THE ROLE, VALUE AND CONTRIBUTION OF ANGEL INVESTORS

submitted to

SECRETARIAT TO THE EXPERT PANEL

REVIEW OF THE NATIONAL INNOVATION SYSTEM

DEPARTMENT OF INNOVATION, INDUSTRY, SCIENCE AND RESEARCH

by the

Australian Association of Angel Investors Limited

on

30TH APRIL 2008

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1. EXECUTIVE SUMMARY

This submission responds to the Innovation Review Terms of Reference to assist the Panel identify gaps and weaknesses in the innovation system and develop proposals to address those gaps and weaknesses with the goal of improved commercial performance.

The Funding Gap

The AAAI has identified the Funding Gap as a critical market failure in the national innovation system that our organisation can address in collaboration with the Government. The Funding Gap is the gap in investors available to businesses between informal, passive investment and the minimum threshold at which venture capital firms and other institutional investors will consider investments in young ventures.

The Performance Gap

The AAAI has identified the Performance Gap as a critical market failure in the national innovation system that our organisation can address in collaboration with the Government. The Performance Gap is the gap in skills and networks that are required to successfully grow and run highly scalable entrepreneurial ventures that derive their inherent opportunity from innovation.

Angel Response

The AAAI firmly believes that collaborating with government to foster a strong angel investor community will significantly address these failures in the national innovation system. The balance of this submission will demonstrate the background and proposals that support our assertion.

Recommendations

The following summarises the key recommendations made by the AAAI in this submission to address the above failures in the national innovation system.

PROPOSAL #1: Build angel capacity in Australia through the introduction of angel investor training programs delivered by the AAAI, angel groups, or both, in partnership and with limited sponsorship by DIISR and State or Territory Governments.

PROPOSAL #2: Measure the development, success and impact of angel investment in Australia through an appropriate mix of professional market research and analysis conducted by the AAAI in partnership and with sponsorship by DIISR and State or Territory Governments.

PROPOSAL #3: DIISR provide financial support for accredited angel groups operating in the States and Territories (not their investments) on the basis of matching those funds provided by group members and State, Territory and Local Government sponsorship.

PROPOSAL #4: DIISR modify the Pre-Seed Funds to provide one or more Co-Investment Funds which match Government funding on a 1 for 1 basis with the investments in early-stage companies made by accredited angel groups.

PROPOSAL #5: AAAI recommends that the existing Federal Government industry assistance schemes are retained. Modifications are proposed which address deficiencies in delivery and eligibility requirements. Specifically:

- Eligibility for the R&D Tax Offset should be extended to those companies that have public sector shareholdings that represent less than 50% of total shareholdings as well as to otherwise eligible companies with R&D expenditure above $1m but with only the first $1m available for Offset payments;
- Although the 1 for 1 matching arrangements are supported for Commercial Ready Plus, companies should be granted the flexibility to source up to half of their matching funds from State or Territory Governments in a similar way to that permitted with the discontinued but highly successful Biotechnology Investment Fund, and

- In the case of COMET, it is recommended that the terms of the grant be amended so that success fees awarded to the COMET adviser are only payable on funds directly raised by the COMET adviser.

PROPOSAL #6: DIISR provide financial support for 3 years so that the AAAI can initiate and implement sustainable roles appropriate for a national peak body and in the interests of the national economy and the national innovation system. This support would include:

- Appointment of AAAI to develop with Government a co-investment program to assist the development of high risk/high growth companies;
- Funding assistance for AAAI education/best practice development and delivery based on the successful introduction of suitable practices in other countries;
- Funding assistance for longitudinal research/analysis of angel investment in Australia;
- Establishment of a working group with ASIC to identify and remedy impediments to innovation, commercialisation and angel investment created by certain provisions of the Corporations Act 2001 and the Financial Services Reform Act; and
- Collaboration on possible tax incentives/benefits to catalyse and drive angel investment in the commercialisation of innovation.

Each proposal is discussed in more detail in the body of this submission.

The AAAI is eager to support the work of the Panel in the Innovation Review and we offer one or more of our team to participate in the working groups that we understand will assist the panel in the analysis of submissions and the preparation of material for the Green Paper.

2. DECLARATION OF INTERESTS AND AFFILIATIONS

This submission has been prepared by the Board of the Australian Association of Angel Investors Limited (AAAI hereafter). The members of this Board, their interests and affiliations are:

John Mactaggart, Chairman, co-founder of Brisbane Angels, QLD;

FAICD

John is the chairman of Brisbane Angels Pty Ltd, Australian Association of Angel Investors limited and the managing director of Jontra Holdings Pty Ltd, J L Mactaggart Holdings Pty Ltd, Associated Construction Equipment Pty Ltd and director of Australian BioRefining Pty Ltd, listed company Technology One Limited. John is also a founding committee member of the World Business Angels Association. John has provided angel capital a number of companies in various industries, including export of animal by-products, food processing, industrial fasteners, formwork, and computer hardware and software as well as all the capital requirements until listing for Technology One Limited.

Jordan Green, Deputy Chairman, founder of Victoria's Investment Partners, VIC;

CPEng MBA BEng(Electronics) MIEAust MIEEE MAAAI MAVCAL

Jordan is a co-founder and director of the AAAI, of Victoria's Investment Partners, an angel group, and co-founder/Managing Director of Melbourne Venture Partners, one of Australia's best performing VC fund managers. Jordan has over twenty five years first-hand experience in the strategic and tactical applications of engineering, manufacturing, computing and information technologies to business and industry in Australia, USA, Asia and Europe. He has been director, CEO, executive and engineer for over a dozen technology and engineering companies since starting his career with IBM, including a Silicon Valley software company, Australia's largest Internet registrar and an Internet Business Incubator. He has led international technology and business projects up to $500,000,000 in value and been active as an angel and venture investor on three continents. Jordan is active in community work, an occasional guest lecturer at the Melbourne Business School and a judge in the Melbourne University Entrepreneurs' Challenge.

John Ballard, Director, co-founder of BioAngels, SA;

BSc (Hons), PhD, DSc, FTSE

John is chairman of BioAngels Inc, which he co-founded in 2002. He is an experienced angel investor and is a Director of AAAI and the Australian Institute of Commercialisation Ltd, as well as of two of his investee companies, Applimex Pty Ltd and Neubody Pty Ltd. He was previously Managing Director of GroPep Ltd, a position which he held since the inception of the company in 1988. In August 2000 he guided GroPep to a successful initial public offering and listing on the ASX. He was also the CEO of the CRC for Tissue Growth and Repair from 1991 until 1999. John is an inventor on many of GroPep's patents and coordinated their prosecution and commercialisation. He is an author of about 300 scientific publications and is a recipient of several research awards. He has served as President of the Australian Society of Biochemistry and as Vice-President of the biotechnology industry association, AusBiotech Ltd. He was elected to the Australian Academy of Technological Sciences and Engineering in 1997, awarded CSIRO's Business Excellence Medal in 2001 for his development of GroPep, the Centenary Medal in 2003 and the ATSE Clunies Ross Medal in 2004 for his contribution to the development of Australia's biotechnology capabilities.

David Malloch, Director, founder of Capital Angels, ACT;

FAICD

David started Capital Angels in 2004 to provide business in Canberra with access to growth capital via angel investing. Over 30 companies have presented to Capital Angels with about 20% attracting investment.

In 1985 David started Malloch Digital Design which designed and manufactured electronic equipment; it was sold in 1989, then subsequently re-acquired in 1992. The second business was Endurance Electronics one of its products was a key control product that was exported to many parts of the world; that business was sold in 2002. Endurance Electronics won two ACT Export Awards.

David is a Director of Australian Business Foundation, Director of NSW Business Chamber and is involved with 3 companies in which he has directly invested.

Vivian Stewart, Director

BA(Hons), MBA

Vivian is a director of Hall Capital where he has worked on a number of successful transactions and assignments for public and private companies including capital raisings, trade sales and strategy. Prior to this he was Commercialisation Manager with the University of Technology**,** Sydney where he negotiated and executed deals for UTS via licensing, assignment, joint venture and spin-out arrangements. In 1999, Vivian co-founded the early-stage investment group TiNSHED, which specialised in the Internet, media and telecommunications sectors. The group invested over $25 million in equity placements during this period. Between 1996 and 1999 Vivian worked for Intel Corporation where he managed multiple marketing programs and online brands throughout the Asia-Pacific region. In 1993, Vivian co-founded and was an executive director of pioneering Australian Internet Service Provider - Magna Data. Magna Data led business Internet access in Australia and ultimately became the country's leading corporate ISP with offices in five cities. In 1999 Magna Data was sold to publicly listed Davnet.

THE AUSTRALIAN ASSOCIATION OF ANGEL INVESTORS LIMITED

The AAAI is the not-for-profit national peak body representing Australian angel investors, angel investor groups and organisations that support the growth of angel investment in Australia.

AAAI was incorporated in 2007 with the mission to:

- Promote ethical and efficient angel investment and angel syndication in Australia.
- Promote the growth of angel investment in Australia, including encouraging and informing the establishment of new angel groups.
- Define best practice for angel investor members in an Australian context.
- Disseminate information on and access to formally recognised syndication models.
- Be a source and channel for information and education of angel investors and entrepreneurs seeking angel investment.
- Represent the interests of angel investor members in Australia as a peak body in dialogues with governments, peers and industry.
- Represent members internationally in dialogues with peers, industry and governments.
- Act as a channel for information and opinion from members to form the basis of advice to Government.
- Assist with, and direct, research into Australian angel investment activities.
- Organise and hold an annual summit conference on topics relevant to members.

These goals for AAAI are consistent with the roles played by angel groups throughout the developed world. An overview of angels and activities is provided in Appendix A – The Profile of Angels.

The AAAI is focused on assisting Australian growth businesses to more successfully realise commercial outcomes built on innovation.

AAAI held its first National Summit Conference in Canberra from 13th to 15th February 2008, attended by 90 participants. An overview is attached as Appendix B – AAAI Conference February 2008**.** Membership in AAAI has been opened to:

Angel Members - are individual angel investors, resident in Australia and nominated by another Angel Member. To be eligible for full membership an individual must already be an angel investor, or be committed to making his/her first angel investment within 12 months of applying for membership.

Group Members - are angel investors who have organised themselves into operational groups. To be eligible for group affiliation a group must be nominated by an Angel Member, have publicly declared itself as an angel group and have a charter (or similar statement of purpose) that expressly incorporates the AAAI Code of Conduct.

Associate Members - are organisations that provide services, or otherwise support angel investors and/or their portfolio companies. Those organisations must have a good faith intention to contribute to the objectives of the AAAI and agree to abide by the AAAI Code of Conduct.

Student Members - AAAI recognises the value and importance of including our young people in the angel community. To be eligible for student membership an individual must be over eighteen (18) years of age and be a full-, or part-time student registered at a recognised tertiary or vocational education institution in Australia and agree to abide by the AAAI Code of Conduct.

The Association anticipates growing its membership in 2008 to several hundred angel members, ten angel groups and twenty associate members. By 2010 the membership is expected to reach 1,500 angel members, 15 angel groups and 100 associate members.

The Code of Ethics for AAAI is attached at Appendix C – AAAI Code of Conduct.

3. DEFICIENCIES IN AUSTRALIA'S INNOVATION SYSTEM

The DIISR Call for Submissions portrays Australia's Innovation System as having three facets or core activities: knowledge production, application and diffusion, with the last of these folding back into the first to create a virtuous circle. The Chairman of the Review Panel, Dr Terry Cutler, addressed these core activities in a recent speech and stated:

> "*I describe innovating and being innovative as the creative problem solving designed to produce practical outcomes*" and "*that we also need an appreciation of the dynamic processes associated with innovation that lead to change*".

AAAI proposes in this submission that, although Australia may be performing at first-world standards in knowledge production, we are deficient at both knowledge application and diffusion so that the research and innovation carried out here is not leading to change as much as it should.

Julian Cribb, writing in the Australian on April 2nd, put this challenge and deficiency as follows:

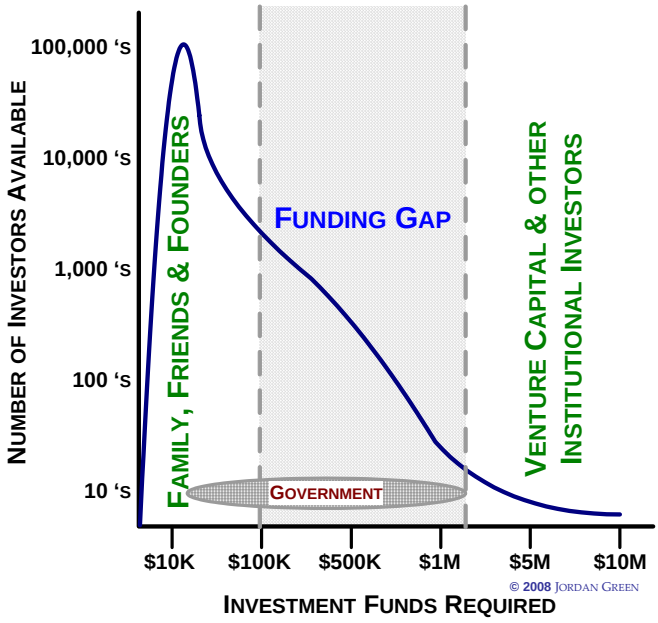
> "*A smart society is not just one that has excellent science. It is one that can best distribute and adopt excellent science. Unfortunately, for several decades Australia has fallen into the trap of assuming research quality alone is sufficient*".

The appearance of gaps and weaknesses in a nation's Innovation System is a clear signal that something is not working as it should. Gaps and weaknesses point to places where the System is not operating with the efficiency, quality, or flexibility it needs to deliver the expected performance. This Submission identifies such critical system failures and offers recommendations for their remedy.

In this Submission, AAAI focuses on serious gaps in Australia's Innovation System.

The Funding Gap

This is the gap in available investors that companies face between informal, passive investment (up to ~$100K) and the minimum threshold at which venture capital firms and other institutional investors will consider investments in young ventures (~$1.5m).



The existence of this gap is now well documented both here and abroad. AAAI is concerned with a constellation of System *weaknesses* associated with this gap, these are:

- The lack of understanding in both the public and private domains of the critical role that a well-functioning angel sector plays in ensuring the health of this nation's Innovation System. That role is critical largely because the angel sector is the only available investor for rapid-growth start-ups when they encounter the funding gap;
- The limitations at all levels of government to address the funding gap on a suitable scale with public funds;
- The failure of government to effectively use public funds to be a catalyst for the angel sector, as has been so successful in New Zealand, Scotland, England, USA and elsewhere;
- The degree to which the tyranny of distance has worked to hold back maturation of the Australian angel investor community, compared to equivalent groups in the USA, Canada, the UK and the continental EU;

- The severe investment skills shortage in the angel investment sector and among entrepreneurs, and
- The lack of investment models that are both tailored to the investment task of addressing the funding gap, and that are compliant with the Australian taxation and regulatory regimes.

Further information is provided in Appendix D – The Funding Gap.

The Performance Gap

This is the gap in skills and networks that are required to successfully grow and run highly scalable, entrepreneurial ventures that derive their inherent opportunity from innovation. Weaknesses associated with this gap include:

- The generally low level of management skills for early-stage companies in the Australian workplace;
- The mistaken assumption that a middle, or top level manager from a corporate, institutional, or government environment is a good manager for a start-up;
- The challenge for a public servant in understanding, appreciating and effectively assisting entrepreneurial ventures;
- The mistaken confidence in academia to produce effective responses to this gap;
- The failure of Australian enterprises to appreciate, attract and exploit the management skills and networks achieved by expatriate Australians;
- The preference of Australian entrepreneurs for hiring staff rather than hiring services;
- The cultural bias of Australians that sees failure as a purely negative experience;
- The habit of seeing the tyranny of distance as a disadvantage; and
- The very limited ability and capacity of public policy initiatives and funding to adequately address these needs.

The majority of potential angel investments fail to occur because the parties involved, the entrepreneur and the angel investor, lack suitable knowledge, skills, resources and guidance to identify, negotiate and execute the deal.

Entrepreneurs typically fail to access finance for their company because:

- The entrepreneur lacks adequate knowledge of the diversity of financial sources, of those most suited to his/her business at its current stage, of the pre-money valuation a potential investor is likely to put on the business and of an investor's expectations as to the equity stake that would be secured by an investment;
- The entrepreneur and his/her business are not investment ready as evidenced by a defective business model and/or a poor or unrealistic business plan; and
- The entrepreneur lacks the knowledge and skills to successfully approach a potential investor, to present the business case professionally and to negotiate reasonable terms of investment.

Angel investors fail to access investment opportunities because:

- The angel lacks knowledge of the diversity of deal flow sources, of those most suited to his/her investment interests, of the appropriate valuation of an investment opportunity and of an entrepreneur's reasonable expectations of an investor;
- The angel lacks investor skills as evidenced by inability to properly evaluate an investment opportunity, frame the terms of an investment, perform appropriate due diligence, negotiate an investment and clearly articulate the value he/she will contribute to the business; and

- The angel lacks the knowledge and skills to successfully frame the investment, present the case for investment professionally and to negotiate reasonable terms of investment that demonstrate alignment with the interests of the business.

The provision of training can improve the situation by assisting the parties to build their knowledge and awareness, develop their skills and become more aware of the available resources.

A plethora of programs exist in both the private and public sector to address the training of entrepreneurs. They include the Australian Institute for Commercialisation, COMET, State Government initiatives, the Triton Foundation, entrepreneurship diploma and degree programs at many universities, the Founders' Forum and an endless supply of magazines and books directed at training and informing entrepreneurs.

By comparison, there is a dearth of resources available for training angel investors. The primary source of training available today are through the mentoring offered by more experienced angels and that is usually only found in angel groups. As a starting point, the AAAI has arranged to source and localise angel investor training programs from the USA but, these have only recently been developed and neither address the full range of issues and topics, nor Australia-specific matters.

To fully develop a viable, effective, economically significant angel sector in Australia the country needs angel investors who know how to do their job, who are not constantly reinventing the wheel to structure and execute each deal and who can contribute to the success of entrepreneurs by acting with confidence as investors, as well as the confidence angels bring as business mentors.

PROPOSAL #1

Build angel capacity in Australia through the introduction of angel investor training programs delivered by the AAAI, angel groups, or both, in partnership and with limited sponsorship by DIISR and State or Territory Governments.

The envisaged target audience of these programs is the membership of established angel groups and virgin or latent angels expressing an interest in becoming members of such a group. There are three main objectives for those delivering these programs:

- To attract new investors into the angel space;
- To inform virgin angels about the process of investing in rapid-growth start-ups, and the expectations they should hold about the returns likely to be delivered by that investment; and
- To upgrade the skills of experienced investors in opportunity evaluation, conducting due diligence, deal negotiation and structuring, post-investment engagement, co-investments, investment management and investment exits.

4. ANGEL INVESTORS AND THEIR IMPORTANCE IN COMPANY GROWTH

The AAAI offers the following definitions of angel investor terms for common understanding:

> An **Angel Investor** is defined as an individual person investing his/her own money and time in a growth company other than by way of a public stock exchange.

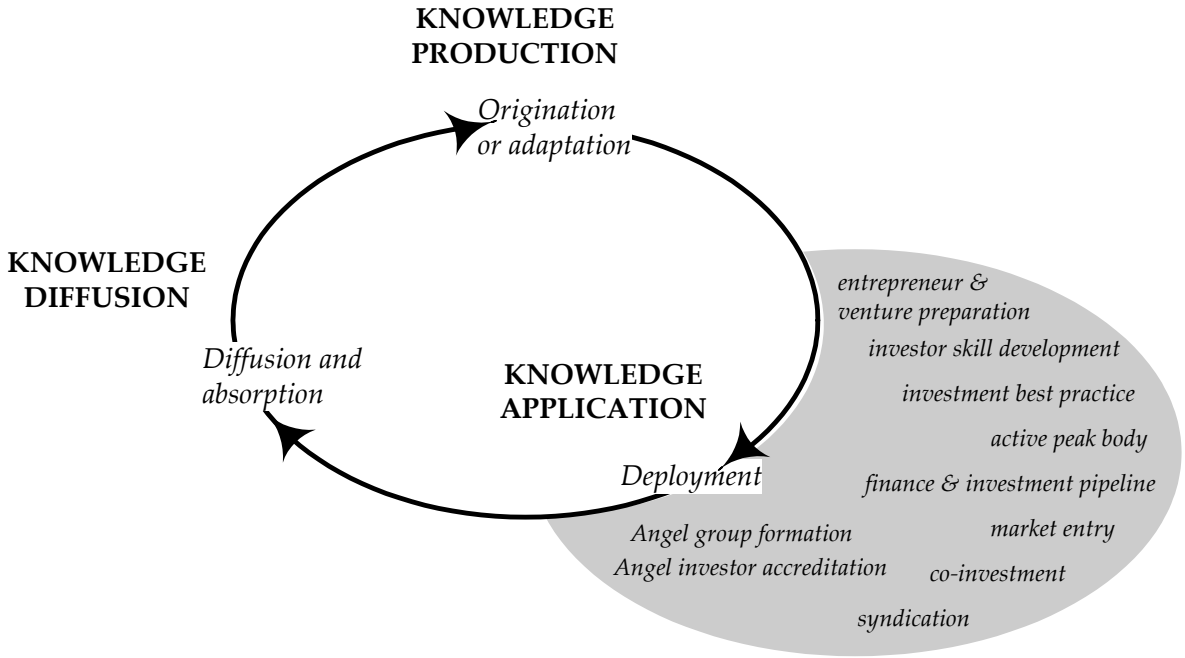
To describe the range of people and groups involved in the angel space, the AAAI characterises the roles as follows:

Active Angels
- Have discretionary funds, have invested (some more than once)
- **Solo Angels** invest without reference to other angels (historical norm)
- **Angel Groups** are a collection of Angels who review and evaluate deals together but, the decision to invest is made individually
- **Angel Syndicate** is the collection of Angels and/or Angel Groups who decide to invest in a particular deal (typically through an aggregating vehicle, e.g. unit trust)
- **Angel Network** is a mailing list of Angels used by matchmaking services and does not represent a group who review and evaluate deals together

Virgin Angels
- Have discretionary funds, decided to invest but, have not yet invested

Latent Angels
- Have discretionary funds, have not decided to invest

Angels are closely involved with their investments so that, in addition to providing capital, they also add value by mentoring staff and applying their business expertise. They also help create a culture of accountability, governance and focus. In terms of the Innovation Cycle as presented by the Review Panel, angel contributions can be viewed in the shaded area in the modified diagram below.



The continuous creation of new, rapid-growth start-ups plays an important role in the exploitation of innovation in any developed economy and this is especially noticeable in the USA. In that large economy, these rapid-growth start-ups - and especially those commercialising applications of new technologies - have a demonstrated capacity to create a disproportionate amount of macro-economic growth, innovation and nett new jobs.

The importance of rapid-growth start-ups in renovating Australia's smaller economy is not so easily discerned in the midst of a resources boom. Resource exploitation calls for established industry heavyweights that can muster the massive investments and the management skills needed to bring major resource projects on stream. Not surprisingly, it is their activities which capture attention.

The John F Kennedy School of Government at Harvard University in a 2002 report to the USA Government that aimed to identify the difficulties faced by firms attempting to fund early-stage high-risk projects, nominated the technology development phase - stretching from proof-of-concept demonstration to the commencement of product development - as the funding gap, or Valley of Death, where there are few sources of funding available to sustain the transition from a scientific enterprise to a soundly-based business venture.

Likewise, in a 2004 report, the Allen Consulting Group reviewed the Australian literature concerning impediments to the commercialisation of Australian university research and noted that one of the most-cited impediments was the inadequate provision of early stage financing. The same literature suggests that at present the Australian R&D sector is generating ~100 technology-based start-ups per year. Another study estimated that on average a start-up needs ~$750k to traverse the Valley of Death. On these indicators, just this limited population creates a demand for ~$75m annually and the studies suggest that only a small proportion of this demand is satisfied.

Unlike VC funds, which form part of the formal institutional capital market, angel investors make up an informal and essentially hidden market. That is, the names of individual angel investors and their individual levels of investment activity are not found in a directory, on a web-site, or by looking in the Yellow Pages of the phone book. To complicate matters, some high net worth individuals who call themselves angel investors behave more like VC investors but, do not identify themselves as either.

The research by Harvard University that first drew attention to the importance of the funding gap also pointed to the critically important role of angel investors as providers of early-stage funding for rapid-growth start-ups. When such companies seek funding in amounts below the $3-5m available from VC, the angel market is the primary source of this risk capital. Angel investors make many times more investments into start-ups than VC funds. In Australia, as in the USA, angel investors represent the oldest and largest source of seed and start-up capital, i.e. innovation capital, for the high growth enterprise.

> In the USA Angels invest USD25bn per year on a sustained basis.
>
> *Angel Capital Association 2008*

Angel investors are active, in one way or another, in nearly every country. Their activity has been formally studied in the USA, the UK, Canada, Brazil, Sweden, Finland, Norway, Denmark, France, Germany, Portugal, the Netherlands, Belgium, Saudi Arabia, South Korea, Japan, New Zealand and, recently, in Australia.

Even so, the body of research literature dealing with angel investment is miniscule in comparison to that which has accumulated about the VC sector. Given the importance of angel investment in the context of a national Innovation System, this is surprising - it means that a great deal of the knowledge base rests on anecdote and assumption rather than on fact. We do not know everything we would like to know about how this critical piece of a national Innovation System works, especially in Australia.

More background on angel investors can be found in Appendix A – The Profile of Angels.

Estimates of the size of the Australian angel investor market are based on largely anecdotal data and tend to be conservative, reflecting the belief that it is younger and proportionately smaller than those in the Northern Hemisphere[1].

Estimates of the size of the USA angel market vary widely. The number of angel investors active in America is variously estimated to be as many as 3 million (investing USD50 billion annually), ranging down to 350,000 who invest USD30 billion into some 50,000 businesses each year.

Taken at face value, the survey data for the USA and other developed Northern Hemisphere economies suggests that the angel investor capital market is roughly twice the size of their formal VC markets. In Australia, given the still small and underperforming VC market, it is likely that the angel market can be significantly more than double the VC market in terms of funds invested annually. At that level the angel market will be investing in hundreds of businesses compared to the few dozen supported by the VC market.

Such scale delivers far greater opportunity for success, spreads the investments more representatively across the national geography and diversifies investment into a wider range of technology and service niches. To reach that scale on a sustainable basis requires improvements in angel skills, the ways angels invest and in the number of angels actively investing.

PROPOSAL #2

Measure the development, success and impact of angel investment in Australia through an appropriate mix of professional market research and analysis conducted by the AAAI in partnership and with sponsorship by DIISR and State or Territory Governments.

[1] In 1996 the Industry Commission included extra questions in the quarterly *Yellow Pages Small Business Index* survey, and in its interpretation of the results, made this observation, which is now taken as conventional wisdom.

5. ANGEL GROUPS: HOW THEY OPERATE AND WHY THEY ARE NEEDED

Part of the fallout from the collapse of the technology bubble at the turn of the century was the re-emergence of the Valley of Death and a re-focusing of angel investor efforts to overcome it, leading to a global trend of increasing formation of formal, structured collectives of angel investors, or angel groups.

By forming groups, angel investors can share funds, skills and networks. Groups typically attract greater and more varied deal flow through the broader reach of the members' networks and associations. The effort involved in screening opportunities, performing due diligence, structuring deals and managing investments can be shared. A particular advantage of groups is the opportunity to access the specialist expertise of one angel for the benefit of the whole group. The opportunities for investment skill development through peer-to-peer learning and mentoring are a primary attraction for angels, often quoted as a key reason for joining a group.

Considerations like these are important drivers of the trend towards group formation but, the easiest one to observe and measure is the improved ability to meet the funding needs of rapid-growth start-ups. A group can increase the size of an investment that can be made into a promising start-up while limiting the exposure of any one angel to each investment. This diversification of risk coupled with increased funds makes investments in technology-based start-ups to advance them through the Valley of Death practical, where previously such investments were beyond the comfort zone of a solo angel.

One of the other lessons drawn by angel investors from the bubble and its aftermath was the recognition of the limits to the pace at which a rapid-growth start-up could be built. Time was needed for the value-adding post-investment activities of angels to take hold. Otherwise, the pre-conditions for sustainable growth were not produced. Common deficits of start-ups funded during the bubble were: absence of a robust business model, no clear marketing strategy, and a management team unable to execute by reason of shortfalls in their abilities and motivations. Post-bubble angels had a greater appreciation of the virtues of patient investment in, and constructive interaction with, their selected rapid-growth start-ups.

In the USA the Kauffman Foundation was instrumental in promoting angel group formation through its support for the establishment of an industry peak body, the Angel Capital Association in 2002. In the European Union, the corresponding body is the European Business Angel Network (EBAN), modelled on the UK National Business Angel Network (now the British Business Angels Association: BBAA). These bodies brought existing angel groups together to share experiences and best practices, with a view to stimulating more skilful investment and the establishment of more groups. One consequence of these initiatives has been the adoption of a degree of formality and structure by angel groups, a process that still continues.

Is it a Group?

Various labels are applied to these groups. Mixed use of labels gives rise to some confusion; however, a settled nomenclature is emerging:

- ***Angel Association**:* This term is increasingly applied to regional or national umbrella organisations to which formal angel groups affiliate. Three of these have already been mentioned: the USA Angel Capital Association (ACA), the EU European Business Angel Network (EBAN) and the UK British Business Angel Association (BBAA). These umbrella bodies are emerging as peak 'industry' bodies, interacting with governments to promote the interests of the sector, to identify best practice through sector-wide consultation and to assist their affiliates in adopting these practices. AAAI performs this role for the Australian angel investor community.

- ***Angel Groups:*** This is the label applied to groups of individuals who have formed a formal membership-based entity in order to pool financial and intellectual capital to invest in deals that would otherwise be out of reach due to financial, time, or expertise constraints. This arrangement offers its members opportunities to:
  - Diversify investment risk across multiple investments;
  - Leverage and share business contacts and investment expertise (for screening, due diligence, valuing and monitoring of investments);
  - Add more investments to an existing portfolio; and
  - Participate in follow-on rounds to existing investments.

  In America and Europe, the number of angel groups is growing at around 65% p.a[1]. Angel group activities include facilitation of a flow of investment opportunities, bringing deals to the notice of members by arranging pitching forums, collective deal evaluation sessions and persistent recruiting of new individuals to the membership.

- ***Angel Syndicates****:* Not all members of an angel group invest in each opportunity that comes to the group's notice. The sub-set of angel group members who do invest is referred to as an angel syndicate. The decision to invest is taken individually by angel group members but, once taken, it is usual for a member of the group to be nominated to act as syndicate leader, coordinating due diligence, valuation, mentoring, monitoring and the like.

Out of the North American and European experience and from the experiments under way in Australia and New Zealand, the contours of a best-practice model angel group are now visible. It draws on the findings of surveys conducted by peak angel networks in the Northern hemisphere[2] (together with some anecdotal evidence from Australia and New Zealand).

Angel Group Size

There is a wide range in group sizes. There seems to be a lower limit around 10-12 angels and a natural upper limit around 100 members. The TechCoast Angels is the largest angel group in the USA. Based in Southern California, it has over 300 members so, to maintain manageable scale and the interpersonal involvement TechCoast has divided itself into five geographically oriented chapters of roughly equal size. In Australia, the Queensland-based Brisbane Angels came into existence in 2006 with 60 members and two New Zealand angel groups - ICE Angels, based in Auckland and Upstart Angels based in Dunedin - both have about 90 members. Both New Zealand groups are linked to university-affiliated technology business incubators. At the smaller end of the spectrum, Capital Angels in the ACT, BioAngels in Adelaide and Victoria's Investment Partners in Melbourne each have about 20 members in structured and active groups which typically make 2-3 investments annually.

Angel group membership tends to be divided into a small core of active angels who take on leadership roles in the group and/or organise syndicates; a larger group of more passive investors; and a small, constantly changing layer of virgin angels (recent recruits to the group who have yet to make their first investment).

Angel Group Structure

Typically, angel groups adopt a membership-based legal format, although about 17% of the American and Canadian groups have no legal structure at all. This subset contains some very new

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[1] A study undertaken for the New Zealand government puts this slightly higher, quoting a growth rate of 67% over the last three years for both the USA/Canada and Europe: MED, *2007: Baseline Review of Angel Investment in New Zealand*, Ministry of Economic Development, Wellington [undertaken as part of the formation of the Seed Co-Investment Fund]

[2] The two main sources of statistical information on angel groups used here are: *Angel Capital Education Foundation Angel Group Statistics for 2006*, (ACEF, Kansas City), and the *EBAN Statistics Compendium 2005* (EBAN Secretariat, Brussels).

groups and others that have been established for years. Where a formal structure has been adopted, somewhere between a third and a half are set up as not-for-profit entities.

Most angel groups operate on the principle that member angels make their investment choices as individuals. Only 13% of the North American groups operate with a one-in-all-in approach with investment decisions being taken by majority vote.

On initial formation, angel group members prefer to manage their organisations as volunteers, with perhaps some paid administrative support. As groups increase in size and investment opportunities rise, the trend is towards more professional management support. There is apparently no serious conflict between an angel group being membership-led and professionally supported.

Group Value to Members

The value proposition an angel group makes to its membership is given above in the discussion of nomenclature, where angel groups are distinguished from angel associations, angel networks and angel syndicates. When an angel group is set up and adopts a legal format, its value proposition is usually translated into a set of explicit objectives for the group, which typically include:

- To enhance the success of investments;
- To improve the collective investment skills of the group;
- To increase the quantity and quality of the deal flow;
- To recruit new members to the group (to reach a target size of X);
- To involve members in screening prospective investments, reviewing business plans, performing due diligence, structuring deals and working with portfolio management teams after investment.

A challenge for angel groups is to have some Executive Officer support in order to effectively coordinate and manage the group, the investment process and interaction with other angel groups and the broader investment community. Surveys by the peak industry body in the USA, the Angel Capital Association, have shown that financial support for Executive Officers is provided by a combination of Government, corporate sponsors and member fees. A similar arrangement is recommended in Australia because it would also facilitate links between the groups and DIISR and other Government bodies.

PROPOSAL #3

DIISR provide financial support for accredited angel groups operating in the States and Territories (not their investments) on the basis of matching those funds provided by group members and State, Territory and Local Government sponsorship.

Additional information on the establishment and operation of angels groups is provided in Appendix E – Global Trends in Angel Investment: The Emerging Model**.**

6. GOVERNMENT CO-INVESTMENT WITH ACCREDITED ANGEL GROUPS

Co-investment is a mechanism through which an angel investment - negotiated and structured by an angel group - is augmented by additional funds from another source, so that the quantum of an investment to be made into a start-up in the funding gap is increased and the Valley of Death traversed. In many cases the co-investment finances are provided by funds specifically established to invest alongside angel groups in which case they are referred to as "side-car funds".

The USA has pioneered the use of side-car funds set up by angel groups themselves as a source of funds to top up the quantum of an angel group's investment. Unfortunately, the lack of flow-through tax benefits for angel investors, as well as aspects of the Financial Services Reform Act, restricts the operation of USA-style side car funds in Australia.

Elsewhere in the Western world Governments have taken a major role in the establishment of side-car funds. Thus in Europe, Scottish Enterprise has pioneered a top-up mechanism, using a £45m fund dedicated to this purpose, sourced in part from the European Regional Development Fund. This co-investment fund invests from £50k to £500k in early-stage companies, on equal terms with its pre-approved co-investment partners (including those it refers to as "seasoned syndicates"). Also in the UK, the London Business Angels group pioneered an arrangement where the City of London provided the money for a £5m side-car fund (called a side-by-side fund in this instance); this arrangement was so successful that the funding has recently been increased and the mechanism is being replicated by other British groups.

Picking Winners vs Winning Investments

The Band of Angels in Silicon Valley is often referred to as the original angel group. Active for over 15 years, this group has run a hybrid model in which individual members choose to invest in deals and a group-operated side-car fund co-invests in every deal the group does. Just as members are free to decide on each deal, they are free to decide on whether and how much to commit to the fund.

A recent review showed that more than a third of members are currently losing money on their individual portfolios. Meanwhile, the side-car fund is running at a significant sustained return on investment (in the order of 15X). The lesson here is that a group does a far better job of picking winners than individual investors.

Another British initiative is Government support for the British Business Angels Association (BBAA). The Government has clearly stated its recognition of the vital role that Business Angels and the BBAA play in funding early stage businesses. A new set of measures includes a third round of the Enterprise Capital Fund beginning in April 2008 as well as the commitment to launch two further rounds amounting to £50m per year over the next 3 years.

A similar approach has been emulated by the New Zealand Government in setting up the Seed Co-Investment Fund (SC-IF). The SC-IF will invest its NZD40m of matched seed funding over 5-6 years alongside accredited angel groups referred to as Seed Co-Investment Partners. Because one of the objectives is to stimulate angel group formation, the SC-IF has subdivided this pool of money into ten sub-funds of NZD4m. This subdivision has been made in expectation that over the 5-6 year investment cycle it will stimulate the formation of ten angel groups with the status of approved Seed Co-Investment Partners - currently, six groups have been accredited.

The SC-IF does not evaluate potential companies as investment targets, rather it performs due diligence on the angel groups in a similar way to the Scottish model. NZ companies at the seed and start-up stage are eligible for co-investment where there is 50/50 matching of private investment. The SC-IF acts as a direct investor on the same terms as its co-investment partner, with the Fund's investments limited to a maximum of NZD250,000 in any one company.

Additional information on the establishment and operation of co-investment schemes is provided in Appendix E – Global Trends in Angel Investment: The Emerging Model.

In Australia, the Federal government has provided substantial funds and operating subsidies for several venture capital schemes that include the Innovation Investment Funds (IIF), the Renewable

Energy Fund (REEF) and the Pre-Seed Funds (PSF). The IIF are highly regarded by the VC industry but are only marginally relevant to the angel investment space because the majority of selected investees are not in the seed or start-up phase and, with only 80 investments over 9 years, the performance of this program is too low to be having any broad impact. REEF is modelled on the IIF program but is exclusively targeted on renewable energy companies.

The four PSF were set up in 2001 with $104.1m under management and, by June 2007, had invested 35% of the available funds in 59 companies, or projects. The PSF are clearly in the investment space where angel investors operate. However, the program is limited to majority-owned spin-outs of public sector institutions, which means that a large number of otherwise eligible companies (probably a substantial majority) would not qualify. The fact that there were only 11 investees during the last year indicates that this program is having little quantitative impact on innovation in Australia.

AAAI considers that the PSF program would be improved substantially by the Government support being utilised to match directly the equity funds placed by private investors into an eligible company rather than indirectly through the creation of a specific PSF. This would operate by angel groups being first accredited as co-investors with the Government, as is described above for the SC-IF in New Zealand.

In summary, the very modest number of investments and the design limitations of the current Australian Government venture capital schemes means that none of these funds is having a large enough impact on the funding gap, nor do they present themselves as potential co-investors with angel groups.

PROPOSAL #4

DIISR modify the Pre-Seed Funds to provide one or more Co-Investment Funds which match Government funding on a 1 for 1 basis with the investments made in early-stage companies by accredited angel groups.

Accreditation

A process for the accreditation of Angel Groups and individual angel investors will be developed as the result of consultation between the AAAI and ASIC to ensure appropriate regulatory coverage. AAAI will act as an industry self-regulator providing accreditation process support through a formal professional development regime similar to that in place for professionals such as accountants, engineers and others.

Accreditation will be conferred on individuals and on groups. Individuals will have to demonstrate a sufficient and continuing level of knowledge, range of skills and awareness of risk to competently engage in high risk private investments without the safety net of retail financial services regulation. Groups will need to be organised in such a manner so as to demonstrate a robust, sustainable capacity to establish, manage and execute suitable processes for speculative investment without the safety net of market regulation.

Co-Investment

A co-investment fund would have low operating costs because investment sourcing, selection, due diligence, execution, management and harvesting would be carried out by the accredited angel groups with minimal costs to government. Assuming positive net returns to the fund, as has been the overwhelming experience overseas, government capital support could be positioned as an evergreen service without ongoing commitments from government budgets.

AAAI considers that there is merit in coordination of a Federal Government Co-Investment Fund with State and Territory investment initiatives such as teQstart in Queensland, Playford Capital in SA and Epicorp Seed Fund in the ACT, all of which

have experience in leveraging investments in early-stage companies with private investors. An independent government agency or a private fund management company would be the most sustainable models to provide the appropriate skills and dedicated resources required to oversee the co-investment activities and avoid this long-term economic driver becoming the victim of short-term partisan politics.

7. AAAI COMMENTS ON EXISTING FEDERAL GOVERNMENT INDUSTRY SUPPORT SCHEMES

The programs summarised in this section have been developed by Government to support Australia's innovation system. AAAI supports the principle of such leverage, especially when it is applied to innovative start-up companies where investments by angel investors are critical.

The quantitative information provided in this section has been compiled from the Annual Reports of Innovation Australia and its predecessor, the Industry Research & Development Board.

7.1. THE R&D TAX CONCESSION AND TAX OFFSET PROGRAM

The R&D tax concession and tax offset are the cornerstones of Australian Government support for industry R&D. Over the last year for which data are available, companies with revenues below $1m in which angel investors are most likely to invest accounted for 42% of all claimants and reported 12.6% of the R&D expenditure by all Australian companies.

Australian companies with an annual group turnover of less than $5m and which carry out less than $1m in R&D, are eligible to take their tax deduction (whether at 125% or 175%, or both) as a cash equivalent payment. This is extremely valuable for companies in a tax loss situation which is typical of companies in the seed and start-up stages of development. However, it seems unreasonable that if a company carries out even $1 of R&D over the $1m limit, its eligibility for the Tax Offset is lost.

A second negative restriction is that companies which have more than 25% of their equity held by public sector institutions (such as universities) are not eligible for the Tax Offset. This is unduly restrictive because it applies to companies with several public sector shareholders where it is inconceivable that they could "control" the company with a combined shareholding of only 25%. Many companies that have spun out of CRCs fail this test.

The R&D Tax Offset is widely utilised by early stage companies with 2,251 reporting $630m in R&D expenditure under this component of the R&D tax concession scheme in 2005/06 and another 386 companies reporting $176m in R&D expenditure where the Offset is used together with the 175% concession.

7.2. VENTURE CAPITAL FUND SCHEMES

As addressed in Section 4 of this submission, AAAI does not consider that the IIF, REEF and PSF alone are sufficient to address the funding gap faced by early-stage companies. These funds have absorbed several hundred million dollars of Government subsidy, often on up to a 2 for 1 basis, yet the total number of investee companies supported over nearly ten years has been less than 200. Many other innovative ventures, particularly those at seed and start-up stages, could not get investments from these funds. We also note that a significant proportion of Government funds allocated for use each year have not been invested, arguably because the VC managers favour later stage investments.

7.3. MERIT-BASED GRANT-IN-AID SCHEMES TIED TO R&D EXPENDITURE

The merit-based grant-in-aid schemes tied to R&D expenditure include Commercial Ready (CR) which replaced R&D Start from 2004, the Biotechnology Innovation Fund (BIF) now absorbed into Commercial Ready Plus (CR+), the Renewable Energy Development Initiative (REDI) and the Industry Cooperative Innovation Program (ICIP). All require 1 for 1 matching by the applicant.

The CR grant scheme is highly regarded both amongst SME and among angel investors because it is available to a wide range of companies including those at the seed, start-up and early expansion phases and because of its high applicant success rates. It has the great advantage that it explicitly allows for proof-of-concept. Over the financial years 2003/04 to 2006/7 grants totalling $676m were provided to 630 companies (average grant $1.07m) at a success rate of 62%.

However, the cost and complexity of the application process and of on-going compliance present problems for smaller enterprises seeking smaller grants. This problem has been addressed with the introduction of CR+, which provides a streamlined application process for grants under $250k.

BIF was a merit-based grant program available to bioscience/biotechnology companies that provided grants up to $250k over 18 months on a 1 for 1 matching basis. An important feature of the matching arrangements was that up to half of a company's matching funds could come from State/Territory sources, so that it was possible for a start-up to attract a grant by providing only 25% of the project cost. This attractive feature was lost when BIF was replaced by CR+. The total BIF allocation of $47.9m was granted to 211 applicants over six funding rounds between 2001/02 and 2004/05 (average grant $227k), at an applicant success rate of 44%. Anecdotal evidence suggests that many of the grant recipients, especially those among the ~80% with revenues less than $1m, utilised matching funds from angel investors.

An important aspect of any Government funding scheme for business growth is the leverage the scheme produces. In this context, BIF grants totalling $4.16m were awarded to 14 companies which listed on the ASX within 2 years where they raised $170m in their IPOs. This gives an impressive leverage multiple of 40 fold. This multiple would be even higher if pre-IPO private investments and post-IPO capital raisings were included.

REDI was introduced in 2004 to stimulate the development of new renewable energy technologies capable of reducing greenhouse gas emissions from energy production. The support provides matching competitive grants for projects involving R&D, proof-of-concept and early stage commercialisation, with grants being made in the range $50k to $5m. During 2006/07 grants totalling $15m were made to 8 companies at an applicant success rate of 50%. Three-quarters of the approved projects went to companies with revenues less than $1m, so the scheme is appropriate for seed and start-up companies developing technologies in the sector.

ICIP is a competitive, merit-based program designed to support business-to-business cooperation on innovation projects, established with $25m to be disbursed from 2005 to 2011. It has a particular focus on meeting strategic industry needs, including those identified through the previous Australian Government's Action Agenda process.

7.4. GRANT-IN-AID PROGRAMS NOT TIED TO R&D EXPENDITURE

COMET is a merit-based assistance program with a strong focus on mentoring, business management and support. It commenced in 1999 and $170m has been allocated to fund the program until 2010-11. In 2006-07, 196 applications for assistance through COMET were received by AusIndustry, of which 174 were accepted; a success rate of 89%. The amount allocated was $11.1m, an average of $63.8k per recipient. This suggests the vast majority of recipients accessed the maximum level of the first round COMET grant.

The COMET scheme is highly regarded by angel investors. They see it as capable of providing the assistance needed to overcome the investment impediments in a start-up company. A review carried out by AusIndustry indicated that COMET-supported companies raised $420m in equity investments between 1999 and December 2006. Although these amounts were self-reported and hence cannot be verified, it would seem that an impressive 10-fold leverage of COMET funding has occurred.

One aspect of COMET with which angels and entrepreneurs in angel-backed companies frequently struggle is the compulsory success fee agreement that awards the COMET adviser a 2% success fee on any funds raised by the grant recipient, regardless of the adviser's involvement in the fund raising. Angels are comfortable with reasonable fees for service providers who deliver a value-adding service to businesses. COMET advisers work for the government and should only receive fees from grant recipients for additional services provided outside the tax payer funded mandate. This blanket approach to a success fee is at odds with the services provided and makes it more difficult to engage with professional corporate advisors who will assist the company to raise

investment funds. It also makes the cost to investors of investing artificially higher for no apparent benefit to investors, or to the grant recipient.

The Export Market Development Grants (EMDG) scheme administered by AusTrade offers up to a 50% rebate on eligible export activities. There is a hurdle of $15k per year for the first two years for initial applicants. Grants totalling $145m were made to 3,813 applicants in 2006/07, with an average payment of $40.4k and an applicant success rate of ~90%. Fewer than 80% of these grants went to small companies with annual revenues less than $5m. The EMDG program is also attractive to angel-supported companies because it is simple to access and applies to the large number of such companies that are seeking to arrange overseas distribution for their products or licensing of their technology.

PROPOSAL #5

AAAI recommends that the existing Federal Government industry assistance schemes are retained. Modifications are proposed which address deficiencies in delivery and eligibility requirements, specifically:

- Eligibility for the R&D Tax Offset should be extended to those companies that have public sector shareholdings that represent less than 50% of total shareholdings as well as to otherwise eligible companies with R&D expenditure above $1m but, with only the first $1m available for Offset payments;
- Although the 1 for 1 matching arrangements are supported for Commercial Ready Plus, companies should be granted the flexibility to source up to half of their matching funds from State or Territory Governments, in a similar way to that permitted with the discontinued but highly successful Biotechnology Investment Fund;
- In the case of COMET, it is recommended that the terms of the grant be amended so that success fees awarded to the COMET adviser are only payable on funds raised directly by the COMET adviser.

8. COORDINATION OF ANGEL GROUP INVESTMENTS BY AAAI

Economic development requires accelerating the rate at which the economy as a whole learns to re-arrange itself to suit emerging opportunities and threats. In a globalising world, confronted with major environmental threats, Australia is faced with an urgent need to renovate its Innovation System. Within that System the largest and most persistent challenge is that of overcoming the funding gap, or Valley of Death, as it chokes the flow of rapid-growth start-ups that drive innovation.

Experience in the USA, Canada, New Zealand and the EU demonstrates the critical, if largely unrecognised role that angel investment plays in overcoming the funding gap. It shows that the emergence of angel groups as a mechanism for reducing the well-known inefficiencies of this informal market is accelerated when best practice is identified, packaged and widely deployed. The history of angel investment in the Northern Hemisphere post the collapse of the technology bubble demonstrates the pivotal role sector peak bodies have played in accelerating this process by delivering information, training, coordination and migrating a cottage industry to a professional practice with widely recognised standards and a sustainable code of conduct.

The Australian angel investor market is markedly smaller than its Northern Hemisphere equivalents and its sector peak body will require Government support if it is to play an equivalent role in catalysing the maturation of this source of early stage investment.

The simplest way to strengthen the ability of the AAAI to perform this role is for government to sub-contract it to undertake tasks that build needed capability in the sector: development of skill formation programs based on best practice and the deployment of these; longitudinal research on Australian angel investment; identification of international initiatives that can be used to advantage in Australia; the provision of advice to government on issues like fine-tuning of the regulatory environment, compliant syndication models and accreditation of angels and angel groups for a national co-investment scheme.

PROPOSAL #6

DIISR provide financial support for 3 years so that the AAAI can initiate and implement sustainable roles appropriate for a national peak body and in the interests of the national economy and the national innovation system. This support would include:

- Appointment of AAAI to develop with Government a co-investment program to assist the development of high risk/high growth companies;
- Funding assistance for AAAI education/best practice development/delivery based on the successful introduction of suitable practices in other countries;
- Funding assistance for longitudinal research/analysis of angel investment in Australia;
- Establishment of a working group to collaborate with ASIC to identify and remedy impediments to innovation, commercialisation and angel investment created by certain provisions of the Corporations Act 2001 and the Financial Services Reform Act, and
- Collaboration on possible tax incentives/benefits to catalyse and drive angel investment in commercialisation of innovation.

APPENDIX A – THE PROFILE OF ANGELS

The term 'angel' for private investors originated in London and New York in the early 1900s to refer to wealthy backers of stage productions who made risky investments to ensure that these shows could be staged. Today, the term angel investor refers to individuals that invest in companies, especially in their earliest stages and whom share their personal management experience and access to business networks with the management teams of those companies.

Angel investors should not be confused with philanthropists: most case studies suggest that angels are interested in substantial returns and are often endowed with significant ego, along with the expertise that is attractive to many new enterprises.

Equally, angels should not be confused with the very rich or High Net Worth Individuals. Some angels may be in those categories but, the majority of angels are only financially secure, not wealthy (although that is certainly a core goal of being an angel). The very rich usually employ professionals to manage and invest their wealth and those professionals are rarely equipped to make angel style investments. Thus, the wealth of the High Net Worth Individuals and the rich families tends to be invested in conventional assets under conservative, risk averse portfolio strategies.

Indeed, some angels start with very little cash to invest and make maximum use of their human capital to assist the companies in which they invest. These individuals are often termed "mentors" as, within a group of angels, these individuals use their greater experience in high growth businesses and their superior expertise in relevant technology to mentor the other angels on how, why, when and where to invest.

In the USA it is generally indicated that to be an angel one should have a minimum net worth of USD3m and a maximum net worth of USD30m. Those limits are very much related to the specific context of the USA, its large, affluent population, business oriented culture and domestic tax structures.

In Australia it is generally accepted that to be an angel one should have a minimum risk capital of $50,000/year and experience has shown that those seeking to invest in excess of $2m/year prefer to operate as independent, mini-VC rather than as angel investors and they usually prefer more passive investments than are typical of an angel.

Unlike VC funds, which form part of the formal capital market, angel investors make up an informal and essentially unregulated market. That is, the names of individual angel investors and their individual levels of investment activity are not found in a directory, on a web-site, or by looking in the Yellow Pages of the phone book. To complicate matters, some high net worth individuals who behave as angel investors do not identify themselves as such, and - as we shall see - there are some who regard themselves as angels, but have not so far invested.

Likewise, because angel investors do not need to comply with the mandatory reporting requirements of a regulator, there are no official statistics as to the magnitude of the angel investor contribution to enterprise development.

The information that is available has been obtained from surveys conducted by academic researchers attached to Centres like those mentioned in the previous section. Although they paint an increasingly consistent picture (largely as a result of angels becoming less reticent about their activities), there are still uncertainties about basics, like the size of the angel market in a given national economy, for example. The absence of a specialized university-level Centre researching Australian angel activity, coupled with the private nature of angel investment, means that much information about their activity in Australia is anecdotal.

Size of the Market

Estimates of the size of the USA angel market vary widely. The number of angel investors active in America is variously estimated to be as many as 3 million (investing USD50 billion annually), ranging down to 350,000 who invest USD30 billion into some 50,000 businesses each year. The USA

Global Entrepreneurship Monitor advances an estimate mid-way between these extremes[1]. Estimates of the size of the Canadian angel market are similarly imprecise: the most current estimate is that Canadian angels invest between CAD5 and CAD20 billion ($5.9-23b) annually into a range of high growth SMEs[2].

In the UK, the Hunter Centre estimates there are about 40,000 angel investors active in that country, and the UK Department of Trade and Industry (DTI) calculates on the basis of published tax information that these invested an average of £670m ($1.52 billion) annually into investee companies over the period 1998-2003[3]. Interestingly, the DTI estimates that something like 10 to 20 times this level of activity would be necessary to meet the UK demand for pre-seed, seed and early stage capital.

Apart from the UK, detailed survey information on European angel activity is hard to locate; the EC estimates that European business angels are in aggregate investing between €10-20b ($16.67-33.33b) each year.

Taken at face value, the survey data for developed Northern Hemisphere economies suggests that the angel investor capital market is roughly twice the size of the formal VC market in each economy. Estimates of the size of the Australian angel investor market tend to be much more conservative, reflecting the belief that it is younger and smaller than those in the Northern Hemisphere[4].

One of the reasons for the fuzziness of all these estimates is that the surveys run in different countries do not always target precisely the same respondents: for example, some surveys are concerned to gather information from all high net worth individuals who have the capacity to act as angel investors (whether or not they have actually done so), while others focus on those with a history of such investments.

The distinction between latent and active angel investors is also complicated by a consistent finding of the UK work, namely that 70-75% of experienced UK angels surveyed has difficulty finding suitable investment opportunities, have further funds to invest and that these uncommitted funds may exceed the amounts actually invested by a factor of three[5]. This contrasts with the UK DTI back-of-the-envelope estimate that angels in that economy were satisfying only 5-10% of its demand for early-stage risk capital.

Recent government and industry studies[6] suggest that the size of the Australian angel investor market is 35% to 50% of VC investment; that is, proportionally smaller than the angel markets of Canada, the USA and the UK. In June 2006, the ABS estimates that Australian venture capital funds invested about $6.5b, which would put annual Australian angel market investment in the range $2.275-3.25b. However, Australia commits a larger sum (~$11b in 2006) to venture capital funds each year, of which only around 60% is actually invested each year, leading staff of the Australian Treasury to comment that *"if there is a problem with 'under-investment' of venture capital*

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[1] Quoted in the 2001 White Paper published by the National Commission on Entrepreneurship: *Embracing Innovation - Entrepreneurship and American Economic Growth,* Kauffman Foundation, Kansas City.

[2] Riding, 2005: *Mobilizing Capital for SMEs - Some Canadian Experiences,* presentation, Eric Sprott School of Business, Carleton University, Ottawa.

[3] Clark, 2004: *Business Angels Networks in Europe,* paper presented to an Expert Group meeting, 7th June 2004; Directorate-General Enterprise, EU, Brussels.

[4] In 1996 the Industry Commission included extra questions in the quarterly *Yellow Pages Small Business Index* survey, and in its interpretation of the results, made this observation, which is now taken as conventional wisdom.

[5] Reported independently by Mason, 2002: *Report on Business Angel Activity 2000-2001,* Hunter Centre for Entrepreneurship, University of Strathclyde, Glasgow; and Gardner, 2003: *InvestorPulse UK Angel Attitude Survey,* InvestorPulse/Best Match/c2Ventures, London.

[6] Caslon Analytics Guide, 2007: accessed at (www.caslon.com.au/ecapitalguide8.htmH)

in Australia, it does not appear to be due to lack of funds"[1]. If the amount of funds committed is used as the base, then the estimate of the size of the Australian angel investor market rises to $3.85-5.5b. Both these estimates are larger than one made in 1996 by the Industry Commission, when the size of the Australian market was put at ~$1b.

AAAI itself believes that in 2007 about $500 million was invested by active Australian angels and that this is only a small fraction of the capital potentially available for mobilization from this sector.

Angel Investor Profiles

Because the angel investor market is made up of thousands of independent, individual investors (contrasting with a much smaller number of fund managers operating in the VC sector), the task of developing a profile of the 'average' angel and their investment behaviour must inevitably grapple with the problems of diversity. Even so, there are two useful studies that have examined the questions: *Who are Australia's business angels? How do they behave?* and *What are their investment criteria?*

The first of these was undertaken by Hindle and Wenban in the 90s, was based on a sample of Australian 36 angels who were surveyed in 1995, with the results being published in 1999[2]. The profile revealed by this investigation shows the 'average' Australian business angel to be:

- Male, successful in business or professional practice, aged in his mid-50s;
- Well off, but not in the super-rich category;
- Well educated, with a tertiary qualification in business or engineering;
- With respect to his angel investment activity, prefers to keep a low profile, guarding his privacy.

The investment activity of this 'average' Australian business angel was characterized by:

- The use of a wide array of methods for locating investment opportunities, with referrals from friends and business associates dominating;
- Relatively infrequent investing: usually making about one investment per year, but on average receiving three proposals in a year for evaluation;
- Use of investment criteria that gave weight to: personal qualities of the owner/manager, growth potential of the market, uniqueness of the product/service, and structure of the deal; as well as business basics like the nature of the business, cash flow projections, actual or prospective competition;
- A commitment to invest time, management skills/expertise, access to personal networks as well as funds to the venture; however, no necessary requirement for a controlling role;
- No great expectation of a return in the first three years, but a significant return (multiples of the original investment >2) at exit anticipated;
- Exit arrangements were given considerable thought before the deal finalized, but often the timing and manner of exit was not codified in a written agreement;
- Most investing up to 14% of their discretionary funds into an investee company; the average transaction was reported as ~$150k.

The second study was commissioned by the federal Department of Industry, Tourism and Resources (DITR) in 2007, and was undertaken for the Department by Vitale, Everingham and Butler[1] (VEB hereafter), and involved face-to-face interviews with 46 angels and 12 angel groups.

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[1] Regan, D. & Tunny, G.: "Venture Capital in Australia", *Economic Roundup,* Summer 2007, Australian Treasury, Canberra.

[2] Hindle & Wenban, 1999: "Australia's Informal Venture Capitalists - An Exploratory Profile", *Venture Capital,* **12** pp. 169-186.

While VEB were careful to stress the unrepresentative nature of their sample, their investigation did generally confirm the findings of the Hindle & Wenban study (for example, Australian angels appear to be overwhelmingly male). Additionally, VEB found that three investor profiles could be developed to better accommodate the diversity of the sector.

The sample included roughly equal numbers in each of the three profiled groups. VEB profile these groups as follows:

- The *early winners*: these angel investors have significant wealth, usually obtained in their mid-30s or early 40s from fortuitous investment in a start-up (in the mid- to late 90s, in the run-up of the technology bubble). Some of these angels are returned expatriates, who have come back to Australia to raise their children in this country. Some early winners had inherited their wealth[2].

  Early winner angels have sufficient investment capital to allocate a small percentage to investments which they see as a way to increase their wealth, as well as a way of having fun. In this group, these angels have made an average of six investments (minimum $57k, maximum $915k) in industry sectors they know (usually ICT). They rely heavily on their own networks to source deals. Having made their own fortunes through investment—or having been closely observant of others who have achieved substantial returns this way—they understand the risk/reward trade-off.

  Angels in this group who have inherited their wealth view angel investment as a quasi-philanthropic activity, investing in businesses that mean something to them personally, or that they believe will make a difference in the world.

- The *professionals:* angels making up this group achieved their wealth and experience through their chosen professional career. They are - or were - consultants, bankers, lawyers, accountants or venture capitalists. They are older than the early winners, being aged between 40 and 65, and usually have a post-graduate qualification.

  They encounter investment opportunities through their day-to-day business dealings, or through professional networks. Typically, they see no benefit in belonging to a formal angel group (only those residing outside the metropolitan centres of Melbourne and Sydney belong to such groups). They don't actively seek investment opportunities, but still may be presented with as many as 20 a year. They only invest what they are prepared to lose; at the same time the view their angel investments as a proper part of their investment portfolio.

  On average, a professional has made 8 angel-type investments (minimum $84k, maximum $425k) for financial reward, in any industry sector where such rewards may be found. They are prepared to make their skill and expertise available to their investees, where this does not involve a conflict of interest.

- The *experienced entrepreneurs:* angel investors in this group generated both wealth and experience by establishing their own businesses. Usually they have sold these businesses in their 50s, and have significant investment capital at their disposal. They will have acquired secondary, graduate, or post-graduate educational qualifications.

  Their motivation for being an angel is to help others achieve as they have, and to generate greater financial returns from investment in higher risk ventures. They are often in semi-retirement.

  If located outside Melbourne or Sydney, they are more likely to be a member of a formal angel group - or other professional body - as a way of sourcing opportunities, and for

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[1] Vitale, Everingham & Butler, 2007: *A Study of the Business Angel Market in Australia,* DITR , Canberra.

[2] Young high net worth individuals who have inherited their fortunes are sometimes collectively referred to in the USA as *trust fund babies*.

delivering mentoring services. They will have made 10 investments on average (minimum $29k, maximum $562k) into start-ups in industry sectors they know well. They have a strong entrepreneurial instinct, and a skill set they want to put to use.

Apart from the behavioural differences among these profiled groups, the angels in the VEB sample act as investors in ways comparable to their Northern Hemisphere counterparts, although there were some points of difference. Australian angel investors are mostly male, aged between their mid-30s and late 60s, usually have a tertiary educational qualification, with some having an add-on post-graduate qualification in business, commerce or economics as well.

Many do not consider themselves as angel investors, and the majority do not like the label (some in the sample had never heard of the term, and after it had been explained to them, reacted negatively to it). Most have started a business, or have been involved in a start-up; most invest for more than financial return, and have been doing so for an average of 9 years. Early winners and professionals make up a new wave of investors, having started as angels in the late 90s or 2000.

Australian angels invest both money and expertise, with the range of personal investments running from a minimum of $5k to $2.6m; the quantum of investment is clearly related to the investor's personal wealth, with the expressed preference being to limit investment in any one deal to less than 10% of the investor's investable capital. The equity stake taken up ranges between 9% and 34% - only four investors in the sample held equity stakes in start-ups of more than 50%. Equity stakes are usually secured as ordinary shares rather than convertible preference stock, and two reasons for this preference were given:

- Complicated preference structures put too much pressure on start-up managers; and
- Where follow-on financing from a VC fund is anticipated, fund manager's preference for simple ownership structures and reluctance to spend on legal fees for investment in an early stage venture drive the decision for angels to hold common stock[1].

Most angels interviewed did not require restrictive covenants in their investment agreements. Where these were written in, they usually relate to issues of future investment, sale of the venture, key performance indicators or milestones.

The sample splits 80:20 over the preferred stage of venture development at which angel investment is made. Eighty percent of the sample invests consistently at a particular stage of development: for 56% of these, investment was made at early stage, meaning post-incorporation but within 1-2 years of the venture starting up. A handful of these investors (16%) would invest pre-incorporation, mostly in high technology ventures where the intellectual property is seen by the angel to have great potential, and there is scope to assist the innovator to build a company around this. The balance of the sample was more inclined to invest in the ramp-up from early stage, or to have no strong preferences as to stage of investment.

Most angels have no specific target for total returns from their investments; expectations run from 3 times to 10 times their investment, usually to be achieved in 3-5 years. Only 15% of the sample was prepared to hold investments for more than 5 years. Australian angels give advance thought to the available exit options, with trade sale and IPO the most common exit strategies.

The vast majority of the sample's investments have yielded a positive return. One or more investments have been exited by 72% of the angels in the VEB sample. Angels that have exited investments have, on average, exited 41% of the investments they had made[2]. What is surprising is that close to 70% of those exiting report that more than half have yielded a positive return. VEB comment that the angels they interviewed *"were either unusually skilled or selectively forgetful"*.

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[1] See, however, the discussion of investor roles following in **Inefficiencies and Risks**.

[2] This is reasonable, given their plans to exit after holding for five years, and that the average investment history of angels in the sample was 9 years; around half their investments should have been exited.

Alternatively, many Australian angels are staying with losing investments until they are liquidated, rather than exiting quickly and acknowledging a loss.

Even though the VEB study can be criticized for its small sample, and the way the sample was selected, the fact that its findings align with the earlier Hindle & Wenban study is encouraging.

Inefficiencies and Risks

> "Imagine a 60-foot box-car in a freight train travelling over poorly maintained railway track. The car is completely empty except for two 1-inch steel ball-bearings. As this box-car jolts over the rails and switch-points, the ball-bearings are flung about inside, bouncing off the box-car's roof, the walls and floor. *These two ball-bearings have a better chance of colliding with each other than an entrepreneur has of securing an investment from an angel investor."* [1]

This is the analogy Dr Jeffrey Sohl, Director, Centre for Venture Research, University of New Hampshire, uses to portray the enormous inefficiencies of the angel investor market. All capital markets are inefficient to some degree, but there is general agreement that the angel investment market is the most inefficient of all.

Dr Sohl's analogy points to one dimension of this inefficiency already touched on in this Submission: it is the inefficiency created by angel investor anonymity. Their desire for anonymity is very understandable, as without it they would be besieged by unsolicited requests for investment funds. Unfortunately, the downside of anonymity is that it imposes *search costs* on both a prospective investee looking for an investment on entering the Valley of Death, and on angel investors seeking an opportunity to invest.

During the 90s, attempts were made in the USA, the UK and Australia to reduce search costs through the establishment of match-making services. These sought to match investee opportunities to angel investors, sometimes with the assistance of a web-enabled database. In Australia, the operation of matchmaking services required changes to be made to the regulatory regime. These services tended to start with enthusiasm but unsustainable expectations. By the end of the 90s, many of the early starters had ceased to operate, with the ASX-inspired *Enterprise Market* being possibly the most spectacular failure, closing abruptly in February 2001 with losses reputed to amount to several millions.

The main problem these services experienced was their difficulty in achieving a large enough throughput of successful matchings on which they could charge the success fees they needed to defray their operating costs. In their attempts to do so, they cast their net very widely, and consequently they dealt with a highly varied clientele of prospective investors and investees. As Christine Kaine, proprietor of the matchmaking service Business Angels P/L, observed in *The Age* in 1998[1]:

> *"many participants do not understand how to play the game, and businesses come to the process as a last resort...financial advisers, accountants, solicitors do not have sufficient understanding of the process to wisely advise their clients when and how to consider the option [of seeking angel investment]"*.

The UK experience[2] suggests that it is difficult to operate a matchmaking service with a fee structure that ensures sufficient throughput with a population base of less than 5 million, and that it

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[1] Kaine, 1998: "Venture skills as rare as capital", *The Age,* December 1st, 1998.

[2] Gardner, P., (2003); *InvestorPulse UK Angel Attitude Survey,* InvestorPulse/BestMatch/c2Ventures, London.

is not possible to operate a network profitably, even at national scales[1]. Those commercial matchmaking services still operating in the USA and the UK appear to be loss leaders sustained by accounting practices and corporate finance companies for marketing purposes.

The problem that has the largest impact on angel investment is *information asymmetry* between investor and investee:

- The investor does not know the investee's ability, and this is a major source of the risks seen to be attached to the investment transaction; and
- The investor does not know the investee's motivation; the risks here are those of moral hazard, as an angel investment is likely to be the single largest tranche of investment made into the investee's venture so far. There is a danger that the investee will misuse the funds made available by the angel investor.

The problem for investors is that it is difficult to manage the risks by contract, as it is not always the case that the investee and the investor are motivated by the same things. If the investor is motivated by the anticipated return on the investment they are proposing to make, and the investee by, say, issues of control and decision-making, then negotiating and codifying the terms of the investment transaction can become very arduous with problematic outcomes, especially if the investee's motivation is not revealed.

Because angel investors make investment decisions as principals - they invest their own money - unlike VC fund managers, who must act as agents and/or employees of their third-party investors in the fund, these two types of capital provider handle the risks attached to information asymmetry quite differently[2].

VC fund managers put a lot of effort into due diligence. This process can take several months to complete, and includes investigations into every assumption on which the prospective investee's business is based. It covers background checks of the founders, assessments of the competitive environment, market research into the size, composition and expected growth of the target market, and investigations into the financial representations of the venture's position. The results of this forensic work are frequently validated by construction of financial models of the enterprise, and comparison of the financial ratios these models yield with those of peer group firms.

If the prospective investee survives this process, and an in-principle decision is taken to invest, the next stage involves negotiation of the terms on which the investment will be made. These negotiations are guided by the *term sheet*, through which the VC fund manager attempts to manage the risks of asymmetric information by specifying performance targets and milestones to be met by the venture's management team, and the penalties and "walk-in" rights the fund may exercise if they fail to meet them.

We have described the risk management practices of VC funds in this detail to make the point that most of the effort is made in advance of an investment deal being finalized, and that this is in sharp contrast to angel investment practice. Angel investors are less concerned with financial projections, and are less likely to calculate rates of return. They do due diligence on their prospects, but at a much lower level than a VC fund, have fewer meetings with an investee's management team, are less likely to take up their references, and are less likely to consult other people about the proposed investment[3].

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[1] Mason, C., (2002); *Report on Business Angel Activity 2000-2001,* Hunter Centre for Entrepreneurship, University of Strathclyde, Glasgow.

[2] Van Osnabrugge, M., 2000: "A comparison of business angel and venture capitalist investment processes: an agency theory-based analysis", *Venture Capital,* **2**, pp. 91-109.

[3] Mason, C.M. & Harrison, R.T., 2002: "Is it Worth It? The Rates of Return from Informal Venture Capital Investments", *Journal of Business Venturing,* **17**, p211-236.

Given these differences, it would be reasonable to expect that, on average, angel investments would have a greater probability of failure than those made by VC fund managers. Across a range of investment practices, angels are positioned at the higher end of the risk spectrum. Empirical studies have confounded this expectation. When the distribution of returns for formal and informal venture capital are compared, the data shows that angel investments are less likely to fail - that is, exit at a loss, or negative return - than formal venture capital[1]. Further, the risk minimization strategy employed by VC fund managers of concentrating on later-stage investments rather than early-stage is also shown to be largely ineffective. Angel investors make the majority of their investments (~80%) at the early-stage, and should therefore experience a higher rate of failure, but the evidence points the other way[2]. Even so, both VC and angel investment is a risky business; for both classes of capital provider the distribution of returns is strongly skewed towards exits with a negative return, but also presents prospects for large successes in a minority of cases (we talk about returns to angel investors in a later section of this Submission).

A possible explanation for the ability of angel investors to tolerate less effort in due diligence and deal structuring in advance of its finalization has been offered by Sarasvathy[3], who notes that not only do external capital providers not know the abilities and motivations of the entrepreneurs driving a rapid-growth start-up, *"but, in fact, the entrepreneurs themselves do not know their own capabilities and motivations"*. They discover and formulate them in the process of building a new firm and new markets.

Instead of casting angels and entrepreneurs into roles on opposite sides of an adversarial relationship, where each is trying to out-guess the other in terms of what each brings to the deal, and what each really wants, this circumstance positions both as partners seeking to create new possibilities in a world where neither can predict what the future will be. For the angel investor, this second role sits more comfortably with the reality of the investment relationship, which they enter as a principal rather than as an agent of other investors.

This explanation is supported by the observation that angels prefer common to preference stock, and put a great deal of weight on entrepreneurial human capital, while they tend to under-weight (or even ignore) other elements of the investment proposal. Once they are satisfied about the quality and potential of a prospective investee's management team, they base their investment decisions on affordable loss rather than on expected return. They also commit to a higher level of post-investment participation than VC funds, as the major part of their risk management activity occurs after investment, rather than *ex ante*.

Some Points of Difference

The VEB study already mentioned uncovered a point of significant difference between Australian angel investors and those of the Northern Hemisphere. There was a mixed response from Australian angels to a survey question about membership of formal angel groups. Very few of those interviewed indicated an interest in joining a formal group if they did not already belong, although many had been asked to join or had once been part of one.

This is in strong contrast to the state of play in the USA, Canada, and the EU, where formal angel groups are exhibiting strong growth, especially in major cities. Only 12% of the Sydney angels, and not one of the Melbourne angels were members of formal angel groups, while all the ACT angels and ~90% of the Queensland ones were. It is possible that angel activity in Melbourne and Sydney is still dominated by the professionals, whereas elsewhere there is a preponderance of early

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[1] This conclusion was first reached by Mason & Harrison (citation 17) after comparing their survey results with those of Murray, G., 1999: "Seed capital funds and the effect of scale economies", *Venture Capital,* **4.** pp. 78-101

[2] Wiltbank, R., 2005: "Investment Practices and outcomes of Informal Venture Investors", *Venture Capital,* **7**, pp. 343-357.

[3] Sarasvathy, S.D.,2007: Entry on *Business Angel Networks,* prepared for the *Edward Elgar Encyclopedia of Entrepreneurship,* coordinating editor, L_P Dana, School of Management, University of Canterbury, New Zealand.

winners and successful entrepreneurs. We return to the topic of angel groups in the next part of this Submission, where we describe global trends observable in the angel investment sector.

VEB interviewed representatives of twelve formal business angel groups - two of which had ceased to function by the time their report was written. They comment that there is no evidence one way or the other that angels in formal groups outperform those that invest alone, as is claimed for Northern Hemisphere groups[1]. They note that angel groups allow some individuals who would not otherwise make angel investments (*latent angels*) to do so, and that these groups perform valuable and useful services for entrepreneurs as well. Rather than providing superior investment performance, they comment that angel groups may serve to enable deals that individual angels would not have attempted on their own.

Although angel groups are capable of investing amounts comparable to those of a VC fund, these groups do not see themselves competing with the VCs, but rather as operating in a different investment space with a different model. Another point of difference noted by VEB was that in their sample there were few examples of angel co-investment with a VC fund, or of follow-on investment being secured from one. Some networks actively seek deals that would not be attractive to a typical VC: *"5X in five years - not 10X in three years"* was the way the difference was summarized by one angel group leader. Again this behaviour differs markedly from that of Northern Hemisphere angels.

How do we explain these differences? The active Australian angel investment sector is apparently smaller in proportion to our VC sector than is the case in the USA Canada, the UK and the core members of the EU[2]. This small size, taken together with disinterest in angel group formation, and discomfort on the part of some with the label 'angel investor' are pointers to a lack of sector maturity and the dominance of old money. This lack of maturity is most likely a result of our distance from more advanced angel investor communities and the limits this places on our capacity to learn from them. We note that Queensland - a preferred destination for returning expatriate high net worth individuals - has made the running on the formation of angel groups. This private initiative is supported by the Queensland Government, in recognition of the role these groups play in the financing pipeline it promotes to underpin its *Smart State* economic development strategy.

Rae Weston of the Macquarie Graduate School of Management made an interesting suggestion in 2003 that could have a bearing on the way Australia's angel sector has evolved; her speculation was that Australia may have developed a model of new enterprise funding that differs from the *California Model*, taken to be the norm in the venture capital field[3]. The stages in the two models are contrasted in the table below which has been updated by AAAI to reflect more recent developments:

Stage	California Model	**Australian Model**
1	Funded by the entrepreneur and other founders (3F)	Entrepreneur develops idea and gets to proof-of-concept stage
2	Friends of the original investors make an additional investment	Uses AusIndustry or State grant-in-aid to develop a persuasive commercialisation proposal (COMET or similar)

[1] DCITA, 2006: *Business Angel Networks,* Department of Communications, Information Technology and the Arts, Canberra.

[2] At 0.1% of GDP in 2003 our VC intensity was then itself only an average performer in the OECD league table of the time.

[3] Weston, R., 2003: "Is there an Australian Model of New Enterprise Funding?", in *Proceedings of the Academy of Entrepreneurship,* **9**, p35 - 40, Allied Academies International Conference, Las Vegas.

Stage	California Model	**Australian Model**
3	High net worth individuals, angels, or a corporation with an eye to a future relationship make additional investments	Enters the Valley of Death, obtains angel investor support
4	One or more Venture Capital funds invests	Reaches early expansion stage, seeks further angel backing, or VC support (more likely the former, as the management team and customer base may still need development).
5	Additional round(s) of VC investment are made	Obtains private equity or VC development capital as preparation for trade sale or IPO
6	The venture proceeds to an IPO	Proceeds to trade sale or IPO

AAAI is not aware of any work that independently validates the 'Australian Model' but, if it accurately depicts the trajectory of rapid-growth start-up companies in this country (other than those spun-out from research institutions or Cooperative Research Centres that can access Pre-Seed Funds), then, among other implications, it underlines the critical importance of a skilled angel investment sector to the effective working of our national Innovation System.

The most noteworthy feature of the Australian Model is the paucity of funding sourced in the earliest stages from family and friends. Weston's contention is that an Australian entrepreneur developing an innovation in a specialised technological area will need to get to proof-of-concept largely by their own efforts - or *sweat equity* - with only a small amount of financial assistance from friends and family, or even none at all. This creates a large information asymmetry at the next stage, which is not encountered in the California Model.

At the point where the venture makes the transition to Stage 2, its assets will be a limited set of capabilities exposed by the achievement of proof-of-concept, perhaps a demonstration prototype, and some knowledge and information, or intellectual property assets acquired in reaching this goal.

In the California model the second funding stage involves friends of the original investors to whom referrals will have been made through social networks. In this circumstance, the motivations and abilities of the entrepreneur and any associates will be more exposed, some of the second-round investors may have technical expertise in the relevant technical area, and the process of development may even have been observed, so that the task of valuing the sweat equity will not be too difficult.

By contrast, in the 'Australian Model' the small amount of assistance provided by friends and family is exhausted, their networks are unlikely to overlap with those of a second-round investors for a referral to occur, but still external funding is needed. Even if an appeal to one or more solo angel investors can be made, it is unlikely to succeed at this stage, given that to overcome the prevailing information asymmetry these angels must penetrate three barriers to investment:

- *Equity aversion* - the entrepreneur's unwillingness to share ownership;
- *Investability* - the degree to which the investee meets the requirements of external investors (ideally, as reflected in the venture's business plan, if one exists), and
- *Presentation failings* - while investability refers to the substance of the opportunity, problems can be encountered in its presentation, even if in principle it should be attractive.

It is at this point that Weston suggests that the 'Australian Model' interleaves use of the COMET program (or similar[1]) as the additional step. COMET is a merit-based assistance program with a strong focus on mentoring, business management and support. It commenced in 1999 and $170m has been allocated to fund the program until 2010-11. A network of 14 private sector consultant business advisors reporting to the COMET National Manager delivers the program. COMET funding is delivered in two tiers, and is used to subsidize access to third party service providers. Funding is capped at $64k for Tier #1 at 80% of the cost of the services. Additional Tier #2 funding of up to $56k at 50% of the cost of services may be available subsequently.

In 2006-07, 196 applications for assistance through COMET were received by AusIndustry, of which 174 were accepted; a success rate of 89%. The amount allocated was $11.1m, an average of $63.8k per recipient. An additional 39 applicants received $1.9m in follow-on payments, averaging $48.k per recipient. For 2006-07, ~90% of approved companies reported annual revenues less than $500k, reflecting the demand for skills, services and knowledge in this early stage of a start-up's development trajectory[2].

The COMET scheme is highly regarded by angel investors. They see it as capable of providing the assistance needed to overcome the investment impediments and deficits listed above. It has a good fit with Weston's 'Australian Model', as it allows successful applicants to better position their venture *vis-à-vis* angel investors to attract capital in this funding model's third stage [3]. AAAI is not arguing here that the COMET scheme has shaped the evolution of the 'Australian Model' but, rather that - given the difficulties faced by entrepreneurs in sourcing early-stage funding from family and friends - it, and state-based programs like it, provide a valuable bridge to the capabilities and resources a start-up needs, if it is to attract angel investment.

A review carried out by AusIndustry indicated that COMET-supported companies raised $420m in equity investments between 1999 and December 2006. Although these amounts were self-reported and hence cannot be verified, it would seem that an impressive 10-fold leverage of COMET funding has occurred.

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[1] Some state/territory programs have been designed to deliver assistance in much the same way as COMET: Queensland's *Innovation Start-Up Scheme*, seed investments by South Australia's Playford Capital, and Tasmania, which mounts two complementary programs: *Early Stage Commercialization Assistance* and *Mentoring Assistance*.

[2] IR&D Board Annual Reports, 2002-03 to 2006-07.

[3] One criticism made about COMET is that the private sector business advisor who acts as gatekeeper takes a percentage of all equity raised by the company over the following 2 years ("success fee"). This applies even if the advisor played no part in raising those funds.

APPENDIX B – AAAI CONFERENCE FEBRUARY 2008

CONFERENCE OVERVIEW

In February 2008 the AAAI held its **inaugural National Angel Conference** in Canberra. The conference was a great success in terms of numbers of delegates, quality of discussion and debate, feedback from delegates and initiatives spawned.

Approximately 100 people attended the conference from around Australia, New Zealand, the USA and the UK. Over 60% of delegates identified as angel investors, fewer than 20% were service providers and the balance were a combination of government, media and interested individuals not yet ready to identify as angels.

Prior to the conference there was a half day **Government Workshop** that attracted over 30 delegates from Federal and State governments. The AAAI appreciates the generous sponsorship of the ACT Government for the Workshop.

The purpose of the workshop was to deepen the understanding of leading government personnel of angel investors and the impact the AAAI is seeking to deliver through its activities in fostering increased investment in SME around the country. Discussion on the day and feedback from the delegates reflected a thirst for more and better information about angel investors, the companies in which they invest and what government can do to foster better outcomes. Of particular note was the interest that arose once the delegates came to understand the grass roots nature and breadth of impact of angel investment. Much interest was aroused when it became clear that angel investment can impact on thousands of companies per year, every year across the nation and that this scale of activity is far beyond any practical expectation of government assistance programs on their own. The role of AAAI as a partner to government in facilitating angel investment was generally acknowledged as appealing and worthy of further development.

The conference commenced with a half day **Master Class on the Power of Angel Investing**: **Valuation & Portfolio Strategies**. This program was developed by the Angel Capital Education Foundation (ACEF) in the USA and was delivered by one of the authors, Mr Bill Payne, a successful angel investor for thirty years. The AAAI appreciates the generous sponsorship of the ANU and ANU Ventures in supporting this event.

The Master Class was over subscribed and the feedback from the packed room acknowledged an excellent learning experience superbly delivered. The Power of Angel Investing is a series of four workshops and the AAAI has already secured in-principle agreement to be the approved delivery partner for Australia. AAAI directors will meet with ACEF directors in May to finalise the arrangement, which will include collaborative development of new workshops and copyright approved localisation by the AAAI of tax and legal elements as required.

Conference sessions were run as expert panels with generous time for open forum Q&A. A selection of panellist profiles can be found below. Invited international guest speakers were:

- Bill Payne, Angel Capital Association (USA)
- Anthony Clarke, European Business Angels Network (UK)
- Andrew Hamilton, ICE Angels (NZ)
- Norman Evans, Upstart Angels (NZ)

Local panellists included:

- John Ballard, Bio Angels (SA)
- Bob Beaumont, Tech Australia Angels (Vic)
- Stewart Gow, Archers Angels (Qld)
- Jordan Green, Victoria's Investment Partners (Vic)
- John Mactaggart, Brisbane Angels (Qld)

- David Malloch, Capital Angels (ACT)
- Vivian Stewart, Hall Capital Strategies (NSW)
- Bob Christiansen, Southern Cross Ventures (Qld)
- Malcolm Thornton, Starfish Ventures (Vic)
- Robert Bowen, National COMET Manager (Qld)
- Cameron MacMillian, AusTrade State Manager (Qld)
- Doug Adamson, Playford Capital (SA)
- Linda Di Moro, AusIndustry State Manager (ACT)
- Todd Wills, Partner PricewaterhouseCoopers (Tax)
- Deborah Chew, Partner Hall & Wilcox (Legal)

The debate and discussion during and between sessions was lively and dynamic including all the panellists and the delegates. The New Zealand delegation was so enthused that they headed back home to immediately establish their own version of the AAAI. A strong relationship has been forged between the **New Zealand and Australian angel communities**. The AAAI is advising on the formation of the New Zealand peak body and the two are holding joint meetings with USA counterparts scheduled for May during the National Angel Summit for North America in San Diego.

In 2007 the AAAI was one of the half dozen national angel peak bodies to come together to form the **World Association of Angel Investors**. Strong interest has been expressed by all parties to hold the inaugural **international angel conference in Australia**. This will acknowledge the international leadership role of the AAAI and be a substantial conference revenue event for Australia.

CONFERENCE PANELLIST PROFILES

RICHARD PALMER

Richard has 18 years experience in senior Private equity M&A and strategy roles both in New Zealand, Europe and North America. He joined NZVIF in 2006 and is responsible for the NZ$40 million Seed Co-Investment Fund that invests into early stage ventures in New Zealand. To date this fund has undertaken over 20 due diligences on potential investment partners agreed terms with seven co-investment partners and invested in 15 companies. Richard is also a member of NZVIF Limited Investment committee.

Prior to his current role he worked for Tower Limited, where he was involved in the listing of Australian Wealth Management on the ASX, at AMP and was a founding principal at Orange Ventures, the US$225 million corporate venturing arm of Orange SA. During his career he has worked on many significant transactions including the purchase of Orange by Mannesmann AG, the subsequent purchase of the Mannesmann Group by Vodafone PLC and the divestiture of Orange to France Telecom. More recently Richard co-founded a privately owned NZ company that provides life insurance advisory services throughout New Zealand. He is also a non-executive director of the Mentum Group and is on the Advisory Board for Connect New Zealand. Richard holds an MBA in International Business (Hons) from Bristol University and a Law Degree from Victoria University.

BILL PAYNE

Bill Payne founded an electronic materials company purchased by DuPont in 1982 and has since invested in 30 early stage companies and been actively involved in five angel networks in the USA: Vegas Valley Angels, San Diego Tech Coast Angels, Chairmen's RoundTable, San Diego Social Venture Partners, and the Aztec Venture Network.

ANTHONY CLARKE

He has been Chair of the British Business Angels Association (BBAA) and President of European Business Angels Network (EBAN) since 2004 and is a Board member of London's Science and Industry Council (Catalyst) chaired by Sir Richard Sykes. Anthony created the first model for business angels co-investment VC Fund leading to the formation of London Seed Capital (LSC), the UK Government's first early growth fund. He also created the UK's first Enterprise Capital Fund, an angel co-investment fund, "Seraphim Capital" in October 2006, a £30m Fund comprising £20m of Government funds with £10m of private funds. Anthony is Managing Director of Seraphim Capital and GLE Growth Capital which encompasses London Business Angels and London Seed Capital.

BOB BEAUMONT

Bob has 35 years experience in investment banking and finance, together with SME (small and medium enterprises) Investment. A career enriched by experience in the UK, USA and Australia, and has a strong empathy for rural and regional business. He held Executive positions for corporations such as Custom Credit, Commonwealth Development Bank until his departure in 1969 for the USA, where he also held senior positions with City Bank, Morgans, USA Capital, Map Ventures and Pacific Venture Group.

Educated in Melbourne and the United States, with Degrees in Commerce and Engineering from UC Berkeley, Bob has a rural background on one side of the family and print media on the other.

In the last ten years since returning permanently to Australia, Bob has mixed his business interests with an active role in developing Australia's successful Business Angels service with VECCI (Victorian Employers' Chamber of Commerce and Industry) in the mid '90's, and has participated and assisted in several Angel networks globally including LINC Scotland, NBAN London, RAIN in St.Paul, Dublin Angels at UCD, Texas capital Network Austin, Tech Coast at UCLA, Bay Angels Palo Alto, IRL's Network in NZ, Capital Angels ACT and Tech Angels in Melbourne.

Bob's board experience in his own enterprise investments and long history of growth lending and investment banking have gained him a wealth of knowledge in developing such programs as Investment Ready, Vic Start, COMET in Australia, SCORE in Scotland, NOVA in Dublin, GAP at Anderson Business School, UCLA, VCI Course at HAAS, UC Berkeley, PE at Harvard and is a past president of the Small Business Mentoring Service in Victoria and was an active regional member of SCORE in Silicon Valley.

Bob has served on many policy and industry initiatives, such as Yellow Pages Ideas, Commercialise series in Victoria, SA Innovation Committee, STI in Victoria, Tech Network, Bob's Mob, Pearcey Foundation Entrepreneur of the Year and many more.

Bob's Angel and VC activities on three continents have seen him involved in more than 250 investments, 15 of these in his own right.

Married to the same person for 35 years with whom he has raised six children, his passions are strategic thinking and community service.

Bob likes to help shape businesses for the future and he considers himself an active Angel as well as an educator and entrepreneurial facilitator.

JORDAN GREEN CPENG MBA MIEAUST MIEEE MAAAI MAVCAL

Jordan is a co-founder and director of the AAAI, of Victoria's Investment Partners, an angel group, and co-founder/Managing Director of Melbourne Venture Partners, one of Australia's best performing VC fund managers. Jordan has over twenty five years first-hand experience in the strategic and tactical applications of engineering, manufacturing, computing and information technologies to business and industry in Australia, USA, Asia and Europe. He has been director, CEO, executive and engineer for over a dozen technology and engineering companies since starting his career with IBM, including a Silicon Valley software company, Australia's largest Internet registrar and an Internet Business Incubator. He has led international technology and business projects up to $500,000,000 in value and been active as an angel and venture investor

on three continents. Jordan is active in community work, an occasional guest lecturer at the Melbourne Business School and a judge in the Melbourne University Entrepreneurs' Challenge.

JOHN MACTAGGART FAICD
Non-Executive Director, Technology One Limited (TNE)

John has extensive experience across many industries, including export of animal products, food processing, industrial fasteners, manufacturing of building equipment and computer hardware and software. John is a director of a number of companies, including JL Mactaggart Holdings and Associated Construction Equipment Pty Ltd.

John, through JL Mactaggart Holdings, has provided venture capital to many companies. He has played an important role in guiding Technology One Ltd through its formative years as the nominee of JL Mactaggart Holdings, which is a Founding Shareholder of Technology One Ltd. John has been a Fellow of the Australian Institute of Company Directors since 1991.

JOHN BALLARD FTSE, PHD, DSC
John Ballard was Managing Director and previously CEO of GroPep Ltd until 2002, positions he held since the inception of the company in 1988. He was one of the founders of BioAngels Inc, of which he is currently Chairman. He is also a Director of BR Angels Pty Ltd, Applimex Pty Ltd, AdAlta Pty Ltd and Neubody Pty Ltd, as well as the not-for-profit companies, Australian Proteome Analysis Facility Ltd and the Australian Institute for Commercialisation Ltd. He is a biochemist by training, has authored more than 300 research publications and is an inventor of 10 patents. He was elected to the Australian Academy of Technological Sciences and Engineering in 1997.

RICK MCELHINNEY BE(HON), MIEAUST, CPENG
Born in Sydney in 1955, Rick McElhinney lived his younger days in Dubbo in Midwestern NSW. At 15 he and his family moved to Coffs Harbour on the central NSW coast. He received an honors degree in Engineering from Newcastle University in 1978.

Working initially as a civil/structural engineer with Sinclair Knight and Partners in Sydney and Newcastle, Rick and his wife moved to Victoria, British Columbia in Canada in 1981 to work for Swan Wooster Engineering. Rick became involved as on-site Project Scheduler with the $220 million coal loading facility in Prince Rupert some 600 miles north of Vancouver and 40 miles south of the Alaska panhandle. He set up and managed the regional office until 1984.

Always involved in the computer side of engineering, Rick purchased, in 1982, the 4th IBM PC delivered to Canada. With this new tool Rick developed a number of engineering related software packages that were eventually sold throughout the world. With a Canadian partner a software company was founded in early 1984.

Later in 1984, Rick relocated his family and business to Fort Wayne, Indiana, where he became involved in developing engineering software to manufacturers in the Midwest region of the USA.

The company was taken public in 1987 and became well known for providing computer solutions to engineering companies within the region. The company provided engineering software, training, consulting and custom software development services to over 3,500 aerospace, automotive, medical and manufacturing companies with operations in the Midwest. During his time in the USA Rick authored "Using AutoCAD" for Que Publishing Corporation, a division of McMillan Publishing, for distribution by the B. Dalton Book Stores. He also authored articles for CAE Magazine, Desktop Engineering and Computer Reseller News. He was speaker at such events as PC Expo, Society of Manufacturing Engineers meetings, company technology days, University programs and Apple Developer conferences. He has participated in the Entrepreneurship & New Ventures program for the Griffith University, Graduate School of Management and was featured in the Bond University MBA Program, Business Breakthrough Video Series.

Rick has held board positions in manufacturing and technology companies within the USA He is a co-founder of Unlimited Plastics Technology, Inc., a specialist in the engineering design and analysis of high technology plastics components. He was an active member of the University of

Toledo Manufacturing and Technology Advisory Board between 1989 and 1993, and the Society of Manufacturing Engineers between 1985 and 2000. He has been a senior member of the Institute of Engineers, Australia since 1978. He is a member of the Bond University Smart Enterprise Research Advisory Committee and the Gold Coast City Council, Regional Economic Development Corporate Advisory Committee.

Since returning to Australia, Rick has invested in and provided advisory services to a number of manufacturing and IT corporations. He has been involved in establishing and currently chairs Founders Forum Limited. The Founders Forum is a network of business angels who syndicate their efforts in assisting start-up companies through investment and mentoring. Rick is involved as an equity partner and maintains various levels of involvement in a number of companies on the Gold Coast and in Brisbane. These companies include WebND Technologies Limited, Eduss Broadcast & Media, Inc., Eduss Asia Pacific Ltd., Seasafe Pty Ltd., ZVino Pty Ltd., Angels Institute Pty Ltd., Australian Biorefining Pty Ltd., and Hotshed Limited.

Rick plays an active role in youth programs on the Gold Coast, with three years in the position as Youth Director for the Coomera Valley Rotary Club and a member of the Coomera-Oxenford Youth Centre Management Committee. Rick was awarded a Rotary International Paul Harris Fellow in recognition of his efforts in the formation of the Coomera-Oxenford Youth Centre.

APPENDIX C – AAAI CODE OF CONDUCT

We, the members of the AAAI, in recognition of the importance of our investments and related activities in affecting the livelihoods of others, and in accepting a personal obligation to our peers and the communities in which we act, do hereby commit ourselves to the highest ethical and professional conduct and agree that every member of the Association is expected to comply with this Code of Conduct.

A member shall, in respect of any angel investment, or related activity in which the member is an actual or prospective investor or advisor, comply with the following standards of conduct:

(1) Members shall act with honour, integrity, dignity, diligence and in good faith in order to merit the trust of their peers and of the community.

(2) Members shall act with honesty, equity and without discrimination towards all individuals in the community.

(3) Members have an obligation to be ethical in judgement and actions.

(4) Members shall not take improper advantage of their position as an actual or prospective investor, or advisor.

(5) Members shall, where relevant, take reasonable steps to inform themselves, their peers, their portfolio companies and their advisors, of the social, environmental, economic and other possible consequences which may arise from their actions.

(6) Members shall not make improper use of information acquired as an actual or prospective investor, or advisor.

(7) Members shall promptly and properly manage any conflict of interests which may arise.

(8) Confidential information received by members in the course of considering, making, or advising on an angel investment remains the property of the person or company from which it was obtained and it is improper for the members to disclose, or allow to be disclosed that confidential information, unless that disclosure has been authorised by that company or person from whom the information is provided, or is required by law.

(9) Members shall not engage in conduct likely to bring discredit upon their angel investments, their peers, or the Association.

(10) Members have an obligation, at all times, to comply with the spirit, as well as the letter, of the law and with the principles of this Code. Members shall not assist in or induce a breach of this Code and shall support those who seek to uphold the Code if called upon, or in a position to do so.

(11) Members will respond promptly, fully and honestly to AAAI research of angel investing. All information gathered in research by the AAAI, or its nominated agent, will be treated in accordance with this Code, the AAAI Privacy Statement and presented in results of the research as anonymous, aggregated data.

APPENDIX D – THE FUNDING GAP

The Valley of Death

In 1999 the USA Department of Commerce, through the National Institute of Standards and Technology commissioned the John F Kennedy School of Government at Harvard University to identify the difficulties faced by firms attempting to fund early-stage, high-risk projects. The report, published in November 2002, nominated the technology development phase - stretching from proof-of-concept demonstration to the commencement of product development - as the Valley of Death, where there are few sources of funding available to sustain the transition from a scientific enterprise to a soundly-based business venture.

Some of the participants in this project saw two financing gaps:

- One stretching from the upper limit of funding from Family, Friends & Fools (seen to be at ~USD100k) to a low VC investment threshold of around USD2m; and
- A second gap stretching from ~USD2m to ~USD5m.

It is not clear if the second gap was an artefact of the immediately prior history of the USA VC market, which in 2002 was still absorbing the fall-out from the collapse of the technology bubble in early 2000. In Australia, at about the same time, a report undertaken by the Australian Institute for Commercialization for DITR identified the innovation funding gap as extending from ~$100K to somewhere in the region between $1m and $2m.

Likewise, in a report prepared for the Business Council of Australia and the Australian Vice-Chancellors' Committee in 2004, the Allen Consulting Group reviewed the Australian literature concerning impediments to the commercialization of Australian university research and noted that one of the most-cited impediments was the inadequate provision of early stage financing. The same literature suggests that at present the Australian R&D sector is generating ~100 technology-based start-ups per year. The AIC study mentioned above shows that, on average, a start-up needs ~$750K to traverse the Valley of Death, ready for follow-on financing. On these indicators, just this limited population creates a demand for ~$75m annually, and the studies suggest that only a small proportion of this demand is satisfied.

Why is there a "Valley of Death"?

The short answer is: because around the world VC funds have raised their investment thresholds. One explanation as to why they have done this is: because to do so is a rational economic decision. VC funds do not flow to an early stage venture because it is not possible to judge its ability to achieve a positive net present value, so rational fund managers do not invest in these opportunities. There are simply too many of Rumsfeld's famous unknown unknowns in play to allow the risk to be qualified. On this argument, the existence of the funding gap is not an example of a capital market failure but, rather, one of rational decision-making in the face of large uncertainties and should be applauded.

While this explanation has an appealing simplicity, it is by no means the whole story. The fact that the collective behaviour of VC fund managers is characterized by an investment threshold - all other things being equal, above the threshold they tend to invest, below it they tend not to - and that this threshold shifts over time, suggests that the explanation lies in the interplay between the VC fund business model and the sector's history.

Venture capital funds emerged in the USA post-WWII. Entrepreneurs exploiting the investments made in technology during that global conflict generated a demand for risk capital that could not be met by traditional, mainstream capital providers. This demand was eventually satisfied by the invention of the venture capital fund. This involved the repurposing and refinement of the limited liability partnership as a vehicle for mobilizing funds, changes to legislation to make it possible for pension (superannuation) funds to make limited investments in these new vehicles and the

development of skills and techniques for managing portfolios of investments in high-risk/high-growth ventures.

The 1987 stock-market crash changed the direction of this evolution by shifting its investment focus away from start-ups and early-stage firms in favour of mature ventures and leveraged buy-outs and buy-ins. This had the effect of blurring the distinction between venture capital and merchant banking, leading to a permanent reduction in the relative level of investment in early-stage ventures. The collapse of the technology bubble at the turn of the century, when the sector lost somewhere in the vicinity of USD2-5 trillion, reinforced an aversion to investment in risky, technology-based early-stage ventures. From then on, start-ups needed to demonstrate (rather than just project) positive cash flows and show that they had a management team capable of absorbing larger quanta of investments designed to substantially accelerate their already gazelle-like growth.

Sources of External Capital

Much of the attention given to start-up funding in the financial press focuses on the role played by institutional venture capital (VC) funds. VC funds are portrayed as the primary source of external capital for the rapid-growth start-up sector; however, in reality VC funds tend to restrict their investments to later stage and larger deals.

A decade ago, external funding of $1m for a start-up could have been raised in this way. But as VC funds have developed and expanded their role (especially through the technology bubble at the turn of the century), their ambitions have similarly grown. Surveys undertaken in the USA by the Centre for Venture Research (University of New Hampshire) reveal that most VC funds in that country will now only consider opportunities where they can invest at least USD7m ($7.95m). Parallel research in the UK by the Hunter Centre for Entrepreneurship (University of Strathclyde) shows that British entrepreneurs struggle to secure VC funding if they are looking for less than £2m-3m ($4.5m-6.8m)[1].

Finance theory predicts that efficient capital markets should ensure that funds flow to investment opportunities with a positive net present value but, the practical reality is quite different. The consequences of the existence of the Valley of Death are so severe and, generally, so poorly understood, that it is worth briefly examining the reasons for the phenomenon. Why have VC funds around the world “gone North” by raising their investment thresholds?

The VC Fund Model

A venture capital fund is a pooled investment vehicle (often a limited partnership in the USA), investing the funds of third-party investors in enterprises that are too risky for mainstream capital markets. In the USA most of the capital invested in VC comes from pension funds and public endowment funds with smaller proportions coming from investment banks, banks and publicly listed funds.

In Australia, most capital is supplied to VC funds by superannuation funds with much smaller proportions coming from investment banks and publicly listed funds[2].

For a VC fund to be able to tap into this supply of capital, the mandates under which the investing institutions manage their own funds must make provision for a proportion (typically small) of their funds under management to be invested in the venture capital asset class. In the USA, it is very common for the pension funds to have target allocations to VC of 5-10% of funds under management as part of their proactive portfolio management for exposure to alternative asset classes. In Australia, most superannuation funds have no allocation for VC and those few that consider VC investment typically have a cap of less than 0.5% of funds under management available for VC with no compulsion or mechanism to realise that opportunity within their portfolio.

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[1] —,2006: “*Business angels, Giving ideas wings*”, *The Economist* [print edition] 14th September 2006.

[2] Murphy, A, 2003: *Queensland Venture Capital Report, 2003*, Queensland Department of Tourism, Regional Development and Industry, Brisbane.

VC funds are operated by a manager; where the fund is structured as a limited partnership, the fund manager is known as the General Partner and the third-party investors in the fund are known as the Limited Partners.

A VC fund is also expected to provide managerial and technical expertise to its investees along with valuable networks of market contacts to underpin company growth and facilitate investment exits.

Typically the fund manager is an entity led by a small team of senior professionals supported by analysts and administrative staff. Worldwide the career backgrounds of the senior professionals varies but, the norm is that the senior team are mostly experienced operational managers with significant experience as entrepreneurs, usually some technical qualifications and a track record related to business investment and success in high growth companies. In Australia the range is quite narrow. Nearly all our senior professionals come from a finance background, usually with experience in investment banking, mergers and acquisitions, or with other types of firms in the corporate investment and finance space. Very few have entrepreneurial experience, technical qualifications and a track record related to business investment and success in high growth companies. This failure in skills is usually considered a key driver of the very poor performance of the Australian VC sector.

Most VC funds have a fixed life of 10 years. The investment cycle for most is three to five years, after which attention is directed to managing and making follow-on investments in an existing portfolio. The portfolio investment strategy is critical, as it limits the exposure of the fund to any one investee company or its products. In such a fund, the third-party investors have a fixed commitment to the fund which is “called” at short notice by the VC over time as the fund makes its investments. There are substantial penalties for an investor, or Limited Partner, that fails to participate in a capital call.

In a typical VC fund in the USA, the fund manager receives an annual management fee of 3-6% of the capital committed to the fund and a 20% share of the net profits (also known as the “carried interest”, or the “carry”). In a typical VC fund in Australia, the fund manager receives an annual management fee of 2% of the capital committed to the fund with arrangements to reduce the fee over time as capital is invested. An Australian VC must then return from its portfolio to its investors the invested capital plus a hurdle rate of interest before the VC can access a 20% share of the net profits. The hurdle rate inappropriately skews the performance of Australian VC funds, creating significant disincentives for all parties to participate in VC in Australia.

Given the investment cycle of a typical fund, the 2% management fee is normally the only source of operating revenues for the first 30%-60% of the fund’s life-span. The overhead costs involved in running a fund are considerable and these costs do not scale directly with the size of the investment. A fund’s outlays on analysis, due diligence, deal structuring and post-investment oversight for a small investment are usually much the same as those for a large investment. From the perspective of management of a limited operating budget during the investment phase, the business model dictates that a prudent fund manager will concentrate on a few, large, later-stage investments, rather than many smaller early-stage ones.

A VC fund’s business model, the backgrounds of its senior professionals and the sector’s received wisdom thus conspire to drive the raising of investment thresholds and the observed tendency of VC funds to become larger, so they can make more, larger, later-stage investments. Because the VC sector worldwide shares a business model, recruitment practices and a history, the emergence of a funding gap is a global phenomenon. The funding gap - truly a Valley of Death, where promising start-ups go to die - is more an example of system failure than it is of a capital market failure.

In the USA, where VC funds are substantially larger, enjoy higher rates of management fees and are not confronted with a distorting hurdle rate the very best VC firms still seed their own deals. That is, when confronted with an early stage opportunity that looks promising but, is too immature to adequately assess for a VC investment the VC will make a small investment, typically no more

than USD300k for a period of 6-18 months. This seed investment enables the entrepreneur to demonstrate performance and value growth while the VC has minimal involvement but, excellent access. If the seed phase is successful the VC can have greater confidence in moving forward with a VC investment, if the seed phase is unconvincing the VC can walk away without entanglements since the investment is usually structured to suit that outcome.

In Australia, some VC firms attempt to seed their own deals but, with the much smaller fund sizes and the commensurate scarcity of resources along with the inadequate skills base of the VC management teams the Australian VC firms tend to focus their efforts on those investment opportunities that are already suitable for VC investment, i.e. later stage opportunities with established intellectual property, a substantially complete team, contracted customers and revenues.

The Economic Importance of Scalable, Rapid-Growth Start-Ups

The continuous creation of new rapid-growth start-ups plays an important role in any developed economy, and this is especially noticeable in the USA.

In that large economy, the rapid-growth start-ups - and especially those commercializing applications of new technologies - have a demonstrated capacity to create a disproportionate amount of macro-economic growth, innovation and net new jobs[1].

The importance of rapid-growth start-ups in renovating Australia's smaller economy is not so easily discerned in the midst of a resources boom. Resource exploitation calls for established industry heavyweights that can muster the massive investments and the management skills needed to bring major resource projects on stream. Not surprisingly, it is their activities which capture attention.

In 2006, the Treasury Secretary Ken Henry referred to Australia's two-speed economy of resource-boom states *"charging along at a rapid pace, with the rest in the wake"*[2]. States with a rich resource endowment like Western Australia, Queensland (and the Northern Territory) have resources accounting for 80% of all their merchandise exports, while for a manufacturing state like Victoria it is around 20%. While the argument for a two-speed economy has probably been overstated, the economic significance of rapid-growth start-ups based on innovation will be more visible in states with a poor endowment of those resources in global demand.

One characteristic these new rapid-growth start-ups share is a need for substantial capital to grow the venture. The creation and survival of these companies is critically dependent on their ability to secure capital, for without it this type of enterprise simply cannot be built. Because most entrepreneurs do not have sufficient funds to completely self-finance a rapid-growth start-up, they must secure external funding for their ventures.

These start-ups typically implement a strategy that trades early profitability for growth[3] and, consequently, they face several years of negative earnings while they refine their product or service and establish a beach-head in their selected market. Consequently, they will be ineligible for a commercial bank loan, as they will not have the needed excess cash-flow to make the required principal and interest payments. Additionally, rapid-growth start-ups usually do not have much in the way of securable assets - what assets they do have are various intellectual properties, which, while being deepened and made more valuable through the commercialization process, are much more difficult to collateralize.

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[1] Van Osnabrugge and Robinson, 2000: *Angel Investing, Matching Start-Up Funds with Start-Up Companies,* Jossey-Bass/John Wiley, New York; Kortum and Lerner, 2000: "Assessing the Contribution of Venture Capital to Innovation", *RAND J. Econ.* **31** pp.674-691; Sohl, 1999: "The Early-Stage Equity Market in the USA", *Venture Capital,* **1** pp.101-105.

[2] Cited in *Beyond the Boom,* an article by Tim Harcourt, Chief Economist, Australian Trade Commission, Sydney, published on the AusTrade web-site (www.austrade.gov.auH) on 16 September 2006.

[3] Boer, 1999: *The Valuation of Technology*, Chapter 6, pp.271-145, John Wiley & Sons, New York.

Consequently, most rapid-growth start-ups are left with equity financing as the only viable option for financing their enterprise. Equity financing involves selling a part of the actual ownership of the company, either by selling common stock or convertible preferred stock in the company to an investor.

The pre-seed and seed stages in the formation of a rapid-growth start-up are often funded from internal (or quasi-internal) sources; for example, by the founders themselves, and their friends and family. This founder's funding will often be derived from personal savings, credit card debt and second home mortgages[1]. The upper limit to founder's funding is somewhere in the range $100K-250K, in many cases it is significantly less and is insufficient for viability, even in the short run.

[1] The term *founders funding* is preferred to the more derogatory *3Fs funding*: monies sourced from "friends, family and fools".

APPENDIX E – GLOBAL TRENDS IN ANGEL INVESTMENT: THE EMERGING MODEL

We begin this part of our Submission by briefly reviewing the history of the technology bubble that inflated at the end of the 20th century. While business angel groups have existed for some time - for example, London Business Angels was founded in 1982 - the collapse of this investment bubble catalysed the emergence of trends that are now reshaping the global angel sector.

THE TRIGGER: THE COLLAPSE OF THE TECHNOLOGY BUBBLE

The beginning of the technology bubble that occurred at the end of the 20th century can best be marked by the emergence of the Amazon.com linked web-site and book sales database from a garage in the city of Bellevue, Washington State in 1994. Although Amazon became the iconic internet company of the dot.com boom, its early history is instructive, as the efforts of its founder, Jeff Bezos, to secure early stage funding from venture capital firms were rebuffed. Amazon's critical early establishment was funded by a syndicate of twelve angel investors.

Venture capital (and angel) investments soared from this relatively quiet and little noticed beginning. VC investments, mainly in high technology ventures, increased 15-fold in six years, from USD6.3 billion in 1995 to a stratospheric USD90 billion in 2000. At the same time, the number of deals increased less rapidly, from 1,128 in 1995 to 5,485 in 2000, only a five-fold increase, implying that average deal size increased 3-fold over the interval, an unprecedented growth in deal valuations. The aggregate investment of USD90 billion in 2000 meant that for the first time in history, VC funds invested more in one year than the angel community (estimated to have invested ~USD40 billion in the same year). Competition between newly-minted angels and VC fund managers for deals was reported, but otherwise the two markets remained roughly complementary over most of the bubble's rise.

As the bubble expanded, the number of VC funds in the USA increased, as did their average size. Over the period, the number of VC funds rose from 458 in 1996 to 1,010 in 2000; over the same period the estimated number of angel investors doubled. Immediately prior to the beginning of the end in 2000 there were 19 VC funds with more than USD1 billion under management, up from four in the period between 1996 and 1998.

There were several contributing causes to the inevitable collapse:

- The surge in the number of active VC funds had generated a demand for more fund managers, and this exceeded the supply; the proportion of inexperienced and/or poorly trained fund managers in the pool of investment professionals increased, with the effect that world-wide VC funds became less savvy.
- As the size of funds grew, and the aggregate management experience was diluted, to compensate the in-house processes used to coordinate investment activity became increasingly formal and structured to, with the effect that these funds became less nimble and slower in their decision-making than they had been when smaller.
- As the amount of seasoned management capacity available to a fund began to shrink, so did their ability to attend to value-adding activities with investees after the investment event; effectively, the value-added dimension of VC investing went by the board.
- Because the growth of the bubble created an overheated investment environment, VC funds began to seek investment opportunities earlier in a start-up's development trajectory, effectively squeezing out the time available for early-stage angel investment to do its value-adding work.

- As the time from start-up formation to IPO shrank, 'designer companies' began to appear to exploit the stag profits available in a red-hot IPO market1. So-called 'new economy IT incubators' also emerged, claiming that they could grow an internet start-up from its foundation to IPO in six to nine months.
- The possibility of achieving huge capital gain multiples blinded many investors - VC managers and angels alike - to the wisdom of only investing what you can afford to lose.

The convergence of these factors led to a sudden deflation of the bubble. It began to collapse in the second quarter of 2000, and by the third quarter of 2001 it was all over. Part of the fallout from the collapse was the re-emergence of the funding gap, and a re-focusing of angel investor efforts to overcome it, leading to the global trends we describe below. One of the most noticeable of these has been the rise in the rate of formation of formal, structured collectives of angel investors, or *angel groups*.

DRIVERS

Post-bubble the migration of the VC sector towards later stage investment underlined the complementary nature of the relationship between angel and VC investment. Without angel investment, the deal flow towards VC investment choked off. At the same time, this migration led to the re-emergence of the funding gap, confronting angels with the need to overcome the inefficiencies and costs of solo investment. In this changed environment, solo angels on both sides of the Atlantic began to see the advantages of collective investment activity, and to coalesce into informal groups.

By forming groups, angel investors could share networks, thus expanding the number (and possibly, the quality) of referrals to which each member of the group was exposed. Further, the effort involved in screening opportunities, performing due diligence and structuring deals could be shared, with the added advantage that specialist expertise possessed by one angel in a group could be leveraged to the advantage of all. The opportunities for investment skill development through peer-to-peer learning would inevitably be enhanced.

Considerations like these were important drivers of the trend towards group formation but, perhaps the most important one was the improved ability to better service the funding needs of rapid-growth start-ups. By coordinating investments by a number of group members, the size of an investment that could be made into a promising start-up could be scaled up. Syndication of angel investment held out the prospect of making investments in technology-based start-ups that were previously difficult, because the quantum of investment needed to advance them through the Valley of Death[2] was out of a solo angel's comfort zone.

One of the other lessons drawn by angel investors from the bubble and its aftermath was the recognition of the limits to the pace at which a rapid-growth start-up could be built. Time was needed for the value-adding post-investment activities of angels to take hold. Otherwise, the pre-conditions for sustainable growth were not produced. Common deficits of start-ups funded during the bubble were: absence of a robust business model, no clear marketing strategy, and a management team unable to execute by reason of shortfalls in their abilities and motivations. Post-bubble angels had a greater appreciation of the virtues of patient investment in, and constructive interaction with, their selected rapid-growth start-ups.

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[1] Perhaps the most famous example of these was Pets.com a short-lived online business that sold pet accessories and supplies direct to consumers over the World Wide Web. It launched in August of 1998 and went from an IPO at $US11/share on a major stock exchange (the NASDAQ) to liquidation in 9 months.

[2] A 'rule-of-thumb' sometimes used to quantify the seed/start-up investment needed by a new technology-based start-up is that the costs of commercialization are roughly ten times larger than the cost of the research on which the technology rests.

In the USA the Kauffman Foundation was instrumental in promoting angel group formation through its support for the establishment of an industry peak body, the Angel Capital Association in 2002. In the European Union, the corresponding body is the European Business Angel Network (EBAN), modelled on the UK National Business Angel Network (now the British Business Angels Association: BBAA). These bodies brought existing angel groups together to share experiences and best practices, with a view to stimulating more skilful investment and the establishment of more groups. One consequence of these initiatives has been the adoption of a degree of formality and structure by angel groups, a process that still continues.

LABELS

Various labels are applied to these groups, which give rise to some confusion; however, a settled nomenclature seems to be emerging:

- ***Angel Associations**:* This term is increasingly applied to regional or national umbrella organizations to which formal angel groups affiliate. Three of these have already been mentioned: the USA's Angel Capital Association (ACA), the EU's European Business Angel Network (EBAN) and the UK's British Business Angel Association (BBAA). These umbrella bodies are emerging as peak 'industry' bodies, interacting with governments to promote the interests of the sector, to identify best practice through sector-wide consultation, and to assist their affiliates in adopting these practices. AAAI performs this role for the Australian angel investor community.

- ***Angel Groups**:* This is the label applied to groups of high net worth individuals who have formed a formal membership-based entity in order to pool money to invest in larger deals that would otherwise be out of reach. This arrangement offers its members opportunities to:

  - Diversify investment risk across multiple investments;
  - Leverage and share business contacts and investment expertise (for screening, due diligence, valuing and monitoring of investments);
  - Add more investments to an existing portfolio; and
  - Participate in follow-on rounds to existing investments.

  In America and Europe, the number of angel groups is growing at something like 65% *p.a*[1]. In terms of activities, an angel group facilitates the delivery of a flow of investment opportunities, bringing deals to the notice of members by arranging pitching forums and the like, and it recruits new high net worth individuals to the membership.

- ***Angel Syndicates**:* Not all members of an angel group invest in each opportunity that comes to the group's notice. The sub-set of angel group members who do invest is referred to as an angel syndicate. The decision to invest is taken individually by angel group members, but once taken, it is usual for a member of the group to be nominated to act as syndicate leader, coordinating due diligence, valuation, mentoring, monitoring and the like.

At the top level of the regional or national network, one of the emergent primary functions is providing its affiliated angel groups with opportunities to enhance their investment skills. In North America, network leaders from the USA and Canada have - through the Angel Capital Association - partnered with the Kauffman Foundation to establish the *Angel Capital Education Foundation.* This organization mounts conferences, regional meetings, educational workshops and seminars for angel investors and produces research projects and reports on group activity.

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[1] A study undertaken for the New Zealand government puts this slightly higher, quoting a growth rate of 67% over the last three years for both the USA/Canada and Europe: MED, 2007: *Baseline Review of Angel Investment in New Zealand,* Ministry of Economic Development, Wellington [undertaken as part of the formation of the Seed Co-Investment Fund]

In the EU, the French National Federation of Business Angel Networks has been a pioneer in organizing training events through *L'Ecole des business angels* for angel investors, and for individuals operating in the role of an angel group administrator. Belgium's Solvay Business School has followed this lead, and now offers a similar program.

Australian angels have set up a similar structure: AAAI has been established as the national peak body, and an entity delivering angel investor skill enhancement has been operating for more than a year. Initiated by a group of Queensland business angels, *The Angels Institute* provides training workshops for newly forming angel groups, and provides them with access to deal-tracking software (the *AngelSoft* platform, devised by a member of the New York Angels group).

Although angel group formation is the dominant trend, the proportion of the angel population in formal groups is still very small - probably no more than 5%.

THE RESULT: AN EMERGING MODEL

Out of the North American and European experience, and from the experiments under way in Australia and New Zealand, the contours of a best-practice model angel group are now visible. The model angel group described in this section is both a synthesis and an abstraction.

It is a synthesis because it draws on the findings of surveys conducted by peak angel networks in the Northern Hemisphere[1] (together with some anecdotal evidence from Australia and New Zealand). It is an abstraction, in that it paints an average picture, which conceals a great deal of variety; only some of this variety can be explained by differing states of development of angel groups in different national settings. In aggregate, the number of angel groups from which this model is distilled exceeds 360, involving more than 16,000 angel investors as members.

Angel Group Size

The average angel group has around 45 accredited members (i.e. angels who would pass the relevant 'sophisticated investor' test). The membership tends divided according to the 80/20 rule into a core of active angels who take on leadership roles in the group and/or organize syndicates, and a larger group of more passive investors, most of whom invest, except for a small proportion of virgin angels (recent recruits to the group who have yet to make their first investment).

There is a wide range in group sizes. There seems to be a lower limit around 10-12 angels, and a natural upper limit around 70-80 members. The TechCoast Angels is the largest angel group in the USA; based in Southern California, it has 300 members, and has found it expedient to divide itself into four chapters of roughly equal size. The Queensland-based Brisbane Angels came into existence in 2006 with 60 members, and two New Zealand angel groups - Ice Angels, based in Auckland, and the Upstart Angels, based in Dunedin - both have about 90 members, and both are linked to university-affiliated technology business incubators.

Group Structure

Most angel groups adopt a membership-based legal format, although about 17% of the American and Canadian groups have no legal structure at all. This subset contains some very new groups, but also others that have been established for years. Where a formal structure has been adopted, somewhere between a third and a half are set up as not-for-profit entities.

The majority adopt the principle that member angels make their investment choices as individuals, only 13% of the North American groups operate with investment decisions being taken by majority vote.

On initial formation, angel group members prefer to manage their organizations as volunteers, with perhaps some paid administrative support. As groups increase in size, the trend is towards more

[1] The two main sources of statistical information on angel groups used here are: Angel Capital Education Foundation *Angel Group Statistics for 2006,* (ACEF, Kansas City), and the EBAN *Statistics Compendium* 2005 (EBAN Secretariat, Brussels).

professional management support, sometimes delivered under a service contract by a provider looking after more than one angel group. There is apparently no serious conflict between an angel group being membership-led and professionally supported.

Objectives and Concerns

The value proposition an angel group makes to its membership is given above in the discussion of nomenclature, where angel groups are distinguished from angel networks and syndicates. When an angel group is set up and adopts a legal format, its value proposition is usually translated into a set of explicit objectives for the group, which typically include:

- To enhance the collective investment skills of the group;
- To educate entrepreneurs seeking investment (to enhance the quality of the deal flow);
- To recruit new members to the group (to reach a target size of X);
- To involve members in screening prospective investees, reviewing business plans, performing due diligence, structuring deals, and working with investee management teams after investment.

These objectives consequently tend to define the main concerns of those members leading the group:

- ***Enhancing investment skills*** - Fortunately, where regional or national networks exist, they have taken on the task of providing workshops to augment the learning-by-doing that occurs as a result of angel group investment activity. It is noteworthy that the Queensland angels who set up *The Angels Institute* saw this need as even more urgent as that for an Australian peak body.
- ***Educating entrepreneurs*** - Angel groups usually discover they have a vested interest in educating entrepreneurs seeking investment from the group. The more investment-ready an opportunity is, the less burdensome the due diligence process becomes. Consequently, angel groups inevitably become involved in assisting entrepreneurs improve the investment readiness of start-ups to be formally presented to the group as an investment opportunity.

  Research into the design of investment-readiness programs[1] has identified the three main problems that such programs need to address: equity aversion, investability and presentation failings. While equity aversion should not normally be a problem, investability and presentation failings may be. Some mature angel groups have developed structured programs that build quality into the deal flow they consider for investment, but these are expensive in both time and effort. The cost of these interventions is only partially defrayed by the registration fee paid by a start-up seeking investment from an angel group, where such fees are charged. Delivery of a group's investment-ready program is usually a responsibility shared between a subset of the membership with an interest in this area, and the group's deal flow manager (where one exists).
- ***Recruiting new members*** - National statistics on the distribution of wealth among the population suggest that the number of latent angels in a developed economy is quite large, as we have shown in the Australian case, using conservative assumptions. The challenge for an angel group is to find these latent angels[2], recruit them, and assist them to become active angel investors.

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[1] Mason & Harrison, 2001: *Designing an "investment Ready" Program: Some Considerations,* Report to the Small Business service, DTI, London.

[2] One Danish angel group has solved this problem by outsourcing the task to a search company to which they have provided a profile of the type of high net worth individuals they seek as members.

An impediment to recruitment is the fact that membership-based angel groups require dues from their members to defray their operating costs. These costs may include compensation for administrative or professional management support, and prospective recruits may see as unnecessary or an indulgence. Membership dues in USA angel groups average to $1,275 *p.a.*[1]

Experienced groups recruit new members using a *taster membership* offer, in which a prospective recruit is invited to attend one or two group events and is encouraged to interact with other group members, before a membership offer is made. The rationale is that the taster provides an opportunity for the prospect to see at first hand what membership dues pay for, in situations where the quality of purchased services and other inputs is on display.

- ***Involving members in group activities*** - Angel group summits show that a perennial concern of leaders of angel groups is the involvement of all dues-paying members in the activities of the group. As mentioned, as with most groups, without attention the 80/20 rule comes into play: 80% of the activity is generated by 20% of the membership. However, the rationale for angels to invest in groups is for their collective investment skills to be raised (and their losses curtailed); in this context skill development is predicated on learning by doing.

Two special cases need particular attention:

- The first involves group members who are virgin angels - they have joined the group, they have funds to invest, they desire to do so but, have yet to take the plunge. A policy adopted by some groups is to ease them into the role of active angel investors by including a virgin angel as a minority investor in a syndicate where a majority of seasoned investors participate.

- The second case involves those members who think paperwork is a headache they do not need. They want to participate as investors in the asset class without getting too involved at the level of process. Opinions among group leaders is divided as to whether such individuals should be accepted as group members in the first place[2].

In the general case, members must be clear about what is expected of them at the recruitment stage. The invitation to join should state this explicitly and members should be held to their commitment. Most angel groups require newcomers to sign a formal membership agreement when they join and this agreement typically includes assent to serving in leadership roles, adherence to a code of conduct[3] and the like.

Global Investment Patterns

In the angel market generally, there has been a decline in the number of investments involving solo angels (especially in the UK)[4], and a corresponding increase in the number involving angels investing as a syndicate. The size of these deals is increasing, but the size of the investments by individual angels is decreasing.

These trends are attributed to the increase in the number of angel groups, the support they give to deal-specific syndicated investment, and their ability to break down large deals into smaller components, making it easier for individual angels in a group to participate.

The average size of investment deal ranges from $250k (USA) to $450k (UK) with the continental European average at an intermediate $350k. Information is available for the level of investment per deal per USA angel participating in a group, which averages $30k. Groups report they expect to

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[1] Based on a very small sample

[2] But see our discussion of side-car funds below under **Co-investment,** below.

[3] The Code of Conduct used in common by AAAI is attached to this Submission.

[4] Mason, 2006: *International trends in angel investing,* presentation to the EBAN Annual Congress.

make between 3-9 new investments a year (average, 4) into new start-ups, as well as providing around three tranches of investment into companies with which the group is already engaged.

Some examples of angel groups working together to put larger investment packages together are reported from the USA with deals in the range $950k - 2.25m being closed.

Around 80% of angel groups report a strong preference for investment into start-ups at the seed, start-up or early stage, with the average age of an investee at the point of first angel investment being 2 years.

Syndication

Syndication is increasingly an activity undertaken by sub-sets of members within an angel group. Groups tend to make investments in a staged process:

- ***Opportunity origination*** - The group is made aware of the opportunity, typically through chance encounter or referral from a business associate of a member, or from an allied organization.
- ***Initial screening*** - The investment readiness of the opportunity is evaluated, sometimes using a formal diagnostic. In promising cases some work may done at this stage to improve readiness. A positive outcome from this stage leads to formal registration of the opportunity with the group.
- ***Detailed evaluation*** - Involves presentation(s) to the group, often in a formal pitching session, examination of the business plan, consultation with associates and among members, initiation of a due diligence process.
- ***Syndicate formation*** - Commences with the identification of a syndicate leader (usually a seasoned angel investor with some familiarity with the industry sector concerned). Involves face-to-face meetings with start-up principals, take-up of references, consideration of due diligence reports, background research. Some of this activity is supported by the group's deal manager (where one exists).
- ***Deal structuring*** - Involves negotiation with the start-up's team to agree valuation and the nature of the deal. On the syndicate's side, this stage involves achieving consensus over the make-up of the investment package, including its dollar value and the nature of the post-investment engagement, and who in the syndicate will take what roles *vis-à-vis* the portfolio investment.
- ***Post-investment engagement*** - The degree of post-investment involvement by a syndicate usually depends on the stage of start-up development, and its business performance. Engagement typically includes provision of advice and mentoring, providing access to business networks, functional inputs at management or governance levels. Intense post-investment engagement has a positive impact on the returns.

The advantages of syndication are that it makes it possible for larger tranches of angel investment to be made into a start-up, accelerating its development. Additionally, the various forms of post-investment engagement can be distributed among syndicate members according to their talents, experience and inclination. Overall, syndication reduces risk and the contribution per deal made by individual angels.

Co-investment

Three patterns of co-investment appear to be emerging: co-investment by angel groups, co-investment through side-car funds, and co-investment with VC funds.

- ***Co-investment by Angel Groups.*** Co-investment by angel groups working together has already been mentioned. So far, examples of this activity have only been reported from the USA but is probably also taking place in Europe where there has been some amalgamation

of angel groups. As a pre-condition, a high level of trust must exist between the cooperating groups. In Australia, it is likely that the first examples of this form of co-investment will occur in Queensland, if this has not happened already.

- ***Side-car Funds.*** Side-car funds appear to have been invented as a way of dealing with angels who wish to belong to an angel group, but do not want to have a close involvement with its operations. About 40% of angels groups have one of these funds, or something similar. A trade-off is made between the group and those of its members who elect to be portfolio investors in the asset class, in that these members agree to make available to the side-car fund a set amount of their discretionary funds each year. When a syndicate forms, the side-car fund may participate, contributing a negotiated quantum of funds to the syndicated deal. However, once these preliminaries are settled, the side-car fund plays no part in the subsequent negotiations over value or deal structure. If the deal is closed, the side-car fund contributes its quantum, as previously agreed, and receives is share of the distribution of returns at exit.

  The side-car fund mechanism is very flexible, as it allows external bodies to contribute to closing the investment gap, without incurring the otherwise significant funds management overheads. In effect, the side-car fund uses the angel group's due diligence and deal structuring capacities to substitute for the role of fund manager. In the UK, the London Angels group pioneered an arrangement where the City of London provided the money for a side-car fund (called a *side-by-side fund* in this instance); this arrangement was so successful that the mechanism is being replicated by the UK DTI with other British groups.

The advantages of being a small, agile economy when there is a need to renovate a national Innovation System is illustrated by New Zealand, with its formation in 2005-06 of the New Zealand Venture Investment Fund (NZVIF). This is a Crown-owned company that manages a NZD160m Venture Capital Fund of Funds and a NZD40m direct Seed Co-investment Fund. The intention behind both of these funds is to help cultivate a sustainable and long-term New Zealand angel and venture capital investment market. The New Zealand Government has identified the need to provide NZ companies with rapid-growth potential with the capital and company building expertise they need to succeed. In this connection, the Seed Co-investment Fund is the most relevant here, as it functions as a side-car fund *vis-à-vis* angel groups.

The Seed Co-Investment Fund (the Fund) is managed by NZVIF, and is an equity investment fund aimed at small to medium sized businesses at the seed and start-up stage of development that show strong potential for high growth. The key objectives of the Fund is to enhance the development of angel investor networks, stimulate investment into innovative start-up companies, and to increase capacity in the market for matching experienced angel investors with new, innovative start-up companies.

The Seed Co-Investment Fund will invest its NZD40m of matched seed funding over 5-6 years alongside groups of angel investors selected as *Seed Co-Investment Partners*. Because one of the objectives is to stimulate angel group formation, NZVIF has subdivided this pool of money notionally into ten sub-funds of NZD4m. This subdivision has been made in expectation that over the 5-6 year investment cycle, it will stimulate the formation of ten angel groups with the status of approved Seed Co-Investment Partners - currently, there are three of these with this standing[1].

In effect, at the Co-Investment Fund level, NZVIF does not evaluate companies as investment targets, it performs due diligence on the angel groups that will perform this function. NZ companies at the seed and start-up stage are eligible for co-investment where there is 50/50 matching private investment will be made by the linked angel group. The Seed Co-Investment Fund acts as a direct investor on the same terms as its co-investment partner, with the Fund's investments limited to a

[1] Ice Angels, Upstart Angels and the health care research charity Cure Kids.

maximum of NZD250,000 in any one company or group of companies[1]. Investments in start-ups engaged in property development, retailing, mining and hospitality industry are excluded.

- ***Co-Investment with VC Funds.*** In the USA something like 30% of angel groups report co-investment with VC funds. This form of co-investment requires a degree of maturity in both parties to the co-investment deal which may be difficult to achieve in Australia at present. Even in the USA the arrangement is not without its problems, as the ACA advises angel groups to approach such arrangements with caution, as there have been cases where a VC fund has knocked-out angel participation, once negotiations with a start-up have been initiated[2].

Returns to Angels in Groups

In November 2007, a study by Wiltbank & Boeker[3] (WB hereafter) was published which analysed the largest set of data about returns to angel investors for the USA so far assembled. All the participants providing data to this study were accredited under the Securities and Exchange Commission's standards, analogous to Australian Corporations Law *sophisticated investor* definitions. This data set was built up by the authors approaching 276 angel groups, seeking the cooperation of their membership. Eighty-six groups agreed to participate, with 13% of the aggregate membership of these groups responding to a questionnaire about their angel investment activity. The resulting data set contains responses from 539 individual angel investors.

The report analyses returns to these angel investors in the same terms used by the investors themselves, that is, by the *multiple* of cash returned from an investee divided by the sum of the capital invested. For example, if $100k is invested in a start-up which returns at exit $500k to the angel investor, the multiple is 5X. Note that the investment does not need to be made at the one point in time, but may involve several investment tranches. These multiples are qualified by a second factor: the time taken from the first tranche to the exit; in other words, the duration of the *investment hold*.

This study finds that the overall returns for group-affiliated angels averaged 2.6X, and that this return was secured after an average investment hold of 3.5 years. The proportion of exits returning more capital than invested was 48%, with 7% of all investments achieving multiples of 10X. The portfolio effect was marked, 61% of investors had an overall multiple in excess of 1X.

The distribution of returns to angels investing in groups is similar to, but distinguishable from that achieved by VC funds, and the findings agree with anecdotal experience. That is, there are no great surprises in terms of the multiples achieved, the frequency of their occurrence, or the holding time needed to achieve them.

Strategic Choices

Some strategic choices influence the returns experienced by angels investing in groups through angel syndicates. Returns are affected by the amount of effort given to due diligence, the deployment of industry expertise within a syndicate, and the level of post-investment engagement by syndicate members with the start-up. In relation to the first and last of these, the WB study investigated the quantum of effort involved, but did not examine the quality of these inputs.

- ***Due diligence*** - The median amount of time spent on due diligence was 20 hours; enough investors spent more than the median to lift the average to 60 hours. This compares with the months typically spent on due diligence by a VC fund manager. The time spent on due

[1] However, there is the possibility of another $250,000 in follow-on capital at the discretion of NZVIF.

[2] A UK fund manager is reputed to have remarked: *"In an investment deal, an entrepreneur is not an asset, and angel investors are the first liability to be dealt with!"*

[3] Whiltbank & Boeker, 2007: *Returns to Angel Investors in Groups,* Ewing Marion Kauffman Foundation/Angel Capital Education Foundation, Kansas City, Missouri.

diligence was found to have a material effect on outcomes: by splitting the sample into two groups - one spending less than the median amount of time, and one spending more - WB found that of those spending less, 65% did not achieve even a 1X return (average was only 1.1X).

Of those spending more than the median 20 hours of due diligence time, only 45% achieved a less than 1X return, with the average return being 5.9X. The difference was even starker when the performance of the top and bottom quartiles was compared: the top quartile achieved a 7.1X return.

- ***Industry expertise*** - The rationale for including in syndicates one or more members with experience in the industry sector in which the start-up proposes to operate is that access to this experience simplifies due diligence, allows more insightful analysis of key success factors, and can provide the start-up with access to relevant business networks. The downside is that there may in fact not be much in the way of deal flow from those industry sectors from which the group's membership is drawn.

  The WB study found that about half of all the investments made by respondents to their survey were made outside the area of expertise of the investing member or members. When made within, the average length of relevant experience of investors in the sector was 14 years. These investments - informed by relevant industry experience - generated returns twice as large as those made outside the area of expertise.

- ***Post-Investment engagement*** - The WB study also found that interaction with the investee start-up post investment was significantly related to venture outcomes. The average frequency with which angel investors met with the start-up's management team was twice a month. The activities included all those already mentioned: mentoring/coaching, strategic consultation, and monitoring financial information.

  Angels meeting with investees at the average rate experienced an average multiple of 3.7X, achieved in four years. Angels meeting with their investees only twice a year experienced an average multiple of just 1.3X, achieved in 3.6 years. WB emphasize that their study did not take account of the quality of investor-investee interaction, only its intensity.

The WB study also investigated the effect on returns of follow-on investments made into a start-up by members of the group, and the impact of formal VC involvement on the returns experienced by angel group investors.

- ***Follow-on investments*** - Angels responding to the WB study had made follow-on investments in 29% of the ventures from which they had exited. This was not a measure of the incidence of follow-on investment, rather that when a follow-on investment was made, whether the angel investor provided some or all of it.

  The survey showed that where such investments were made, the angels concerned experienced only an average 1.4X return, significantly lower than those who did not make follow-on investments where the average return of 3.6X. 68% of those making follow-on investments lost capital.

- ***Formal VC involvement*** - In this sample, 35% of the ventures took on VC investment after angel financing. The survey provided no information as to whether VC-backed ventures with initial angel investment performed better or worse than those without VC involvement.

  The multiples experienced by those start-ups which received subsequent VC funding were not significantly higher than those that did not. However, there was a significant difference in the distribution of returns.

  Those with VC investment had a more extreme distribution: higher enterprise failure rates and larger exits. Where VC was not involved there were fewer failures, but more exits with multiples in the 1X-5X range. Although WB do not draw the conclusion, on the face of it, later

VC financing results in ventures being driven harder to achieve higher valuations at exit, with a corresponding increase in the number of failures.

Summary

The collapse of the technology bubble in the first few months of the 21st century had the unexpected outcome of re-invigorating the angel wing of the external equity capital market. This under-researched and relatively invisible source is the oldest and largest segment of the venture capital industry. In Australia it has an unwritten history that probably stretches back to the early days of European settlement.

This sector's engagement with a re-emerging funding gap - through the innovations described above - has largely been a grass-roots response, facilitated by national organizations which are themselves something of an innovation.

Until recently, when the collapse of the technology bubble inflicted so much carnage on wealth, employment opportunities and entrepreneurial aspirations based on new technology goods and services, governments in the developed economies of the West were little motivated to look to alternatives to formal venture capital. As Dr Jeffrey Sohl trenchantly remarked in 2003:

> *"If the goal of public policy initiatives is to spurn the commercialization of innovation in the United States, one needs to look no further than initiatives directed to the angel investor".*