why angels invest

decomposing the data behind
$16.5M of invested capital
The big numbers

The data in this report is compiled from the venture analysis work from 16 different Angel investor analysts who collectively spent an estimated 1,305 "man hours" screening and analyzing ventures.

The total number of initial venture submissions (1,450) that were manually screened down to the 29 finalists that went through the full venture 360 report analysis process. Of the 29 finalists, 18 ventures received funding.

For each venture, eight core categories comprising of 80 individual elements were scored. In addition to scoring, analysts produced roughly 174 written pages of insights and other information in the final venture 360 reports.

The total amount of capital (in US$) invested into 18 of the 29 ventures that were analyzed using the Venture 360 software in the first half of 2009.
strong geographical diversity

The 29 ventures that were reviewed using the Venture 360 software come from all across the US with noticeable clustering in Northern California, Boston, and New York.

Additional investor analysts have recently been added from various countries in the EU and the Pacific Rim which will be included in the next data report.

only non-identifying data used

The data used to compile this report was based upon a numerical extraction from the venture 360 analysis database.

All identifying data (all text; including names of investors, company name, investment groups, management team members, company name, etc.) are completely confidential.

Ventures that were scored by entrepreneurs for educational purposes or by unqualified Angel groups or individual investors were not included in the data set used for this report.

geographic distribution

Each of the 29 orange circles on the map below shows the approximate zip code location of the 29 ventures spread across 14 different states.
The 29 ventures that were scored fall into 8 different industry categories.

Leading the pack was the consumer products and services category with nearly one third of all ventures selected for review. (31%)

Notable segments are media and entertainment and energy which combined made up over a third of the ventures that were scored. (39%)

Over time the industry segments that are selected by the Angel investors as finalists for funding consideration will help identify potential investor and market shifts.
overall conclusions

Through the scoring data generated by investors who evaluated 29 venture investments (from an initial pool of over 1,450 applicants), we can see clear patterns of influential criteria and the weight of their value in the投资者 capital deployment decisions.

This report provides educational information around what specific criteria play an actual role in the Angel investors decision process, and which criteria are "stated as important" by investors yet fail to materialize as an influencing factor in actual investment decisions.

For individual investors this data can help cut through emotional bias or stated intentions and identify investors actual decision making patterns to help inform an investor about any potential divergence from their stated investment strategy, and their actual investment decisions.

key findings

The most influential aspect of Angel investment criteria (often stated by investors as the "most important criteria" was confirmed as the 'management team score' having the highest statistical correlation with funding decisions. The correlation between prior raised capital and existing revenue strength were also extremely strong predictors of investment decisions.

The lack of actual impact placed upon several other venture attributes that were described or stated as "very important" is one of the key discoveries of this research.

Readers should note the discrepancy between stated importance and actual importance as an interesting finding that will be explored further in future data reports.

research scope

In the first half of 2009 nearly 1,450 ventures were screened by Angel investors.

From that pool, 29 were reviewed using a web based venture analysis application that collected 140 points of quantitative and qualitative data.

This report attempts to discover insights from their venture scoring data, and uncover which attributes influenced the decisions that led to the investment of $16,550,000.
This chart shows the correlation between scored and unscored attributes to the 18 ventures that received capital. Much of this research in this report is focused on seeking to understand the influential power (both perceived and actual) of various venture attributes and how they correlate to the investors decisions.

The most influential of all attributes was management team, which had nearly twice the correlated strength to investment decisions when compared to several other “key” variables.

Noticably, several other factors which are often stated as primary drivers of investment decisions played a much smaller role in the invested deals. (projected revenue, economic model, and deal structure to name a few.)

Overall, there is a strong relationship between overall venture 360 score and the amount of capital invested.

The early data shows that investors are more likely to invest in a strong management team with an unproven revenue model and lesser deal terms than they are to bet on a rapidly growing market with a low scoring management team.
data collection methodology

The data in this report was collected through the usage of a web based venture analysis application. The application was used by Angel investors (analysts) to provide a standardized framework for deal analysis. Each of the 29 ventures scored passed an initial “human screening” prior to the Angel analyst spending 5-15 additional hours to perform a full analysis using the software. The 29 scored ventures represent the selected deals from an estimated initial submission pool of roughly 1,450 ventures.

The venture analysis application requires the analyst to input numerical scores for 80 venture attributes which are spread across 8 major categories. The tool also provides several text entry fields where the analyst (or team of analysts) input written assessments and insights to support or clarify their numerical scores.

Each of the analysts have stated more than 5 years experience in the field of venture investing, and over 60% have graduate or advanced degrees in business or finance.

ongoing research

As this is the first of many data reports, the initial focus on this report is on the scored and unscored attributes of each venture and the influence that they had on the investors final decision.

Over time, as each of these companies will be tracked over a 10 year period, additional insights will be uncovered as many of the ventures will achieve various milestones like profitability and liquidity.

The foundation of analysis criteria used in the venture analysis were developed through the ongoing Venture Phenome Project which works with hundreds of Angel investors and entrepreneurs to isolate and identify the key attributes and environmental factors that are considered during the Angel investment due diligence process.
the power of comparative analysis

The core driver behind much of this research came from a simple problem: The lack of a clear method for providing investors with a comparative data point to describe the strength of a venture other than, an arbitrary point along the spectrum of “bad” to “very good”.

When given a set of limited opportunities simply selecting the strongest, and using this historical taxonomy is sufficient. However, when looking at a larger pool of opportunities over a larger period of time a clear breakdown occurs.

This simple principle is the core driver behind this research project, and the overall goal of the Venture 360 Report software. The hypothesis is this: by looking at a larger pool of ventures over time, using a standardized scoring methodology, patterns will begin to emerge that will correlate with venture failure and with success.

First we will begin to see what attributes are strongly correlated with investor decisions. Then over time as the funded ventures mature, positive and negative correlations will appear.

In the end, knowing which attributes of a venture have a statistically significant correlation with failure or with success will help empower both investors and entrepreneurs to make smarter decisions, syndicate and collaborate on due diligence more efficiently, and ultimately have a positive impact the returns that both investors and entrepreneurs seek.

how this data can be used by investors

As seen in the image to the right, comparative data can help investors make more informed decisions for both a single investment, or for formulating an overall investment strategy.

The information in this report can help Angel investors better understand their actions and how they correlate to their stated intentions. It will also help create a dialogue between Angel investors about the potential benefits from a standardized data driven deal screening process.
Three statisticians go deer hunting one day.

They spot a big buck and take aim. The first shoots and misses ten feet to the left. The second takes aim, shoots and misses three feet to the right.

The third statistician starts jumping up and down yelling, “We got him! We got him!”

disclaimer

One consistent theme that plagues data driven research is the potential for error.

Human errors, sampling errors, mathematical errors, and false positives are all quite common in data driven research.

While this research was conducted we were on the look out for these potential errors, but we cannot guarantee that we are immune from them. More specifically, it's highly likely that some or all of these errors exist within this sampling and potentially all future samples.

That said, we created this report to see what information we could gather, and what insights we might be able to build based upon the collected data.

We're not yet ready to start jumping up and down yelling "we got him!", but we are confident that over time, as the pool of data grows, that we will find some very powerful insights that will enable Angel investors to make more informed investment decisions.
data deconstruction

correlations and insights from the venture analysis data
overall score distribution
This chart shows the overall score distribution of the 29 reviewed ventures.

This distribution shows a slightly positive skew with a high level of kurtosis (2.06), or “peak” in the distribution which indicates a stronger than normal clustering of scores around the mean of 5.60.

descriptive statistics

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total capital invested: $16.5M

This chart shows the distribution of capital invested into the 29 scored ventures.

Two ventures raised more than $2M, while 13 of 18 fell between $250K and $1.1M.

The mean of $570K is roughly in line with industry averages.

descriptive statistics

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Overall Venture 360 Report Score

Plotting the overall Venture 360 Report score against the amount of capital raised confirms the hypothesis that the stronger the overall venture score, the more likely they are to receive funding.

Future research will attempt to determine if there might be a developing trend that lower scoring deals getting financed reflects market inefficiencies that are often found in highly fragmented markets.

Key investor insight

12 of the 14 ventures (86%) that scored above a 5.65 received some amount of Angel funding. The scoring data shows a consistent trend of higher scoring ventures receiving larger amounts of Angel funding.
Management team has long been considered a strong driver of investment decisions. Reason behind this bias is that investors believe that many components of a business can be changed, but the management team is typically one that is a long term fixture, and that a strong management team will recognize and make the necessary adjustments to a business.

The data analysis follows this hypothesis, as management team score has the highest correlation with invested capital.

Note: Only 2 out of the 11 ventures that scored above 6.6 in this category did not receive a capital investment.

Key investor insight
9 of the 18 ventures funded had “very high” management team scores (above 6.50) 6 out of the 7 investments that were $1M or larger were made into ventures that had high management scores.
The analysis of the economic model for a venture boils down to the strength and validity of “how the company makes money”.

Overall this attribute showed a very low correlation with investment decisions. This could be an indicator that the investors either don’t value this attribute as highly as others, or perhaps lose focus and discipline when it comes to evaluating the economic model in comparison to the utility or appeal of the company’s offering.

This will be an interesting attribute to watch over time as the ventures progress from funding to operations.

**key investor insight**

4 of the larger investments scored below average in this category. Could point to an investment trend where investors weigh “a proven economic model” less in practice than in stated principle.
**product & target to $**

This category measures the fit between the company's offering "the product" and the target consumer.

Ideally high scoring ventures have been able to demonstrate that there is not only a consumer need for the company's offering, but that the target consumer has both the buying power and the buying behaviors required to support the projected revenue goals.

10 of the 11 ventures that did not receive capital scored below 6.2 in this category.

Potentially an indication that after deep analysis investors felt that "market risk" can ultimately overcome initial interest in a venture.

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**key investor insight**

While a proven consumer "fit" for an offering is good; for new product categories the market risk is artificially elevated. Note: The upside associated with this risk is often the "reward" that venture investors are seeking.
Competition scores had a stronger than average influence in investor decisions. This category measures the market competition both in and out of category.

Investors may be attracted to either weak competition from few market participants, a vulnerable market leader, or perhaps the creation of new “blue ocean” markets where competition falls largely out of category.

Perhaps there is an affinity to facing a “known enemy” which creates a competitive market against which an investor can gauge the strength of a business.

Key investor insight

Some investors prefer a second mover position which would make lower competition scores attractive. The correlation between venture failure or success will provide interesting insights to this category over time.
The focus of the sales and marketing category is largely centered around the intersection of market risk and execution risk. High scores are achieved by demonstrating a strong sales and marketing acumen with clear objectives, strategies, and tactics prior to, or during, initial launch.

The low correlation with invested capital could be an indication that investors are more focused on product risk and less on execution risk (potentially offset by leaning heavily on management team scores).

Sales and marketing are the revenue engine of any business, and over time the correlations of these category scores with revenue performance will be insightful.

key investor insight
As a secondary indication of management team ability, the sales and marketing category might warrant additional consideration when considering the operational risk of any venture.
deal structure to $

Ideally the venture has a clean deal structure, a fair valuation, and balanced terms of control for the investors and the management team.

A striking finding in this initial data is the lack of a strong correlation between the two and the clustering of points around the center of the regression line.

Perhaps investors are following the advice of Paul Graham and aren’t worried about the terms of the deal, and are focused more on whether or not the venture will be a success. It could also be that the terms are negotiated to a favorable position after the initial analysis is complete, so that there is a disconnect between the time period of the analysis and the final transaction.

key investor insight

One of the most interesting data points in this report is the missing correlation between deal terms and investment. Is this point less influential because of standardized terms, or because of the rule of small numbers?
strategic advisors to $

Often the influential power of having a strong board of directors or advisors can have a profound impact on a venture.

While this category has a roughly average weight on investment decisions, it could be because the investors feel that the advisor positions will be filled in after the completion of the financing, and that it is rarely a criteria that would make or break a particular investment decision.

It appears that only an extremely low score in this category (reluctance to allow outside control?) can impact the investment decision directly.

key investor insight

While outside advisors provide substantial assistance to a growing company, it seems that only a very low score in this category can be influential in a decision. Note: 3 of the 4 lowest scores did not get funding.
The defensibility of a venture depends upon the creation of barriers to entry for competitors. The intellectual property category helps score the legal or other potential defense tools that are available to the venture.

This seems to be an average influence category with 8 out of 10 ventures that scored above a 5.8 getting capital.

As the database continues to grow, it is likely that certain industries will put far greater weight on the IP score as a determinant of investment.

intellectual property to $

key investor insight

While defense is sometimes a good offense, this category is likely more applicable to certain industries where IP is not only a defensive measure, but where IP licensing is also a revenue center. (i.e. Biotech)
This chart looks at the projected revenue growth between years two and four in the pro forma financials provided by the company.

The chart was looking to see if there is a influencing factor that comes from the entrepreneurs who project a steep revenue ramp business.

The data seems to show virtually zero correlation between the stated steep revenue ramp and the final investment decision.

There are a few notable outliers: 4 out of 5 ventures that projected revenue growth in excess of 1,200% from years two to four did receive funding.

key investor insight

While there is a tendency for entrepreneurs to get carried away with lofty revenue projections, on average investors didn’t gravitate towards the companies that predicted a “moon shot” growth curve.
prior investment to $

While the spread of points across this chart is considerable, there is one notable focus of ventures in the lower left hand corner.

Of the 18 ventures that have reached the milestone of raising at least $101,000 or more, only four did not receive additional investment capital.

This likely points out the power of momentum created from the initial investment, or perhaps a preservation of capital strategy employed from already committed investors.

Also notable is that 100% of the 13 deals that raised over $250K had received prior investment of at least $150K from previous investors.

key investor insight

Investors placing amounts larger than $250K universally chose ventures that had previously taken on invested capital greater than $150K. While a strong management team is good, prior investment is a very strong influencer.
The split between companies with zero training revenue, and substantial trailing revenue was split to 11 companies with existing revenue, and 18 with none. (Roughly 70/30)

Where many Angel investors are thought to be primarily seed stage investors, the later stage companies are often still hunting Angel capital for better terms than they would get from most venture capital investment firms. (especially in down markets.)

While it is certainly not a requirement for investment, it is worth noting that 100% of the companies with existing revenue (11 of 11) received investment capital.

**key investor insight**

Few attributes give more confidence to an investor than the ability to ring the register. Paying customers not only create a positive feedback loop for the business, but are also an indication of the entrepreneur’s priorities.
the venture 360 report
re-inventing venture analysis

a fully hosted, web based venture analysis application

The venture analysis application used by the Angel investors/analysts during the creation of this report is available under a fully hosted license to approved investors, investment groups, and professional firms.

To see a demo of the application, a sample output report, and to sign up for a free trial account, please visit www.venture360report.com or contact Venture 360 by email at analyst@venture360report.com

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