
Fuel Cell 2002

Lucerne

July 1 – 6 2002

Financing Fuel Cell Ventures

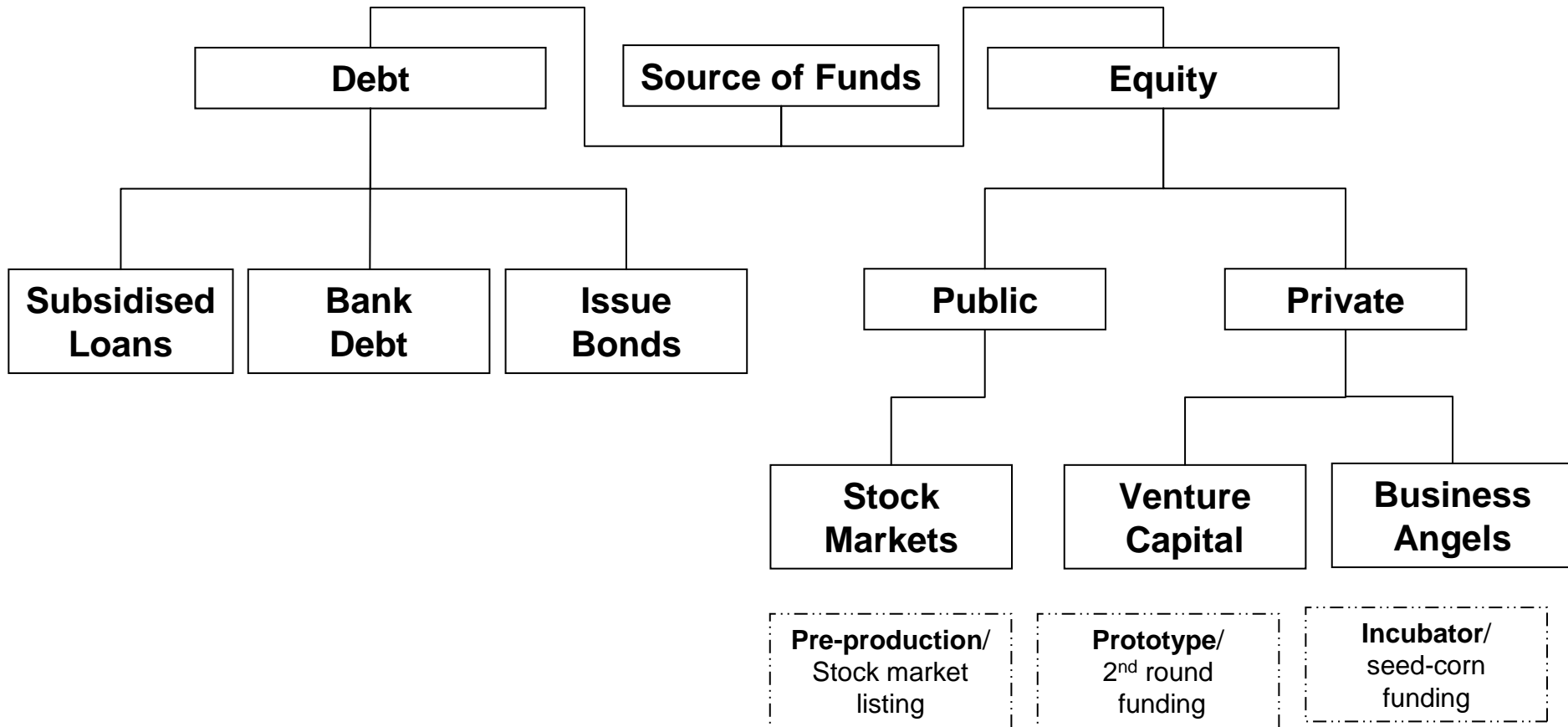
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Agenda

- **Sources of Finance**
- **Market**
 - **Industry drivers**
 - **Financial drivers**
 - **The hype cycle**
- **The Crisis in Corporate & Financial Confidence & its Consequences**
- **Cautionary Tales**
- **Core Technology Ventures LLP: Investment philosophy**
- **Conclusions**

Sources of Finance



Start-up companies are essentially limited to seed & early-stage financing

The Wider Financial Community is Alert to:

- *Rise in environmental legislation shifting the price structure in favour of clean technologies*
 - Global warming: Kyoto Protocol, which is close to ratification, calls for significant CO₂ reductions across the industrialised world
 - Regulated emissions: California ARB's ZEV mandate
- *Rising Energy security Concerns*
 - US imports 50%+ of oil requirement
 - Europe imports 50% of total energy requirement
 - By 2020 Europe will import 70% of energy requirement
- *'Entrenched' industries reportedly embracing fuel cells:*
 - Major auto manufacturers have fuel cell engine programmes
 - Oil majors devoting resources to hydrogen infrastructure
 - Utilities pursuing fuel cell demonstration programmes

And is Aware of:

Government's annual fuel cell spend:

- Japan \$240 million
- US \$200 million
- European \$ 60 million
- **Total** \$500 million

Corporate expenditure

- Annual industry spend up to \$3 billion
- Auto industry alone has invested \$4.5bn to-date

Existence of a Quoted Sector in North America

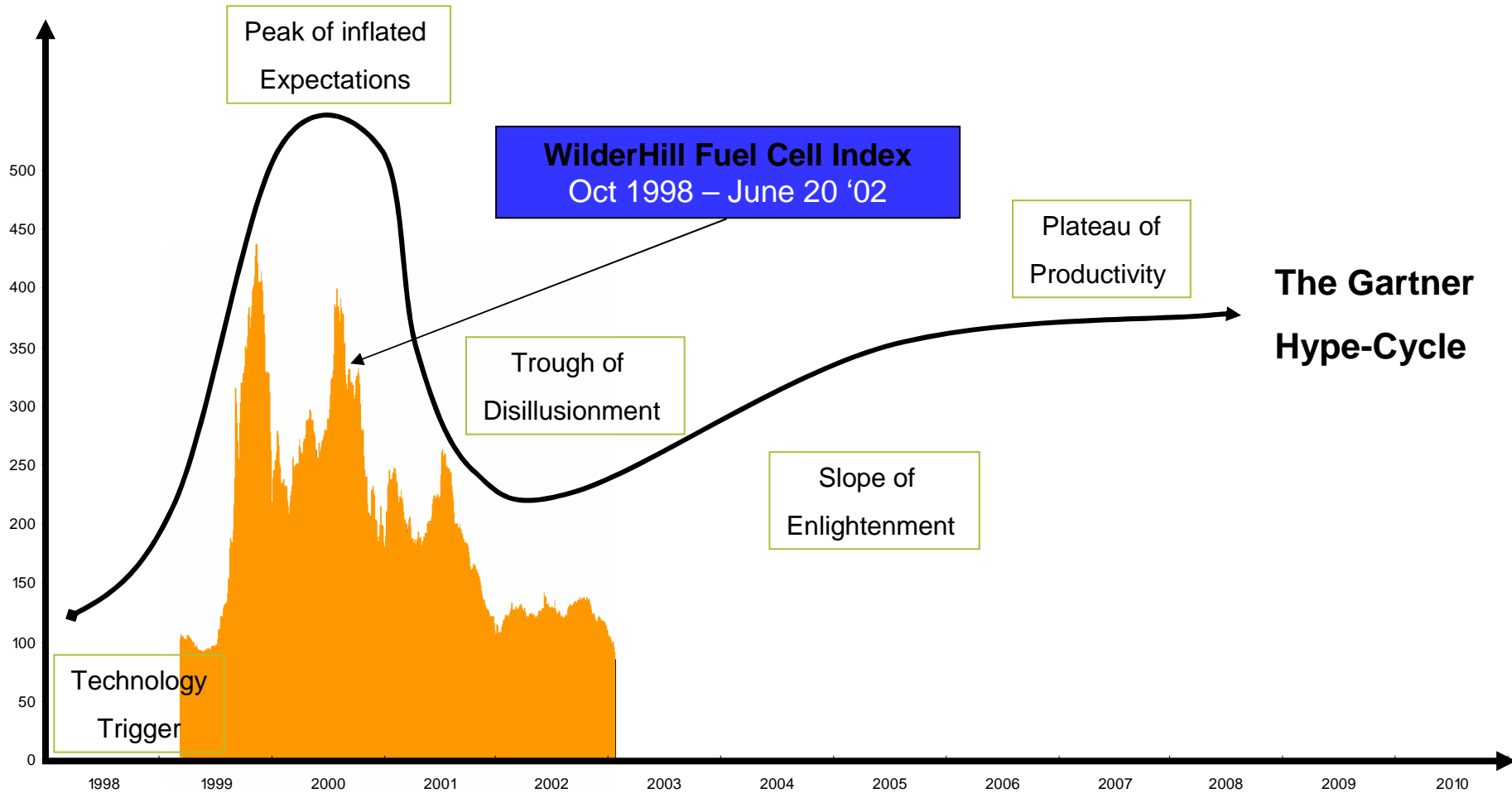
- A \$4bn pure fuel cell quoted sector exists in North American
- North American fuel cell companies have raised >\$1.5bn via both primary and secondary offerings
- US investors have exposure to North American fuel cell companies

Absence of a European quoted sector

- Restricting fund managers access to fuel cell companies
- Limited venture capital available

But There has been considerable Hype:

Visibility



The Gartner
Hype-Cycle

Confidence Crisis in Corporate & Financial Sectors

- *Corporate Sector:*

- Accusations of greed and malpractice on the part of company directors abound
- Some non-executive directors are suspected of failing in their duty to protect shareholders
- At the same time external advisors stand accused of having a conflict of interest

- *Financial Sector*

- Wide-spread suspicions surround the relationship between equity research and corporate finance departments with
- Cynicism surrounding the banking sectors' ability to act as 'Honest Broker' between financial investors & the corporate sector

This is Creating a Significant Liquidity Squeeze

- With the eyes of public prosecutors, investors and politicians trained on the corporate sector executive boards are more risk averse and are concentrating on revenue generating activities
- Activity in secondary (debt & equity) and primary (M&A, IPO) markets remains severely depressed
- With both the corporate and financial sectors under such heavy scrutiny industrial and financial investors are focusing on less speculative ventures
- The fuel cell sector will have to come to terms with the new reality, accept realistic valuations, improve its reporting standards and learn to manage expectations
- Those companies with the greatest sense of financial and commercial realism will succeed, not necessarily those with the best technology

Cautionary Tales

- **Management**

- Inexperience at dealing with corporate partners

- Poor customer expectation management

- Poor investor relations management

- Founders' reluctance to introduce professional managers**

- Inactive non-executive (supervisory) board

- Inappropriately large management teams

- **Strategy**

- No technical or commercial milestones

- Poor or ill defined product focus

- Reluctance or inability to adapt to changing markets

- No exit strategy

Cautionary Tales Continued

- **Markets**

- Ignoring value of market research

- Overextension into new products or countries

- Insufficient intelligence of:

- supply chain development

- competition

- **Cash Management**

- Not enough cash to enable company to take necessary risks

- Too much cash causing company to take too many risks

- Too high burn rate

- **Fundraising**

- Inadequate corporate structure

- Unclear ownership of intellectual property**

- Poor and/or misleading investor miscommunications raises the long-term cost capital

- The highest price is rarely the best price**

Core Technology's Investment Philosophy

- Strong management
- Strength of proprietary position (IP)
- Size and structure of potential markets

and would seek to

- build a diverse portfolio across the fuel cell sector
- invest in a limited number of companies over the investment period

Conclusions

- Essentially there are two sources of finance:
 - Debt i.e. loans from third parties and
 - Equity, which is equivalent to selling shares in the company
- Most fuel cell ventures are restricted to the equity route for financing
- The good news is:
 - the financial markets are aware of the promise of fuel cells
- The bad news is:
 - the financial & corporate sectors are suffering from a crisis in confidence &
 - the fuel cell sector has already over-promised & under-delivered
- The message is:
 - Be realistic & ensure your advisors understand your business & the sector