VI. Cash — Financial Management and Finance Acquisition

- Financial Models
- Financial Statements and Models
- Budgets
- Cash and Profitability
- Key Indicators and Cost Accounting
- Bank, Government, Private Financing
- Venture Capital
- Going Public

Financial Models

- *Central to your business plan must be a financial forecasting model which provides a reality check, allows the exploration of options, assists the establishing of expectations and standards of financial performance, and aids the intelligent management of business downturns. (#44)*

Construction of the Model

- Top-down construction — first model the big picture, then refine and add detail
- Make assumptions explicit
- Use equations rather than list of numbers where possible
- Monthly for 1 year, or until cash flow no longer an issue
- Quarterly for 3 years, or until significant profitability no longer an issue
- Annually after that if required

Use of the Model

- Predict pro format financial statements
  - Cash flow statement, indicating cash needs
  - Profit and loss (P&L) statement, indicating profitability
  - Balance sheet statement, indicating assets and liabilities

Software Contract Business Models

- Estimating revenues
  - Manpower billing ratio (price / cost)
  - Manpower billable time percentage
- Estimating expenses
  - Salaries (augmented by overhead)

Software Product Business Models

- Estimating revenues
  - Product volumes
  - Product prices, discount structure
- Estimating expenses
  - R&D costs, royalties
  - Marketing costs, sales commissions, etc.

1

Break-even Analysis

- Volume of business (manpower being billed, sales volume) to achieve break even
- Variable costs versus fixed costs
- The myth of fixed costs (more realistically, a staircase function)

Sensitivity analysis

- Variability of output (results) as a function of variability of input (assumptions)
- Contracts business — vary the billing ratio, billable time %, underestimates of project difficulty
- Product business — vary sales volume and market share, prices, R&D and marketing budgets, delays in product introduction
- The need to hedge against tough times!!!

Financial Statements and Models

- *Use your financial statements and models in tandem — initialize the model with actual data from the statement, and transfer the results of the model into the statements as budgets. (#45)*

Budgets

- *Budgets are projected sets of desired lower bounds on revenues and upper bounds on expenditures. They force planning, and facilitate understanding, thoughtful management, and control. They must be negotiated in a top-down, bottom-up manner by all those who will be responsible and accountable. (#46)*

Cash and Profitability

- *Conserve and protect cash as you would your life. And, don't forget, you can only neglect profitability for so long. (#47)*
- Example: Accugraph presentation in 1987
  - Revenues in   1982 $0.5M
  - 1983 $0.8M
  - 1984 $1.1M
  - 1985 $1.9M
  - 1986 $9.8M
  - 1987 $30-40M (est.)
  - Company lost money in every year, but said that it would be profitable in 1987!

Key Indicators and Cost Accounting

- *Establish a set of key indicators — financial measurements which can be used to track and evaluate financial performance and business health. Properly attribute costs in various projects, products, and services, so that you can determine the profitability of each one. (#48)*
- Uses of key indicators — horizontal (comparison to past performance and to budget) and vertical (comparison to industry)

Examples of Key Indicators

- Percentage of sales overseas by U.S. software companies (SPA, Nov. 1995)
  - 7% by firms with revenue under $5M
  - 10% by firms with revenue under $30M
  - 25% by firms with revenue of $30M-$100M
  - 50% by firms with revenue over $100M
- Ave. productivity of top 100 product firms: 1994 revenue/employee in current $Can. (Industry Canada)
  - Top 100, Canada $153K
  - Top 100, U.S. $321K
  - Top 55, Can. (Rev., $5.5M-$220M) ... $164K
  - #11-100, U.S.(Rev., $5.4M-$236M) ... $229K

Bank Financing

- *Bank financing for start-up software ventures is for all practical purposes impossible unless backed by security and personal loan guarantees. (#49)*
- Ignore any bank hype about financing "knowledge-based industries"
- General exceptions re impossibility of bank financing (personal guarantees still needed!!!)
  - Capital purchases (typically at most 75%)
  - Receivables (at most 80% of "good" receivables under 90 days)

Government Aid

- R&D Investment Tax Credits — Can recoup $0.40 of every $1 spent on R&D
- NRC IRAP Programs — Relatively hassle-free R&D grants through industrial Technology Advisors
- Support to R&D consortia, organizations
  - BCASI, CRIM, CITO, NCEs (IRIS, TLRN)
  - Software engineering initiatives (e.g., Software Productivity Centre in Vancouver, contact Inform. Tech. Ind. Branch of Industry Can., rand.bob@ic.gc.ca)
- Be wary of lengthy procedures

Government Export Program Aid

- Trade fairs and missions (IC)
- Prog. for Export Market Develop., trade commissioner service, market information services, sourcing and procurement, new exporter programs (DFAIT)
- Government-to-government contracts, export finance and insurance (CCC)
- Contact: Ruth Girard, Investment Manager, Information Technol., DFAIT, (613) 995-0796, ruth.girard@extott16.X400.gc.ca
- Contact: Bill Skinner, InfoCentre Bulletin Board, Trade Information Systems Division, DFAIT, 1(800) 628-1581, bill.skinner@fait.gc.ca

Other Non-venture Finance Sources

- Clients (orders, prepayments, "loans", e.g., Alias and SGI) and suppliers (trade credit)
- "Angels", "archangels", and "bands of angels"
- Private placements
- Going public on new issue exchanges (CDNX) via a reverse takeover — sometimes requires venture money, but control plays out differently
- Investments by companies in related industries
  - Netron and Noma Industries
  - Discus and Harlequin Books

Equity for Principals and Employees

- Principals
  - The founders' commitment
  - Equal and unequal partners
  - Buy-sell agreements
- Employees
  - Not a major source of funds
  - Stock ownership or profit sharing?
  - Stock purchases and stock options
  - Vesting, expiry date — golden handcuffs

Venture Financing

- *Venture financing for start-up software ventures is possible, but usually only after initial software development is complete and a few early sales have been made. Look for venture funding that results in advice and connections as well as cash. Venture firms will look primarily at management quality, and will seek outstanding potential returns as well as a path to liquidity. (#50)*

What is Venture Capital?

- Venture capital is risk capital, typically equity, invested in a company at an early stage of growth
- 1995: $2.5B (U.S.), $183M (Can.) in software and communications
- Roughly 10 times as much as that now, also 30-40 times Canadian level in the U.S.
- Finding interested firms, best by word of mouth, but also at venture capital fairs ("beauty contests"), from directories, and via the press

The Venture Capitalist's Perspective

- Venture capitalists look for…
  - Management!!!
  - A good and growing market ($100M-$200M annual revenue potential within 3-5 years)
  - An idea/product that confers competitive edge and that can be protected
  - Recall Silver's Law of Venture Capital
- Venture capitalists expect…
  - A return of 30-50% compounded annually — Growth at least 5 fold in 5 years
  - Liquidity within 5-7 years

Advantages of Venture Capital

- Large sums of money
- Deep pockets if more needed
- Management advice and nurturing
- Access to people and resources
- Assistance in going public

Disadvantages of Venture Capital

- New partners imply sharing of control or sometimes loss of control of the business
- Potential changes in management
- Often, little understanding of the technology and, sometimes, of entrepreneurial business
- In worst case, pawns on a chessboard

What to look for and avoid in a venture capitalist

- Look for…
  - Understanding of entrepreneurial business
  - Understanding of software industry
  - Understanding of your business
  - Openness and decisiveness
  - Long term view
- Watch out for…
  - Unhappy investees
  - Lack of authority to make decisions
  - A bank masquerading as a venture capitalist

Venture capital stages

- Seed capital (still somewhat rare in Canada, but this was changing before the crash)
- First round
- Second round
- Mezzanine financing (towards going public)
- Bridge financing (to deal with a temporary problem, e.g., cash flow)

Structuring the deal

- Common stock, or sometimes preferred stock, debentures, warrants
- Shareholder's agreement
  - Right of first refusal on sale of existing stock — So they can increase their position
  - Pre-emptive rights on issue of new stock — So they can maintain their position
  - Piggyback rights on sale of your stock — So you can't bail out without them
  - Negative covenants, e.g., kind of business, large deals, size of debt
  - Event of election — To seize control if things go bad
  - Ratchet — To lower this round's price if future round at lower price

Pricing, negotiating, and closing the deal

- Pricing (pre-1998 Internet craze)
  - Pre-commercial, prototype stage: valuation on revenue potential
  - Market entry: valuation on revenue growth or forecast revenue multiple (e.g., x 1, x 2, x 20)
  - Growth, diversification: valuation on earnings growth or forecast earnings multiple (e.g., x 10, x 20, x100)
  - VC% based on forecast present value to give desired return (e.g., 40% per annum)
- Negotiating and closing
  - 3-9 months, drain on time, out on a limb
  - Letter of intent --> due diligence --> agreement --> closing

Going Public

- Advantages
  - Can retain more control
  - Liquidity for founders and employees
  - But escrow restrictions will apply
- Disadvantages
  - Expensive, excruciating process
  - Can be aborted with great loss of time, money, and face
  - Ongoing public scrutiny, need to manage by the quarterly results