INVESTIGATING THE BEHAVIOR OF VENTURE CAPITAL SYNDICATIONS AND ITS' IMPACT ON THE ENTREPRENEURIAL GROWTH (WITH AUSTRALIAN DATA)

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ABSTRACT

In a modern economy, venture capital not only provides the finances, but also the essential institutional infrastructure for the technology driven and other promising enterprises to grow. Given the level of uncertainty and diverse recourse requirements involved in young enterprises the venture capitalists would often prefer to syndicate investments pooling together the information and resources to enhance the value of the enterprise. Financial contracts, especially the syndication behaviour and patterns are often context specific and it would be expected that, in an emerging market like Australia syndication behaviour and patterns would depict the nature and strength of the investment network.

Key words: Syndication, Affiliation network

INTRODUCTION

Many venture capital backed enterprises like Microsoft, Yahoo or Federal Express not only turned into giant corporations, but also changed the way the modern economies function and the businesses are conducted for ever and for better, simply by promoting technological innovation & adaptation. Venture capital is not only about a handful of success stories, but also about a journey to modernization and growth. It is impossible today to think of a modern economy without a venture capital market, possibly with more developed economies with more developed venture capital institutions. Institutional network and collaborations are very common in financial market in different forms such as syndicated loan deals by commercial banks, co-underwriting of securities by investment banks or joint purchase of securities private companies by institutional investors. Similar, investment network exists in the venture capital market where one venture capitalist would co-invest with another (Parker, 2008). They often form social networks and long term relations through repeat co-investments. The network members get to share information regarding potential deals, references and opinion which could help access to a greater flow of deals, more information and better investment judgements (Bygrave, 1988). Once, the deals are shared, the syndicate members can also share the pool of professionals, lawyers, accountants, investment bankers, financial advisers and distributors to help the new company receive better management and professional supports to grow and divest at a lucrative price on exit (Hochberg, 2007). Syndication is particularly important in venture capital market at least for several reasons. Investing in young ventures involve significant uncertainly which require the venture capitalists obtain as much information as possible about the venture, especially the entrepreneurial team. The young and innovative ventures often require diverse resources and new knowledge for expansion which may not be provided by a single venture capital firm. The structure and the behaviour of the syndicates potentially have strong influences over the life cycle of young enterprises. However, forming and managing syndicates could be fairly complex which despite the potential benefit may deject syndication. Hence, being able to understand and manage the complexity effectively could be the desirable options.

ORGANIZATION OF THE PAPER

The paper would start with providing a brief description and characterization of the context, the Australian venture capital market as the financial institutions and contracts are often context specific despite the rapid globalization. The following chapter would survey the literature so that the possible research questions are surfaced out and the contribution of this paper becomes evident. The next chapter would then specify the research questions for this paper and then it be the turn to identify & organize the data. In the following chapter the methods would be specified and explained. Once the results are generated using the data and methods, the paper will analyse the result to validate the research questions.
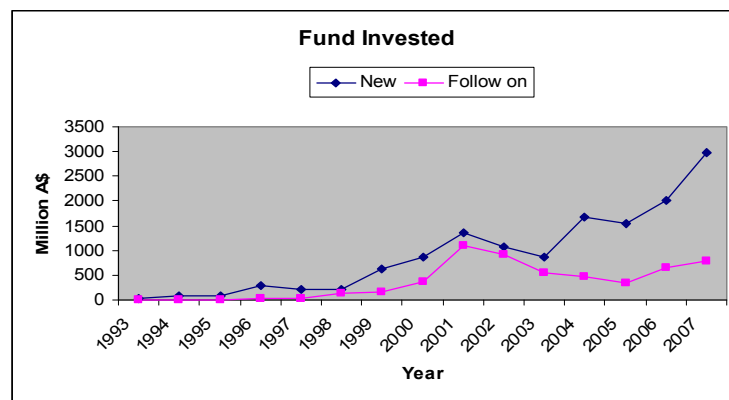
CONTEXT: AUSTRALIAN VENTURE CAPITAL MARKET

The venture capital market did not sprout spontaneously in Australia like in the US market. However, like most other developed and industrializing countries Australian government played an active role since early 1980s to promote the venture capital market. Lerner and Watson (2008) commended the policy supports in Australia in last two decades and recent market developments. However, the last 10 years could be seen as transformational for the local market after years of profound dependence on government supports. During the period market forces have become significant generating strong growth in fund rasing and investment activities driven by healthy returns (MFM 2005, PWC 2006). The following figures are providing a glimpse of investment activates over the last 15 years.

Figure: 1 Number of New and Follow-on Investment
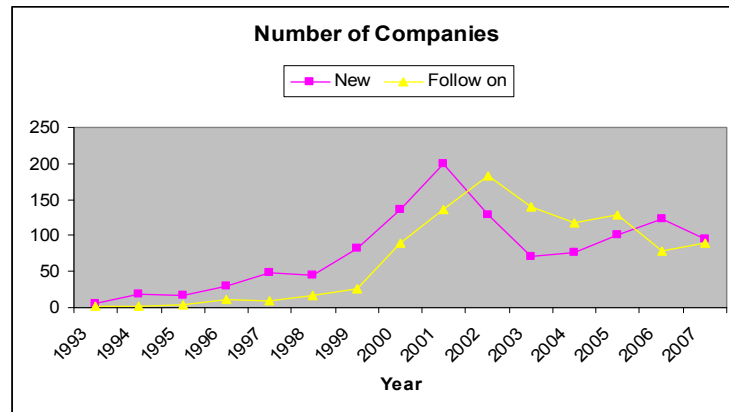
Source: AVCAL Yearbooks 2000-07

Figure: 2 New and Follow Investment (in million A$)

Source: AVCAL Yearbooks 2000-07

Australian venture capital market simultaneously followed the US models for developing market based institutions over time keeping balance with the British models because of similar jurisdictions governing the financial. Thus, eventually it gradually shaped its individual characteristics and directions. Hence, one may observe some variation in syndication structures and network patterns in Australia compared to the US and other key markets. To stimulate the market government's first big step was MIC program in 1987. The program generated the early batch of managers, although inappropriate tax incentive attracted wrong class of investors leading to the demise of the program. Thereafter the PDF program was introduced in early 1990s to replace MIC program. However, it had some structural (corporate) limitations and investments were tax driven attracting some retail investors although technology companies and young enterprises did not receive much attention. Thus, Aus Technology Group was introduced to bring the focus on technology companies. The one time funding of the program was perhaps far bellow the critical mass to generate any momentum in market, but it attracted and trained some strong management team. Overall management fee surpassed perforce fee demonstrating dismal returns on investors' equity throughout the period (ABS Venture Capital Surveys). IIF & REEF programs in late 1990s did reasonably well in generating management teams

with industry experience, learning from international experiences and giving appropriate signals to super funds. During the period some funds showed strong performance. However, on the hinder side it was again an one-off investment cycle often failing to raise follow on funds. Unfortunately, despite the performances it took time to attract investors committing funds which showed low investors confidence at that point. The return however brought in the confidence in the market and created a new momentum. It was partially facilitated by the 2001 Financial Act to support venture capital. In 2002 VCLP and ESVCLP were introduced as a step toward emulating the US LP structure. However, the structure suffers from some limitation which potentially benefits the buyout funds overt the venture capital. However, some combinations of financial reforms, VCLP and globalization of private equities generated strong inflow of foreign capital in early 2000 onwards until the recent market downturns. Dduring this period market showed more potential. Many venture capital and private equity mangers generated attractive returns for the investors attracting further private and institutional investors making the market more self sustaining without direct supports from government programs. Nevertheless, given the increased fund flows and investment activities the number of experienced managers remained moderate in the market. Thus, institutional collaboration and syndication could mitigate some of the market limitations.

SURVEY OF LITERATURE

Syndicated investment is prevalent in an uncertain domain of financing young ventures and the significance of syndication is well acknowledged in finance and economics literature. However, the syndication process and management is fairly complex and the literature is yet to capture the depth of the issues, especially in a rapidly globalizing private equity market where the financial institution are evolving fast. Thus, much research is warranted to understand the emerging venture capital markets like Australia. Despite considerable growth of the venture capital activities where a significant fraction of the investments are syndicated, there has been little or no effort made to analyse the syndicated investments and venture capital network as yet in Australia.

As far as venture capital syndication is concerned, one can ask three broad research questions. What are the purposes of investment syndication? How the syndications are structured in order to serve the purposes? How well the purposes are served? Each of the broad questions could lead to many related questions. There would be no unique answer to some of these questions. Further, the questions are interrelated and so are the possible answers. In the literature one could initially find what answers were provided and how the answers were justified through evidence (data & information) and analysis (methodology). One could thus review and investigate how adequate the answers are and proceed to revise or supplement the existing answers or could explore the new frontiers and unanswered questions. Noteworthily, the researchers from different business disciplines such as economics, finance and management often provided similar answers to a question using different methodology bringing alternative perspective to the same issue.

Rationale of Syndication:

First, there have been several expiations for why venture capitalists syndicate investment. Bygrave (1987, 1988), Lokett (2001), Wright (2003), Manigart (2006), Hopp (2006) among others suggested that the venture capital syndication can be explained by resource based motives. In other words, the venture capitalists syndicate to share resources and knowledge. However, there is little explanation on how the resources are traded and combined through syndication. *It keeps the frontier open for further study which would be partially exploited in this study.* A similar explanation is the so-called value added hypothesis where the argument is that, the venture capitalists invite others to co-invest in a venture in order to add value (Barnder 2002). A very common finance based explanation is portfolio diversification (Bygrave 1987; Lokett 2001; Wright 2003; Manigart 2006). The papers often validated the arguments with questionnaire surveys. Sahlman (1990) also indicates that the limited partners of the fund companies often requires venture capitalists to invest a certain maximum amount in one company requiring the general partners to seek potential syndicate partners. Lerner (1994) and Cestone (2006) suggest that the venture capitalist syndicate investment in order to double check the quality of the venture with another venture capitalist, which is also supported by the so-called selection hypothesis (Brander 2002). Interestingly, as opposed to the portfolio risk diversification, here apparently the objective is minimizing individual investment risk. Bygrave (1988) suggests that the venture capitalists would form network like other business networks in order to get access to better flow of information regarding individual ventures. Sharing experience and gathering information could be vital in venture selection (Casamatta 2007; Baron 1999). Noteworthily, it also provides information on the potential syndicate partners for the venture capitalists as well as various entrepreneurial teams and projects. Shane (2002) suggests that peer reference in the investor network plays a vital role in

venture selection. Lerner (1994) argued that venture capitalist invite others to co-invest in a venture in order to get a future invitation form the later. He also suggested that the venture capital may syndicate at a later for *window dressing* the fund returns. The question remains, why the lead investor would allow the incumbent to take advantage of a potentially successful project. The cost of window dressing could be paid in terms of security prices at later stage. Concurrently, the lead investor may receive a promise of reciprocation of the favour. Casamatta (2007) and Hochberg (2007a) also suggest that the venture capitalist syndicate in order to avoid competition. However, the rationale of syndication may not be justified by one reason and venture capitalists perhaps syndicate for more then one reason Cestone (2006).

Structure of Syndication:

The syndication structure deserves a lot more attention in literature than it has received so far. The syndications must be structured to serve the purpose of the investors discussed earlier. In other words, the structure or pattern of the co-investment must be justified against the stated purposes, the link which is often implied, but not explained explicitly in literature. Literature observed and analysed a number of patterns in the venture capital syndicates. However, the macro view of the syndication networks around the market are largely absent in literature. Kogut (2007) elucidates the evolution of venture capital syndication networks in the US. Bygrave (1988) found that the venture capitalists investing in highly innovative companies are highly networked in the US, especially when they are from the same state. *Consequently, an analysis of the venture capital network structure would be an important contribution to the literature.* Lerner (1994) has found that sophisticated venture capitalists are more likely to syndicate investment with other sophisticated venture capitalists. He argued that the sophisticated venture capitalists would value the opinion of the similar venture capitalists in support of the selection hypothesis. He also observed that the small venture capitalists have very high tendency to co-invest with the other small venture capitalists. Hopp (2006) argues that the smaller venture capitalist with lower experience and expertise may require to syndicate more often overcoming resource constraints. Filatotchev (2006) found in venture backed German IPOs that the syndicated investments have higher board dependence involving multiple layers of decision problems. Thus, it would be formidable challenge to manage a syndicate. Wright (2003) studied the management structure of the syndicates and suggested that the lead venture capitalist would have larger share in the venture and his residual and control right is important in timely decision making. The complexity of syndication management may induce the syndicate partners to repeat con-investment if they tend to get along. Venture capital syndications are usually initiated and structured in two different ways. First, two or more venture capitalist may initiate to co-invest at the same time (typically at the first round) where the second opinion may play an important role. Second, the lead venture capitalist would invite others to co-invest at a later round. The reason could be resource complementation. The design of financial contracts and equities would be strongly connected to the staging of the finance in this case which deserves more attention than it has received. Indeed, Dessi (2005) suggested that the lead venture capitalist may take advantage of the informational asymmetry with the later stage investors. Lerner thus supported Admati's (1994) prediction that the lead venture capitalist would maintain constant portion of shares across stages in the venture for providing the right signal about the quality of the venture to the new co-investors. Cestone (2006) argued that, the lead venture capitalist is more likely to hold convertible preferred shares and the later round investors are likely to have participatory convertible preferred share.

Impacts of Syndication:

Finally, one would like to know how well the purpose of syndication is served. The answer is not straight forward. The researchers have compared the returns on syndicated investments with returns on single venture capital investments. The results show that in the US, Canada and Europe the syndicated investment perform well (Hochberg 2007, Brander 2002, Lehman 2006). Although, with that result in Canada, Brander (2002) supported the value added hypothesis, one can still argue that the higher return could be at least partially due to better venture selection. Hochberg (2006) has studied the centrality of the venture capitalist in the co-investment network in the US and found that the well-networked venture capitalists generate better returns on the funds. Noticeably, if the venture capitalists syndicate investment in a later stage for window dressing, the impact would directly be reflected on the higher returns to their funds. Further, if the syndication and networking generate better information and deal-flow, the better networked venture capitalists would generate better return. Lehman (2006) also argued that, venture capital syndication significantly contributes to the employment growth and shareholder value. Such results should perhaps encourage more of syndicated investments in general, although in reality more of venture investments are not syndicated. Indeed, the returns only show the effectiveness

of syndication when syndication is motivated by value added purpose. However, if the selection is the purpose of syndication whether it is portfolio based or individual venture based, the impact of syndication can not simply be measured by the returns. Portfolio diversification could be an in immediate investment objectives and would be served as soon as the investments are made, depending on the target portfolio size of the fund in question. In theory, portfolio diversification would reduce portfolio risk and lower risk and so would the return. Consequently, the funds with more syndicated investment would generate lower average returns on equity. It then contradicts the finding that the highly syndicated funds could generate better returns (Brander 2002, Hochberg 2006). Thus, the relation between portfolio size, syndication and return could be further analysed.

Syndication in Australia:

Australian venture capital market has received very inadequate attention in literature as of now, despite the recent exuberance in the private equity market. Fleming (2004) studies the venture capital returns in Australia between 1992 and 2002 and found that the syndicated investments received lower return. The result contradicts the findings elsewhere. However, given the recent developments discussed earlier, the result could be different at this point which requires further investigation into the recent performances of the venture backed companies. However, there has not been any separate study on syndication structure and venture capital network in Australia and this paper would be a primary step in this direction.

RESEARCH QUESTIONS

In the context of the above literature review, it would then be justified to propose several research questions. What is pattern of venture capital network in Australia? The answer to this question would portray how the venture capitalists are networked and connected facilitating the flow of information on deals. Claim of originality of this question is primarily market focused as this would be the first hand look at the Australian venture capital market. How is the venture capital syndicates structured? How are the structures linked to the possible purposes of syndication? The structure of a syndicate is closely related to the purpose of the syndication. The venture capitalist may have different attributes and different objectives for syndication where syndication would jointly serve the purposes of everyone.

DATA:

First, the data on investment detail in each company by the venture capital firms (would be called VCF hereafter) was required for identifying the syndicates and syndication networks. Second, the information on characteristics and specialization of the VCFs was required for analysing the syndication patterns. Thomson Finance compiles a global database with details on transactions and profiles of VCFs and the companies receiving investments which was used for obtaining the data for this research. First, the premise and the timeframe was chosen. The information on Australian VCFs investing in Australian companies in last 10 years (from January 1998 to August 2008) was initially isolated. All the venture related investments were taken ruling out the other private equity and money-tree investments (values in million US$). The period last ten years have been chosen for two reasons. First, as discussed earlier, venture capital market generated a new momentum in last ten years where return and market forces have been more dominant than before. Second, around 92% of all the venture investment activities in Australia took place during this period. In order to focus on venture capital (will be called VC hereafter) investments including the early (seed and start-up) and expansion stage investments, all buyout transactions (e.g. MBO, MBI, M&A) have been excluded. The companies receiving the investments were then categorized according to the industry category. Thomson dataset classifies all companies with three primary industry categories according to the products and services produced by them namely, information and communication technology (coded as 'ICT' for future references), biotechnology , medical & healthcare (coded as 'BMH' for further references) and the other non-high-tech industry. The following table summarizes the number of companies receiving finances from VCFs in the stated period.

Table: Venture Related Investments in Australian Companies by Australian firms

Industry	All Stages	Proportion	Early & Expansion	Proportion
ICT	263	33.21%	246	38.08%
BMH	139	17.55%	121	18.73%
Other	390	49.24%	279	43.19%
Total	792		646	100.00%

Source: Thomson Finance

In last 10 years, the Australian VCFs have invested in 646 companies in early and expansion stages. In the following analysis other non high-tech category will be excluded as venture capital investment typically refers to the investment in the young and growing technology backed enterprises. In the above data, 646 companies received venture capital from 126 VCFs where 53 of them are corporate venture windows and affiliates of financial institutions, 62 of them are private equity firms, pension funds, endowment funds, angel and individual investors and 11 VCFs are government programs and incubators. The dataset provides the age, capital under management, portfolio and investment profiles of each firm.

METHODOLOGY:

Network analysis and Visualization:

In order to describe and analyse the venture capital investment network, tools have been borrowed from graph theory and social network analysis. Here venture capital investment network has been analysed as an *affiliation network*. Affiliation networks are 2-mode networks, but have only one set of actors. The 2nd mode is a set of events where the actors participate. The actors are linked through participation in an event which is the units of observation (affiliation variable). The events are not defined on the pairs of actors, but on the subset/group of actors. Thus, each affiliation is defined on a subset. The VCFs have been treated as the *actors* and companies/ ventures where they invested were treated as *events*. The VCFs would therefore form a *tie* or create a *link* if they co-invest/ purchase the securities in one company. In affiliation matrix A, an element $a_{ij} = [0,1]$ where, $a_{ij} = 1$ if the actor i is affiliated with the event j or $a_{ij} = 0$ otherwise. For example, in the following matrix let us denote venture capital investors as Vi and the companies as Xj. Accordingly, here investor V1 invests in company X2, investor V2 invests in company X1 & X2 and investor V3 invests in X3. Thus, the investor V1 and V2 form a *tie* by co-investing in company X2. In affiliation matrix the summation of row elements would give the number of co-investment by the V and the summation of the elements in column will give the number of inventor in the company X.

Example of Affiliation Matrix

	X1	X2	X3
V1	0	1	0
V2	1	1	0
V3	0	0	1

The first task was generating an affiliation matrix with the data in question. The companies were separated according to the industry categories and the ICT and BMH companies were taken in two separate Excel files. It was expected that, the VCFs specializing in certain industry would probably network with VCFs investing in the same industry, although there are a few generalists investing across industries. In each file the information on company names, investment dates, company stage at the round, investment amount, investor VCF name, VCF found year, VCF size (capital under management) and VCF type was recorded. The investment details have been organized by company so that the lead investors can be identified. The analysis started with one set of companies at a time. The data, initially recorded in Excel has been exported to Matlab for further manipulation and for generating the 2-mode affiliation matrix. The affiliation matrix then has been again copied to UCINET for further analysis and generating the graphs.

Pattern Analysis:

The companies (affiliation variables) were taken as the unit of analysis. The attributes (composition variables) of the VCFs (actors) were analysed basically by observing how the VCFs of different size and types (attributes) were *linked* in each co-investment event. The lead investor was defined as the investor participating in the first round of investment. In some events, there were two co-investors at the first round, where both were treated as the lead investors if the amount of investment in the round was same. Otherwise, the larger investor would be defined as the lead investor. Here the objective was not to create a diagraph or to measure centrality of actors, but to observe how the lead investors given their attributes have chosen the co-investment partners of similar or different attributes.

RESULTS AND DISCUSSION:

Network Structure:

As the data was taken exclusively on Australian VCFs investing in local companies, the network structure depicts Australia's internal venture capital syndication network, excluding the foreign links. The bipartite-affiliation matrix has been constructed separately for companies of two different industries. Thus, the network provides investment network in each industry category. Industry specialization and portfolio diversification within the industry category is not uncommon elsewhere in the world (Norton 1993). In the ICT industry 57 VCFs have been found syndicating investments where 17 of them also syndicated investment in BMH industry. Thus, 70.17% of the VCFs specialize in ICT industry. Out of 34 syndicating VCFs in BMH industry, only 50.00% apparently specializes and the others co-invest across industries. Thus, level of specialization seems higher in ICT industry.

The bipartite-affiliation matrix provides an overview of the network. The row/ columns show the *i*th VCF co-investment number with *j*th VCF. As, at the diagonal $i=j$, the diagonal elements of the matrix shows *i*th VCF's total number of co-investments indicating the network position. The matrix is symmetric off the diagonal. A partial view of the bipartite-affiliation matrix for ICT industry has been displayed bellow.

Table: Partial View of the Bipartite-Affiliation Matrix (ICT)

	v35	v36	v37	v38	v40	v41	v42	v43	v44	v45	v04	v46	v05	v06
v35	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	2	0	0	0	0	0	0	0	0	0	0	0	0
v37	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v38	0	0	0	8	0	0	0	0	0	1	0	0	0	0
v40	0	0	0	0	3	0	0	0	0	0	0	0	1	1
v41	0	0	0	0	0	3	0	0	0	0	0	1	0	0
v42	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v43	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v44	0	0	0	0	0	0	0	0	2	0	0	0	0	0
v45	0	0	0	1	0	0	0	0	0	1	0	0	0	0
v04	0	0	0	0	0	0	0	0	0	0	2	0	0	0
v46	0	0	0	0	0	1	0	0	0	0	0	1	0	0
v05	0	0	0	0	1	0	0	0	0	0	0	0	5	0
v06	0	0	0	0	1	0	0	0	0	0	0	0	0	2

The above matrix could be visualized as bipartite affiliation graph where one can have bird's eye view of the network rather than going through the numbers. The graph (G) is defined on a set of nodes (N) and a set of links (L) where the links would show how the nodes are connected. In Graph:1 the VCF-company affiliation network has been provided for the ICT industry. In the graph, the VCFs have been pictured as round dots and coded with a prefix *"v"* and the companies were pictured with small rectangular boxes and coded with prefix *"i"*. The value of the link/ edge is 1 everywhere as a VCF's investment in a company will be counted as 1 link irrespective of the number of rounds. The graph shows the number of VCFs investing in each company and the number of syndicated investment by each VCF. Graph:2 is the 1-mode reproduction of the graph showing the links between VCFs. The links are valued by the number of co-investments adjacent VCFs. Graph: 3 & 4 presents the samilar information for BMH industry.
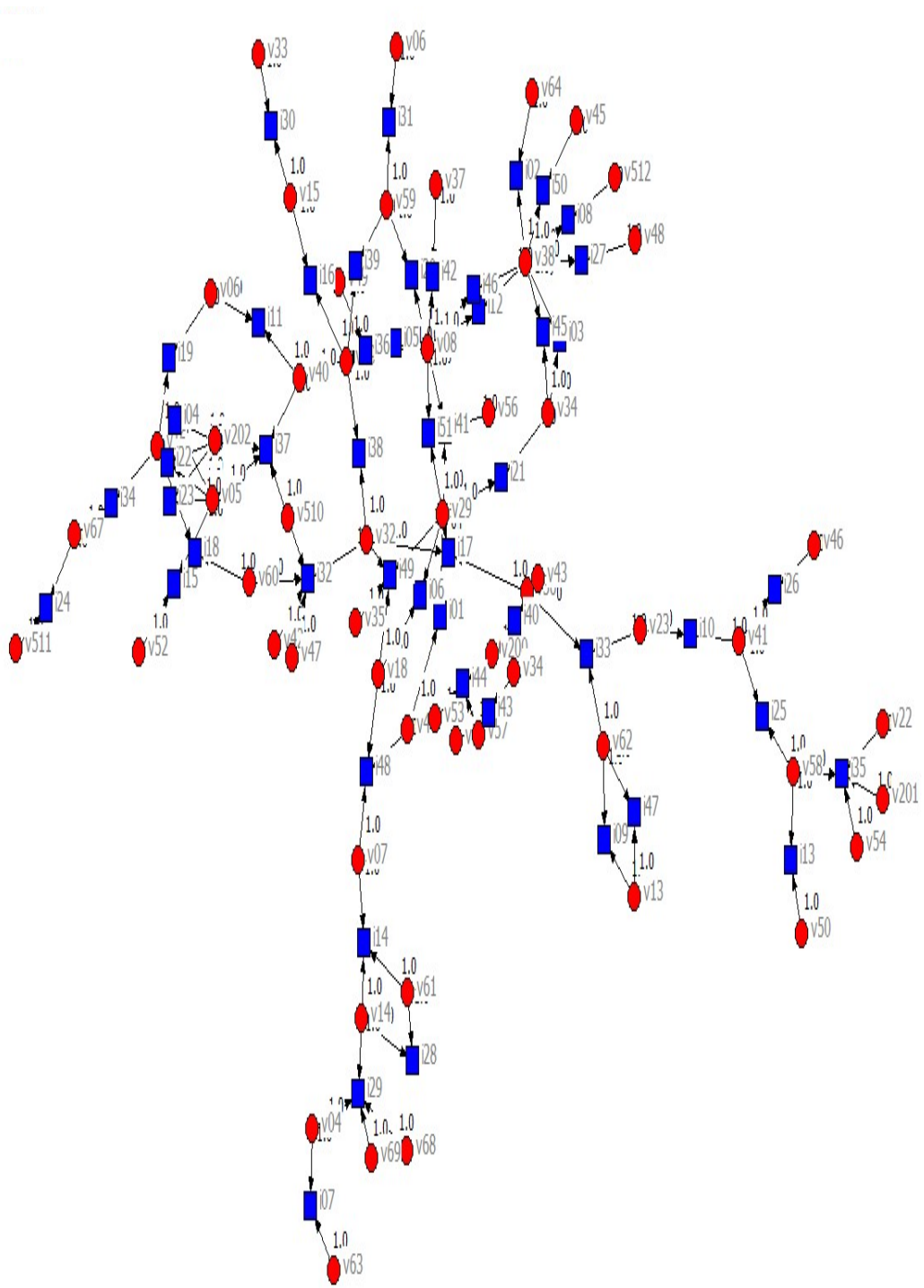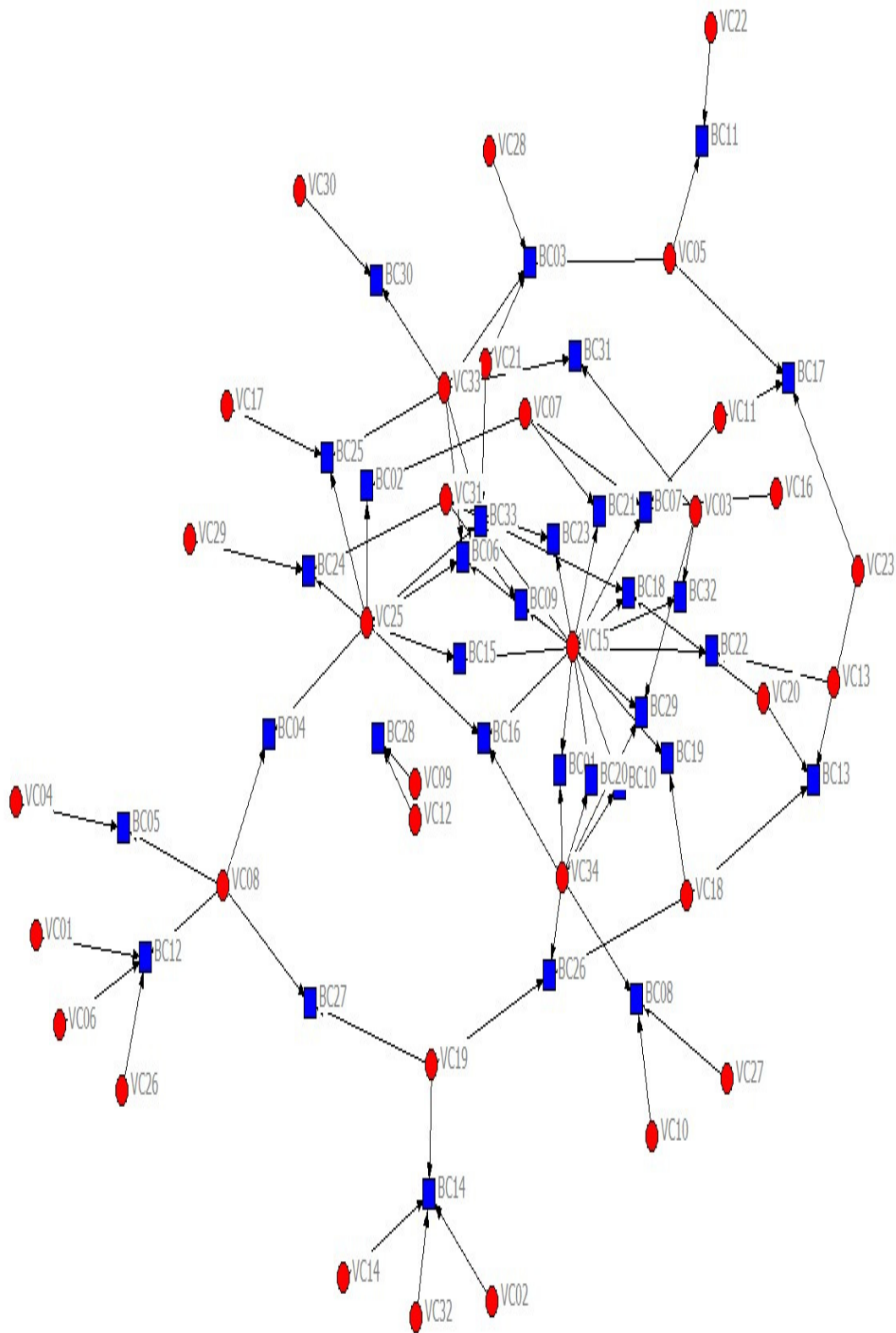
Graph: 1
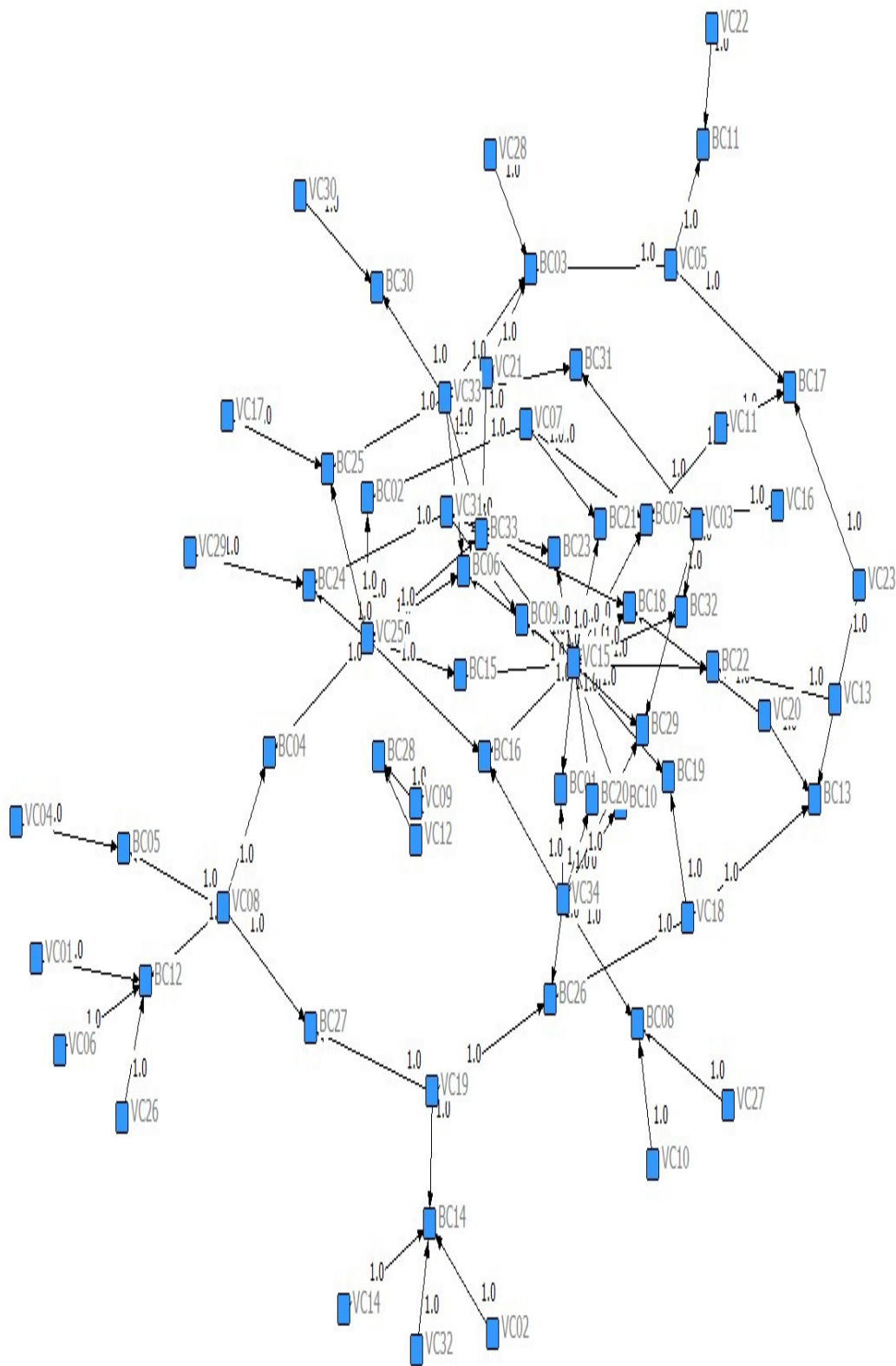VCF-Company Affiliation Network for ICT Industry
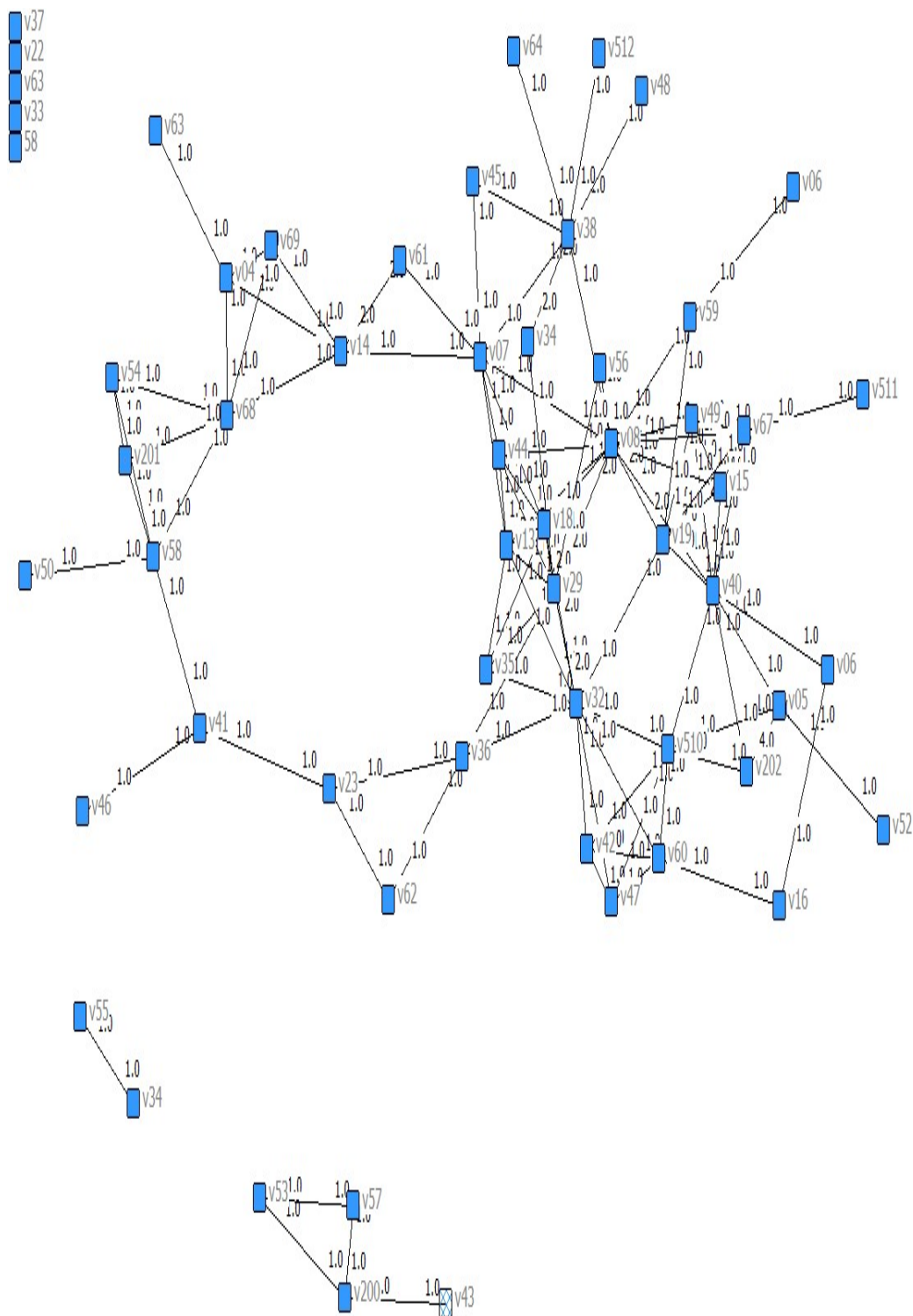
Graph: 2
The VCF Network in ICT Industry)

Graph: 3
VCF-Company Affiliation Network for BMH Industry

Graph: 4
VCF Network in BMH Industry)

Syndication Patterns and Motives:

In the sample out of 121 BMH companies 27.27 % companies received syndicated investments and whereas out of 246 ICT companies only 21.14% companies received syndicated investment. It could be related to the fact that 70.17% of the VCFs investing in ICT industry apparently specialize in that industry. The average size of the syndicates in the BMH industry is 2.61 [SD=0.75] and in ICT 2.37 [SD=0.72] also demonstrating greater tendency to syndicate investment by the VCFs in BMH companies compared. Hence, strategic resource requirement from the other VCFs could be low. In order to analyse the syndication pattern further, the affiliation variables (the companies) have been considered. As a group of actors (VCFs) are linked in a company, the actor attributes especially the size and type has been studied.

Size Attributes of the VCFs in Syndicates:

Capital under management has been considered to indicate the VCF size which has several implications. It fairly depicts the fund raising capacity of a VCF which could be due to earlier returns, successful exits, reputation with investors (i.e. limited partners). There are apparently experienced VCFs which have been longer in the market but with moderate performance and fundraising capacity. Thus, the size of capital could reflect the venture capitalists' quality and reputation.

The VCFs with larger capital under management would have bigger funds under management, larger portfolio and lower capital constraints. However, it may sometime lack company specific knowledge and information. On the other hand the smaller VCFs are likely to have capital constraint as well as the capacity to higher external professionals. However, they sometime form coherent management teams and possesses the key knowledge and information about a company. Thus, the smaller VCFs are likely to seek syndicate partners to overcome capital constrains and the larger VCFs are likely to seek co-investment partners for non-financial strategic resources like information, second opinion etc. Given the average size of the capital under management being US$216.35 million in the sample, it has been (arbitrarily) considered that the VCFs managing less than 100 million as smaller VCFs where they are highest in number. The VCFs managing above US$ 400 million have been considered larger VCFs and the ones managing between US$ 100-400 have been considered as medium. The size of capital of the VCFs investing in the BMH companies range from US$1.46 million to US$1952.90 million with the average of US$ 216.35 million, although only one VCF has capital larger than 1 billion. The size of capital of the VCFs investing in the information and communication related companies range from US$2.80 million to US$2226.40 million with the average of US$ 216.35 million, although only three VCF has capital larger than 1 billion. The VCFs investing in IT related companies have a mean capital size of US$ 254.88 Million [SD=483.037] compared to the VCFs investing in BMH-tech companies in the data with a mean capital size of US$ 179.09 million [SD=316.809]. The following table summarizes the information about how many times VCFs of various size have invited others to syndicate. The number in each industry has been normalized by the number of initiation.

Table: VCFs Size Composition in Syndicates

Initiator	Small	Small	Small	Medium	Medium	Medium	Large	Large	Large
Follower	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large
ICT	19.51%	24.39%	8.54%	17.07%	9.76%	0.00%	18.29%	2.44%	0.00%
BMH	27.59%	34.48%	3.45%	12.07%	18.97%	1.72%	1.72%	0.00%	0.00%

The first row in the table indicates the size of initiator or the lead investor in the syndicate. Surprisingly, the large VCFs never invited other large VCFs to syndicate in the sample. They mostly invited the small VCFs. It implies that the large VCFs in Australia are most likely to invite the small VCFs to syndicate with more company specific knowledge and specialization. It can be argued that the medium size VCFs are in balanced position with financial and access to non-financial resources. In ICT sector medium VCFs are more likely to invite small VCFs whereas in BMH sector they are more likely to invite similar size VCFs. It shows that the smaller VCFs in the market could possess important strategic resources to commands significant clout in the network despite limited financial capacity.

Type Attributes of the VCFs in Syndicates:

One could comprehend the core competence of a VCF, by looking carefully at the management teams' profile and experiences. However, one might have a fair indication on a VCF's specialization by looking at the organizational form. There are VCFs of several types in the sample. Each of the VCFs has different specialization and objectives other than maximization of returns on equity. On the one hand, there are strategic investors who invest in strategic resources with strategic purposes. Corporate venture programs would prefer to finance ventures which complement the parent company (Gamper and Lerner 2004). Government programs are designed to provide strategic resources and wider support to the innovation and productivity growth along with finance. The university programs and incubators might specialize in providing strategic inputs like knowledge and know-how. The data shows that, these type VCFs usually manage small capital incapable of providing major financial supports to the portfolio companies. However, in the previous section we have seen that smaller VCFs commands significant clout in the network in the Australian market, perhaps because they posses important strategic resources. On the other hand, there are VCFs who are financial investors, although they might have the capacity to higher industry professionals. They are affiliates of banks and other financial institutions. In Australian market, this type of VCFs has been playing a key role for a long time in terms of market capitalization and investment. They are likely to diversify portfolio through syndication. Between these two extremes there are private equity VCFs often capable of providing both financial and strategic resources. In venture capital industry vocabulary, typically private equity firms rising and investing own capital in young ventures is known as the main stream venture capitalists. Essentially, they play the major role in the market. Being placed between strategic and financial investors, they could be called balanced investors. The government programs which providing both financial and strategic resources survived against the market forces in last decade could also considered balanced investors at this point. They are capable of providing both strategic and financial resources. The different types of VCFs may have similar or different objectives while forming syndication. The type attribute of the group of co-investing VCFs in each company has been observed again and the summary of the observations have been given in the following table.

Table: The Summary of the Investor Type in Syndicates

Initiator	Strategic			Balanced			Financial		
Follower	Strategic	Balanced	Financial	Strategic	Balanced	Financial	Strategic	Balanced	Financial
ICT	0.00%	8.45%	1.41%	5.63%	35.21%	16.90%	2.82%	11.27%	18.31%
BMH	0.00%	15.38%	1.92%	7.69%	32.69%	26.92%	0.00%	13.46%	1.92%

The strategic investors in the data have never invited the other strategic investors to co-invest. This is perhaps for avoiding competition with similar investor and to consolidate the control over the strategic resource management in the portfolio company. The strategic investors are more likely to invite the VCFs or investors for financial and further strategic inputs. The private equity investors in both industries are likely to syndicate with the same type. There is perhaps no serious deficiency of either financial or strategic resources in these VCFs and they are less likely to seek pure strategic or financial partners. Interestingly, the financial institute affiliates are more likely to co-invest with the same type of investors. It could be explained by the existing professional network within the finance industry and the VCFs have the tendency to higher professional managers for portfolio selection and management reducing the dependence on strategic or private equity investors.

SYNDICATION & ENTREPRENEURIAL DEVELOPMENT:

The Australian venture capital market, despite the recent growth is fairly smaller compared to the major markets, especially the US. The above data and analysis of the syndication pattern clearly suggests that, the VCFs combine multiple resources both financial and non-financial to enhance the growth of the enterprise they invest in. The syndication provide access not only to the resources, but also to their network of professionals such as lawyers, financial advisors and distributors in the process of going public or a lucrative private divestment. The single venture investor in a company may not enjoy the options and opportunity provided by a group of investors. It has been mentioned that, syndicated investments reportedly enjoyed better returns in the US. However, given the minuscule exit history of the Australian market it would be hard to obtain a similar result with appropriate significance.

Table: Company Status and Exit Details by Industry

Status	BMH (All)	BMH (Syndicated)	ICT (All)	ICT (Syndicated)
Active	66.94%	54.55%	63.01%	61.54%
IPO	18.18%	30.30%	7.32%	7.69%
ACQ	9.09%	6.06%	18.70%	23.08%
Defunct	4.96%	9.09%	8.94%	7.69%
Bankrupt	0.83%	na	2.03%	na

The above table has summarized the status and exit details of the companies from the sample. No syndicated investment has gone bankrupt. Among all BMH companies 18.18% went public where from those receiving syndicated investment 30.30% went public. However, in ICT industry syndicated invest displays marginally lower IPO exit. We have seen earlier that the VCFs in ICT industry are more likely to invest alone.

CLOSING REMARKS:

This paper is only a fresh start to a new direction as the research on venture capital syndication has a long way to go in Australia. However, it has been a significant outset, with a macro level overview of the market. It provides a quick understanding of how companies and VCFs are linked. The market overview of the network could also be useful for venture capitalists that are willing to enter the network somewhere in order to generate greater flow of information about the deals. The ambitious entrepreneurs can benefit form knowing the network in order to raise funds and combine resources from alternative VCFs. Further, the use of graph theory in syndication analysis is not very common despite its suitability. In several syndication studies, the theory has been used predominantly for measuring centrality of actors. However, the paper has initiated the usage of affiliation and composition analysis to better understand how the diverse resources are pooled together to enhance entrepreneurial development.

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