



New Zealand
**Venture
Investment
Fund**

New Zealand
Early-Stage Company
Investment Valuations

December 2018

Executive Summary

1. The calendar year 2018 was a record year for investment by New Zealand angels. The defining theme for the year was the significant increase in total amount invested over previous years: \$111m in 2018 vs \$86m in 2017 and \$69m in 2016, a compounded annual growth rate (CAGR) of 17%.
2. Several New Zealand companies raised capital from overseas investors, demonstrating the competitiveness of companies originating from New Zealand and the abundance of high-quality local opportunities available to investors. These trends are very positive as offshore investment provides greater choice for companies, but crucially access to networks and markets as well.
3. Auckland gained the largest share of both deals and dollars in 2018, accounting for 63% of total deals and 73% of total capital. The next city in line was Wellington with 11% and 8% share of deals and dollars respectively.
4. The dataset shows that median pre-money valuations (PMVs) (across all industry sectors from 2006 - 2018) for proof of concept, seed, start-up and early expansion were \$0.6m, \$1.4m, \$3.2m and \$11.3m respectively. However, it is worth noting that these median values do not reflect the significant variance across industry sectors. For example, the median PMVs for proof of concept, seed, start-up and early expansion in the software sector were \$1.2m, \$2.6m, \$5.2m and \$16.8m. Median values in this context are the preferred method for reporting this data because it removes the impact of dataset outliers.
5. The CAGR of angel investment was 16% between 2013 to 2018. This data is collected as part of Young Company Finance (YCF) index, an ecosystem initiative to track early stage investment activities. The strong capital availability in the market for early-stage investment opportunities has led to increased competition for deals and corresponding increases in valuations:

Software & Services	NZVIF Valuation Reports			
	2006 - 2010	2006-2012	2006-2016	2006 - 2018
Median PMV				
Seed	\$0.5m	\$0.5m	\$1.2m	\$1.4m
Startup	\$1.9m	\$1.8m	\$2.5m	\$3.5m
Early expansion	\$6.8m	\$7.2m	\$8.8m	\$11.3m

6. Our view is that the higher valuations in the market is mostly driven by the better quality of New Zealand companies and partially attributed to trends in the international market, with domestic valuations increasing due to significant increases in availability of capital globally in recent years.
7. Median valuations for “early expansion” companies were 3.6x larger than those for “Start-up” stage companies (as per NZVIF definitions of each stage). Additionally, start-up companies were valued at 3.2X the price of “Seed” companies, and these were valued 2.3X more than companies at “Proof of Concept” stage.

8. The PMV has seen double digit increases for seed and start-up companies seeking their first round of capital, representing a 5-year CAGR of 12% and 42% respectively.
9. From 2004 to 2018, 2.23x 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 the cumulative follow-on capital requirements of that portfolio is growing steadily as a proportion to new investments.
10. Over 113 recorded investment rounds in 2018, 2% were 'down-rounds'. Median down-round valuations were 31% lower than the previous round's value.
11. In 2018, 55% of companies raised money using ordinary shares. The next most common instrument was convertible loans at 24% and finally preference shares at 21%.
12. Trade sales continue to be the main form of exit for angel investors.
13. In 2018, the top two sectors attracting angel investment were software & services (software), and technology hardware & equipment (tech-hardware). At the seed stage, software investments were 60% and tech-hardware were 20% of the total deal value. At the start-up stage, those sectors were 50% and 14% respectively.
14. Software companies showed a 5-year PMV CAGR of 31% at the start-up stage. For comparison, pharma-biotech start-up companies exhibited a PMV CAGR was 5%
15. Comparing median PMVs for seed, start-up and early expansion in the software sector from our three published reports. The most noteworthy insight is that median seed and start-up company valuations have doubled since 2014 (**Seed** - \$1.7m in 2014, \$3.5m in 2018. **Start-up** - \$3.0m in 2014, \$7.6m in 2018).
16. Median PMVs for pharma-biotech companies were much higher than software & services companies in 2010, but have remained relatively unchanged in recent years.

	Software & Services			Pharmaceuticals, Biotechnology & Life		
	Median	Average	Count	Median	Average	Count
2010	\$ 1.1m	\$ 2.8m	24	\$ 4.1m	\$ 4.0m	7
2011	\$ 1.4m	\$ 2.1m	27	\$ 4.4m	\$ 5.1m	6
2012	\$ 2.2m	\$ 2.9m	28	\$ 2.3m	\$ 4.8m	2
2013	\$ 1.5m	\$ 2.8m	29	*	*	1
2014	\$ 2.1m	\$ 2.6m	35	*	*	2
2015	\$ 1.8m	\$ 3.9m	72	\$ 3.9m	\$ 8.6m	3
2016	\$ 3.5m	\$ 6.7m	47	\$ 1.2m	\$ 3.7m	6
2017	\$ 3.5m	\$ 7.7m	50	*	*	1
2018	\$ 6.7m	\$ 11.6m	54	\$ 3.5m	\$ 12.9m	10

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

INTRODUCTION

In June 2011, New Zealand Venture Investment Fund (NZVIF) released *The Valuation of Early Stage Investments in New Zealand* report which reported PMV and other data from investments into 186 companies between 2004 and December 2010. The second report was released in December 2012 with updated investment data from January 2011 to June 2012, and a third report was released in August 2016.

Key findings identified in the 2016 report included:

1. The top two sectors attracting angel investment by amount invested were software & services, and pharma-biotech sectors.
2. The dataset showed that the median PMVs (across all industry sectors) for proof of concept, seed, start-up and early expansion were \$0.5m, \$1.2m, \$2.5m and \$10.6m respectively. There was however, substantial variance across industry sectors.
3. Over the years 2.7X more capital was invested into follow-on rounds compared to initial investment rounds. This trend was expected to continue.
4. Auckland gained the largest share of both deals and dollars, accounting for 52% of total deals and 57% of total capital invested between 2006 and June 2016, followed by Wellington.
5. Trade sales continued to be the main form of exit for angel investors.

Two years later, a significant number of the key findings identified in the 2016 report remain true, while we observe notable growth in the total amount invested in the market.

Scope

This report analyses deals based on the Young Company Finance (YCF) index. The YCF index is an ecosystem initiative to track early stage investment activities. The companies included in the YCF index 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.

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 early stage investment, the data removes some of the material variances which can arise when venture capital investment data is mixed with angel investment data – as has been the case with the original valuation reports in 2010 and 2012. While the earlier Early-Stage Company Investment Valuations reports were accurate in their own right, this report provides further analysis around the specific dynamics for early stage company investment by angel investors in New Zealand.

Company Type

There are some common characteristics of these companies and it is important to be comparing 'apples for apples' when looking at company valuations. The YCF index 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 18 for definitions] and it is important to 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 i.e. a seed stage investment in New Zealand may not necessarily be regarded as seed stage in the US.. The definitions used in this report have been developed by NZVIF over a long period of time to reflect the characteristics of New Zealand's angel community and have been used consistently across all of the investments made by NZVIF's Seed Co-investment Fund (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 to grow and develop.

ANALYSIS OF PRE-MONEY VALUATION

BY INDUSTRY– ACTIVITY

Detailed in the tables below is the number of deals in each stage across the last four years. It is clear that Software & Services leads all industries in deal activity followed by Pharma-Biotech. The number of deals available in Software & Services means we are able to take a closer look at the PMV changes for the seed and start-up stages across the last four years. The lack of data means we are unable to replicate this for other industries due to confidentiality concerns and the effect of statistical outliers.

Table 1: Number of deals in the last four years – proof of concept, seed

	PoC - Number of Deals				Seed - Number of Deals			
	2015	2016	2017	2018	2015	2016	2017	2018
Capital Goods	-	-	1	3	2	-	-	1
Commercial Services & Supplies	-	-	-	-	-	1	1	-
Consumer Durables & Apparel	-	-	-	-	1	-	-	-
Education	-	-	-	-	-	-	-	-
Energy	-	-	2	1	-	-	1	-
Food, Beverage & Tobacco	1	-	-	-	1	-	-	-
Healthcare Equipment & Services	-	-	1	-	1	2	3	-
Horticulture	-	-	-	-	-	-	-	-
Household & Personal Products	-	-	-	-	-	-	-	-
Materials	-	1	-	1	3	1	-	1
Media	-	-	-	-	-	-	-	-
Pharma-Biotech	-	7	3	3	5	6	1	2
Semiconductors	-	-	-	-	-	-	-	-
Software & Services	3	4	2	3	40	16	13	16
Tech Hardware & Equipment	-	2	1	-	4	-	-	6
Telecommunication Services	1	-	-	-	-	-	-	-

Table 2: Number of deals in the last four years – start-up, early expansion

	Start-Up - Number of Deals				Early Expansion - Number of Deals			
	2015	2016	2017	2018	2015	2016	2017	2018
Capital Goods	3	3	1	-	-	1	-	-
Commercial Services & Supplies	-	2	2	2	-	-	1	-
Consumer Durables & Apparel	1	6	3	2	-	-	1	-
Education	-	-	-	1	-	-	-	-
Energy	-	-	-	-	-	-	-	-
Food, Beverage & Tobacco	4	-	1	3	-	-	-	-
Healthcare Equipment & Services	1	1	4	1	1	-	-	-
Horticulture	-	-	-	-	-	-	-	-
Household & Personal Products	3	1	2	2	-	-	-	-
Materials	4	1	-	-	1	-	-	-
Media	1	-	-	-	-	-	-	-
Pharma-Biotech	3	6	1	4	2	-	-	1
Semiconductors	-	-	-	-	-	-	-	-
Software & Services	26	21	28	27	1	5	7	6
Tech Hardware & Equipment	2	5	5	6	-	-	-	-
Telecommunication Services	-	-	-	-	-	-	-	-

BY INDUSTRY– FULL DATA

Detailed in the table below are the median and average PMVs of investments by stage of investment. The data consists of 1,023 complete investment rounds made between 2006 and 2018. The software sector leads the most rounds, followed by the pharma-biotech industry.

Table 3: PMV of entire dataset

Industries	Median Pre-Money Valuation								Average Pre-Money Valuation			
	PoC		Seed		Start-Up		Early Expansion		PoC	Seed	Start up	Early Expansion
	\$ value	No. of rounds	\$ value	No. of rounds	\$ value	No. of rounds	\$ value	No. of rounds	\$ value	\$ value	\$ value	\$ value
Capital Goods	\$3.5m	6	\$2.0m	7	\$2.4m	22	*	2	\$4.7m	\$5.1m	\$3.3m	*
Commercial Services & Supplies	\$0.3m	4	\$1.3m	3	\$2.0m	22	\$10.0m	4	\$0.4m	\$1.9m	\$2.7m	\$10.0m
Consumer Durables & Apparel	\$0.3m	3	\$1.5m	5	\$2.9m	36	\$8.4m	3	\$0.3m	\$1.4m	\$4.5m	\$8.4m
Education	*	-	*	-	*	1	*	-	*	*	*	*
Energy	\$0.8m	3	*	2	\$11.7m	4	*	-	\$0.6m	*	\$11.7m	*
Food, Beverage & Tobacco	*	1	\$0.5m	5	\$1.9m	27	*	2	*	\$0.5m	\$4.6m	*
Healthcare Equipment & Services	*	1	\$0.7m	15	\$3.0m	30	*	1	*	\$1.3m	\$4.0m	*
Horticulture	*	-	*	-	*	1	*	-	*	*	*	*
Household & Personal Products	*	-	*	1	\$1.5m	21	*	-	*	*	\$2.0m	*
Materials	\$1.5m	5	\$1.9m	14	\$4.2m	29	*	1	\$2.2m	\$3.8m	\$4.2m	*
Media	*	-	*	-	*	2	*	2	*	*	*	*
Pharma-Biotech	\$1.2m	20	\$1.7m	54	\$4.5m	66	\$15.0m	13	\$1.5m	\$2.6m	\$5.8m	\$19.2m
Semiconductors	*	-	*	-	\$4.6m	3	*	-	*	*	\$4.1m	*
Software & Services	\$0.6m	30	\$1.4m	161	\$3.5m	257	\$11.3m	34	\$0.8m	\$2.7m	\$5.7m	\$15.3m
Tech Hardware & Equipment	\$0.5m	4	\$0.6m	32	\$4.4m	56	\$11.5m	4	\$0.7m	\$1.9m	\$6.3m	\$11.5m
Telecommunication Services	*	1	*	-	\$0.0m	3	*	-	*	*	\$0.0m	*
Total	\$0.6m	78	\$1.4m	299	\$3.2m	580	\$11.3m	66	\$1.2m	\$2.6m	\$5.2m	\$16.8m

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

The median results indicate valuations were 2.3X higher for a seed company compared with at the Proof of Concept (PoC) stage, then 2.4X and 3.6X higher for a start-up and early expansion company respectively. The table above also shows that most investments are at the seed and start-up stages, with total number of seed rounds being 3.78X of PoC. A similar observation could be made on the other end of the spectrum, with number of early expansion rounds only being 11% of the number of start-up rounds.

Chart 1: Seed PMV by sector – 2006 to June 2018

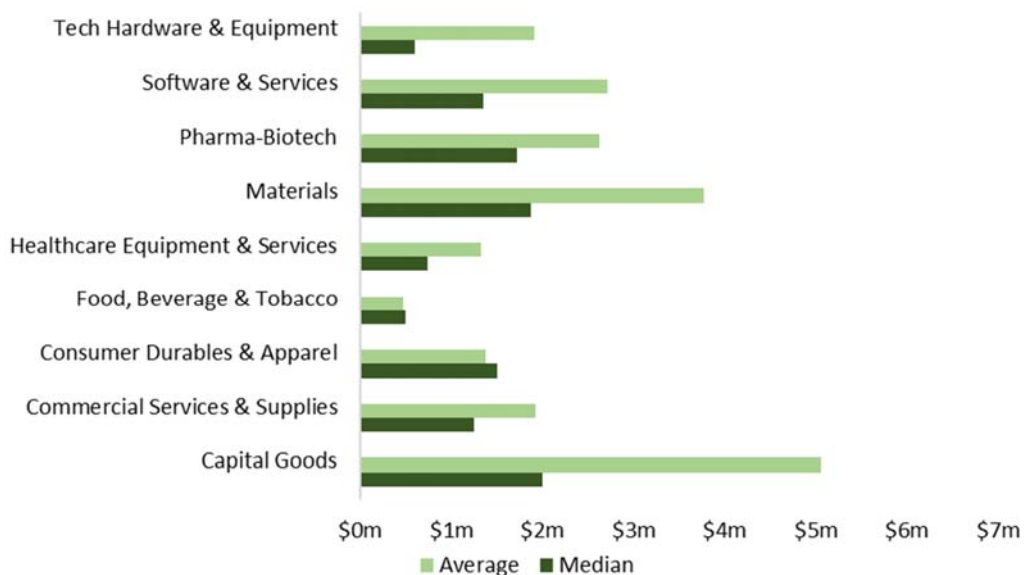
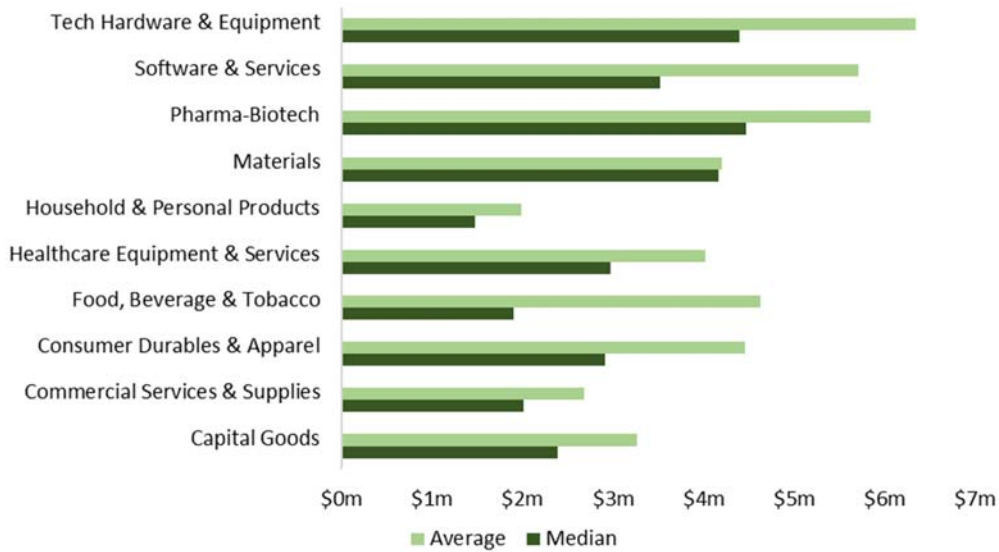


Chart 2: Start up PMV by sector – 2006 to June 2018



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. These outliers are typically highly successful companies that have raised capital at very high valuations. Although they represent a tiny fraction of the results and skew the results for the vast majority of early stage companies, a large discrepancy between median and mean is a sign of the industry having companies with very high PMVs.
- The range of PMVs among different sectors vary widely in both the seed and the start-up stage. This could indicate 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.

BY INDUSTRY– LAST FOUR YEARS

The median PMV values from the last four years of data are higher than the medians across the whole dataset. This is evident for the start-up stage where the median valuation from the past four years of data is 56% higher than from the full dataset. The median PMV for seed stage companies is only 14% higher for the last four years, which is not a significant increase. However, the difference between average and median is significant, particularly at the seed stage.

Table 4: PMV of companies during the last four years

(in \$NZ)	PoC		Seed		Start-up		Early Expansion	
	Median	Average	Median	Average	Median	Average	Median	Average
Capital Goods	\$0.0m	\$5.7m	\$2.0m	\$7.6m	\$4.0m	\$5.5m	*	*
Commercial Services & Supplies	*	*	*	*	\$4.0m	\$4.9m	*	*
Consumer Durables & Apparel	*	*	\$2.0m	\$2.0m	\$5.0m	\$5.4m	*	*
Education	*	*	*	*	*	*	*	*
Energy	\$0.8m	\$0.6m	*	*	*	*	*	*
Food, Beverage & Tobacco	*	*	*	*	\$2.9m	\$7.5m	*	*
Healthcare Equipment & Services	*	*	\$1.5m	\$1.5m	\$6.0m	\$6.6m	*	*
Horticulture	*	*	*	*	*	*	*	*
Household & Personal Products	*	*	*	*	\$2.1m	\$3.3m	*	*
Materials	\$3.3m	\$3.3m	\$4.8m	\$4.0m	\$2.8m	\$3.9m	*	*
Media	*	*	*	*	*	*	*	*
Pharma-Biotech	\$1.2m	\$1.5m	\$1.9m	\$2.5m	\$4.8m	\$7.3m	\$35.0m	\$48.3m
Semiconductors	*	*	*	*	*	*	*	*
Software & Services	\$1.0m	\$1.1m	\$1.5m	\$3.5m	\$5.4m	\$8.9m	\$15.0m	\$17.0m
Tech Hardware & Equipment	\$0.5m	\$0.7m	\$1.5m	\$3.4m	\$8.3m	\$8.3m	*	*
Telecommunication Services	*	*	*	*	*	*	*	*
Total - 2015 to December 2018	\$1.0m	\$1.7m	\$1.6m	\$3.3m	\$5.0m	\$7.7m	\$15.6m	\$21.0m
Total - 2006 to December 2018	\$0.6m	\$1.2m	\$1.4m	\$2.6m	\$3.2m	\$5.2m	\$11.3m	\$16.8m

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 four years

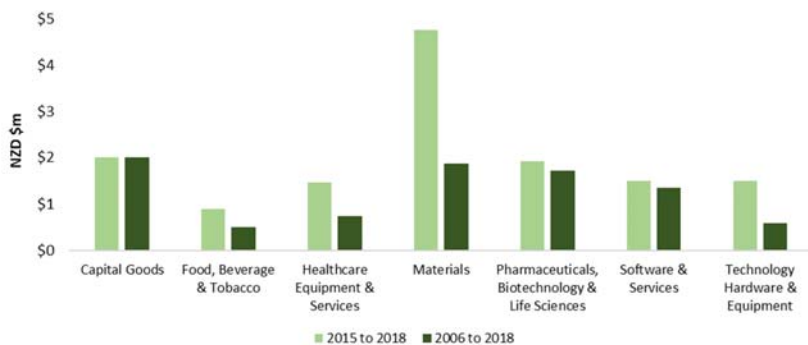
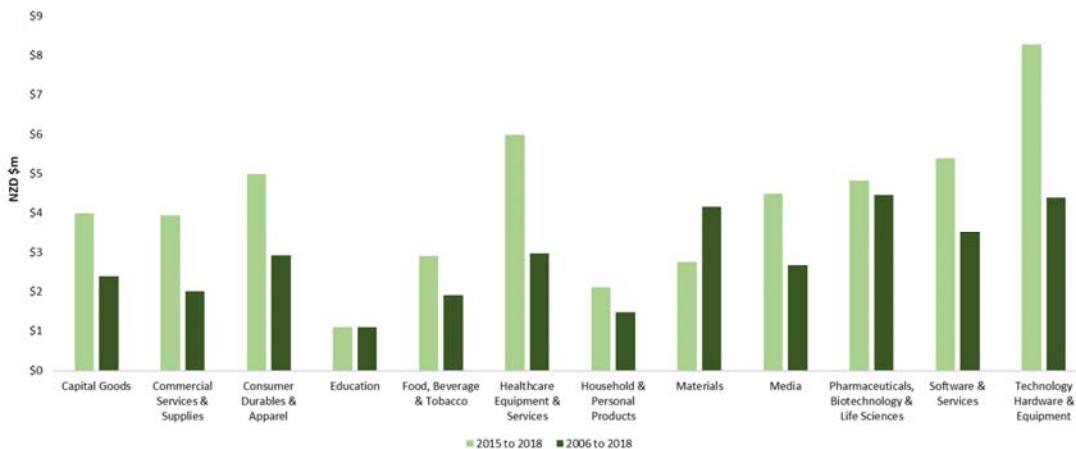


Chart 4: Start-up Median PMV by sector – Full time compared with last four years



SOFTWARE & SERVICES

From the activity data presented in the previous sections it is apparent that the software & services sector captures enough data to be examined on its own.

The table below provides a historical view at each point in time from inception. The valuation uplift is apparent, with the 2006-2018 median almost doubling for all stages of investment compared to the 2006-2010 dataset. This implies company valuations in the software & services industry have increased substantially in recent years to drag the median up for the entire time horizon. Across our entire dataset, investments into the start-up stage were most prevalent (52% combined by rounds).

Table 5: Valuation uplift across stages

Software & Services	NZVIF Valuation Reports			
	2006 - 2010	2006-2012	2006-2016	2006 - 2018
Seed	\$0.5m	\$0.5m	\$1.2m	\$1.4m
Startup	\$1.9m	\$1.8m	\$2.5m	\$3.5m
Early expansion	\$6.8m	\$7.2m	\$8.8m	\$11.3m

This activity is reflected in the chart below and shows the valuation movements year on year. Despite a minor decrease in 2015 and 2016, median pre-money valuations have been on an upward trend for both start-up and seed stage companies, with start-up software & services companies recording a record \$7.6m median across 27 investment rounds in 2018. Early expansion companies have been excluded from the chart below due to scale and limited dataset.

Chart 5 & Table 6: Median PMV – start-ups and seed companies



	Software & Services		
	Seed	Start-up	Early expansion
2010	\$ 0.5m	\$ 1.8m	\$ 6.7m
2011	\$ 0.6m	\$ 2.2m	-
2012	\$ 0.2m	\$ 2.4m	-
2013	\$ 1.1m	\$ 2.2m	\$ 25.0m
2014	\$ 1.7m	\$ 3.0m	-
2015	\$ 1.1m	\$ 4.9m	\$ 18.8m
2016	\$ 1.8m	\$ 4.0m	\$ 9.2m
2017	\$ 2.3m	\$ 4.0m	\$ 12.0m
2018	\$ 3.5m	\$ 7.6m	\$ 21.0m

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 157 seed companies and 153 start-ups. From 2006 to 2016, the seed companies across different sectors were valued at around \$1m at first round of capital raising from angel investors. This increased to almost \$2m in 2017 and 2018. Start-up companies saw steady uplift in valuation between 2013 and 2018, with median valuation for first round increasing to \$5.8m in 2018 from \$1m in 2013.

Chart 6: Median PMV of 1st round by time

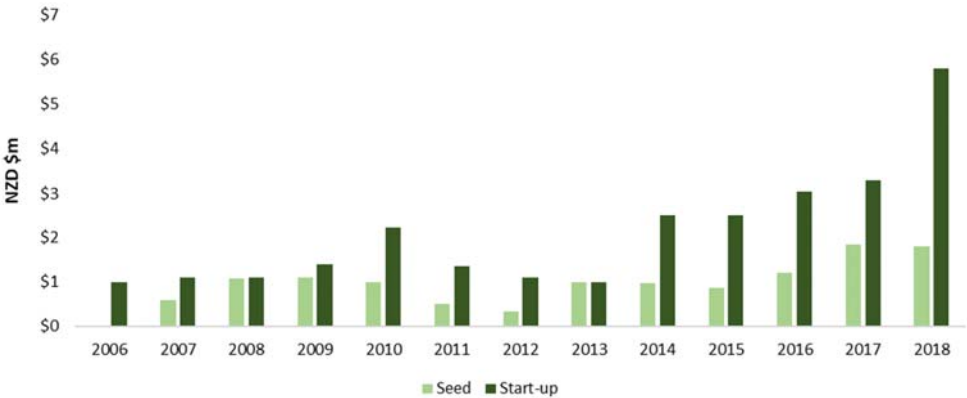
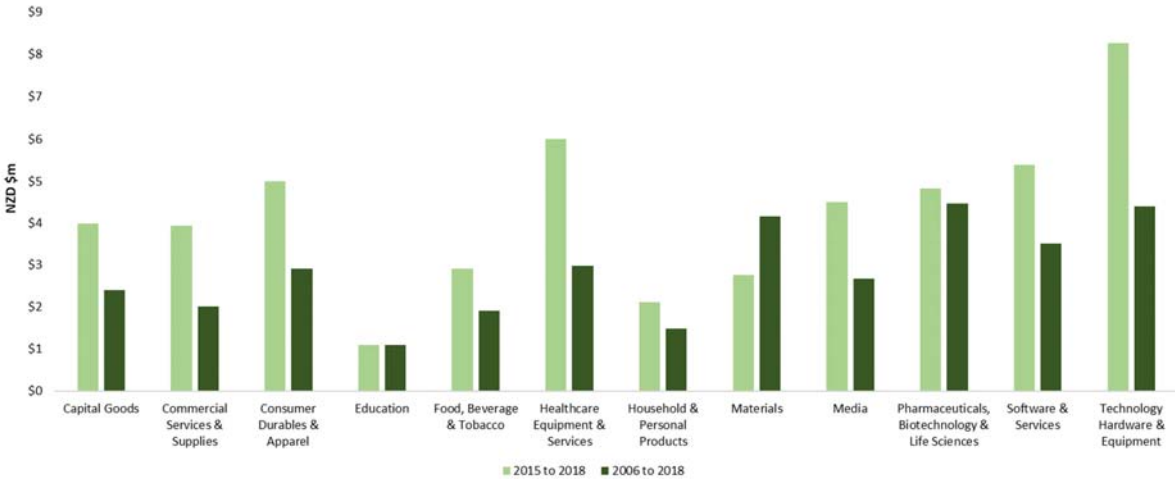


Chart 7: Median PMV of 1st round by industry



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 and the valuation uplifts between each round of each company. There are 202 companies (70 seed and 132 start-up) which raised at least 2 rounds of funding.

Looking at the median valuation variations, seed and start-up companies raised on average at \$2.2m PMV in round 1 and \$8.5m PMV in round 6, but the amount of capital raised at each round did not increase significantly across rounds. Although there is a steady PMV uplift across rounds, as companies make progress, the risks and uncertainties tend to reduce, and investors value each subsequent round with a lower percentage uplift compared to the one previously. For example, at round 2 the PMV uplift was 91% and dropped to 18% at round 6.

Chart 8: Median valuation variation between funding rounds

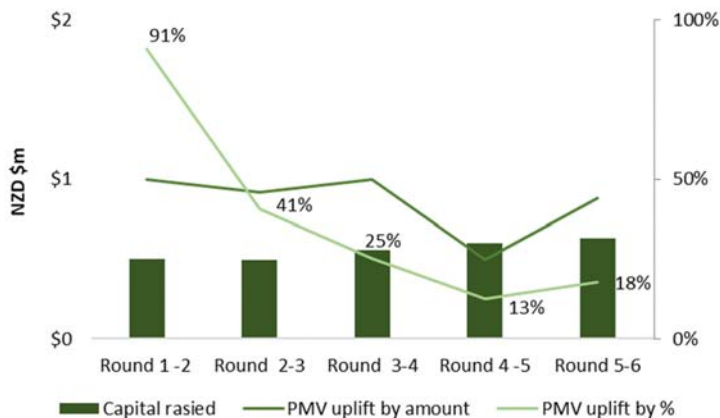
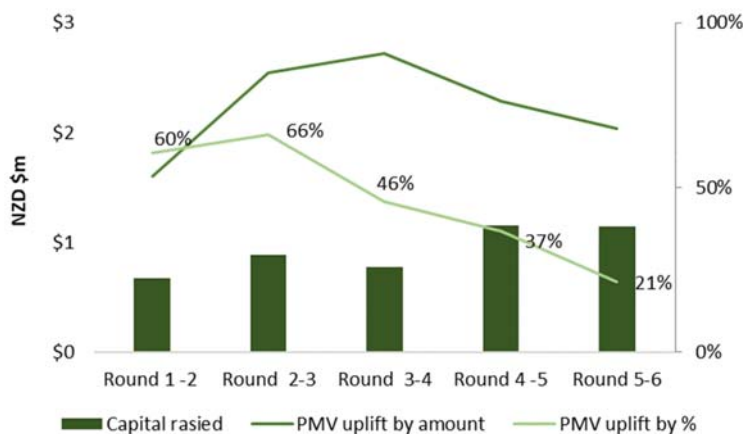


Chart 9: Average valuation variation between funding rounds

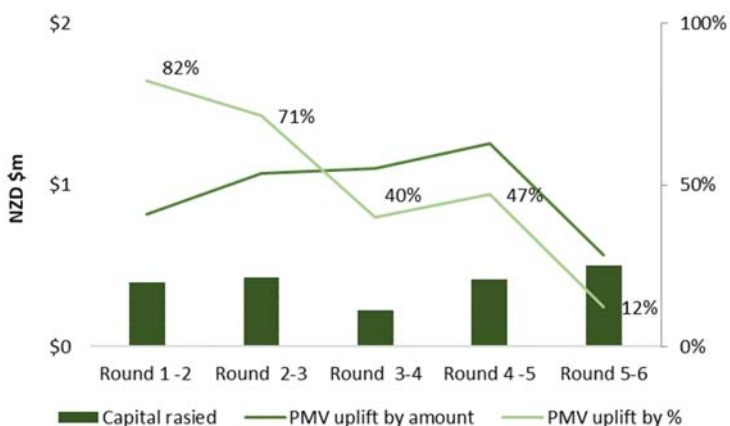


DYNAMICS BETWEEN FUNDING ROUNDS

BY STAGE – SEED

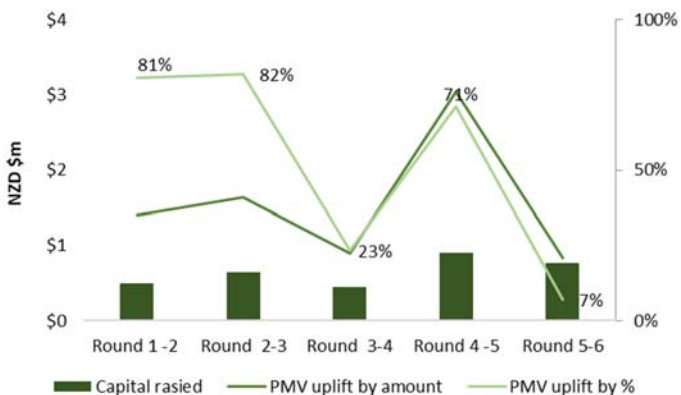
By analysing the seed companies separately, it shows the curves of total capital raised and PMV uplift in percentage terms are steeper, reflecting the greater business risk for companies at the very early stage and that investors are willing to significantly increase valuations as companies are de-risked. Using the median data from 2006 to 2018, seed companies raised a total of \$35m at round 2 with a PMV increase of 82% from the previous round, and at round 6 over \$3.8m of capital was raised at a valuation uplift by 12% compared to round 5.

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



The chart below displays a sharp drop in valuation uplift in rounds 3-4. This is caused by a few outliers in the dataset and is less apparent in the median valuations chart above. Median valuations are included for comparisons throughout this report for a better representation of market activity.

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



NEW AND FOLLOW-ON INVESTMENTS

This section shows the mix between new and follow-on investments in the dataset between 2006 and December 2018 by the number of companies and dollar amount. These angel-backed companies raised \$772m in that period, with each company raising an average of \$639k growth capital per round.

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 59% in 2006 to 33% in December 2018. This trend has stabilised in recent years as more companies are reaching successful exits.

The amount of follow-on investment as compared with new was high in the later years of this dataset. Initial investment has averaged \$23m per annum over the last five years. Follow-on investment has averaged \$61m per year over the same period representing a 2.7X investment multiple over initial investments. This investment multiple is expected to continue in the future.

Chart 12: No. of deals by %

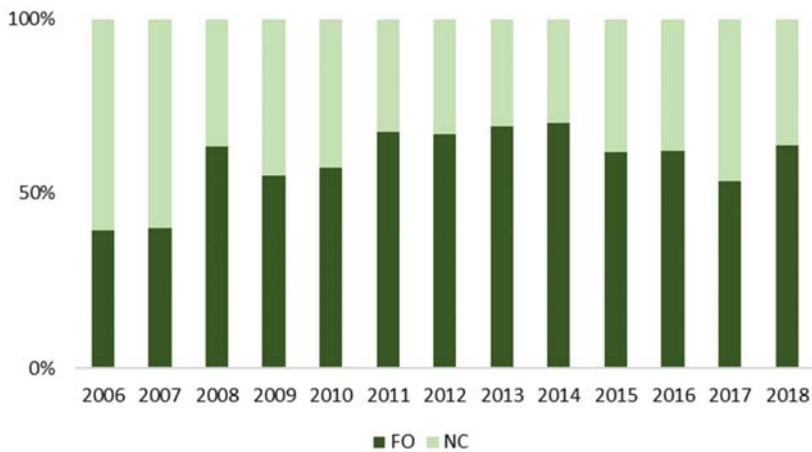
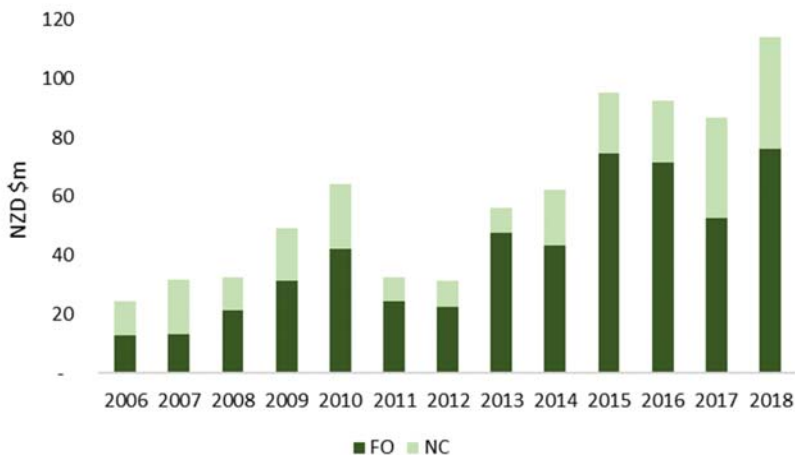


Chart 13: Investment amount



INDUSTRY INVESTMENT MIX

SEED STAGE INVESTMENTS – BREAKDOWN BY SECTOR

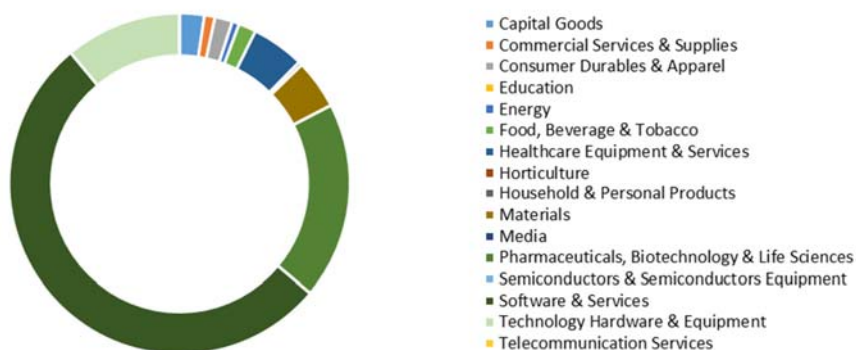
Of the 299 seed rounds, 161 software rounds secured \$74m of capital between 2006 and December 2018, representing 54% of the total deals and 48% of all the capital invested. On average, each software round raised around \$460k – 9% less than the average amount raised across all sectors. This is consistent with trends in the US as the overall cost of establishing IT businesses falls (and the number of start-ups grows). Some of the factors contributing to this decrease in cost include the increased availability of resources and support from angel groups and incubators, as well as the availability of cloud computing and co-working spaces.

In terms of the investment amount, pharma-biotech received a total of \$41m (26%) at the seed stage. On an individual basis, each company received \$757k from investors. This reflects the higher costs associated with establishing a successful pharma-biotech company.

Table 7: Percentage by No. of companies and amount

	Seed		
	Median	Average	Count
Capital Goods	\$ -	\$ 619,311	7
Commercial Services & Supplies	\$ 160,000	\$ 360,000	3
Consumer Durables & Apparel	\$ 152,500	\$ 227,572	5
Education	\$ -	\$ -	0
Energy	\$ 300,000	\$ 300,000	2
Food, Beverage & Tobacco	\$ 450,000	\$ 1,429,000	5
Healthcare Equipment & Services	\$ 250,000	\$ 326,066	15
Horticulture	\$ -	\$ -	0
Household & Personal Products	\$ 500,000	\$ 500,000	1
Materials	\$ 465,158	\$ 689,355	14
Media	\$ -	\$ -	0
Pharma-Biotech	\$ 555,000	\$ 757,150	54
Semiconductors	\$ -	\$ -	0
Software & Services	\$ 300,000	\$ 459,999	161
Tech Hardware & Equipment	\$ 200,000	\$ 336,328	32
Telecommunication Services	\$ -	\$ -	0
Total	\$ 300,000	\$ 505,134	299

Chart 14: Sector breakdown by No. of companies - seed



INDUSTRY INVESTMENT MIX

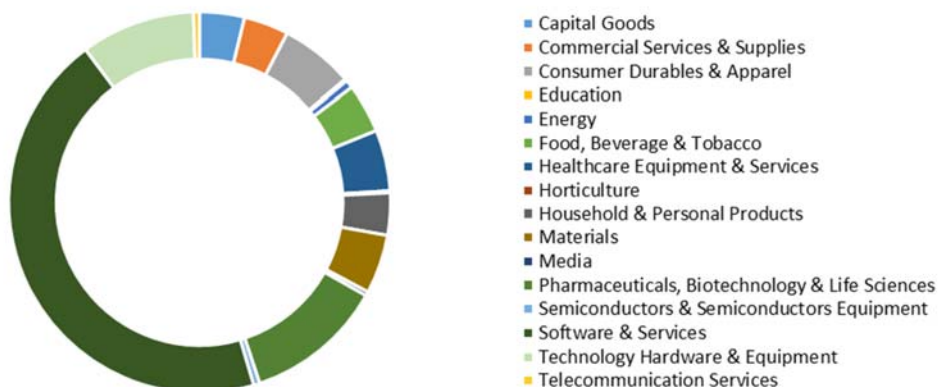
BY SECTOR – START-UP

At the start-up stage, the software sector dominates both the number of deals and the amount of capital invested. Among 580 start-up rounds, 257 software rounds (44% of the total count) raised \$205m (46% of the total capital raised) between 2006 and 2018, with the average round attracting \$799k. The second most invested sector is pharma-biotech, which accounts for 11% of total number of deals and 16% of investment amount, with the average round raising \$1m.

Table 8: Percentage by No. of companies and amount

	Start-up		
	Median	Average	Count
Capital Goods	\$ 500,000	\$ 963,296	22
Commercial Services & Supplies	\$ 529,195	\$ 781,780	22
Consumer Durables & Apparel	\$ 444,402	\$ 655,200	36
Education	\$ -	\$ -	1
Energy	\$ 1,000,000	\$ 1,000,000	4
Food, Beverage & Tobacco	\$ 1,336,750	\$ 1,305,901	27
Healthcare Equipment & Services	\$ 450,000	\$ 476,521	30
Horticulture	\$ 240,000	\$ 240,000	1
Household & Personal Products	\$ 355,000	\$ 355,000	21
Materials	\$ 500,000	\$ 490,000	29
Media	\$ 411,000	\$ 411,000	2
Pharma-Biotech	\$ 850,000	\$ 1,074,748	66
Semiconductors	\$ 600,000	\$ 600,000	3
Software & Services	\$ 588,750	\$ 799,145	257
Tech Hardware & Equipment	\$ 390,000	\$ 621,206	56
Telecommunication Services	\$ 275,000	\$ 275,000	3
Total	\$ 535,000	\$ 762,162	580

Chart 15: Sector breakdown by No. of companies – start-up



HOLDING PERIODS

This section of analysis was solely based on the SCIF portfolio as data is not collected for the ecosystem. In terms of the median holding periods (since first SCIF investment):

- The investee companies have an average holding period of 4 years for those still actively operating.
- On average companies that filed for liquidation did so after 4 years of operation.
- Six companies pursued mergers after an average of 3.8 years to achieve operational efficiency.
- Two companies have had IPOs with an average holding period prior to listing of 9 years.

Table 9: Holding period breakdown by type

Holding Periods (Years)		
Exit Type	Average	No. of Co.
Active	4.1	127
IPO	9.1	2
Liquidation	3.4	37
Other	3.2	6
Secondary Sale	5.1	3
Trade Sale	3.0	16
Write Off	4.9	22

Table 10: Write-offs and liquidated company breakdown

Industry	Number of companies	Write-off %	Average holding period (Yrs)
Capital Goods	3	27%	4.6
Consumer Durables & Apparel	4	44%	4.0
Education	2	29%	6.9
Food, Beverage & Tobacco	2	29%	1.7
Health Care Equipment & Services	1	13%	6.8
Materials	4	44%	4.2
Media	1	50%	0.8
Pharmaceuticals, Biotechnology & Life Sciences	9	39%	4.6
Software & Services	26	21%	3.5
Technology Hardware & Equipment	2	9%	3.7
Telecommunication Services	1	50%	2.1

Of the 55 write offs and liquidations, 16% are pharma-biotech and another 47% are software companies.

- Among pharma-biotech investments write-offs, the average holding period prior to write off is 4.6 years. Pharma-biotech companies take longer to undertake research and development and reach feasibility milestones, resulting in a longer holding period prior to write-off.
- Out of the software & services write-offs, the average holding period prior to write-off is 3.5 years, slightly lower than the overall average of 4 years. This reflects the fact that software & services companies are less capital intensive and normally develop quickly to prove whether 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 New Zealand \$300k.

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 \$1m.

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 \$3m; 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 \$2m.

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 \$2m and \$10m.

PREVIOUS REPORTS AND CONTACTS

To view our 2010, 2011 and 2016 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>

<https://www.nzvif.co.nz/assets/publications/SCIF-Valuation-Research-Report-August-2017.pdf>

The latest Start Up magazine (and all previous reports) can be viewed here:

<https://www.pwc.co.nz/insights-and-publications/2019-publications/startup-investment-magazine.html>

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 Owen Woodhouse or Allen Fan (see contact details below) or email us at venture@nzvif.co.nz.

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