

Financing minerals exploration in Chile

The Economic Governance Mechanism in Venture Capital Funds

Francesco Bressi V.
Christian Moscoso W.
Mineral Economics Programme
Universidad de Chile
www.min-econ.cl



Economic governance

- Attempted definition – support of economic activity and economic transactions by protecting
 - property rights, enforcing contracts, and taking collective action to provide the needed physical and organizational infrastructure (Dixit).
- Various agency problems to do with corporations
 - (shareholders v. managers, hierarchies of management and workers) and their resolution by explicit or implicit contracts

Economic governance

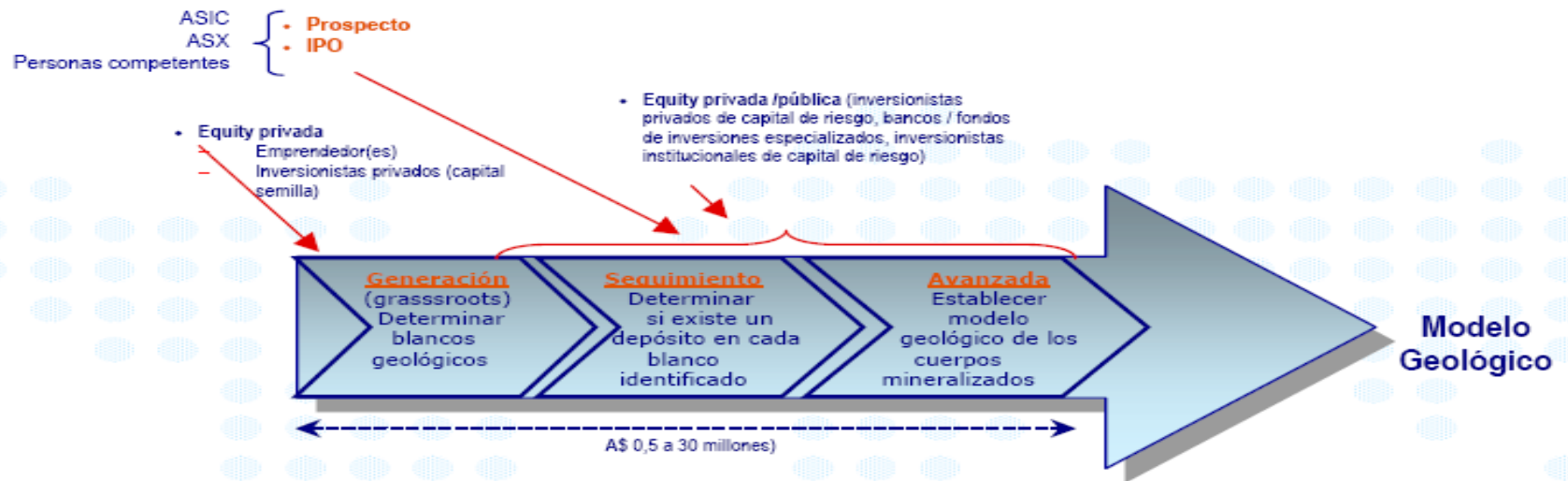
- Connected because the boundary of a firm is itself endogenous (Coase, Williamson).
 - If governance of arm's length contracts is poor, that raises the transaction costs of using the market and therefore favors integration
 - Vertical for transactions in intermediate inputs, and horizontal, vertical, or conglomerate for internal financing
 - This can explain the large family-owned conglomerates in LDCs (Dixit)

Financing minerals exploration

Venture Stock Exchange

Modelo

Figura 1: Negocio de exploración



Hitos para el caso de Equity Pública:

• Prospecto:

- ✓ Se advierte que invertir en él es especulativo
- ✓ Participan **EJECUTIVOS DE LA CIA.**, **GEOLOGOS CONSULTORES INDEPENDIENTES**, **OTROS PROFESIONALES CONSULTORES (ING. DE MINAS)**, **ABOGADOS (SOLICITORS)**, **AUDITORES Y EMPRESAS DE CORREDORES**. Especialistas acreditados y sus opiniones generan responsabilidades.

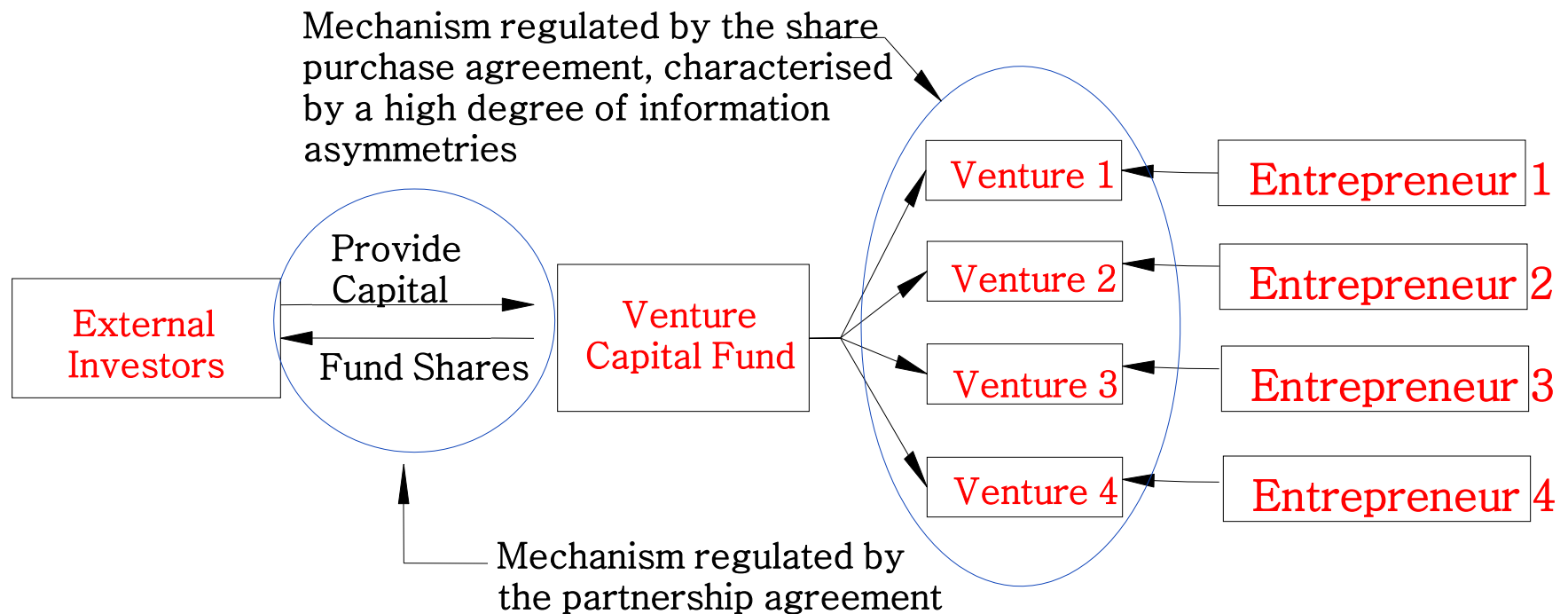
• Oferta Pública Inicial (IPO):

- ✓ Ley de Sociedades Anónimas
- ✓ Reglas de negocio de la Bolsa

Fuente: Preparación propia en base a Misión Australite 2003. Proyecto Atacama Resource Capital



Venture capital funds



VC Mechanism

- ❑ VC funds are highly specialised and focused in one specific area
- ❑ They share a common structure which creates the governance mechanism
- ❑ Depending on the degree of information asymmetries different kind of rights are allocated, regardless on the amount of capital invested and depending on performance (state contingency)
- ❑ Investors provide capital in return of a right proportional to the amount invested
- ❑ VC's are responsible of investing the capital in the best projects and their payment is given by the value they can create giving support, expertise and monitoring the venture
- ❑ Entrepreneurs present their projects to VC's

Overcoming information asymmetries

Venture Capitalist's Concerns (Agency Problems)	Solution by contract
The Entrepreneur will not work hard to maximize value after investment is made.	VC will make the entrepreneur's compensation strongly dependant on performance.
The Entrepreneur knows more about his or her quality/ability than the VC.	VC can design contracts with greater pay-for-performance that good entrepreneurs will be more willing to accept.
After the investment is made there will be circumstances when the VC disagrees with the entrepreneur and the VC will want the right to make decisions.	Control theories show that the solution is to give control to the VC in some states and to the entrepreneur in others.
The Entrepreneur knows more about his or her quality/ability than the VC ("Hold up" problem).	VC can reduce the entrepreneur's incentive to leave by vesting the entrepreneur's shares.

Chilean structure of investment funds

Type of Fund	Capital Invested [mUS\$]	Market Share [%]
Debt Funds, mostly invested in debt obligations, such as treasury bonds, corporate bonds and others.	4,970	74.4
Real Estate Funds, mostly invested in shares of construction companies, mortgage debts and others.	1,300	19.5
Private Funds, mostly invested in small companies with high returns expectations and high risk.	172	2.6
Other Funds	236	3.5
TOTAL	6,678	100.0

Investments limits for institutional investors in Chile

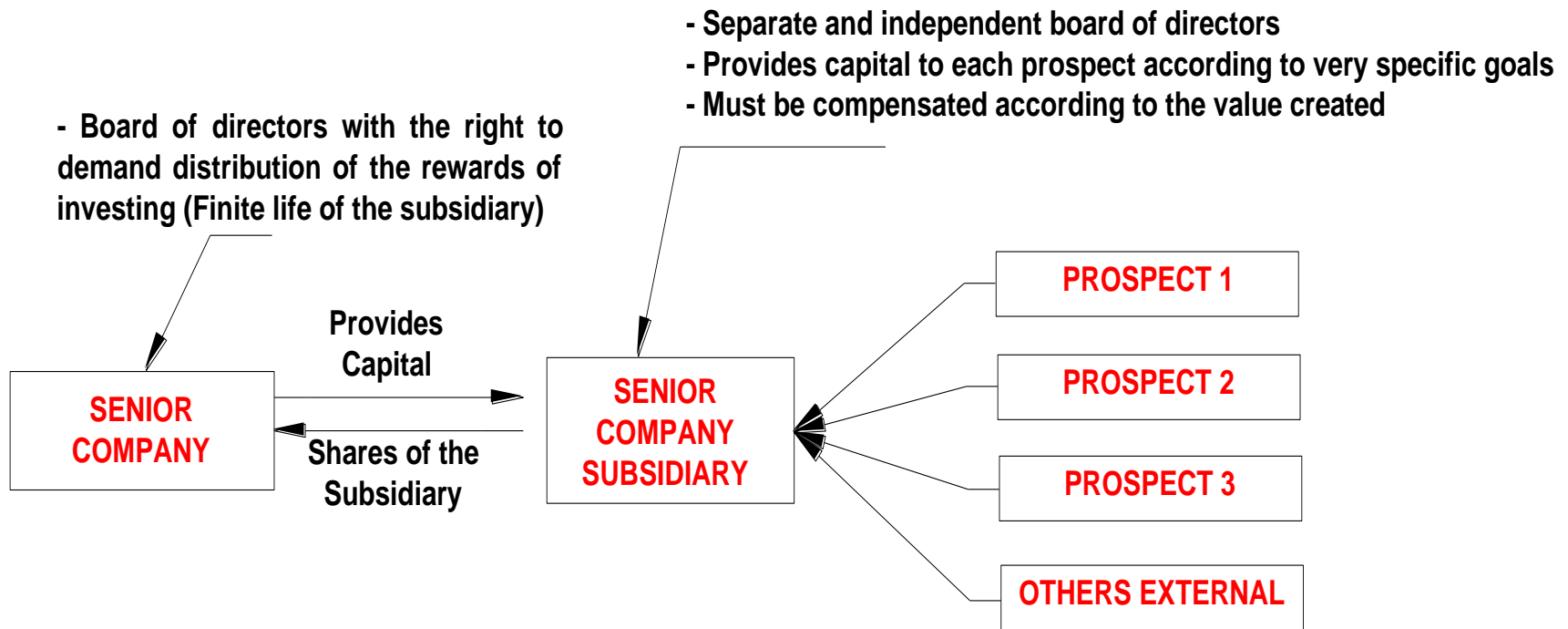
Maximum capital's availability	Rough estimate [mUS\$]
Pension Funds <ul style="list-style-type: none">▪ 1% of C and D Funds▪ 3% of A and B Funds	2,000
Banks <ul style="list-style-type: none">▪ 1% of the assets	2,200
Insurance Companies <ul style="list-style-type: none">▪ 10% of the investments of insurance companies	110
CORFO <ul style="list-style-type: none">▪ 40% of the shares of a venture capital fund, with a limit of 2.000.000 UTM	150
TOTAL	~ 4,500

Developing a minerals exploration VC fund

Challenges and solutions

Aspect	Main difficulties	Solution found
Demand for capital	<p>Estimate projects that could need financing</p> <ul style="list-style-type: none"> ▪ Poor rotation of land rights ▪ Poor regional geological information ▪ Exploration rights owners that not explore 	<p>Incentives for exploration rights owners to explore</p> <p>To raise rights costs in time and make it contingents on a business plan</p> <p>To give the entrepreneur more</p>
Regulations	<p>Venture capital fund has to invest in ventures with 5 years of existence</p> <p>Due to tributary benefits, most of the ventures are organised as a</p>	<p>When a partnership is transformed from one kind to another, at all the effects the new partnership is continuer of the old one.</p> <p>If that is not acceptable, the VCF</p>
IPO availability	<p>“mining contractual partnership”</p> <p>The Santiago stock exchange might not be suitable for liquidation of ventures because is not big</p>	<p>could buy an older shell company.</p> <p>IPO's in any other stock exchange, such as the AIM, ASX or TSX.</p>
Supply of capital	<p>enough.</p> <p>Even though the estimate of capital supply seems to be enough to start, most institutional investors can't be attracted.</p>	<p>Investors are not attracted because there are strong information asymmetries.</p> <p>Standardising the information on mineral deposits, building a good reputation and implementing a</p>

VC Mechanism for improving governance in Senior Companies



Conclusions

- ❑ VC funds specialised in minerals exploration seems a good alternative to provide financing.
- ❑ Their governance mechanism can overcome information asymmetries in a better way than VSX
- ❑ The role of institutional investors as main providers of venture capital is crucial
- ❑ Knowledge, reputation and good incentives are core assets for the VC's
- ❑ CORFO can play an important role to start the industry