8b6/1b9bb079e6b112fa852568900071be6b/\\$FILE/N%20annuities22000.pdf](http://wbln0018.worldbank.org/HDNet/hddocs.nsf/2d5135ecbf351de6852566a90069b8b6/1b9bb079e6b112fa852568900071be6b/$FILE/N%20annuities22000.pdf)

†Mitchell, O., & McCarthy, D., (2002), “Annuities for an Ageing World”, NBER Working Paper #9092. Available at www.nber.org.

Formica, A. and G. Kingston (1981), “Inflation Insurance for Australian Annuitants”, *Australian Journal of Management*.

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†Milevsky, M., & Young, V. (2006), “The Timing of Annuitization: Investment Dominance and Mortality Risk”, *Insurance: Mathematics and Economics*.

†Brown, J. (2007), “Rational and Behavioural Perspectives on the Role of Annuities in Retirement”, NBER Working Paper #w13537. [Available from the NBER’s website]

Bateman, H., G. Kingston and S. Thorp, “Financial Engineering for Australian Annuitants”, in H. Bateman (ed.), *Scary Markets*. Edward Elgar, 2007.

Week 9: Investing Internationally

Tuesday September 23

Currency hedging

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†Thorp, S. (2003), “Investing internationally: currency issues for superannuation funds”, School of Economics Working Paper. Available at the School of Economics website: via www.unsw.edu.au [Dr Thorp also has published an abridged version of this paper in the 2005 volume of the *Economic Record*].

†Solnik, B. (1998), “Global Asset Management”, *Journal of Portfolio Management*, Summer issue, pp43-51.

†Glen, J. and Jorion, P (1993), “Currency Hedging for International Portfolios”, *Journal of Finance*, 1865-1886.

Emerging Markets

†Goldman Sachs economics Group (2007), *BRICS and Beyond*. [Available on the internet.]

†Bekaert, G. and C. Harvey (2003), “Emerging markets finance”, *Journal of Empirical Finance*, 3-55.

†Goetzmann, William. & Phillippe. Jorion (1998), “Re-emerging markets”, *Journal of Financial and Quantitative Analysis*. [Available also at the websites of either of the two authors.]

Week 10: More on Managing Life-Cycle Investments

Tuesday October 7

Designing guarantees for defined contribution plans

†Sharpe, W., & Perold, A., (1988), “Dynamic Strategies for Asset Allocation”, *Financial Analyst’s Journal*, Jan-Feb, 16-27.

†Lachance, M-E and O. Mitchell (2002), “Understanding individual account guarantees”, NBER Working Paper # 9195. Available at www.nber.org

†Asher, A. (2003), “Smoothing investment returns”, paper presented to the 11th Colloquium of Superannuation Researchers.

† Bateman, H. (1997), “Risk Management Issues for Mandatory Private Retirement Provision: Roles for Options”, *Australian Journal of Management*, Vol.22, 175-97.

Industry tailoring

†Davis, S. & and P. Willen (2000), “Risky labor income and portfolio choice”, Working paper, Graduate School of Business, University of Chicago. Available at the website of Steven J. Davis.

†Campbell, J. and L. Viciera (2002, *Strategic Asset Allocation: Portfolio Choice for Long Term Investors*, Oxford University Press, ch.7.

†Benzoni. L., P. Collin-Dufresne and R. Goldstein (2005), “Portfolio Choice over the Life-Cycle in the Presence of ‘Trickle-Down’ Labor Income”, NBER #11247 [down loadable].

†Cochrane, J. (2008), “Applications of long-Run Mean-Variance Analysis”, appendix to “A Mean-Variance Benchmark for Intertemporal Portfolio Theory”. [Available from John Cochrane’s website at the University of Chicago.]

Week 11: More on Statements of Advice, Product Disclosure Statements, and Fees

Tuesday October 14

Regulations

CCH ch.8

Two actual PDSs

†Vanguard Australia, PDS for Personal Super. [Available from Vanguard's website.]

†Platinum Asia, PDS. [Available from their website]

Week 12: Policy Issues

Tuesday October 21

Australian issues

†Treasury, 2006 Budget Papers: A Plan to Simplify and Streamline Superannuation

<http://www.budget.gov.au/2006-07/overview2/download/overview2.pdf>

Detailed outline

http://simplersuper.treasury.gov.au/documents/outline/download/simpler_super.pdf

†Productivity Commission (2005), 'Economic Implications of an Ageing Australia', April 2005. <http://www.pc.gov.au/study/ageing/finalreport/index.html> (read Executive Summary)

International issues

†Bloom D (2006), Global Demography: Fact, Force and Future, presented to the RBA conference Demography and Financial Markets, July 2006.
<http://www.rba.gov.au/PublicationsAndResearch/Conferences/2006/bloom.pdf>

†World Bank (1994), *Averting the Old Age Crisis* (Overview and Chapter 1): 1-48.

†Holzmann R and R Hinz (2005), Old Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform, Introduction and Executive Summary.

† Blinder, A S (1998), “Why is the Government in the Pension Business?” in S M Watcher (Ed), *Social Security and Private Pensions: Providing for the Twenty-First Century*, Lexington Books, 17-34.

Bateman, H. and G. Kingston (2005), “Retirement Income Policies in the Anglosphere”, forthcoming in *Accounting: Accountability and Performance*. [Available from Kingston’s webpage at UNSW.]

†Susan St John and Michael Littlewood (2006), Does Kiwisaver improve the unique mix of retirement policies?, paper presented to the 14th annual colloquium of superannuation researchers, July 2006.

† Diamond, P. and P. Orszag,(2005), “Saving Social Security”, *Journal of Economic Perspectives*.(Spring issue).

† Feldstein, M (2005), “Structural Reform of Social Security”, *Journal of Economic Perspectives*.(Spring issue).

Tutorial Program

Introductory Exercises on Population Ageing and Saving for Retirement

[The week 1 tutorial will be short—the main objective will be to find your tutorial room. Some students will also want to put in a bid for their review article—first come, first served.]

1. What is superannuation?
2. Define the following terms:
 - (a) Defined benefits
 - (b) Defined-contributions/accumulation scheme
 - (c) Annuity
 - (d) Preservation rules
3. What are the five main types of superannuation fund in Australia?
4. What are the alternatives to super in providing for one's retirement in Australia?

More Exercises on Population Ageing and Saving for Retirement

1. All Australian employees have part of their wages set aside for superannuation. Academics can join either a defined benefit plan (DBP) or an accumulation (defined contribution) plan called the investment choice plan (ICP). In either case the retirement benefit comes in the form of a lump sum. In the case of the DBP the main benefit B is defined by the multiplicative formula

$$B = FAS * M * LSF$$

where *FAS* stands for average salary during the three years prior to retirement, *M* stands for equivalent full-time years of service, and *LSF* stands for lump sum factor, which is set at .21 in the case of 55 year olds, and then gradually rises, to .23 in the case of 65 year olds. Evaluate *B* in the case of a 55 year old who retires after 30 years of service, with the last three years on \$100 000 per year.

2. What is the “Three Pillars” doctrine of retirement income policy? What is the main rationale for introducing the compulsory “middle pillar” once there is in place a safety-net “first pillar”?

3. Give an historical account of how Australia came to have a three-pillars policy.

4. Give a brief overview of the main adequacy and fairness problems of the Australian system for providing retirement incomes.

5. What is meant by the term “replacement rate” in retirement finance? Why do financial planners typically recommend income replacement rates well under 100 percent?

Exercises on Alternative Types of Fund

1. Imagine that you are a financial planner. Having suffered a series of career setbacks, you are reduced to advising Australian academics, a group notorious for their low salaries and consequent low net worth, which naturally makes them an unappealing client base.

Permanent hires to academe can join either a defined benefit plan (DBP), or an accumulation (defined contribution) plan called the investment choice plan (ICP). The ICP gets its name from the fact that it offers members a choice of several

different funds, including Secure, Stable, Trustee's Choice (a balanced fund), and Shares.

In the case of either plan the retirement benefit B is a lump sum. In the case of ICP, B is simply accumulated contributions plus investment earnings. In the case of DBP, on the other hand, the main component of B is defined by a multiplicative formula with three inputs (it was introduced earlier in this course):

$$B = FAS \times M \times LSF$$

where

FAS final average salary, in particular, average salary during the three years prior to retirement (or resignation)

M equivalent full-time years of service (i.e., adjusted for things such as leave without pay and part-time service)

LSF lump sum factor, which gradually increases with age. E.g., LSF stands at 0.21 for retirement or resignation at 55, rising to 0.23 for retirement at 65.

Here is an example. If you retire on a final average salary of \$50,000, after 30 years full-time service and at age 55, then your benefit is given by $50,000 \times 30 \times .21 = \$315,000$.

(a) Calculate the value of B for the values $FAS = \$70,000$, $M = 25$ and $LSF = .23$.

(b) The average DBP member will receive a payout comparable to what they would have received under the Trustee's Choice for the ICP (unless investment markets perform poorly—see Question 4). However, information provided to academics by UniSuper (www.unisuper.com.au) says that to the extent that you anticipate your resignation or retirement will be preceded by exceptional success with promotion committees, you should tend to prefer the DBP over the ICP. Is this good advice? Explain your answer.

(c) Compared to science academics, accounting/finance academics are less likely to be promoted but more likely to receive fixed-term salary supplements (especially early in their careers), and more likely to leave the university for careers downtown. Use these facts to help explain why the DBP is much more popular with science academics than with accounting/finance academics.

(d) Suppose that in your view investment markets will be exceptionally volatile in the decades ahead. The DBP has an unusual provision, namely, if large surpluses build up then these will be periodically distributed in the form of enhanced benefits to DBP members. (This is unusual because large surpluses in defined benefit plans are ordinarily worked off by allowing the plan sponsor to take a contributions holiday, in this way assisting the sponsor rather than fund members.) Explain why this unusual feature of the DBP, together with your assumed view about volatile markets, inclines you to steer academic clients towards the DBP and away from the ICP.

(e) Consider a worker with a flat age-earnings profile in a defined contributions (accumulations) plan that pays lump-sum benefits according to

$$B = 10,500 \times \frac{[(1.035)^M - 1]}{0.035},$$

$$(\text{note that } \frac{(1.035)^{30} - 1}{0.035} \approx 50.)$$

For a worker with a flat age-earnings profile, how does this plan compare with UniSuper's DBP?

2. Explain and discuss the advantages and disadvantages of defined benefits from an employer's standpoint.

3. Using diagrams, explain and discuss how defined benefit plans can be characterized as an exchange of options between employee and sponsor (typically the employer)? How does the fact of credit risk play havoc with this characterization?
4. Why does it make sense that only large and stable enterprises consider offering defined benefit plans to their employees?

Exercises on Saving and Investing Over the Life Cycle

1. A popular rule of thumb for financial planners is that the percentage of shares in a wage-earner's exposure to risky assets should be equal to 100 minus the investor's age. What is the rationale of this prescription? Does it make sense for retired investors?
2. What are the pitfalls in using portfolio-insurance techniques for mitigating investment risk in defined contributions super? Explain in particular why portfolio insurance is less efficacious in cycling investment markets.
3. Why is a constant-mix strategy more efficacious in cycling investment markets?
4. Diversification has been described as a free lunch. Do you agree? Explain.
5. Are Australian super balances adequate? Explain.

6. What is the rationale of ensuring a discrete drop in exposure to risky assets at the point of a voluntary retirement?

Exercises on Retirement

1. According to a simple version of the life-cycle model of retirement, your planned span of retirement, $T - R$, should be proportional to the ratio of your net worth at retirement x to your salary at retirement, Y . Here, T is your life expectancy and R is your age at retirement. The factor of proportionality is ℓ , your disutility of work. Hence, the formula is

$$T - R = \frac{\ell x}{Y}.$$

(a) What is your age at retirement R if $T = 80$ years, $\ell = 2$, $x = \$200,000$ and $Y = \$40,000$?

(b) What is the increase in the age at retirement (for workers on the verge of retirement) if life expectancy T rises to 90 years?

(c) Now suppose that you are entitled to a retirement-conditioned pension P . In other words, the occasion of retirement triggers a lifelong income stream at the rate $\$P$ per year. The optimal retirement formula changes to

$$T - R = \frac{\ell x}{Y - P}.$$

Assuming $T = 80$, $\ell = 2$, $x = \$200,000$, $Y = \$40,000$ p.a. & $P = \$20,000$ p.a., what is the new value of your age at retirement R ? Explain why this illustration sheds light on the observed tendency to early retirement in the Commonwealth Public Service.

2. A popular rule of thumb for financial planners is the '17/15/13 rule' whereby an individual seeking an income of $\$P$ pa in retirement needs a super balance of $\$17P$ if he or she retires at age 55, $\$15P$ if he or she retires at age 60, and $\$13P$ if he or she retires at age 65. Evaluate this rule in the case of an individual with life expectancy of 83, expected real return on investments of 3% pa, and with the help of the generic formula for the level-payment term annuity that can be purchased with an accumulation x in order to finance a retirement spanning L years, given a rate of return r on investments, namely,

$$P = \frac{rx}{(1+r)\left[1 - (1+r)^{-L}\right]} .$$

3. Explain and discuss the tension between theory and fact in the lifecycle theory of consumption, saving and retirement.

4. What is the definition of an "Employment Termination Payment" (ETP)? Are payments in lieu of unused long service leave included in ETPs? Are ETPs rolled over into a complying super fund assessable for income tax purposes?

5. In what circumstances are the trustees of a super fund likely to give favourable consideration to a request for early release of super?

Exercises on the Taxation and Regulation of Superannuation before Retirement

1. With the help of a numerical example, explain how salary sacrifice can generate substantial tax savings for an individual aged over 55 on the second-top rate of personal income tax, without jeopardizing her lifestyle.

2. With the help of a numerical example, explain how government co-contributions can be tax/benefit efficient for a family with a member in the lowest tax bracket.
3. (a) Explain the differing tax treatments, from an employer standpoint, of concessional (employer) contributions and personal (non-concessional) contributions to a superannuation fund.

(b) Leaving aside the transitional arrangements, what are the post- June 2007 caps on concessional and personal contributions?
4. Under what conditions is there a good prospect of obtaining early release of superannuation balances?
5. What is the age limit on tax deductibility to employers of super contributions on behalf of employees?
6. Give a broad overview of the tax treatment of superannuation and retirement benefits in Australia. Are the relevant taxes too heavy, or too concentrated at the early years of the life cycle?

Exercises on the Superannuation Industry

1. Imagine that you are comparing the performance of two funds, X and Y. Fund X has historical real returns of 8% per year, and standard deviation (of real returns) of 20% per year. Fund Y has historical real returns of 6% per year, and standard deviation of 5% per year. In each case the benchmark portfolio has constant returns of 4% per year. Which fund has the higher Sharpe ratio? Explain your answer.

2. Imagine that you are supervising three superannuation funds, X, Y and Z, and are attempting to ascertain their relative expenses. Fund X charges 15% on contributions to it. Fund Y charges 15% on retirement benefits. Fund Z charges 1% each year of assets under management. Which two funds' expenses can be readily compared, while which fund cannot be compared unless the relevant contributions span is known? Explain your answer.

3. Explain the financial-planning concepts of:

- (a) fiduciary duty
- (b) the suitability rule
- (c) informed consent
- (d) soft-dollar benefits
- (e) Statement of Advice (SoA)
- (f) Product Disclosure Statement (PDS)
- (g) RG 146 requirements.

4. Distinguish between costs and charges on superannuation and retirement benefits.

How can we reduce the measurement of different charges to a single metric? In Australia, is there a case for caps on some or all of the charges on private pension plans?

5. Define and discuss the measurement of (Jensen's) Alpha.

6. What are the advantages and disadvantages of Self Managed Superannuation Funds (SMSFs)?

7. In your judgment, can Australian workers be trusted to make wise choices about defined contributions super funds? What information, if any, should would-be providers be compelled to give?

Exercises on Retirement Income Streams

1. The generic formula for the level-payment term annuity that can be purchased with an accumulation x in order to finance a retirement spanning L years, given a rate of return r on investments, is

$$P = \frac{rx}{(1+r)\left[1 - (1+r)^{-L}\right]} .$$

(a) What is your replacement rate if the accumulation x is \$500,000, the rate of return is 3 % p.a., the span of retirement L is 20 years, and the retiree's final salary was \$50,000 p.a.?

(b) How does your answer change if

- (i) r rises to 5 % p.a.
- (ii) x rises to \$1,000,000 or
- (iii) L falls to 15 years

2. Imagine that you want to purchase a "level" (non-escalated) annuity P with term of 20 years. This annuity needs to replace 60% of your final salary of \$100,000 pa. How many dollars per year does P represent ?

3. What are the minimum rates of drawdown from an account-based pension? Have the authorities come up with a good design for this schedule?
4. List the ways in which it is not strictly true that super in Australia is entirely free of tax during the retirement phase.
5. Explain and discuss the so-called 'annuity puzzle'.
6. What are the factors that should govern the decision to switch from an account-based pension to a life annuity?

Exercises on Investing Internationally

1. Assume zero correlation between returns to stocks and returns to currencies. Assume also that unconditional Uncovered Interest Parity (UIP) holds. Then the unconditional Sharpe ratio for an unhedged international investment is given by

$$SR_u = \frac{E(\mu^*) + (r - r^*) - r}{\sigma_{\mu^*} + \sigma_s}$$

where E is the expectations operator, μ^* is the return in terms of foreign currency to an unhedged international investment, r is the interest rate on domestic cash, r^* is the interest rate on foreign cash, σ_{μ^*} is the volatility (standard deviation) of returns to an unhedged international investment, and σ_s is the volatility of returns to an investment in foreign currency. In the case of a hedged international investment, the unconditional Sharpe Ratio is given by

$$SR_h = \frac{E(\mu^*) + (r - r^*) - r}{\sigma_{\mu^*}}.$$

Evaluate SR_u and SR_h when $E(\mu^*)=.08$, $r^*=.04$, and $\sigma_s=.1$. Do these estimates support the Australian industry practice of not hedging foreign stocks?

2. Explain the flaw in the following argument, in the Australian context: 'hedging currency risk costs money. Therefore it doesn't pay on average to hedge offshore investments.'
3. Explain the distinction between unconditional and conditional currency hedging. What is the most popular conditioning variable?
4. In mid 2007 the super funds administered by APRA (about three quarters of the total amount invested by Australians in super) allocated 24 % of their funds to international shares. In your opinion, was this fraction too high, too low or about right?
5. Has the time come for Australian investors to reweight their portfolios towards Chinese and Indian stocks?

Exercises on Managing Life Cycle Investments

1. Explain why the cost of viable guarantees of minimum returns to life cycle investments rises with the time horizon of the investment.
2. Explain why collar strategies tend to place superannuation contributors in a highly conservative asset allocation whereas age-phased put options do not.

3. Actors and fund managers are two occupational groups that tend to pay off their family homes as quickly as possible. Why does this behaviour make sense?

4. Summarize briefly the evidence on correlations between asset returns and persistent innovations to wages. Why is this debate important for industry funds?

Exercises on Statements of Advice, Product Disclosure Statements, Fees, & Policy Issues

1. Professor David Blake (Cass Business School, London) has suggested that trailing fees by financial advisers should be banned. Do you agree? Give reasons for your answer.

2. Mr Alan Kohler (ABC TV & Business Spectator magazine) has suggested that financial planners who accept commissions from funds should be labeled by law as financial brokers rather than financial planners (who should be remunerated only by fees for services). Do you agree? Give reasons for your answer.

3. Can the Superannuation Guarantee be said to be a success, thus far? How could it be improved? Give reasons for your answers.

4. Is the Three Pillars doctrine the right paradigm for thinking about retirement income policy around the world? Give reasons for your answer.