

EARLY-STAGE COMPANY INVESTMENT VALUATIONS IN NEW ZEALAND



August 2016

Research Report

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INTRODUCTION

Background

The early stage company investment market in New Zealand has undergone significant growth over the past decade. In the formal angel investment market alone, there has been an aggregated investment of over \$440 million into 280 young companies since the Young Company Finance Index began measuring activity in 2006 – an average of \$1.6 million from angel investors for each of those companies. Added to that, there is also a considerable level of investment activity outside the formal angel groups by other private investors.

This activity is likely to continue to expand, not just from more angel sector growth but also with the advent of equity crowdfunding platforms over the past 24 months. This pleasing growth comes in spite of the fact that early stage investing is not for the faint-hearted. It remains inherently high risk, illiquid and long term. Earning a quick return is very much the exception – and the earliest exits are usually failures.

The high risk nature of early stage investing can be mitigated through experience – trial and error – and by developing a greater understanding of the sector, particularly some of the practices employed by seasoned angel investors. Prominent among these are rules such as building a broad portfolio, syndicating investments, careful due diligence and negotiation of investment terms, active management of investments, and keeping plenty of ‘powder’ dry for follow-on rounds.

Even seasoned investors can underestimate the follow-on capital required and how long it will take to get a return on the total investment. Our data shows that for every initial investment of \$1 by an angel, between double and four times that is required for follow-on. So for an investor putting \$20,000 into a new start-up, they should be prepared for further investments taking their capital in that company of between \$40,000 to \$80,000. While another option would be for the investor to put small amounts of money into a number of companies and do little or no follow-on investment, that investor would need to take into account the effects of dilution of their shareholdings over time. As companies go on to raise (often very significant) further capital the percentage owned by the investor – and, therefore, their share of any eventual investment returns - will diminish proportionately. This dilution can end up being very substantial over time.

One of the most important aspects for investors and entrepreneurs to understand is how to approach the valuation of a company – the pre-money valuation – or PMV. The PMV helps to determine how much money should be invested, how much ownership of the company the investor(s) get for their investment, how much will be retained by the present and future founders/management team, and it is a key driver of the level of any ultimate investment return for all shareholders. If a company’s PMV is \$1 million at the time of initial investment, and then it is sold for \$10 million, the initial investor (not adjusting for dilution for simplicity) has made a 10X return. If that company had been valued at \$2 million initially, then the return would be halved to 5X. Across an investor’s portfolio of early stage company investments, and recognising that many of them will fail, the difference between these two outcomes can make a huge difference to their overall investment returns.

Decisions made around initial PMVs can also have significant (negative and positive) bearings on a company’s ability to raise additional capital down the track. If a company is over-valued at the outset, that

may increase the risks around what happens if it then underperforms but needs new capital. New investors might well reduce the valuation – resulting in a ‘down round’ [see page 16] - at the expense and annoyance of the earlier investors, who in turn will be reluctant to provide additional support.

This report provides a snapshot of the PMVs valuations from 443 investment rounds involving 150 mainly very early stage, angel-backed companies in which the Seed Co-Investment Fund (SCIF) was involved from 2006 to June 2016 alongside 15 angel networks or angel funds investing throughout New Zealand.

We do not analyse valuation methodologies. Valuing these companies is definitely more of an art than a science. This is true especially for early stage companies, particularly those that are pre-revenue. And there are a wide range of valuation approaches used by an increasingly diverse range of investors.

One particular area which this report should be very useful is by providing strong comparable valuation data. Angel investors in New Zealand, like their counterparts in countries such as the US and Canada, often use comparable valuation data as an important way of valuing companies (i.e. agreeing the PMV at which they will invest). This is especially true for pre-revenue/early revenue companies that are building their venture around a promise of things to come. Practically speaking this means that unless you've really got a super-star personal track record and/or your company is already demonstrating significant commercial traction, the PMV of your company will be pretty much nailed down to a range based on the PMV valuations of companies that have gone before you. This is a dynamic which comes through strongly in this report, particularly in relation to seed and early stage software and services companies which make up approximately 42% of the dataset.

Previous NZVIF Valuation Reports

In June 2011, NZVIF released *The Valuation of Early Stage Investments in New Zealand* which reported PMV and other data from investments into 186 companies between early 2004 and December 2010. This was then updated with further investment data from January 2011 to June 2012 in a second report released in December 2012.

This report is the 2016 update, but it is different from the two earlier reports in some key respects. The first two reports drew on valuation data from across NZVIF's Venture Capital Fund and SCIF, transactions published in the Young Company Finance Index, together with other NZ early-stage company investments that had been identified by NZVIF. With the growth in the SCIF portfolio over the past few years, this report analyses deals solely with SCIF involvement. The companies in question have also sourced capital from a range of other parties including private investors who are not affiliated with a specific angel network or fund, family offices, venture capitalists and offshore investors of various types.

While the data is exclusively from SCIF's portfolio, we believe that the analysis provides a broad reflection of the experiences of early stage capital investors active in the New Zealand market. It provides insights into some of the valuation-related characteristics of investment based on a large portfolio of young technology companies over multiple years, industries, sectors and regions. By focusing exclusively on angel investment the data removes some of the material variances which can, for instance, arise when VC investment data is mixed with angel investment data – as has been the case with the original valuation

reports in 2010 and 2012. In addition, we have been able to look back and include all valuations from convertible loans which subsequently converted to equity. In the dataset, there are 105 convertible loan rounds - 84 of them have been convertible to equity. While those reports were accurate in their own right, this report is more pure in terms of representing the specific dynamics around early stage company investment by angel investors in New Zealand.

Company Type

Details of all the companies in the SCIF portfolio are available on the NZVIF website (www.nzvif.co.nz). There are some common characteristics of these companies and it is important to be comparing 'apples for apples' when looking at company valuations. The SCIF portfolio companies:

- Have relatively high to very high levels of technology/innovation (in place and/or being developed) at the time of first angel investment.
- Are typically focused on international markets and revenue growth from their inception.
- Are often still at the pre-commercialisation/pre-revenue stage when angels first invest.
- Are often receiving external capital on commercial basis for the first time.
- Will require significant additional capital after the first investment to scale the business.

Stage Definitions

This data is arranged across different stages of company development, namely proof of concept, seed, early stage and early expansion [see page 21 for definitions]. Again, it is important to reference and bear these definitions in mind when applying the data. There is no common international standard for these definitions and they can vary quite considerably between countries and markets. What is a seed stage investment in NZ may not necessarily be regarded as seed stage in the US for instance. The definitions used in this Report have been developed by NZVIF over a long period of time to reflect the characteristics of New Zealand angels' community and have been used consistently across all of the investments by SCIF.

This is a unique and strong dataset by international standards. It is extremely rare to be able to track such a large number of early stage private company investment rounds, over an extended period, with a high level of accuracy. NZVIF hopes that this report is helpful to the New Zealand early stage company investment and entrepreneurial community as it continues its growth and development.

KEY FINDINGS

1. The top two sectors attracting angel investment are software & services (software), and pharmaceutical, biotechnology and life sciences (pharma-biotech) sectors. At the seed stage, software investments were 33% of the total and pharma-biotech 46% (by deal value). At the startup stage, those sectors were 41% and 20% respectively. This is consistent with recently reported US angel investment appetite. According to the most recent HALO report¹, software and healthcare comprise 48% of US angel investments in 2015.
2. The dataset shows that the median PMVs (across all industry sectors) for proof of concept, seed, start-up and early expansion were \$500,000, \$1.2m, \$2.5m and \$10.6m respectively. There is, however, substantial variance across industry sectors. The median PMVs for seed, start-up and early expansion in the software sector were \$1.2m, \$2.5m and \$8.8m. The averages across those stages and in that sector were \$1.6m, \$3.4m and \$9.7m. We note that median values in this context are the preferred method for reporting this data because it removes the impact of “outlier” investments in the dataset.
3. Software companies showed a 5-year median pre-money valuation compound average growth rate of (PMV-CAGR) of 20% at the startup stage. For pharma-biotech startup companies, the median PMV-CAGR was 10%.

Comparing median PMVs for seed, start-up & early expansion in the software sector from our three published reports, the most striking point of note is that seed company median PMVs have more than doubled since 2012, whereas the startup and early expansion PMV increased by 41% and 22% respectively during the same period. The strong growth in seed valuation was partly the result of increased angel activity as more money chases comparatively less very high quality deals. The 3-year compound annual growth rate of angel investment was 28% between 2012 to 2015 (YCF data), indicating strong capital availability in the market for seed investment in particular has led to increased levels of competition for deals and a corresponding increase in valuations. Our view is that the higher valuations in the NZ market can also be attributed to some extent by events in international markets, in particular significant increases in US seed and start-up valuations in 2014 and 2015.

Software & Services	NZVIF Valuation Reports			% increase based on June 2012
	Median PMV	Dec 2010	June 2012	
Seed	\$500,000	\$500,000	\$1,200,000	140%
Startup	\$1,855,006	\$1,771,913	\$2,500,000	41%
Early expansion	\$6,825,000	\$7,200,000	\$8,796,054	22%

4. Pharma-biotech companies have the highest valuations, but they are accompanied with high investment risk - 33% were written off after an average of only 3.3 years. The average investment across 21

¹ <http://www.angelresourceinstitute.org/~media/Files/Halo%20Report%202015%20Annual%20vFinal.pdf>

companies was \$4.6 million of investment. Over the last three years we observe that angels have becoming more cautious about investing in the pharma-biotech sector as evidenced by the fact that there were very few new investments made in the sector by angels over that period.

5. For the 1st round of funding across all sectors, startup companies are valued 1.5X more than seed companies.
6. For all funding rounds across all sectors, investors paid 2.4X more for a seed company compared with companies at Proof of Concept (PoC) stage, then 2.1X for a startup compared to a seed stage company, and 4.2X higher for an early expansion company compared to a startup stage company.
7. The PMV asking price has seen double digit increases for seed and startup companies seeking their 1st round of capital, representing a 5-year CAGR of 19% and 32% respectively.
8. At a portfolio level, the top 3 aggregated enterprise values (EV)² account for 16% of the current portfolio value, the top 5 for 25% and top 10 for 40% as of 30 June, 2016. The data suggests that 10% of deals will be able to return half of all the value from the portfolio. It is worth noting that the median age of the SCIF portfolio is still just 3 years old and the portfolio is valued very conservatively. As the portfolio matures over the time it will be interesting to monitor this dynamic. Over time, perhaps up to 90% of realised value will come from as little as 5–10% of companies in the portfolio.

Company Ranking	Aggregated (realised + unrealised)	As % of portfolio value	As % of total companies
Top 3	\$8,624,782	16%	2%
Top 5	\$13,292,644	25%	3%
Top 10	\$21,449,870	40%	7%
Top 15	\$26,650,763	49%	10%
Top 20	\$30,688,717	57%	13%
Top 30	\$36,297,550	67%	20%
Top 40	\$40,998,565	76%	27%
Total	\$54,194,814		150

9. Over the years 2.7X more capital was invested into follow-on rounds compared to initial investment rounds. This trend is expected to continue, reflecting the fact that angel investors have built a substantial portfolio of companies over the last decade and so the cumulative follow-on capital requirements of that portfolio is growing steadily as a proportion to new investments.
10. The angel round ownership is 30% for PoC stage software companies and 24% for seed companies. This is fairly consistent to the 20% to 25% in the HALO report in the US.

² NZVIF uses conservative valuation methodology applying international best practice. Under the IFRS accounting rules, NZVIF is required annually to record the 'fair value' of all its portfolio companies for its annual accounts. Valuation of NZVIF's portfolio follows the "International Private Equity and Venture Capital Valuations Guidelines" (IPEV). www.privateequityvaluation.com.

Angel ownership (including SCIF)	Proof of concept	Seed
Median	30%	24%
Average	30%	28%

Note: 10-15 Software companies each during the last 3 years.

11. Over the 443 recorded investment rounds, 8.4% of them are down rounds. Down round valuations dropped by 39% (median) from the previous round's value. In most cases the down rounds were due to the company not having met planned business milestones/targets.
12. Convertible loans were the most favored instrument type used for investment. From 2006 to June 2016, 44% of companies in this dataset raised money using a convertible loan either for initial or follow-on funding. It is a popular way to secure investment funds without setting a valuation on a company and can protect early investors from dilution in the next round of financing.
13. Auckland gained the largest share of both deals and dollars, accounting for 52% of total deals and 57% of total capital from 2006 to June 2016, followed by Wellington (17% by deals and 14% by amount of capital).
14. 2015 was a record year for investment by angels and a stand out theme for the year was the significant increase in angel-backed companies successfully raising capital from offshore investors – including venture capital firms, angel groups and equity crowdfunding. That demonstrates the growth maturity of the companies and that NZ is increasingly on the radar for international investors looking for opportunities. This is a very positive trend as offshore investment brings not only capital in the form of a widened shareholder base for companies but also, and crucially, access to wider and deeper networks and markets.
15. Trade sales continue to be the main form of exit for angel investors.

ANALYSIS OF PRE-MONEY VALUATION

BY INDUSTRY– FULL DATA

Detailed in the table below are the median and average PMVs of investments led by 15 SCIF partners by stage of investment. The data consists of 443 complete investment rounds made between 2006 and June 2016. The software sector leads the most rounds and followed by the pharma-biotech sector.

Table 1: Full data

(in \$NZ)	Median Pre-Money Valuation								Average Pre-Money Valuation			
	PoC \$ value	No. of rounds	Seed \$ value	No. of rounds	Start up \$ value	No. of rounds	Early Expansion \$ value	No. of rounds	PoC \$ value	Seed \$ value	Start up \$ value	Early Expansion \$ value
Capital Goods	*	1	*	2	\$ 1,900,000	14	\$ -	0	*	*	\$ 3,288,035	\$ -
Commercial Services & Supp	\$ 300,000	3	*	2	\$ 1,210,000	7	\$ -	0	\$ 418,800	*	\$ 1,362,000	\$ -
Consumer Durables & Appa	*	2	\$ 1,736,888	4	\$ 2,873,362	18	\$ -	0	*	\$ 1,596,924	\$ 4,340,599	\$ -
Food, Beverage & Tobacco	*	1	*	2	\$ 1,400,000	8	\$ -	0	*	*	\$ 2,361,494	\$ -
Healthcare Equipment & Se	\$ -	0	\$ 1,225,000	4	\$ 2,349,688	12	*	1	\$ -	\$ 1,525,000	\$ 2,469,804	*
Household & Personal Prod	\$ -	0	*	1	\$ 1,148,259	12	\$ -	0	\$ -	*	\$ 1,008,684	\$ -
Materials	*	1	\$ 1,415,660	6	\$ 2,686,739	9	\$ -	0	*	\$ 2,281,887	\$ 3,970,367	\$ -
Media	\$ -	0	\$ -	0	*	1	\$ -	0	\$ -	\$ -	*	\$ -
Pharma-Biotech	*	2	\$ 1,705,767	39	\$ 4,642,852	34	\$ 15,000,000	7	*	\$ 2,850,445	\$ 5,252,067	\$ 12,195,714
Semiconductors	\$ -	0	\$ -	0	\$ 4,600,000	3	\$ -	0	\$ -	\$ -	\$ 4,078,460	\$ -
Software & Services	\$ 528,570	14	\$ 1,200,000	66	\$ 2,500,000	118	\$ 8,796,054	6	\$ 532,693	\$ 1,636,107	\$ 3,366,136	\$ 9,704,831
Tech Hardware & Equipmer	\$ -	0	\$ 500,000	19	\$ 3,237,255	22	\$ -	0	\$ -	\$ 635,119	\$ 4,821,639	\$ -
Telecommunication Service	*	1	\$ -	0	\$ -	0	\$ -	0	*	*	\$ -	\$ -
Total	\$ 500,000	25	\$ 1,200,000	145	\$ 2,511,000	258	\$ 10,600,000	14	\$ 484,564	\$ 1,862,018	\$ 3,546,980	\$ 14,483,616

Note: Due to confidentiality, the sector deals below 3 are not shown here. The data is included in the total figures.

Table 2: Valuation uplift across stages

Stage	Median		Average	
	PMV	Uplift	PMV	Uplift
PoC	\$ 500,000	0	\$ 484,564	0.0
Seed	\$ 1,200,000	2.4	\$ 1,862,018	3.8
Startup	\$ 2,511,000	2.1	\$ 3,546,980	1.9
Early expansion	\$ 10,600,000	4.2	\$ 14,483,616	4.1

The median results indicate investors paid 2.4X higher for a seed company compared with at the PoC stage, then 2.1X and 4.2X higher for a startup and early expansion company respectively.

Chart 1: Seed PMV by sector – 2006 to June 2016

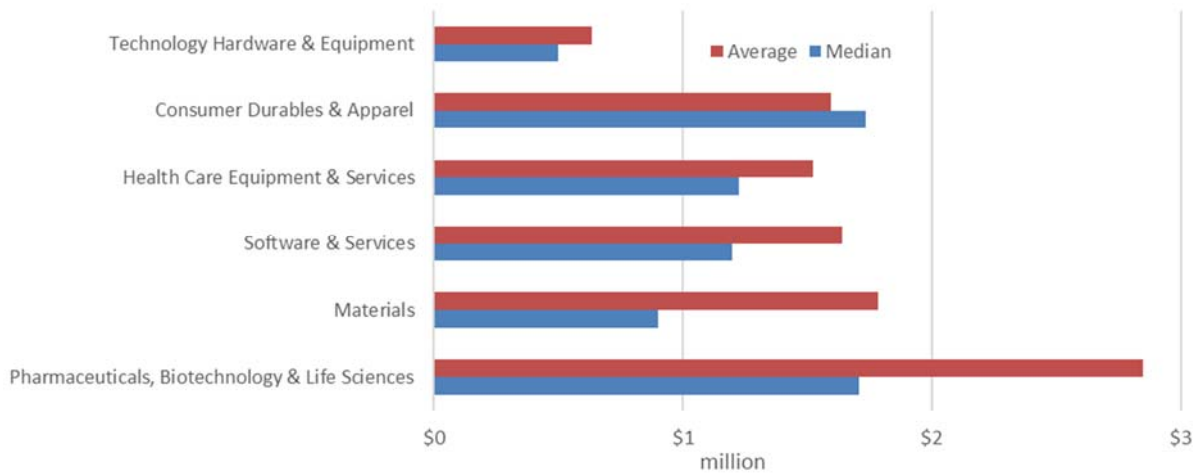
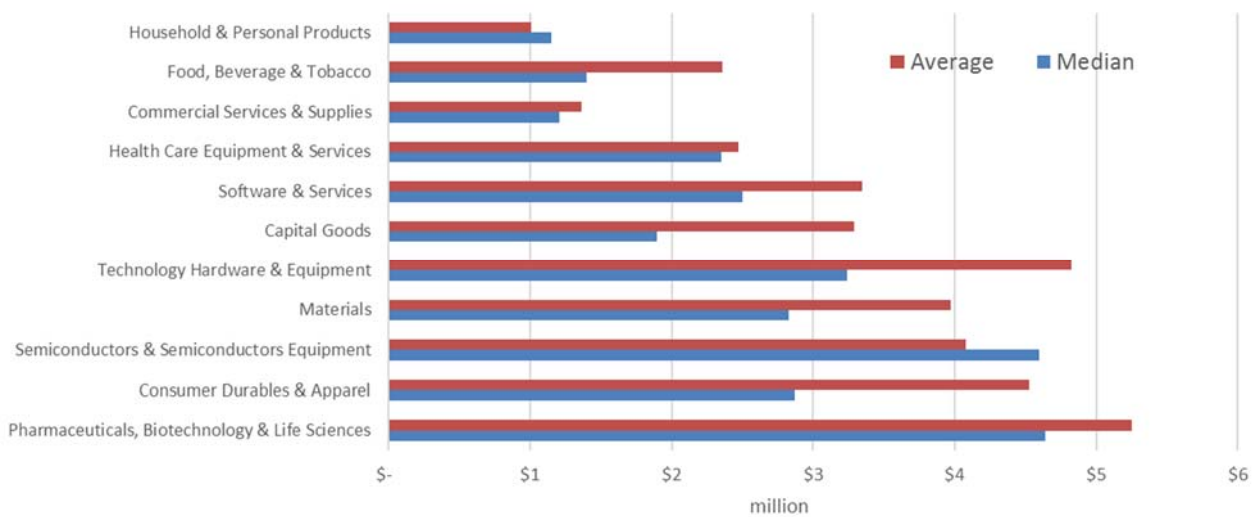


Chart 2: Start up PMV by sector – 2006 to June 2016



The following observations can be made from the data:

- Median values tend to be much lower than average values due to medians removing the effect of the outliers in the data set.
- The PMV range among different sectors are much wider in the startup stage compared with seed stage, which means with the further development of individual business, the fast growing industry players are gaining much higher enterprise values thus causing a bigger gap among each other.

Table 3: Median valuation data – Software & Pharma-biotech across stages

PMV/no. of rounds	Seed	Start-up	Early Expansion
Software & service	\$1.2m	\$2.5m	\$8.8m
	66 rounds	118 rounds	6 rounds
Pharma-biotech	\$1.7m	\$4.6m	\$15m
	39 rounds	34 rounds	7 rounds

Analysis of Pre-money Valuation – by Industry – 2013 to June 2016 Data Only

The combined PMV data during the last 3.5 years are higher than the data across the whole time frame although some variance across the industries.

Table 4: PMV of seed and start up during the last 3.5 years

(in \$NZ) Industries	Seed		Start up	
	Median	Average	Median	Average
Capital Goods	*	*	\$ 3,375,000	\$ 4,892,667
Consumer Durables & Apparel	\$ 1,736,888	\$ 1,596,924	\$ 3,204,993	\$ 3,195,623
Food, Beverage & Tobacco	*	*	\$ 1,400,000	\$ 2,361,494
Health Care Equipment & Services	*	*	\$ 2,655,500	\$ 2,790,212
Household & Personal Products	*	*	\$ 1,308,500	\$ 1,094,119
Materials	\$ 1,931,320	\$ 2,510,440	\$ 2,821,000	\$ 3,823,667
Pharmaceuticals, Biotechnology & Life Sciences	\$ 2,000,000	\$ 3,185,152	\$ 5,700,000	\$ 5,661,940
Software & Services	\$ 1,275,000	\$ 1,797,606	\$ 3,000,000	\$ 4,114,611
Technology Hardware & Equipment	\$ 600,000	\$ 763,333	\$ 2,850,000	\$ 6,519,321
Total - 2013 to June 2016	\$ 1,350,000	\$ 1,841,672	\$ 2,896,000	\$ 3,870,107
Total - 2006 to June 2016	\$ 1,200,000	\$ 1,862,018	\$ 2,511,000	\$ 3,546,980

Note: Due to confidentiality, the sector deals below 3 are not shown here. The data is included in the total figures.

Chart 3: Seed Median PMV by sector – Full time compared with last 3.5 years

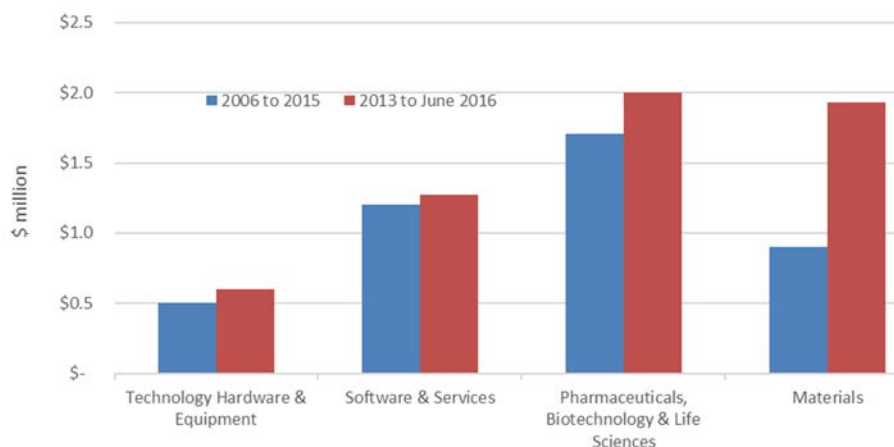
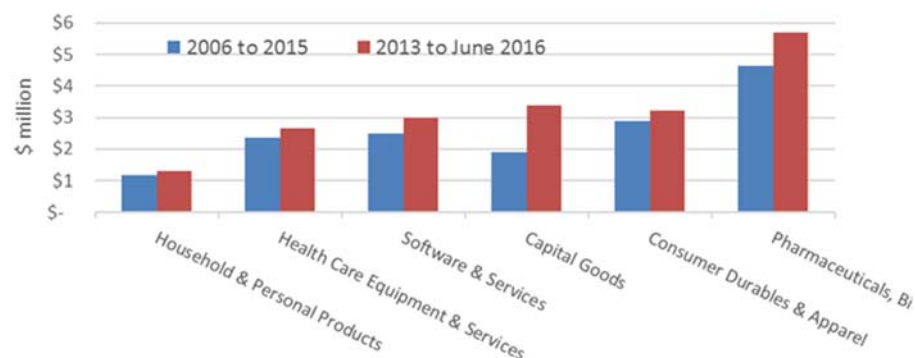


Chart 4: Start-up Median PMV by sector – Full time compared with last three years



ANALYSIS OF PRE-MONEY VALUATION

BY TIME

Two sectors - software and pharma-biotech - capture enough data to be able to analyse the trends across these sectors. Within those industries the most frequent investments are made in start-up stage (59% combined by rounds).

Chart 5: Median PMV - startups

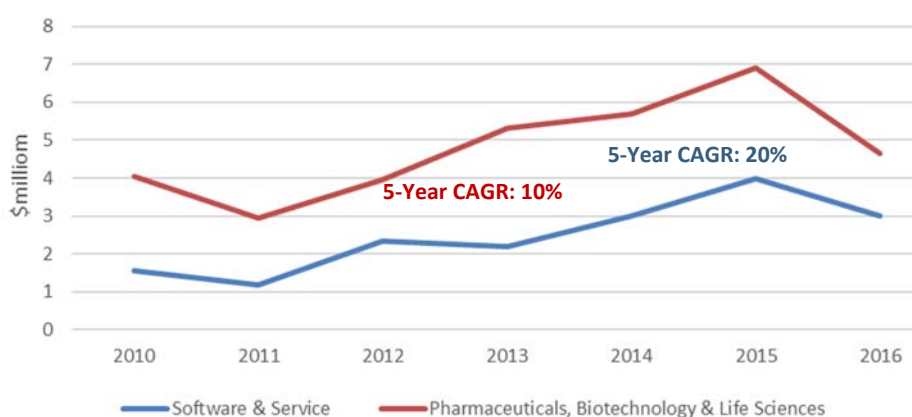


Table 5: PMV of top two most invested industries – start up

Start up	Software & Services			Pharmaceuticals, Biotechnology & Life Sciences		
	Median	Average	Count	Median	Average	Count
2010	\$ 1,552,500	\$ 1,708,381	7	\$4,060,000	\$4,385,803	7
2011	\$ 1,187,264	\$ 2,323,515	14	\$2,946,599	\$4,618,409	3
2012	\$ 2,334,200	\$ 3,197,316	19	\$3,956,600	\$3,568,244	3
2013	\$ 2,200,000	\$ 2,833,951	11	*	*	2
2014	\$ 3,000,000	\$ 3,466,057	17	\$5,700,000	\$5,121,870	4
2015	\$ 4,733,183	\$ 4,446,253	25	\$6,900,000	\$7,046,042	3
Jun-16	\$ 3,000,000	\$ 6,128,450	9	\$4,642,850	\$5,047,110	3
	\$ 2,500,000	\$ 3,366,136	102	\$4,642,852	\$5,252,067	25

Overall observations are:

- The median PMVs of pharma-biotech are overall 86% higher than software,
- Both software and pharma-biotech start-up valuations have seen double digits growth over the last 5 years (delivering a CAGR of 20% and 10% respectively). Although pharma-biotech companies have much higher valuation base, due to the complex and lengthy R&D processes, their growth is much slower compared with their software counterparts.

ANALYSIS OF PRE-MONEY VALUATION

BY 1st ROUND

The charts below are the median PMVs of new investments at the first round by time and industry. The dataset consists of 67 seed companies and 53 startups. From 2007 to June 2016, the seed companies across different sectors were valued at around \$1 million at first round of capital raising from angel investors, while startup companies show more variance depending on the nature and progression of the business, with the highest valuation of \$7 million in 2009.

Chart 6: Median PMV of 1st round by time

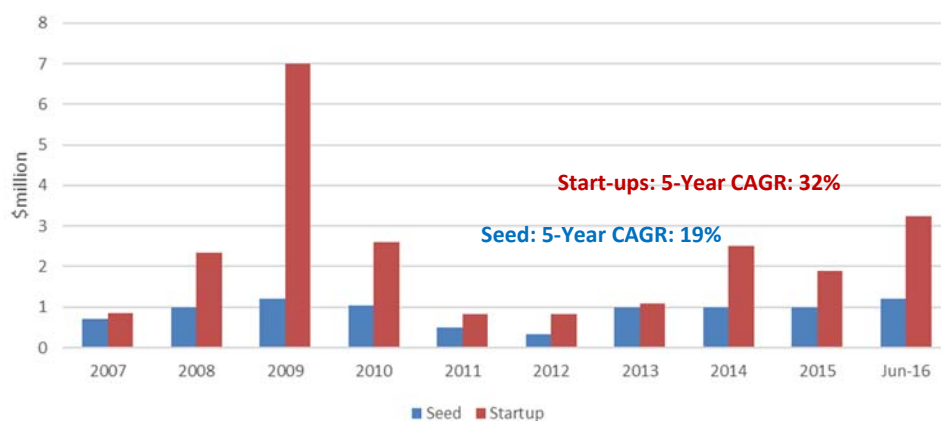
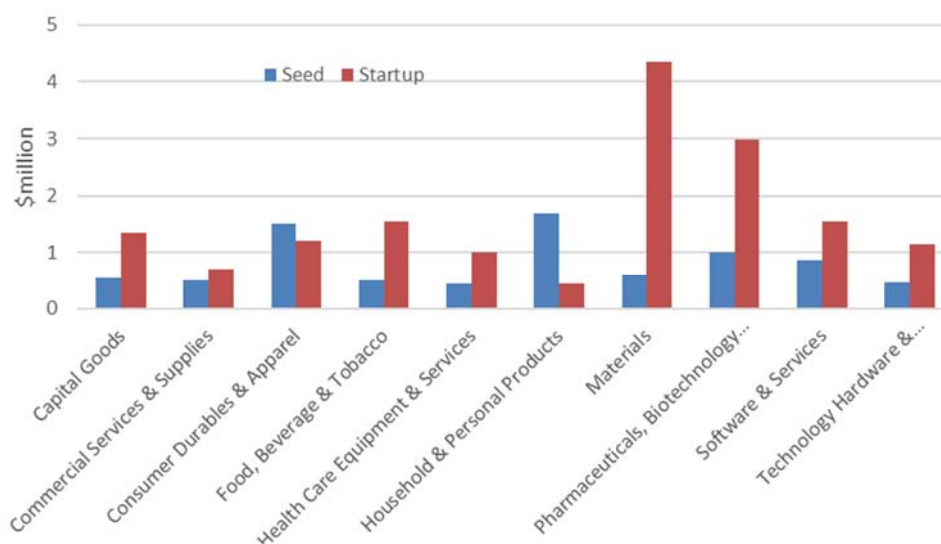


Chart 7: Median PMV of 1st round by industry



DYNAMICS BETWEEN FUNDING ROUNDS

BY STAGE – SEED and START UP

There are some interesting dynamics and activities between multiple funding rounds for each company. Charts 8 and 9 aggregate the capital raised, the timeframes for burning cash and the valuation uplifts between each round of each company. There are 98 companies (52 seed and 46 startup) which raised at least 2 rounds of funding and a third of them raised at least 5 rounds. Average data shows higher numbers than median, i.e. more capital raised, higher valuation uplift and longer timeframes for burning cash.

Looking at the median valuation variations, companies raised \$533,000 during their 2nd round and \$2.1 million by their 7th round. These companies saw a steady capital requirement of between \$450,000 to \$600,000 up to round 5 and then a sharp increase in capital requirements after that as the businesses grow. Given the increased capital requirements, the time between rounds narrowed as the companies' burn rate increased. As companies make progress, the risks and uncertainties tend to reduce, and, not surprisingly, investors value each subsequent round with a lower percentage uplift compared to those raised previously. For example, at round 2 the PMV uplift was 83% and dropped to 38% at round 7.

Chart 8: Median valuation variation between funding rounds

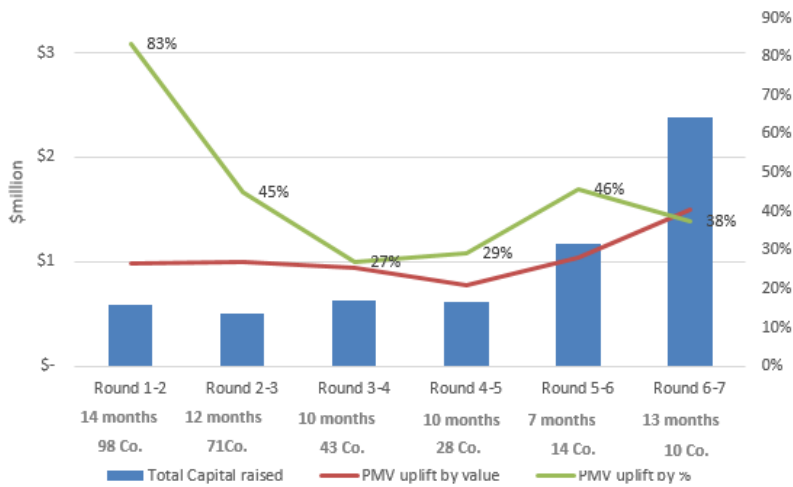
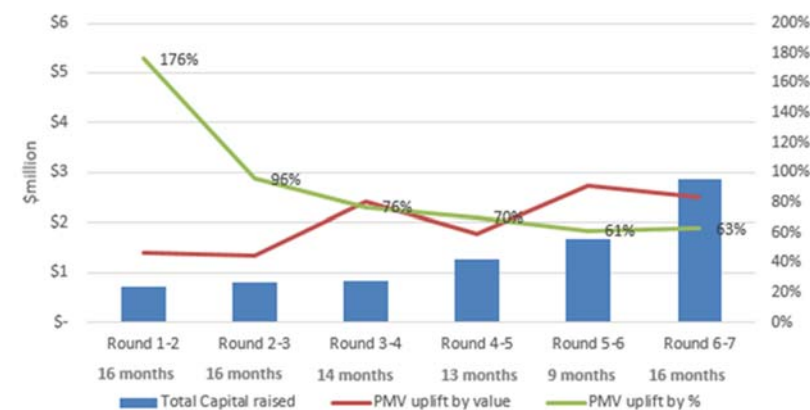


Chart 9: Average valuation variation between funding rounds



DYNAMICS BETWEEN FUNDING ROUNDS

BY STAGE – SEED

By analysing the 52 seed companies separately it shows the curves of total capital raised and PMV uplift in percentage terms are steeper, reflecting the greater business risk for companies at the very early stage. Using the median data, seed companies raised \$520,000 at round 2 with a PMV increase of 104% and at round 7, over \$2.6 million of capital was raised at a valuation uplift by 38%.

Chart 10: Median valuation variation between funding rounds – seed only

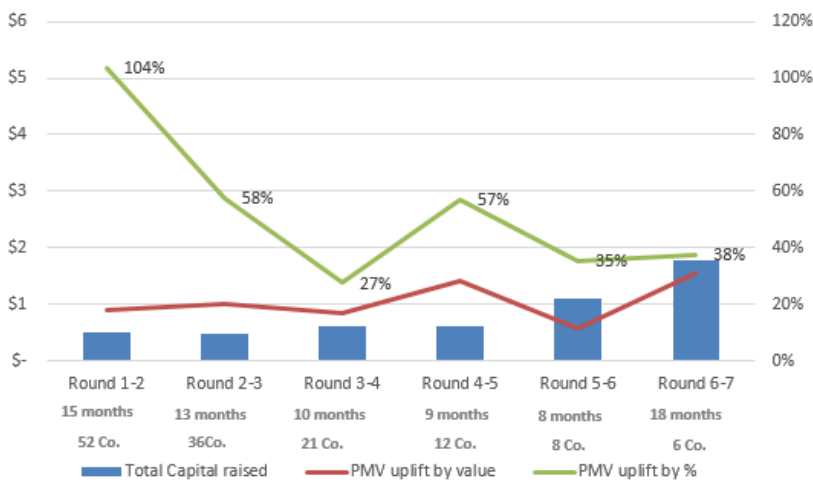
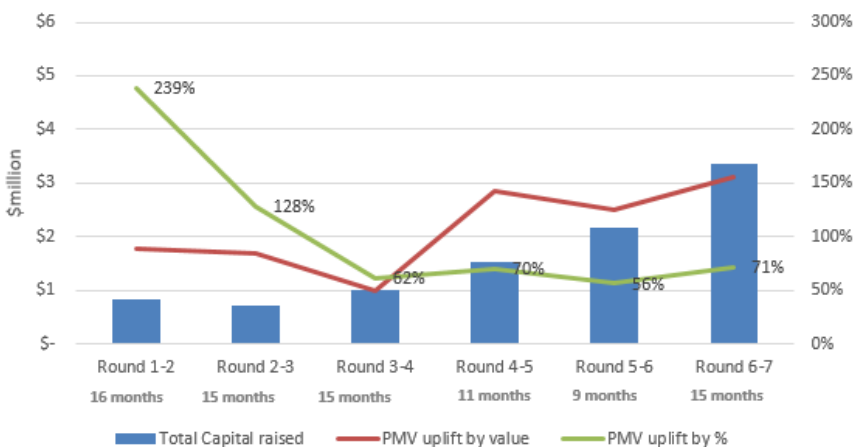


Chart 11: Average valuation variation between funding rounds – seed only

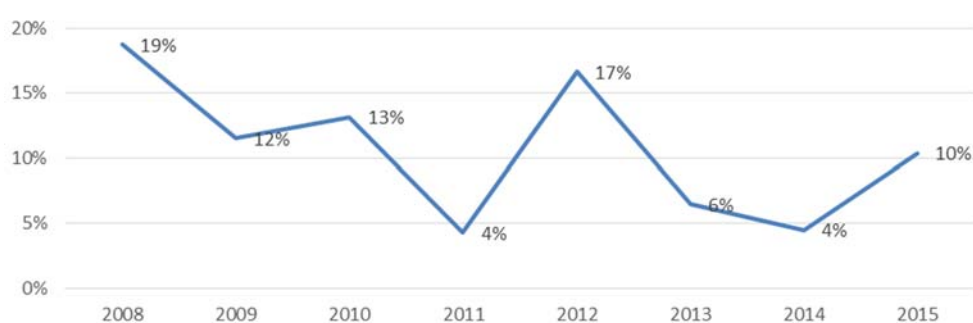


Down Rounds

A down round is a round of financing where investors purchase stock from a company at a lower valuation than the valuation placed upon the company by earlier investors. Down rounds includes exits at lower valuations but excludes write-offs. Down rounds are detrimental to the companies' development and cause shareholder dilution.

Over the 443 funding and 8 exit rounds, 37 (8.3%) were down rounds (including some companies which had more than 1 down round). The highest proportion of down rounds were in 2008 (19%) and 2012 (17%) while both 2011 and 2014 saw down rounds in only 4% of cases.

Chart 12: Down rounds as a % of total



The median down round dropped by 39% on average from the previous round's value. There are different reasons behind down rounds. In the majority of cases, down rounds indicated that the companies had not achieved development targets and, therefore, offer discounts to existing shareholders for continued support. In most instances of down rounds, companies offered lower valuation after 2 or 3 rounds of funding. Typically, these companies would have completed refinement of their products and services but experienced unexpected challenges in closing enough sales or failed to deliver the commercialisation plan, thus losing growth momentum and requiring more cash to restructure and sustain the business.

Table 6: Down rounds by type

By type	No. of Co.	As % of total	PMV % drop	Comment
- Exits	8	31%	N.A.	Either through trade sale or liquidated
- Eventually wrote off	5	19%	-42%	Lost investor attraction and the business was written down to zero
- Merged	1	4%	-64%	Seek alternative development model for continues development
- Operating	8	31%	-42%	Raised capital as bridging rounds and using convertible clause
- Progressing	4	15%	-27%	Rights issue at deep discount & value recovered afterwards, now in healthy growth
Subtotal	26	100%	-39%	

NEW AND FOLLOW-ON INVESTMENTS

This section shows the mix between new and follow-on investments in the dataset between 2006 and June 2016 by the number of companies and dollar amount. The 150 angel backed companies raised \$337 million in that period, with average each company raised \$2.2 million growth capital.

As is expected in a maturing investment portfolio, there is proportionally more capital being invested into follow-on rounds than initial investments. Capital invested in new companies as a percentage of the total has fallen from 72% in 2007 to 15% in June 2016.

As expected the amount of follow-on investment as compared with new was high in the later years of this dataset. Initial investment has averaged \$8.5 million per annum over the last five years. Follow-on investment has averaged \$32 million per year over the same period representing a 3.8X investment multiple over initial investments. This investment multiple is expected to continue in the future.

Chart 13: No. of deals by %

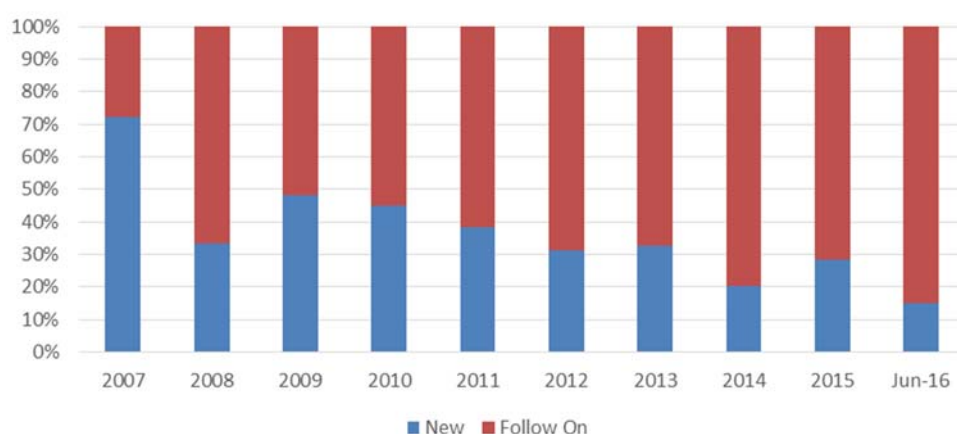
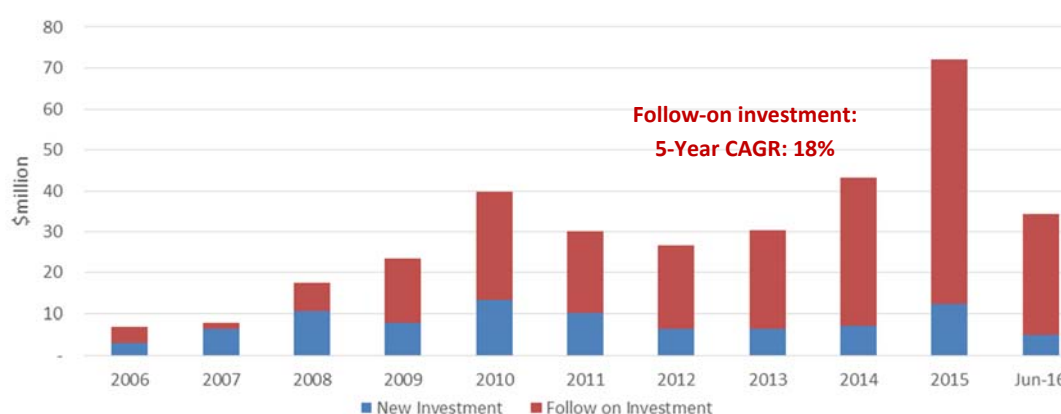


Chart 14: Investment amount



INDUSTRY INVESTMENT MIX

BY SECTOR – SEED

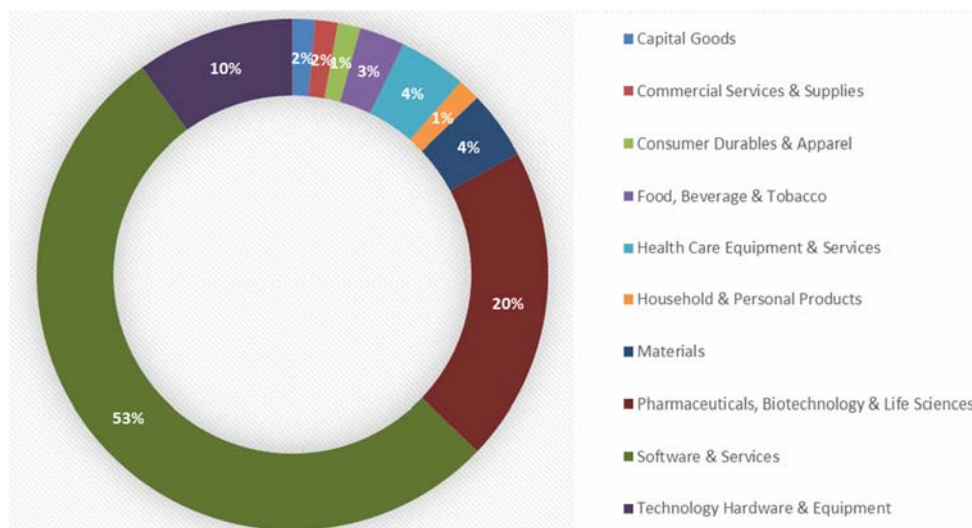
Of the 70 seed companies in the portfolio, 37 software companies secured \$31.6 million of capital between 2006 and June 2016, representing 53% of the total deals and 33% of all the capital invested. On average, each software company raised around \$855,000 – 125% less than the average amount raised by companies in other sectors. This is consistent with trends in the US as the overall cost in establishing IT businesses falls (and the count of start-ups grows)

In terms of the investment amount, pharma-biotech received most capital from investors with a total of \$43.7 million (46%) being invested. On an individual basis, each company received \$3.1 million from investors, reflecting the capital intensive nature of the industry.

Table 7: Percentage by No. of companies and amount

Seed	No. of Co.	% of Total	Investment	% of Total
Pharmaceuticals, Biotechnology & Software & Services	14	20%	\$ 43,687,066	46%
Software & Services	37	53%	\$ 31,635,990	33%
Subtotal	51	73%	\$ 75,323,056	79%
Total	70		\$ 95,016,935	

Chart 15: Sector breakdown by No. of companies - seed



INDUSTRY INVESTMENT MIX

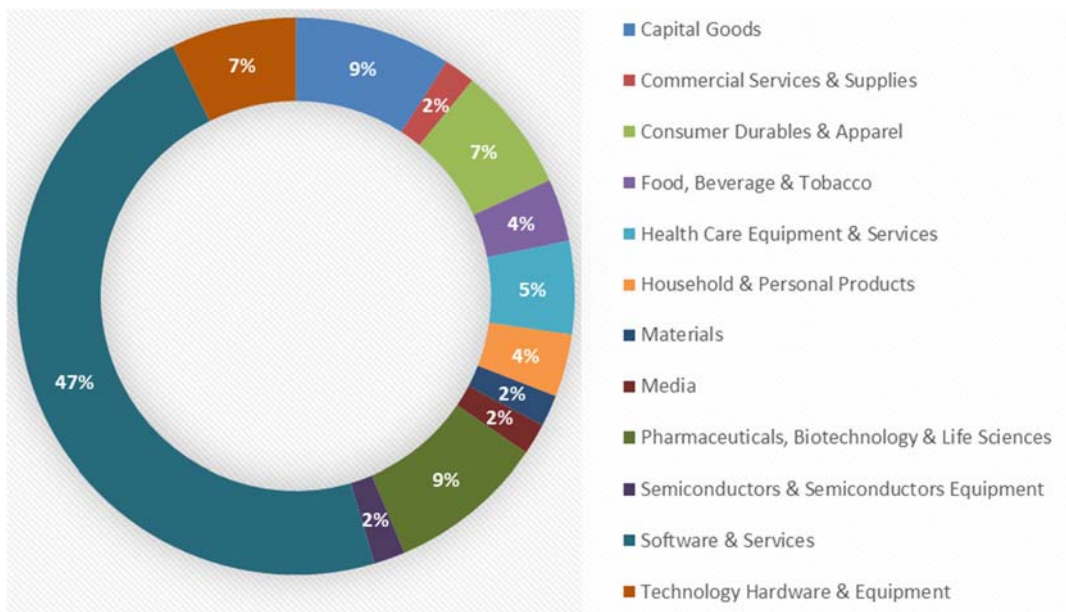
BY SECTOR – START UP

At the startup stage, the software sector dominates both the number of deals and the capital amount invested. Among 55 startup companies, 26 software companies (47% of the total count) raised \$89 million (41 % of the total capital raised) during 2006 and June 2016, with average company attracted \$3.4 million. The second most invested sector is pharma-biotech, it accounts for 9% of total number of deals and 20% of investment amount, with average company raised \$8.9 million.

Table 8: Percentage by No. of companies and amount

Startup	No. of Co.	% of Total	Investment	% of Total
Pharmaceuticals, Biotechnology & Software & Services	5	9%	\$ 44,442,943	20%
	26	47%	\$ 89,522,335	41%
Subtotal		56%	\$ 133,965,278	61%
Total	55		\$ 220,891,275	

Chart 16: Sector breakdown by No. of companies – start up



HOLDING PERIODS

In terms of the median holding periods (since first SCIF investment):

- The investee companies have an average holding period of 3 years for those still actively operating.
- On average companies that filed for liquidation did so after 2 years of operation.
- 4 companies pursued mergers after average 4 years to achieve operational efficiency.
- 1 company has a successful IPO after an 8 year holding period.

Table 9: Holding period breakdown by type

Holding Periods (years)			
Exit Type	Median	Average	No. of Co.
Liquidation	2.1	2.0	5
Merger	3.8	4.1	4
Trade Sale	2.8	3.1	7
Write Off	2.6	3.0	27
Active	2.8	3.2	106
IPO	8.2	8.2	1

Table 9: Write Offs by Top Sectors

Sector	Total investments	No. of Write offs	Write off rate	As % of total write off	Median age
Pharmaceuticals, Biotechnology & Software & Service	21	7	33%	26%	3.3
Software & Service	76	13	17%	48%	1.8
Subtotal	97	20	21%	74%	
Total portfolio	150	27	Overall write off		2.6

Of the 27 write offs, 26% are pharma-biotech and another 48% are software companies.

- Pharma-biotech companies have the highest valuations but they also face higher risks due to the complex nature of business. Among 21 pharma-biotech investments, 33% of them wrote off the business after 3.3 years, much longer than the overall median of 2.6 years. Pharma-biotech companies take longer to undertake R&D and reach feasibility milestones, thus dragging the write-off period longer.
- Out of 76 software investments, 17% of them wrote off the business after 1.8 years, well under the overall 2.6 years. These companies are less capital intensive and normally develop quickly to prove whether or not their planned business model worked.

COMPANY STAGE DEFINITIONS

Proof of concept: A company where the investment will help the yet to be formed business to establish viability, to isolate technical issues, and to suggest overall direction. The investment is to build a very early prototype product. Key characteristics of companies at this stage: sometimes solo founder with no employees; definitely pre-revenue; highly likely that there is no board in place, round size is typically less than NZD\$300,000.

Seed: A company where the investment will enable development, validation of IP, testing and preparation of a product or service to the point where it is feasible to start business operations. Key characteristics of companies at this stage: most likely to be pre-revenue or some revenues from trial orders; negative cash-flow; generally no or very small customer base; staff consist of founders plus perhaps some part-time employee(s); no or little formal governance – perhaps a nascent board of directors; and no (or little) prior investment by third party investors, investment round size is typically less than \$1 million.

Start-up: A company where the investment will enable actual business operations to get underway. This includes further development of the company's product(s) and initial production, key management hires, marketing and international growth. Key characteristics of companies at this stage: revenues are less than \$3 million; negative cash-flow; incomplete senior management team with less than 20 full time employees; formal governance in place with a mix of founders and investors; round size is typically smaller than \$2 million.

Early expansion: A company where the investment provides capital to scale up production facilities, expand offshore offices, and build out marketing but where the company can be still cash flow negative. Key characteristics of companies at this stage: structured governance, established and fully formed senior management team is in place; with more than 20 full time employees; growing customer base and typically based and/or have a physical presence offshore, and the round size is typically between \$2 million and \$10 million.

PREVIOUS REPORTS AND NZVIF CONTACTS

To view our 2010 and 2012 Valuation Reports please go to:

<http://www.nzvif.co.nz/assets/publications/Valuation-Early-Stage-Investments-Dec12.pdf>

<http://www.nzvif.co.nz/assets/publications/Valuation-Early-Stage-Investments-Jun11.pdf>

See also NZVIF's Annual Investment Reports

<http://www.nzvif.co.nz/assets/publications/NZVIF-Investment-Report-2016.pdf>

And our Annual Investment Snapshot Report

<http://www.nzvif.co.nz/assets/publications/InvestmentSnapshot-Jul15.pdf>

The latest Young Company Finance (YCF) report (and all previous reports) can be viewed here

<http://www.nzvif.co.nz/assets/publications/STARTUPIssue20-April2016.pdf>

We welcome your feedback on this valuation report, including suggestions on how it could be improved and what other analysis you would like to see us include over time and your feedback of comments/insights on the data and observations presented in this report. Please contact Bridget Unsworth or Molly Yang (see contact details below) or email us at venture@nzvif.co.nz.

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