Venture Capital: A Challenge for Commercial Banks

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The question of how banks can play an active role in the financing of entrepreneurial companies preoccupies academics, practitioners, and policymakers alike. Over the last forty years, venture capital developed in the U.S. as a financial institution specializing in the financing of new high-risk ventures. Venture capitalists managed to fill a niche that had been left open by the more traditional financial institutions. With the visible success of venture capital as a viable form of financial intermediation, commercial banks had to reevaluate their approach.

This article analyzes the involvement of U.S. commercial banks in the provision of funds and financial services to the U.S. venture capital industry ("VC industry"). The method of investigation was to conduct a series of interviews with a variety of actors in the VC industry and the commercial banks, and to review publicly available information. This article is an exploratory analysis: It does not attempt to collect systematic data, but rather takes a more anecdotal approach to the subject matter. To preserve anonymity, all names of the institutions involved in this study have been withheld.

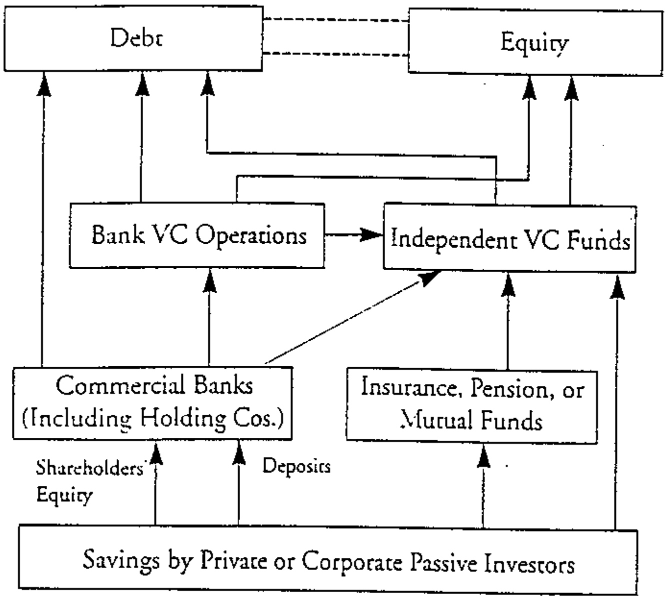
BANK INVOLVEMENT IN THE VC INDUSTRY: AN OVERVIEW

We define a *venture capital company* (VC company) as a firm that has not yet reached a position of sustainable profitability or consistently positive cash flow and has a demand for external finance to meet its growth objectives. This definition does not exclude firms that have concluded an initial public offering (IPO). It does, however, exclude companies whose capital structure has been shaped principally as the result of a leveraged buyout. There is a tendency on the part of Silicon Valley to consider VC finance in terms of start-up technology ventures, typically computer, telecommunications, medical device, and biotechnology companies. I use a somewhat broader definition of VC companies that includes companies from all industries.

I call a *venture capital operator* (VC operator) any financier that provides funds to VC companies. This includes independent VC firms (that administer VC funds) as well as "captive" VC operations that are owned by banks either as an internal division, or as a subsidiary of the bank.[1] Finally, I call *venture capital finance* (VC finance) the funds provided by any financier directly to a VC company. This funding may be comprised of debt (including senior debt, lease finance, and subordinated debt, but excluding trade credit) or equity (including hybrid securities such as the redeemable convertible preferred stock). While these definitions are not always precise, they are useful points of reference.

The involvement of commercial banks in intermediating funds from passive savers to VC companies can be described by Exhibit 1. To understand the flow of funds, it is useful to ask what economic fundamentals are driving them. The demand for funds comes from VC companies. Demand is a function of the number of VC companies, their funding require-

EXHIBIT 1
VENTURE CAPITAL FUNDS FLOW



ments, and their desired capital structure. The supply of funds ultimately comes from the savings of private individuals and corporations that are passive investors. Banks compete with other financial institutions to intermediate these funds.

The supply of funds to the VC industry depends on the risk and returns of financing VC companies. Because individual savers are typically unable to fully assess the true risk and return characteristics of investments — this is one of the reasons they entrust financial intermediaries with their money in the first place — the choices of financial intermediaries themselves have a first-order impact on the supply of VC finance.

The next section briefly discusses the demand for funds. I then examine in greater detail the role of commercial banks in the supply of funds.

THE DEMAND FOR FUNDS

Modern finance theory provides a host of arguments as to why companies would want to choose debt, equity, or hybrid instruments (see Harris and Raviv [1991]). A robust conclusion of this literature is that if a company has easily collateralizable assets, it may want to raise debt against them.[2] If, however, debt cannot be guaranteed by such assets, a number of agency problems may increase the cost of debt. If highly leveraged, the VC company may, for example, want to increase the risk, thereby increasing the expected value of equity at the expense of the unsecured debtholder. Issuing equity instead of taking on debt may alleviate some of these agency problems. If, however, a company needs to give up a significant equity stake to outside investors, a different set of agency problems may arise. In particular, the management team may have weaker incentives to maximize shareholder value as the equity share of the entrepreneurs and the size of the employee option pool become smaller.

Unsecured debt and equity provide different payoff patterns to investors, as debt has a prior claim in a liquidation and equity a residual claim. As a result, the required return to the provider of capital is also different. In general, it can be argued that unsecured debt has a lower risk profile than equity. At a low leverage, it may thus be a relatively "cheap" source of funds. In addition to wanting to raise a maximum amount of collateralizable (or "safe") debt, a company would thus want to raise some unsecured debt, as well as some equity.[3]

A Federal Reserve Bank study finds a limited amount of debt finance associated with companies backed by VC operators (see Fenn, Liang, and Prowse [1995]). Total borrowings by the 346 venture-backed companies that implemented an IPO in the period 1991 to 1993 was less than $2 billion. At the time of their IPO, venture capital-backed companies had a median debt-to-asset ratio of 16.2%, compared to 41.5% for companies not backed by venture capitalists. It is interesting to note that even in those industries in which venture-backed companies have the dominant share of IPOs, i.e., computer software and hardware, biotechnology, medical instruments, and health services, the VC companies exhibit significantly lower leverage than non-VC companies (see Fenn, Liang, and Prowse [1995, pp. 22-23]).

One hypothesis that would explain these facts is that VC companies simply have a lower demand for debt. While this article does not try to formally refute that hypothesis, I advance an alternative (or complementary) hypothesis that there are difficulties at the level of supply. Some of these difficulties are inherent to the nature of the lending transaction, although others seem to be the result of inefficient banking practices.

BANKS AS DEBT PROVIDERS

The Limited Role of Banks in Providing Debt to VC Companies

The number of banks involved in lending to VC companies appears to be very small. Lending to VC companies is not the same as holding a loan portfolio of technology-sector companies. Loans of the portfolio variety tend to be available only to companies with a long history of positive cash flows. The scarcity of banks acting as commercial lenders to VC companies appears to be driven by five main reasons: the size of the transactions, the nature of organizational decision-making processes, the sourcing of deals, some regulatory issues, and the perception of potential returns.

Size of Transactions. The size of funding transactions usually associated with VC companies is relatively small. Given that the creditworthiness of a VC company depends predominantly on the viability of its business plan and its ability to implement it, each loan assessment requires a significant amount of time to evaluate. Although the margin that a VC company may be prepared to pay could be higher than a conventional borrower is prepared to pay, the small transaction size still makes it difficult to meet the fixed costs of screening applicants.

Organizational Decision-Making. The nature of credit decision-making in banks seems to be a barrier to their successful participation in this business. Contrary to the accepted wisdom generated by finance theory, credit committees' decisions tend not to be made with a view to achieving the highest risk-adjusted return from a portfolio of loans. Credit committees in banks tend to make decisions to lend based on their assessment of the degree of certainty that the principal will be repaid. If a credit committee is sufficiently confident that the principal will be returned, the pricing decision is then affected by a number of factors, including competition, existing relationships, or existing commitments to an industry sector.

The maximum margin charged by a commercial bank is often capped at approximately 2%-3% per year. Many credit approval authorities are unwilling to consider proposals to lend at significantly larger margins, as such margins are considered to be an indicator of a bad lending proposal. Senior executives in credit committees have developed their expertise within this lending paradigm, and credit committees tend not to have the skills or experience necessary to assess the type of risk involved in VC company lending.

This issue is further complicated by the delegated credit decision process. In most large banks, credit officers are delegated to make decisions subject to carefully defined, identifiable criteria. These criteria effectively discourage lending against untested (or indeed untestable) future performance.

Internal Deal Sourcing. Banks suffer problems of accessing good deals. Although banks, particularly those in more populous areas, have large branch networks, these tend to be unsuited for collection of relevant information on VC companies. Our interviews reveal problems with the ability of branch and commercial lending networks to source VC opportunities, primarily due to lack of training and experience and to inherent business conflicts.

Bank branch managers and loan officers are not trained to identify VC lending opportunities or to market the product. Their credit mentality is similar to that of the credit committees, preventing them from identifying VC opportunities in the first place. But even if branch managers learn to refer deals to the bank's VC operators, the referral process may be inefficient. One industry participant notes that the proposals that tend to be referred from the normal commercial areas to the VC operations of banks are often inadmissible. A branch manager, for example, would prefer to finance a good business proposal, and would refer to the VC operations only those that were unacceptable to the branch.

The effect of this is twofold. If the barely acceptable proposal does get credit committee approval (possibly as a result of various internal relations and network manipulation), the bank is likely to receive only a normal margin, when it could have extracted a much higher margin had it been assessed as a VC loan opportunity. But in the event that the proposal is rejected at the branch level, the potential borrower becomes "tainted" within the bank, even though it may be appropriate for the VC operators. The problem with referrals is considered to be greater for banks that do not allow the VC arm to pay finders' fees to the division of the bank that originated the transaction.

Regulatory Environment. The regulatory environment in the U.S. imposes constraints on lending to high-risk sectors. Due to the limitations on interstate banking imposed by the Interstate Banking Act and the separation of commercial and investment banking created under the Glass-Steagall Act, banks in the U.S. tend to be smaller than those in other OECD countries. Given this smaller size, their ability to offer a full range of financial products is somewhat more limited.

Banks rely on Federal Deposit Insurance Corporation (FDIC) guarantee status to attract deposits. As part of its supervisory role, the FDIC monitors the quality of a bank's loan portfolio to ensure compliance with the agreed ratios. This monitoring is achieved by way of collection of reported information and by spot audits. The FDIC can impact a bank's ability to write new loans if it decides that a particular loan or particular class of loans has the characteristics of an impaired loan and requires a write-down. If a bank accumulates a portfolio of loans in a specialist area, it needs to be confident that FDIC officials have the skills and flexibility within their own formula-based analysis to evaluate this loan portfolio on its inherent characteristics, rather than by comparing it to the type of portfolio found in traditional banks that have pursued a conventional lending strategy. The risk that this may not occur creates a disincentive for the bank to build up specialized loan portfolios.

Perception of Potential Returns. Apart from the small number of commercial lenders to VC companies discussed below, none of the interviewees mention the potential returns from unsecured corporate lending as being significant. It appears that the expectation of returns from investing in VC companies is overwhelmed by the folklore associated with the returns from equity investment.

The question is whether this perception is correct: Have commercial banks exhausted all profitable lending opportunities to VC companies? If there is unmet demand for debt by VC companies — and it is likely that these companies would pay relatively large margins to raise debt in order to avoid dilution of their equity interest — banks could construct lending portfolios that yield, on a risk-adjusted basis, a return equal to or greater than conventional secured lending. Although we cannot answer this question in general, it is instructive to examine the strategies of the small number of banks that are active lenders in this industry.[5]

Characteristics of Banks that Lend to VC Companies

The small number of banks that lend to VC companies have introduced a number of techniques to overcome some of the problems identified above.

These banks often use venture capitalists as their primary source of deal origination. This reduces the asset selection problem and the cost of credit assessment, because the presence of a reputable venture capitalist as an equity participant is perceived as an indicator of acceptable credit quality. Another source of transactions is advisors to VC companies such as lawyers and accountants.

Internal bank procedures (analysis, approval, audit, etc.) are similar to the commercial banking practices in any other market segment. In lending to VC companies, however, these banks have developed skills at understanding the unique trials of start-up companies, the trading patterns that typically occur in their development, and the funding needs at the various developmental stages. Monitoring of loans is carried out by reference to business plans rather than to profitability.

In addition to their normal margin on debt, these banks seek, where possible, the potential for upside return by obtaining warrants over a portion of the ordinary equity of the VC company. This allows the bank to access upside returns and may reduce the short-term cost to the VC company of borrowing debt.

These banks also use cash collateralization of debt to increase the quality of the credit and to monitor their exposure. The banks tend to require the VC company to deposit the commitment received from the venture capitalists as security. The bank then lends an amount equal to the deposit. The cash deposit is drawn down only when the initial loan has been fully drawn. This has two benefits. First, on a portfolio basis it appears that the loan book is substantially cash collateralized. Some loans will be fully drawn and some partially drawn, which can, at an aggregate level, present a healthy portfolio. Second, by the time the VC company has used the funds, 70% to 80% of which tend to be for salaries and administration expenses, sufficient time may have passed to allow progress against the business plan to be evaluated.

Other services that these banks offer to the VC companies include taking deposits and providing checking accounts, payroll services, executive/personal banking services, international payments, factoring, and leasing. Equipment leasing to existing customers is becoming a particularly important area for these banks, as they can lend against specific equipment (thus improving their risk profile) at little incremental cost (as their due diligence has already been done in relation to the main commercial lending).

BANKS AS EQUITY PROVIDERS

While the natural role of commercial banks in the financing of VC companies seems to be on the debt side, a small number of banks (in relation to the overall number of banks in the U.S.) have successfully developed their own VC operations, which allows them to participate on the equity side. Although the total size of these activities is not clear, the Fenn-Liang-Prowse [1995] study provides some interesting estimates, as shown in Exhibit 2.

Another study, by *Private Equity Analyst*, shows that of the twenty bank holding companies with the largest private equity investments, the largest five accounted for two-thirds of those funds.

Banks have a variety of motives for entering on the equity side of the VC business, and they have developed a variety of approaches. Of particular importance seems to be the relationship between the VC operation and the parent bank.

EXHIBIT 2
SHARE OF BANKS IN VENTURE CAPITAL

ESTIMATED PRIVATE EQUITY HOLDINGS YEAR ENDED 1994	$ BILLIONS	% OF TOTAL
Bank Holding Companies[a]	11.0	11
Insurance Companies	7.2	7.2
Subtotal	18.3	18.3
Total Holdings	$100.4	
COMMITMENTS TO ALL PRIVATE EQUITY PARTNERSHIPS 1992-1994		
Bank Holding and Insurance Companies	7.3	17
Total Commitments	$42.96	
COMMITMENTS TO VENTURE CAPITAL PARTNERSHIPS		
Bank Holding and Insurance Companies (1986-1992)	2.49	12
Total Commitments	$21.68	
VENTURE CAPITAL UNDER MANAGEMENT 1994		
Corporate Financial[b]	4.8	14
Total Commitments	$34.1	

[a] BANK HOLDING COMPANIES INCLUDE COMMERCIAL AS WELL AS INVESTMENT BANKS.

[b] VENTURE CAPITAL SUBSIDIARIES OF FINANCIAL CORPORATIONS. INCLUDES SBICS AFFILIATED WITH BANK HOLDING COMPANIES AND PARTNERSHIPS MANAGED BY AFFILIATES OF FINANCIAL INSTITUTIONS.

REASONS FOR ENTERING ON THE EQUITY SIDE OF THE MARKET

During the interview process, it became apparent that the reason banks enter the business of providing or managing equity finance for the VC industry is either a strategic initiative or the actual byproduct of a structural problem. The commonly cited strategic initiatives are accessing a new industry (the equity industry as opposed to the banking industry), making new financial instruments (i.e., equity) available to an existing market segment to increase returns, and participating in what was or is perceived to be a market segment earning above-normal returns. The competencies used to justify commercial bank entry into this equity market appear to revolve around the perceived ability to leverage the banks' brand names, their network of branches, the skills of their personnel, and their traditional knowledge of businesses' financial needs.

A common structural problem that gave rise to the VC operation was a requirement to manage or liquidate problem loans. This was achieved through the bank's equity participation in the customers. Another, very different, reason is that a small group of talented bank personnel with an affinity for VC business implicitly or explicitly threatened to leave the bank if the bank didn't launch some VC initiative.

TRUE VERSUS EXPERIMENTAL VC OPERATORS

During the interview process it became clear that there are significant differences among what banks consider a VC operation. It appears that commercial banks with a "true" VC operation have a majority of the following features:

- It is usually incorporated as a separate subsidiary of the bank holding company and is free from the normal operating constraints (e.g., procedures and policies) of the main bank.
- The credit committee is separate and autonomous (although it may include, as a minority member, the senior credit officer of the bank).
- The board comprises a sufficient number of non-bank personnel who have non-banking perspectives.

- The compensation structure for the senior executives of the VC operations of the bank is similar to that of an independent VC fund. The executives receive a share of the returns generated from VC operation.

Other banks seems to have a more experimental — and sometimes also more confused — approach to investing on the equity side. Interestingly, these banks typically seem to be in a period of transition either toward or away from a true independent VC operation. They do not exhibit a majority of the characteristics of independent VC operators as listed above. Instead, the parent bank has strong control over the investment and credit decisions; the executives and personnel are not compensated based on fund performance; and the VC operation relies primarily on the bank network to source transactions.

The venture capital operations of these "experimental" banks tend to have emerged not necessarily as a strategic initiative of the bank to enter a high-profile or potentially profitable new business segment, but rather as a response to some unforeseen event such as an emerging portfolio of bad loans.

For example, one bank had experienced problems with its lending portfolio in a particular industry. It estimated that it would experience substantial losses if it managed this problem portfolio in its usual manner. Top management decided to retain some external managers who had expertise in this particular industry to manage the bank's portfolio in return for a management fee. The arrangement was successful, and ultimately the bank recovered a substantial portion of the loan portfolio. Following the success of this experience, the bank established a new venture with this group of external managers whereby the bank supplied the majority of the capital (the external managers subscribed 10% of the equity), and participated in a limited partnership type of return.

Relationship of VC Operation With the Parent Bank

The VC operations of the commercial banks are typically organized as subsidiaries of bank holding companies and SBIC affiliates of banks. The key regulatory issue driving this structure is the Glass-Steagall Act, which proscribes banks from participating in the supply of equity. Through the bank holding company exemptions and the SBIC legislation, banks found it was possible to enter the business.

Among the "true" VC operators, the parent bank gave the VC operation a large amount of organizational independence. The VC operation typically uses the bank's brand name to establish credibility, but uses effectively none of the bank's other core competencies. It appears from the interviews that these independent VC operations have experienced higher rates of return than the core lending operation of the bank. They tend not to have generated incremental returns by way of increased corporate loan book or financial service fees, however.

The limited corporate lending opportunity provided by an independent operation to its parent bank is due in part to the common law provisions involving equitable subordination. In effect, if a bank has a secured loan and its affiliate has an equity position, the unsecured creditors can seek to have the secured loan subordinated on the basis that the financial circumstances facing the company are in some way a byproduct of either the action or inaction of the equity-providing affiliate. Accordingly, when it lends to a company in which its VC arm holds equity, the lending operation in effect faces a higher risk than an independent lender.

Even without the regulatory and common law provisions, there are substantial organizational issues to be faced if a VC company is funded by two different parties that belong to the same bank (i.e., the credit and equity arms of the bank). If there exist some other secured or unsecured creditors of the VC company, the two parties cannot reach an internal arrangement without sharing that benefit with the outside creditors. Moreover, it may be that neither party is able to exercise its rights as vigorously as if it were independent if it wants to avoid internal political tension.

Another important aspect of the independent operation is the benefit of an independent credit committee. It appears that there is a correlation between success of the equity business and independence of credit decisions. All the "true" VC operation banks interviewed discussed the corporate loan mindset of the parent bank as an impediment to growth and success.

After early successes in the 1980s, there was a large defection of skilled personnel from the bank-operated VC funds to independent VC funds. This was due to the highly favorable compensation arrangements offered by private funds and the institutional inability to match these within the parent banks' compensation policy schemes. After this episode, the banks recognized the need to match the offerings of independent VC funds, and separating the VC operation from the mainstream operation of the parent bank facilitated the compensation issue.

Banks as Limited Partners

A number of banks participate on the equity side of the VC business not through their own VC operation, but indirectly through limited partnerships. These banks buy limited partnership shares as a form of portfolio diversification. In 1995, the share of limited liability partnerships funded by banks and finance companies increased by 35% ($1.43B) to 12.4% of total limited liability fund commitments outstanding. In 1995, this sector provided 23% of the total limited liability partnership commitments raised.

It is clear that investments as limited partners are more passive and, to the extent that the banks spread their money across a wider range of deals, less risky. This lowers the likelihood of an adverse FDIC audit. Banks, however, may end up forgoing some opportunities both on a stand-alone basis and in terms of not realizing synergistic benefits. Indeed, in the interviews, "true" bank VC operators were keen to distinguish their investment activity from their competitors whose VC operations were restricted to investments in limited partnerships operated by independent VC operators.

CONCLUDING THOUGHTS

Venture capital-financed companies have a need for both debt and equity finance. Banks would seem to be natural candidates for supplying the lending component. This article discusses the difficulties that U.S. commercial banks experience in fulfilling that role. It discusses the reasons why many banks shy away from getting involved with venture capital, and documents the approach of those banks that do get involved both on the debt and the equity side of the market.

Although some of the difficulties seem to be inherent to the risky nature of the lending transaction, it also appears that banks have been operating somewhat inefficiently in this market. The unwillingness of the commercial banking sector as a whole to service the needs of venture capital-financed companies has left a gap in the market.

An interesting recent development is that venture capitalists, who seem to be aware of the demand for debt by the venture capital-financed companies, have begun to provide the debt themselves. For this, they have introduced so-called subordinated debt limited partnerships. Our interviews indicate that independent venture capitalists were able to raise relatively large amounts of subordinated debt, and, in some cases, subscription to subordinated debt was a condition of entry into an equity fund. Perhaps these subordinated debt limited partnerships will become a wake-up call for the commercial banking industry to take a greater interest in the venture capital industry.

ENDNOTES

The author thanks Ronan McGovern, Paul Morton, and Peter Yates for their excellent research support.

[1]Corporations may also own captive venture capital operations. See Hellmann [1997].

[2]This is especially true if there are tax benefits associated with the use of debt. Venture capital companies are rarely in a tax-paying position, so the tax-deductible benefits of debt may be lost, or, at best, be deferred until the company is profitable. Tax arbitrage is therefore often of secondary important to these companies.

[3]A company may also use more complex instruments. For example, convertible preferred share, a common security in the VC industry, combines various features of debt and equity in one instrument.

[4]See Stiglitz and Weiss [1981] for a rational explanation why banks might behave like this if they lack information on the quality of their borrowers.

[5]Fiet and Fraser [1994] also point out that the risk/return characteristics of a VC lending portfolio may be judged too unfavorably if banks fail to take into account the diversification value of this type of lending.

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