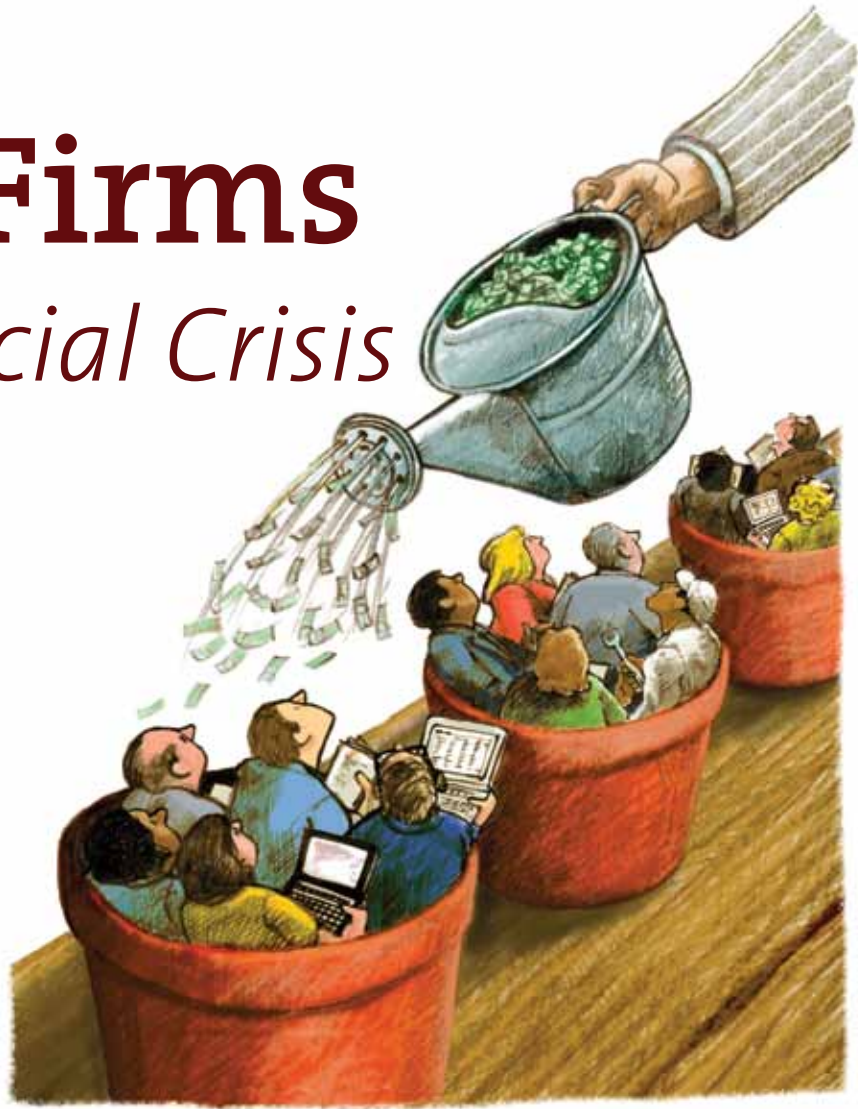


# Start-up Firms

## *in the Financial Crisis*

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**S**tart-up firms are a key feature of the U.S. economy.<sup>1</sup> Annually, start-ups account for about 20 percent of all companies.<sup>2</sup> On average, they create 3 million jobs per year, somewhat more than 5 percent of total job creation.<sup>3</sup> But, by 2009, in the depths of the Great Recession, the rate of job creation at start-ups had fallen significantly, to about 2 million jobs per year, as a result of fewer start-ups and/or fewer jobs at each start-up.<sup>4</sup> Although job creation at start-ups should increase as the economy recovers, it is worth asking whether the financial crisis will have a lasting effect.

## Overview and Analysis

The Kauffman Firm Survey tracks a panel of about 5,000 businesses from year to year. Each business has a unique identification number. The original survey asked each firm more than 1,400 questions, seeking out details on financial structure, owner and founder characteristics, business and innovation activity, and location. Survey start-ups are not only new but also small. Ninety-eight percent have fewer than 25 employees in their start-up year. But although small by standard metrics, a firm with 25 people in its first year represents real job creation. (See “Financial Structure 2004.”)

Summary statistics for the 2004 sample show that for the average start-up, 64 percent of financing at inception is internal equity (primarily the entrepreneur’s own resources), 30 percent is external loans (both bank and credit card), and the rest is made up of loans from friends and family and external equity (often from angels or venture capitalists). Compared with previous work on small firms, that suggests a much greater role for internal resources at launch than for young firms with ongoing operations.<sup>5</sup> However, there is significant variation in these averages and the gross distinction between debt and equity does not take advantage of the KFS detail. In particular, distinguishing between bank loans and credit card debt could be important, since the former has a much higher burden of credit assessment than the latter, but both were restricted during the financial crisis.

Start-ups with more physical assets, or those where the owners have more than one business, are more likely than other start-ups to have external debt (for example, a loan from a bank) in the financial structure. The physical assets of the start-up and the assets of the entrepreneur’s other businesses can be pledged as collateral since they have some liquidation value. In fact, as tangible capital increases by a thousand dollars, new ventures are 5.7 percent more likely to use bank loans and 3.4 percent more likely to use credit cards to finance their operations than to use personal resources.

Start-ups with mostly human capital (the entrepreneur) or with some intellectual property assets (say, a brand name or trademark) have a lower probability of using debt. That is because such assets are specific to the start-up and its people and are not liquid or valuable as collateral. Start-ups located in the entrepreneur’s home are the most opaque in terms of financial structure,

which is dominated by credit card debt. Entrepreneurs with home offices are 17 percent more likely to use credit cards than other start-ups.

Team-run start-ups and those started by serial entrepreneurs are more likely than other start-ups to have owner and venture capital equity in their financial structure, consistent with greater personal resources and the availability of information about the principals. A serial entrepreneur is 3.3 percent less likely to use credit card debt for

obtaining debt financing (either from banks or credit cards). Lower-income people also have fewer personal resources to tap. Thus more education regarding government loan programs could positively affect the start-up potential of previously underserved owners.

The financial structure of high-tech start-ups is interesting, particularly given the touted role of angel investors and venture capital. Specific factors underpin the different financial structures of high-tech start-ups. Having another high-

### Financial Structure 2004: Principal Form of Financing by Number of Start-ups

Friends/family or employees	131
Bank debt	224
Credit card debt	2343
Other loans, including government	199
Angel or venture capital financing	56

Source: Kauffman Firm Survey

the start-up and 2.6 percent more likely to be financed by other types of external debt, such as government loans. Team-run firms are 35 percent less likely than other start-ups to finance their operations using credit cards and 72 percent less likely to use nonbank loans (as opposed to personal resources and that of family and friends). These results are consistent with serial entrepreneurs and team-run start-ups having a wealth base from which to finance

tech business increases the probability of borrowing from friends and family (who may be the true angel investors), since the likelihood of the high-tech start-up using external equity (specifically coded as VC/angel) is lower than for a non-high-tech start-up. Additionally, serial entrepreneurs in high tech are less likely to use external debt or equity and more likely to use personal resources.

Regional factors and local conditions

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the new enterprise—and in the case of serial entrepreneurs, with their having knowledge of government loan programs. They tend not to use credit cards for financing.

As for owner attributes, older and more educated entrepreneurs are more likely to have debt financing. African American entrepreneurs are more likely to use their own resources or bank loans and are much less likely to use credit card or nonbank debt (even government programs). Controlling for other attributes, there is no difference in the financial structure of women-owned and male-owned start-ups. As for new firms in low- and middle-income communities, it is possible to infer a lower probability of

are also important in start-ups’ financial structure. Areas with better-educated resident populations are more likely to finance start-ups using loans from family and friends, sometimes a home-equity line of credit. Start-ups in innovative states (those with high rates of patenting inventions) and states with higher VC activity have a greater probability of having external equity. Start-ups in larger states have a higher probability of bank loans.

### Implications

The research shows that start-ups with more physical assets—or those started by entrepreneurs who have other, similar

businesses—are more likely to use external debt in the financial structure because of the high liquidation value. Start-ups with human capital embodied in the entrepreneur or in intellectual property assets have a lower probability of using debt, given their greater asset specificity and lower collateral value. Start-ups characterized as small, unincorporated, solo, first-time, or home-office-based are more likely to be financed by entrepreneurs themselves, family, friends, and credit cards because such businesses have both highly specific assets and information opacity, making them challenging for lenders to evaluate.

The financial crisis, by reducing asset values (such as home values) and by tightening credit assessment of the collateral value of existing business assets, has reduced access to bank debt and likely has hurt entrepreneurs who were planning to open a business by borrowing against their other businesses or their home. Moreover, with financial institutions restricting credit card exposure, and with the market for securities backed by credit card balances currently moribund, start-ups continue to face a crunch on this form of financing. To the extent that such asset valuations and associated credit constraints remain

in place, they will continue to undermine start-up formation and job creation.

Nevertheless, states with a less severe drop in home equity—and those with strength in innovation, venture capital activity, and higher education—will offer a relatively better environment and may be poised for a rebound in start-ups and job creation.

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### Endnotes

- <sup>1</sup> This article draws on Paroma Sanyal and Catherine L. Mann, "The Financial Structure of Start-up Firms: The Role of Assets, Information, and Entrepreneur Characteristics," <http://www.bos.frb.org/economic/wp/index.htm>.
- <sup>2</sup> John C. Haltiwanger, Ron S. Jarmin, and Javier Miranda, "Who Creates Jobs? Small vs. Large vs. Young" (National Bureau of Economic Research working paper 16300, Cambridge, Massachusetts, 2010).
- <sup>3</sup> Tim Kane, "The Importance of Start-ups in Job Creation and Job Destruction" (Ewing Marion Kauffman Foundation report, Kansas City, Missouri, 2010).
- <sup>4</sup> John C. Haltiwanger, Ron S. Jarmin, and Javier Miranda, "Historically Large Decline in Job Creation by Startup and Existing Firms in the Great Recession" (Ewing Marion Kauffman Foundation report, Kansas City, Missouri, March 2011).
- <sup>5</sup> A.M. Berger and G.F. Udell, "Small Business and Debt Finance" in *Handbook of Entrepreneurship Research*, eds. Z.J. Acs and D.B. Audretsch (London: Kluwer Academic Publishers), 299-328.

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