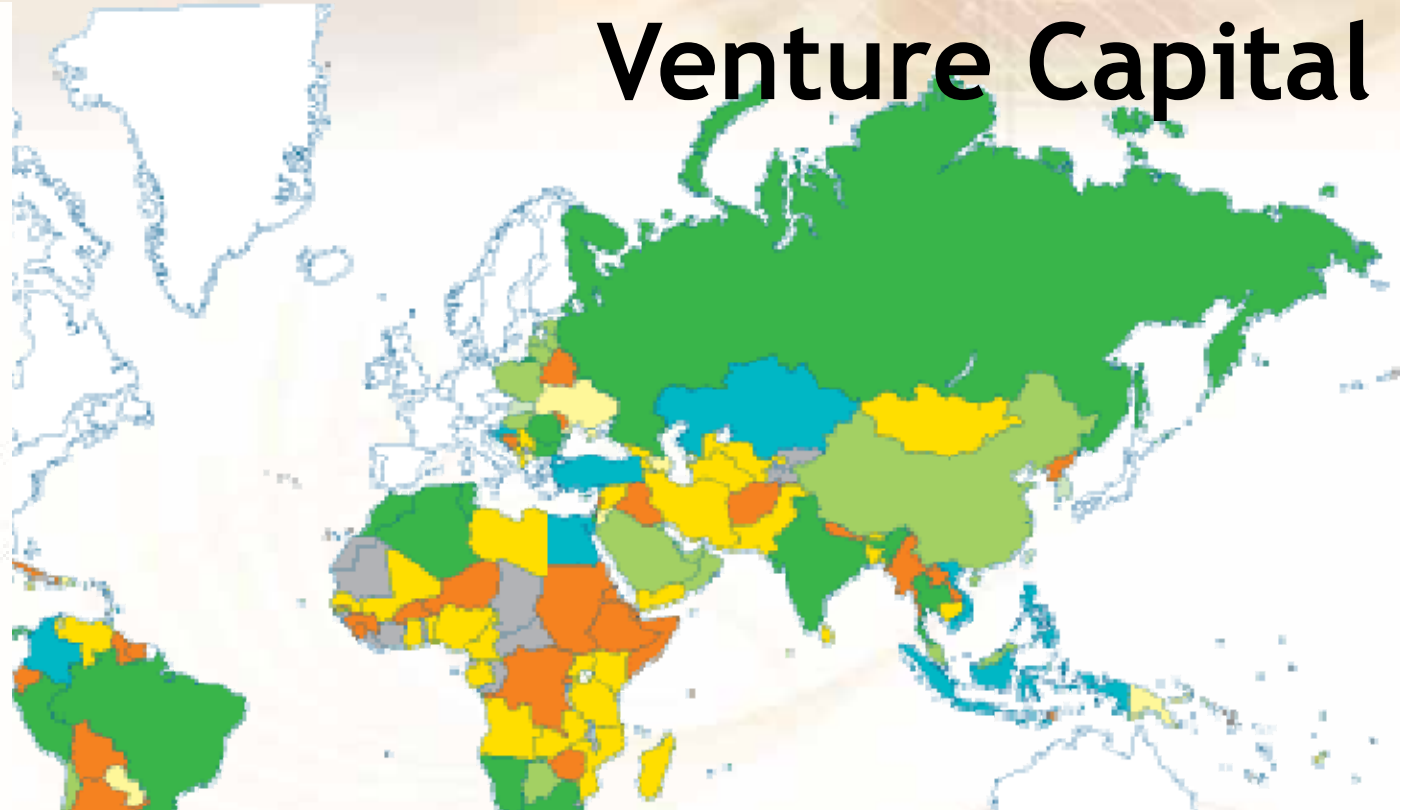


M Insider View, Twists & Turns—Int'l Venture Capital



**Thomas D. Nastas Innovative Ventures Inc (IVI)
Lecture, Class of Dr. Zsuzsanna Fluck, Venture
Capital & Private Equity,
Eli Broad Graduate School of Business, MSU
2 February 2012**

Topic #1

Lessons Learned in Int'l VC/PE

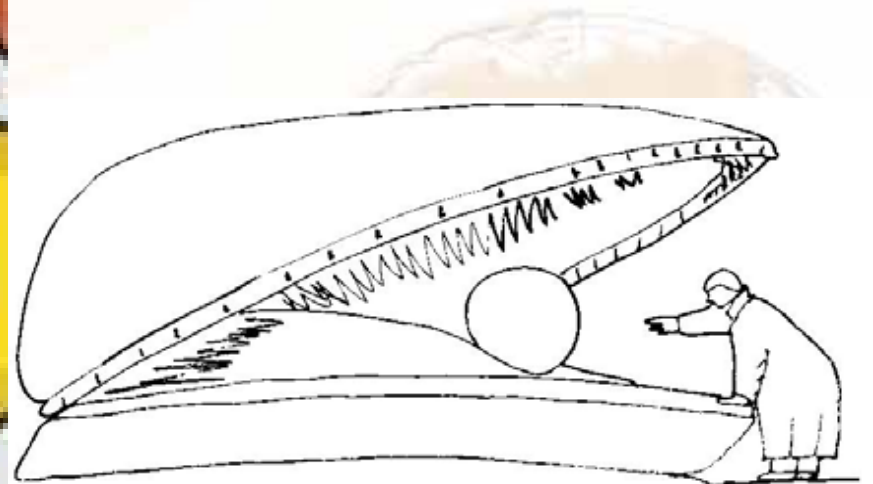
- The Past & Present, Funds & Deals, Emerging Markets
- Perspective from Living & Working In-Country on Investing





Topic #2

Impact: Culture of Risk & Failure on Deals & Investment



Topic #3

Go Forward Plan

- More Investment, More Deals, More Profits, More Fun
- Michigan & Emerging Markets



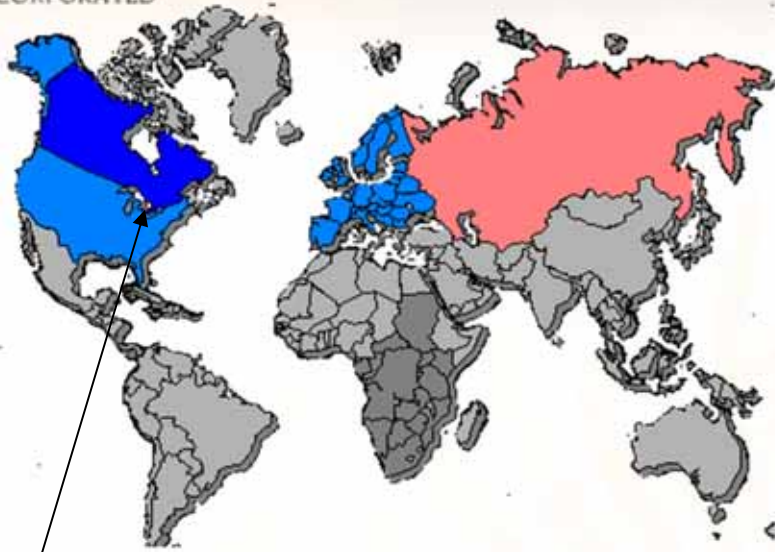


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CLOSING
REMARKS

My 1st Fund



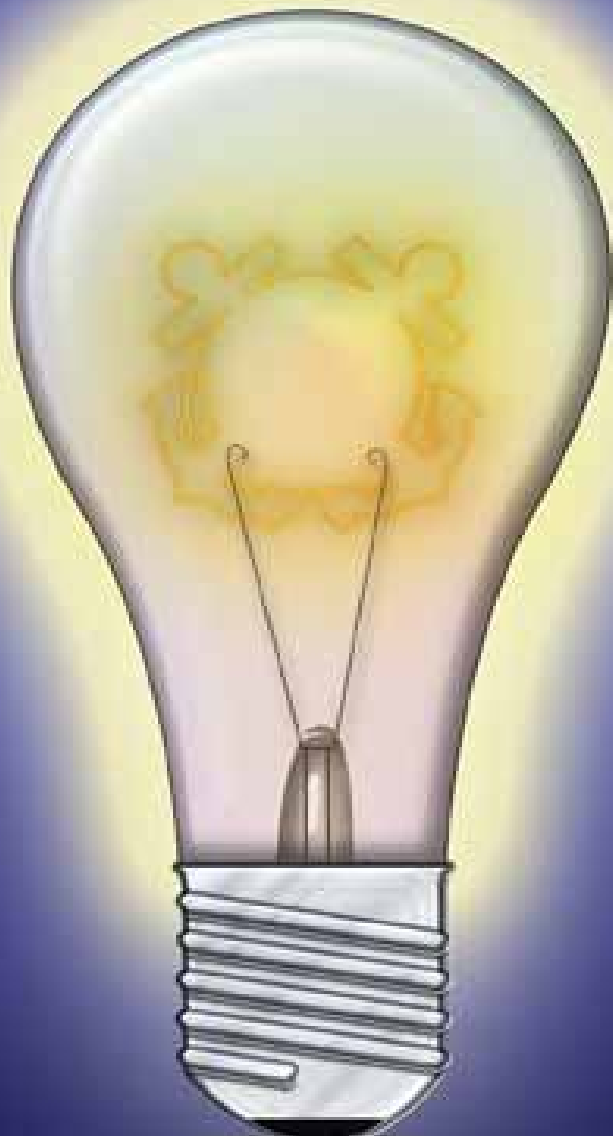
USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



- Seed/Early Stage Tech, SMEs in Valley of Death
- State of Michigan Founding Investor
- Goal: Make \$ & Advance Economic Development
- Structure: Royalties in Perpetuity, No Cap
- Royalty Investment in a Tech, a Product (Design)

Oops!

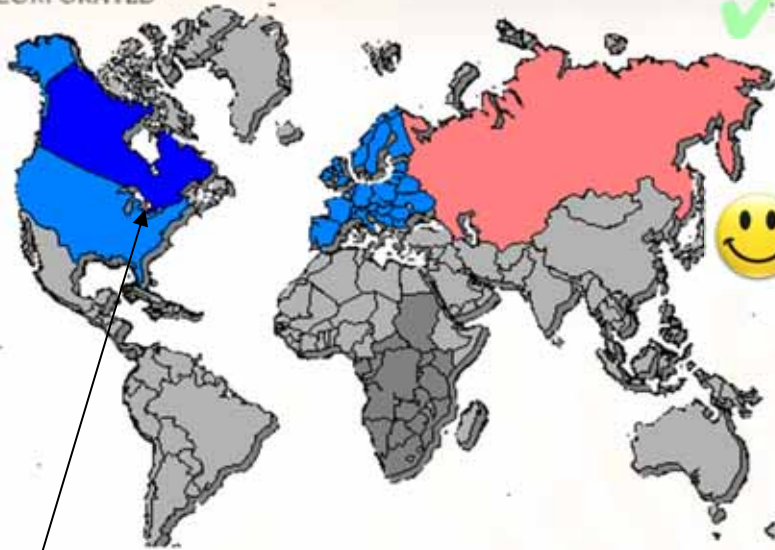


LESSONS

LEARNED



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USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



Lesson #1

✓ Royalty structures are great for early & fast cash returns

😊 Terrific to finance medium growth & family-held SMEs

But

✗ Not so good: Investment in a single platform-SMEs obsolete products

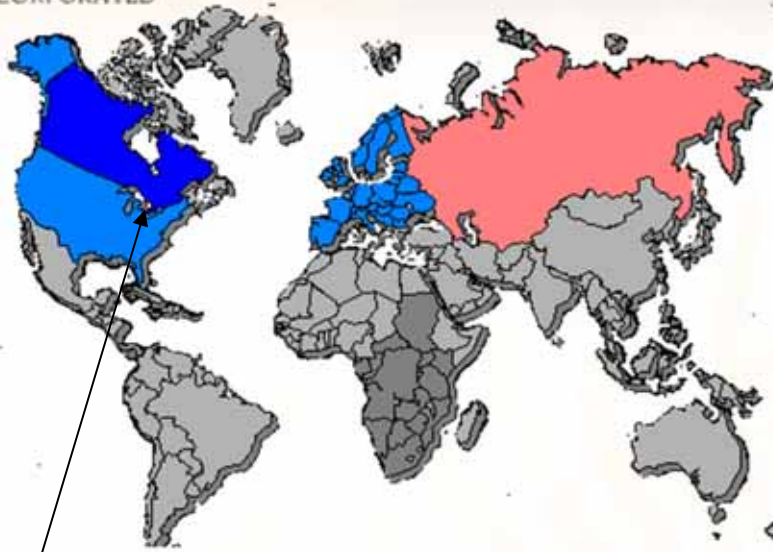


Results? Terrible when SMEs replace one product with another
= no (or little) ROI



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Lesson #2



USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



Structure investment to market needs satisfied, not platform or product design

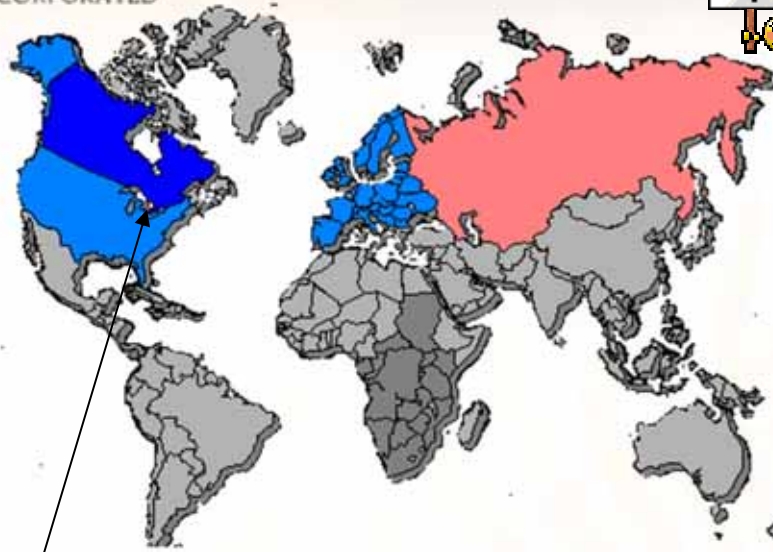
Circumvents risks of product replacement, obsolescence

✓ Gives investor multiple cash streams from multiple products

✓ Emulates equity w/o the disadvantages of equity



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USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



Lesson #3



Cash payments can become onerous for the investee with royalty payments for multiple products

Happens when SME hits the  & must reinvest cash to capture new growth



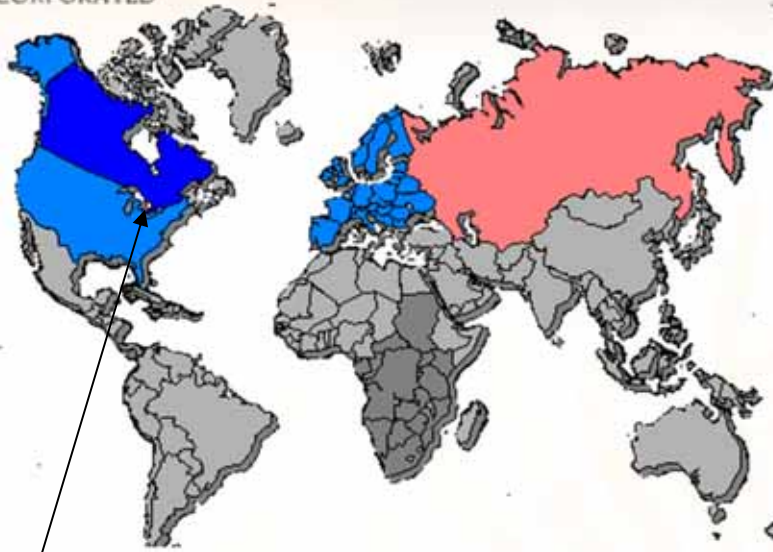
What to Do?

When cash payments become too much for the investee company



Sell the royalty claim for equity

Some Results



USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



- \$700k investment in Applied Intelligent Systems Inc., \$500K in royalty returns, years 1 & 2. Sold royalty claim for equity, 10%, exit @ \$120MM
- \$700k investment in Neogen. Little royalty ROI, but later, Wow, IPO. 2010 valuation \$750MM
- All on a \$4MM fund. Lucky!
- Demonstrated new uses-royalty financing, creative & flexible

What Happened Then

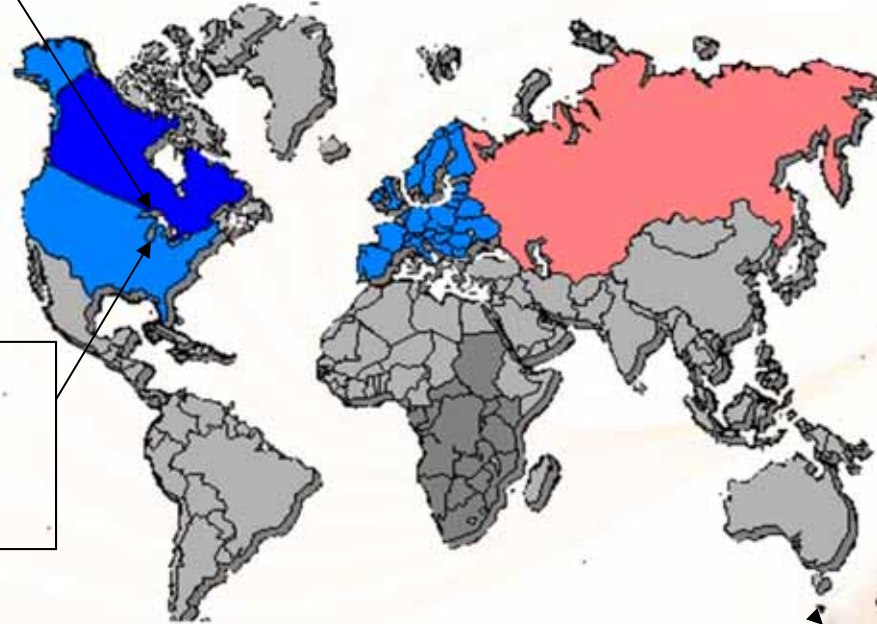
Canada (1992)

C\$100MM-Canadian
Bus. Dev. Bank



USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



And Then

Canada (1992)

C\$100MM-Canadian
Bus. Dev. Bank



USA (1986)

The Michigan Product
Dev. Fund (\$4MM)



Europe (1992/94)

Tech Fund,
\$10MM-EU, \$5MM
Financière St
Dominique, Paris



Africa (1993/96)

E. Africa \$5MM, Sub-Saharan,
\$280MM, South Africa, \$30MM,
IFC/World Bank

Next

Canada (1992)

C\$100MM-Canadian
 Bus. Dev. Bank



USA (1986)

The Michigan Product
 Dev. Fund (\$4MM)



Russia (2005)



Shell Tech
 Ventures

CIS Hi Technology Partnership
 Initiative: Shell Oil & IVI

Europe (1992/94)

Tech Fund,
 \$10MM-EU, \$5MM
 Financière St
 Dominique, Paris



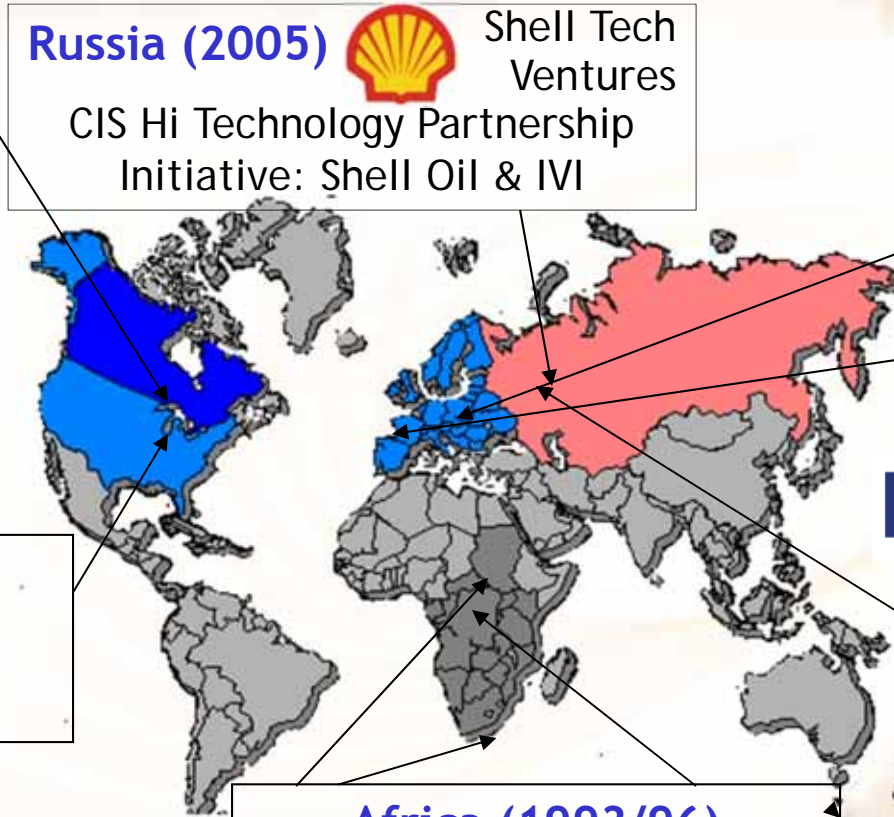
Russia (1997)

HP LP, \$30MM-EBRD &
 USAID



Africa (1993/96)

E. Africa \$5MM, Sub-Saharan,
 \$280MM, South Africa, \$30MM,
 IFC/World Bank



And Finally

Canada (1992)
 C\$100MM-Canadian
 Bus. Dev. Bank



Russia (2005)  Shell Tech
 Ventures
 CIS Hi Technology Partnership
 Initiative: Shell Oil & IVI

Kazakhstan (2011)
 \$85MM Tech  
 Commercialization
 Project

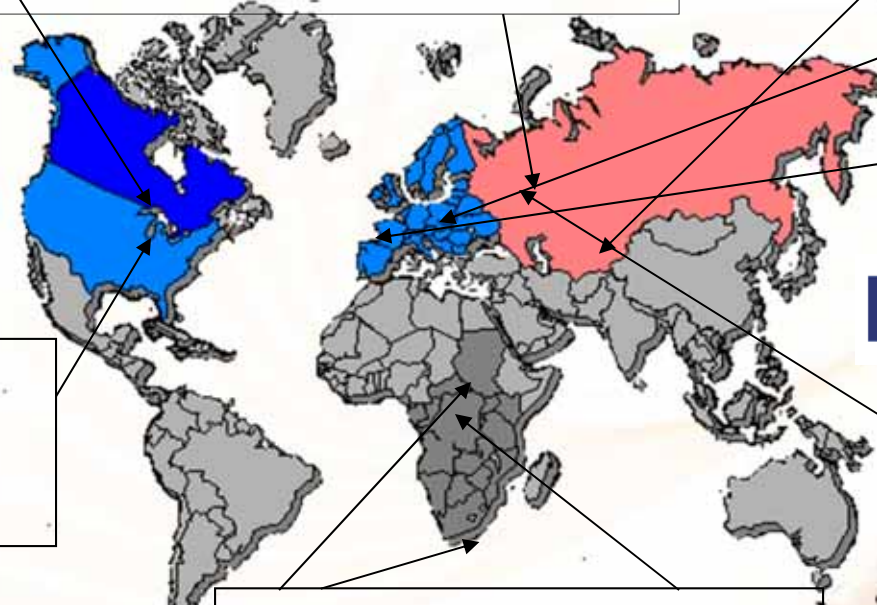
Europe (1992/94)
 Tech Fund,
 \$10MM-EU, \$5MM
 Financière St
 Dominique, Paris



USA (1986)
 The Michigan Product
 Dev. Fund (\$4MM)



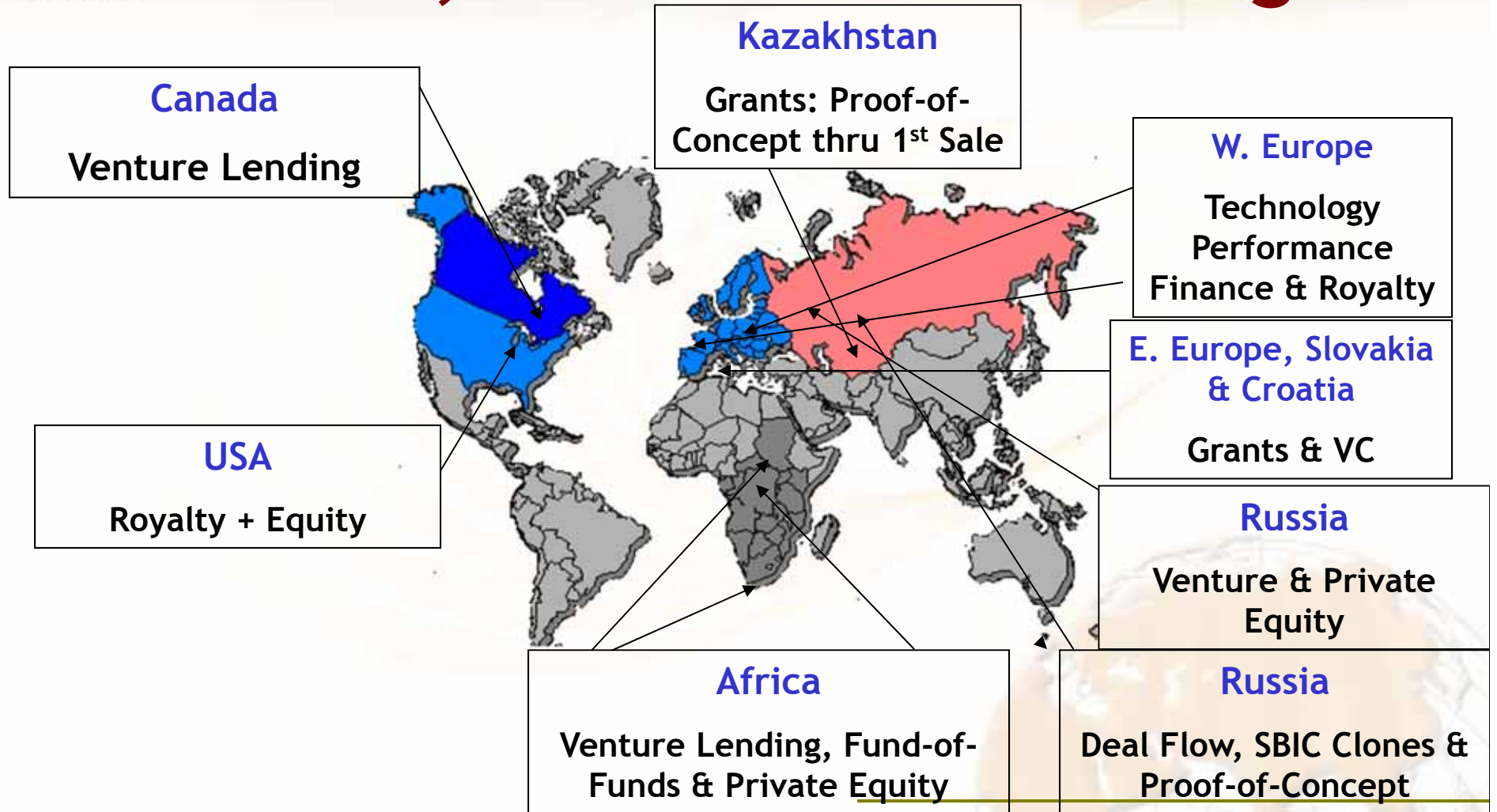
Russia (1997)
 HP LP, \$30MM-EBRD &
 USAID



Africa (1993/96)
 E. Africa \$5MM, Sub-Saharan,
 \$280MM, South Africa, \$30MM,
 IFC/World Bank



Investing Through a Variety of Funds, Structures & Strategies





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To Make \$ & an Economic Development Impact



Business Development Bank of Canada
Banque de développement du Canada



For My Investors & Partners



Shell Technology Ventures



EUROPEAN
COMMISSION



The World Bank





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Governments Lead & Seed the Market

Example, Collapse of Berlin Wall & Soviet Union

- 1st Wave of Investment, 1990-1998
 - Economic Shock Therapy
- Economies Liberalized to Free Market Principles

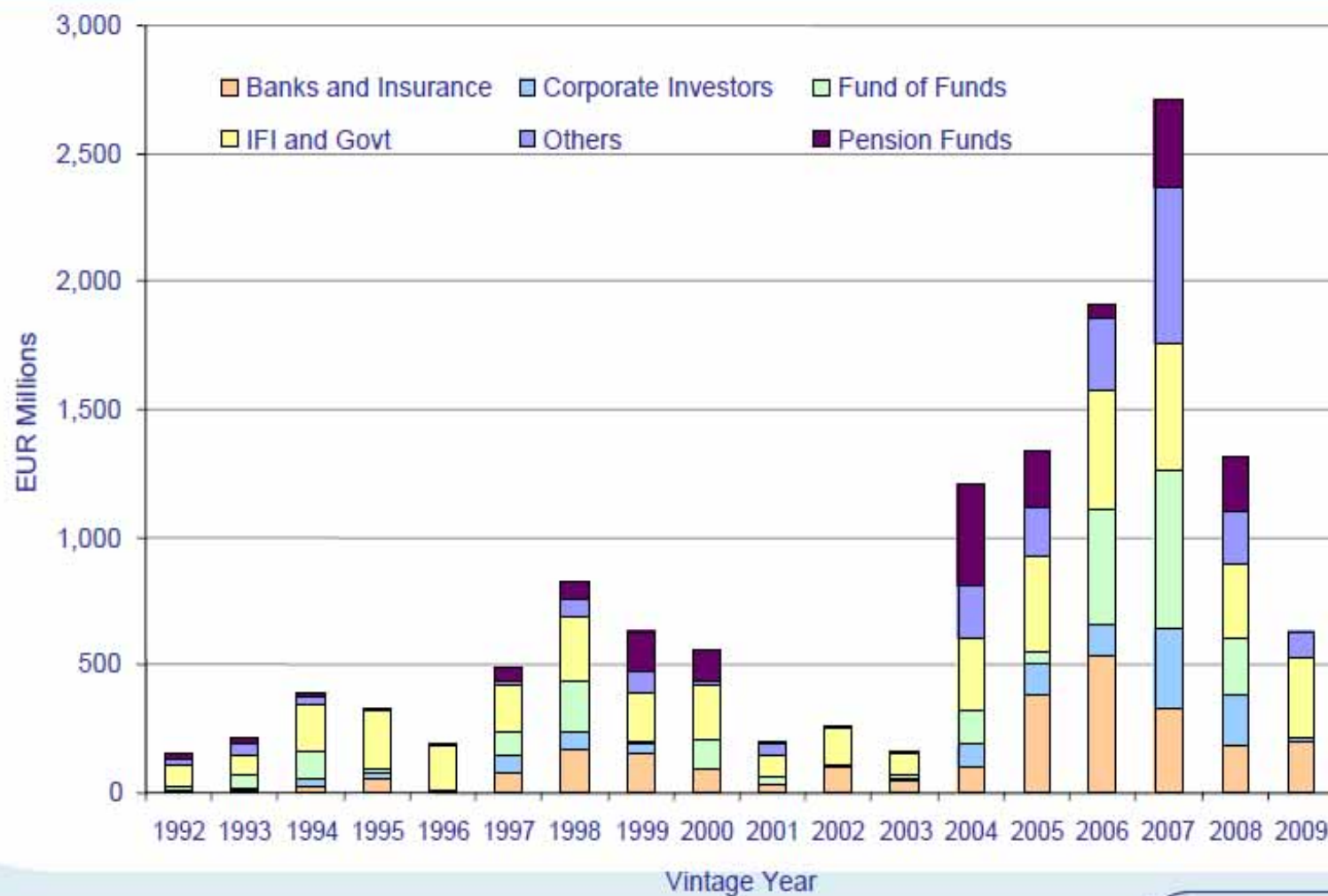
Action of US Gov't

- Polish-American Fund, 1990 • \$255 million
 - Hungarian-American Fund, 1990 • \$73
 - Czech-Slovak American Fund, 1991 • \$65
 - Bulgarian-American Fund, 1991 • \$58
 - Baltic-American Fund, 1994 • \$50
 - Romanian-American Fund, 1994 • \$61
 - Central Asian-American Fund, 1994 • \$106
 - Western New Independent States Fund, 1994 • \$150
 - The U.S. Russia Enterprise Fund, 1994 • \$329
 - The US Russia Investment Fund, 1994 • \$120
 - Albanian-American Fund, 1995 • \$30
 - TOTAL • \$1,297
-
-

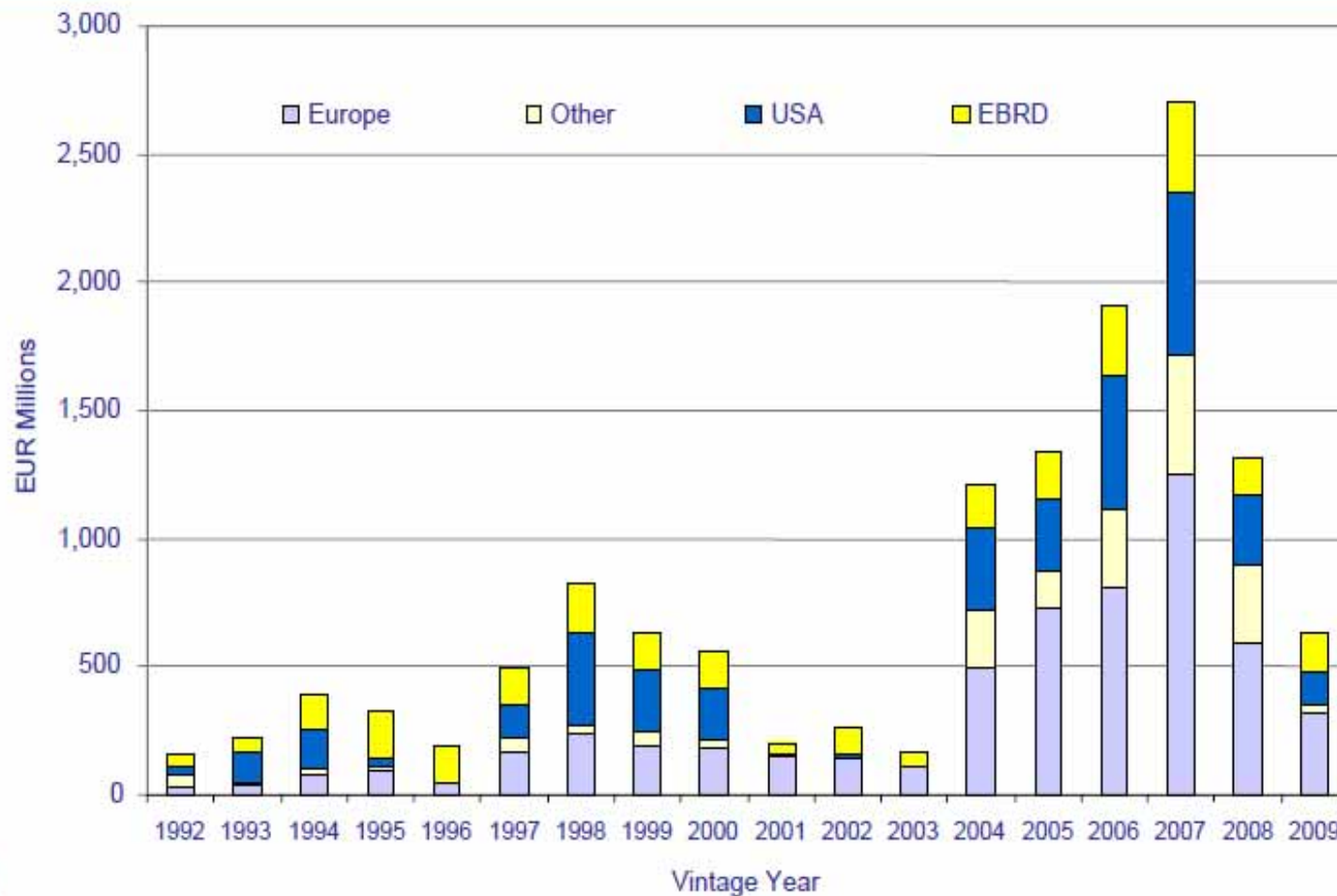
Creation, European Bank for Reconstruction & Development

- 1991, by G7 + Others
- Direct Project Financing
- Establish Funds w/Private Managers, 90% of \$ from EBRD
- ~~Influence/Impact Investor Behavior~~

Investor Type by Vintage Year



Investors by Origin Over Time



1st Wave 1990-1998

Purpose of Funds

- Invest in Privatized Firms, More Debt vs. Equity
- Raise New \$, Add Contacts & Experience
- Inject Corporate Governance & Transparency:
Keep Interests Aligned
(Still a Challenge)

2nd Wave 1998-2008

Russian Default

- **Ruble Crash, Inflation & Import Costs Soared**
 - **Stimulated Local Manufacturing, Domestic Economy**
 - **Global Demand for Natural Resources**
-
-

2nd Wave 1998-2008

From VC to PE

- From 1990-1998, Deals were VC
- Deals Matured, Evolved to PE, Expansion, Post Crisis, \$5MM-\$50MM
- Creation of PE Funds Financed by Oligarchs
 - ~~Champagne & Caviar Flowed till 2008~~

What I Learned in North American, International & Emerging Market VC

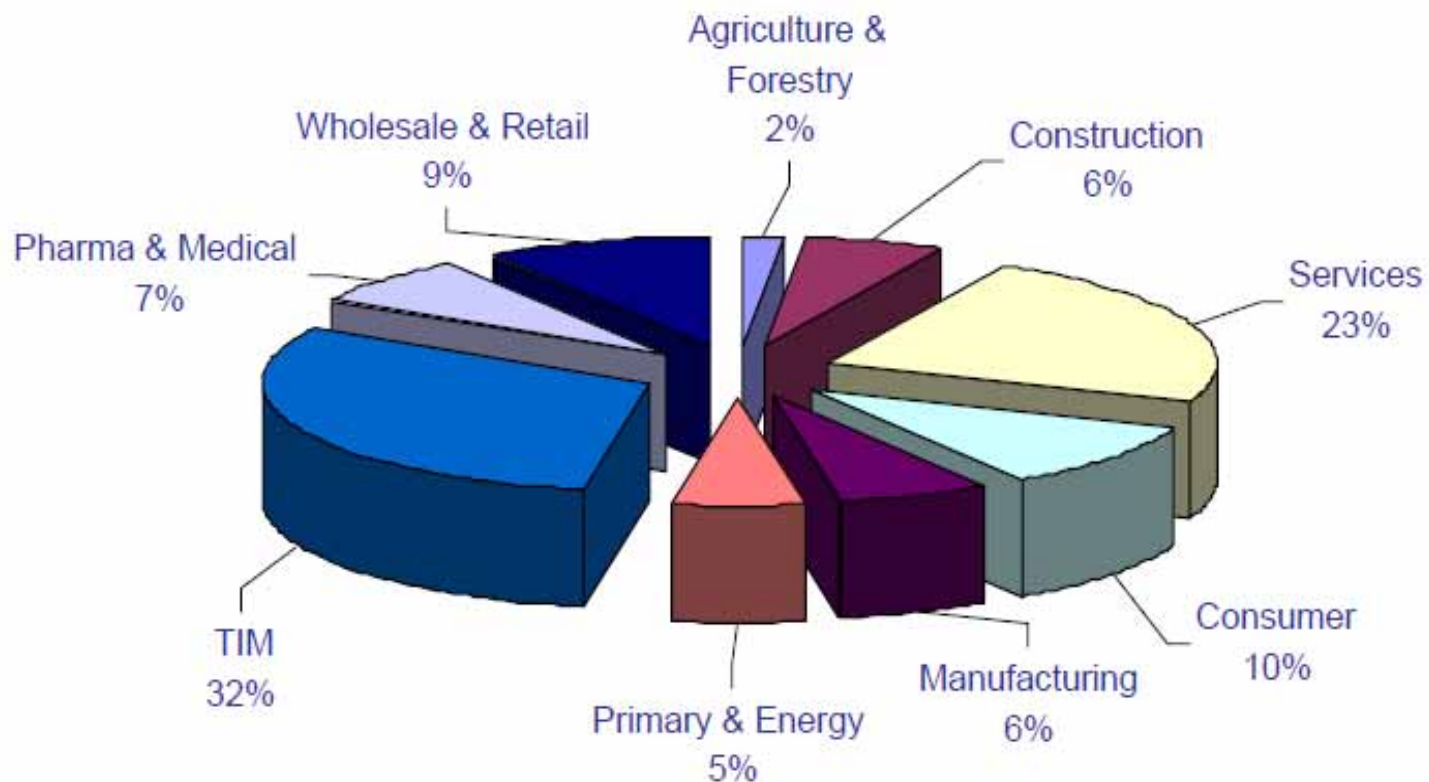
- Investor DNA
- Business Model/Deal Flow DNA
- Entrepreneur/Mgt Team DNA



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Deal Flow Continues to Center Around the Mainstream Economy

Investments by Sector: Deal Flow Breakdown by Acquisition Cost to end 2009



Note: since inception, in EUR, CSE and CIS



Unbelievable Freedom in Pricing

- **Pent-Up Demand > Supply—Brand Names Rule**
 - **Mid Brands Positioned as ‘Luxury’**
 - **Mgt Attitudes & Mkt Acceptance to Pricing =
Breathtaking Profits & Wealth Creation**
-
-



- ≈ \$25/Retail (Michigan)
- Sale price ≈ \$13-\$17

- \$5/bottle



- ≈ \$25/Retail
- Sale price ≈ \$13-\$17
- Russia Price ≈ \$65!

- \$7-\$10/bottle
- Russia Price ≈ \$30!

Threats Created

- **Entrenched Suppliers & Status Quo Use Gov't & Bureaucracy to Crush All**
 - **Relationships, Relationships, Relationships**
 - **Employ ex 'KBG' Guys for 'Security'**
-
-

Entrepreneur & Mgt Team DNA

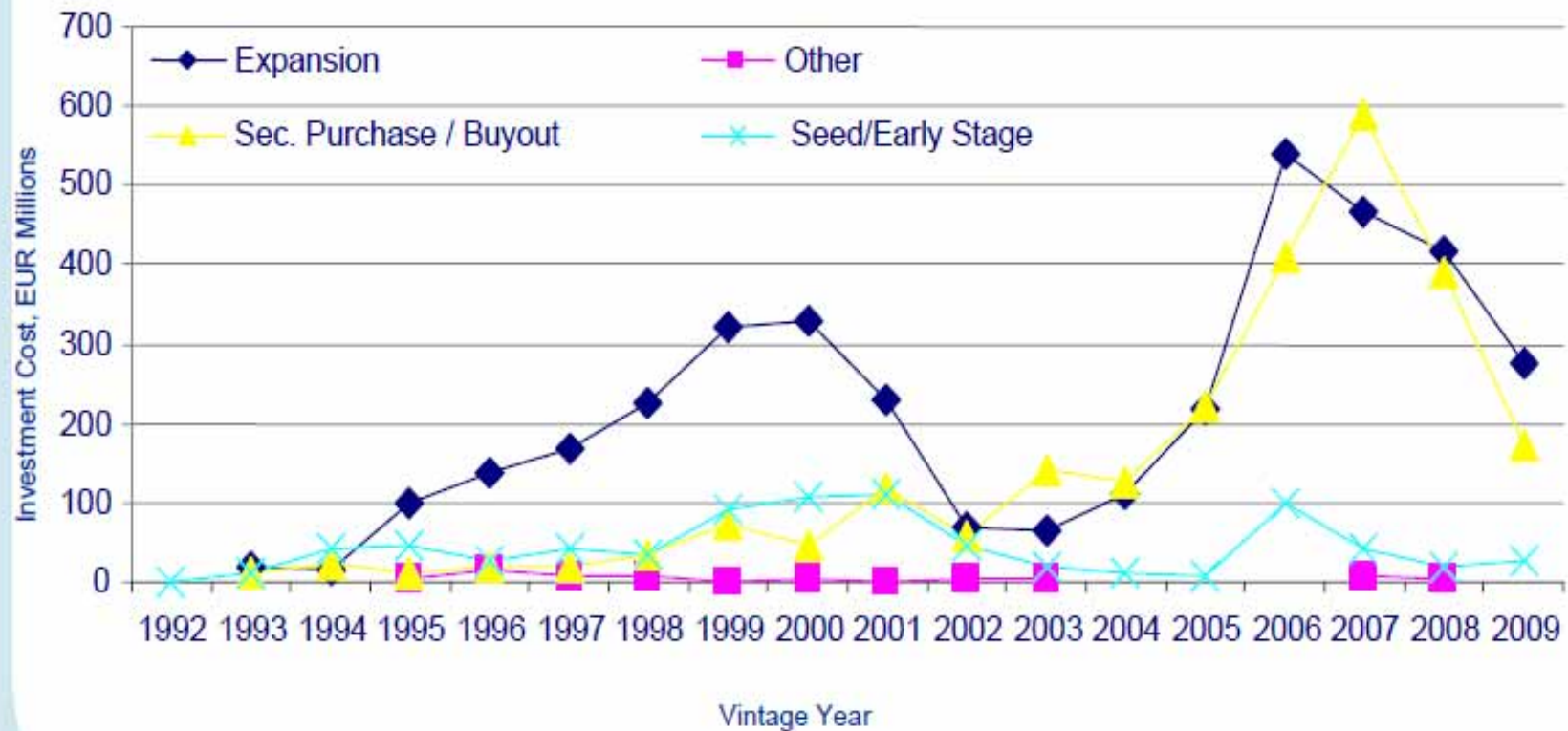
- Loyalty & ‘Connections’ over Experience
(**demand so strong, who needs experience**)
- On the Job Learning with Little Instruction
 - Thrive in Adversity, Uncertainty, 24/7
- “I Wanna Be Rich!” ~~Envy Big Motivator to IPO~~

Investors 'Bet' on Sure Things

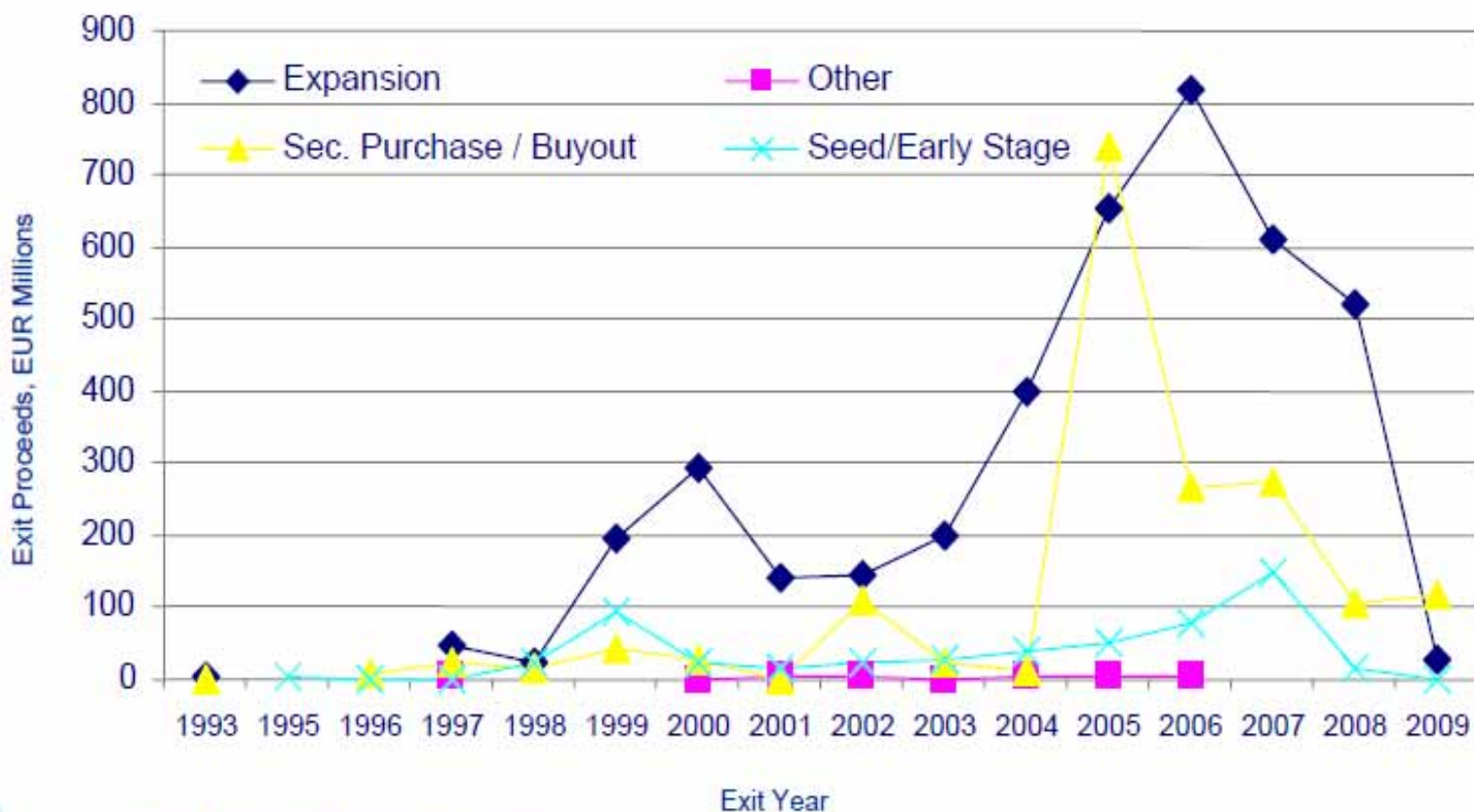


- Expansion Capital & Acquisition Finance
 - Established Business Models
 - Exit Prices, 10x in 3 Years is Common

Investments by Stage Over Time



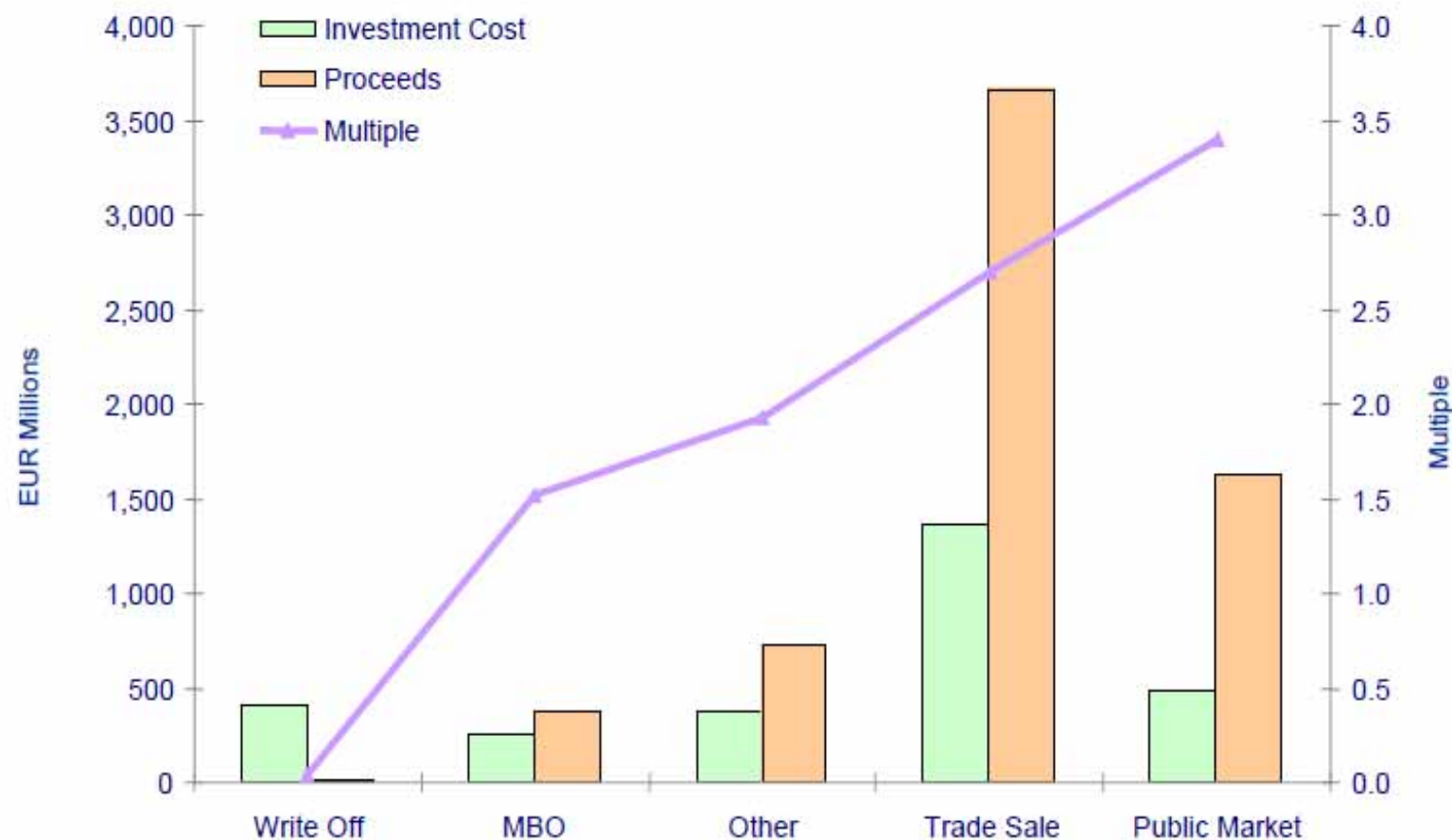
Exits by Stage Over Time



Note: Fully realised investments only



Performance by Exit Type – to end 2009



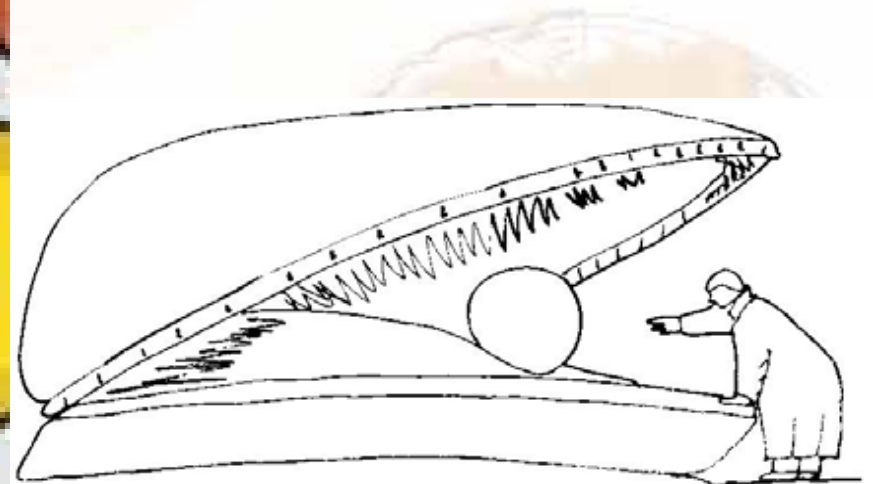
EBRD Net Horizon Returns: Breakdown

	Returns as at December 31 2009	One Year	Three Years	Five Years	Ten Years	Since Inception
USD	EBRD Private Equity Portfolio - All	6.4%	5.2%	25.0%	16.9%	12.3%
	CSE	1.5%	8.6%	20.5%	14.6%	11.0%
	Russia/CIS	16.7%	0.6%	32.3%	20.1%	13.7%
	CSE/Survivors	3.0%	8.9%	20.1%	17.1%	14.0%
	Russia/CIS Survivors	17.0%	0.4%	27.6%	22.3%	19.2%
EUR	EBRD Private Equity Portfolio - All	3.6%	2.4%	27.4%	11.8%	9.7%
	CSE	-1.4%	5.8%	22.5%	10.1%	9.0%
	Russia/CIS	14.1%	-2.4%	35.0%	14.0%	10.6%
	CSE/Survivors	0.0%	6.1%	21.9%	12.7%	12.1%
	Russia/CIS Survivors	14.4%	-2.5%	28.6%	16.3%	15.4%

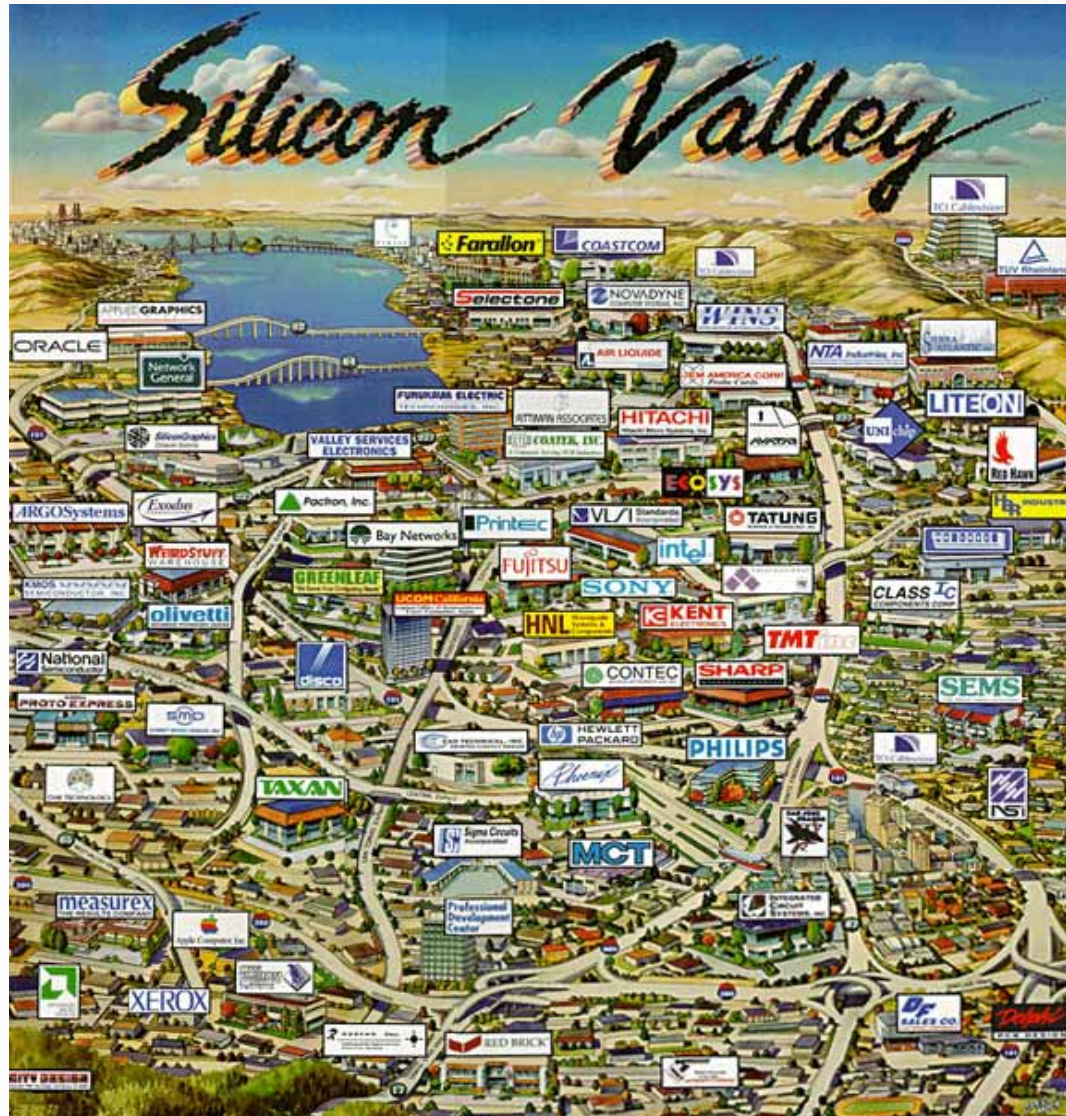




Culture of Risk & Failure on Deals & Investment

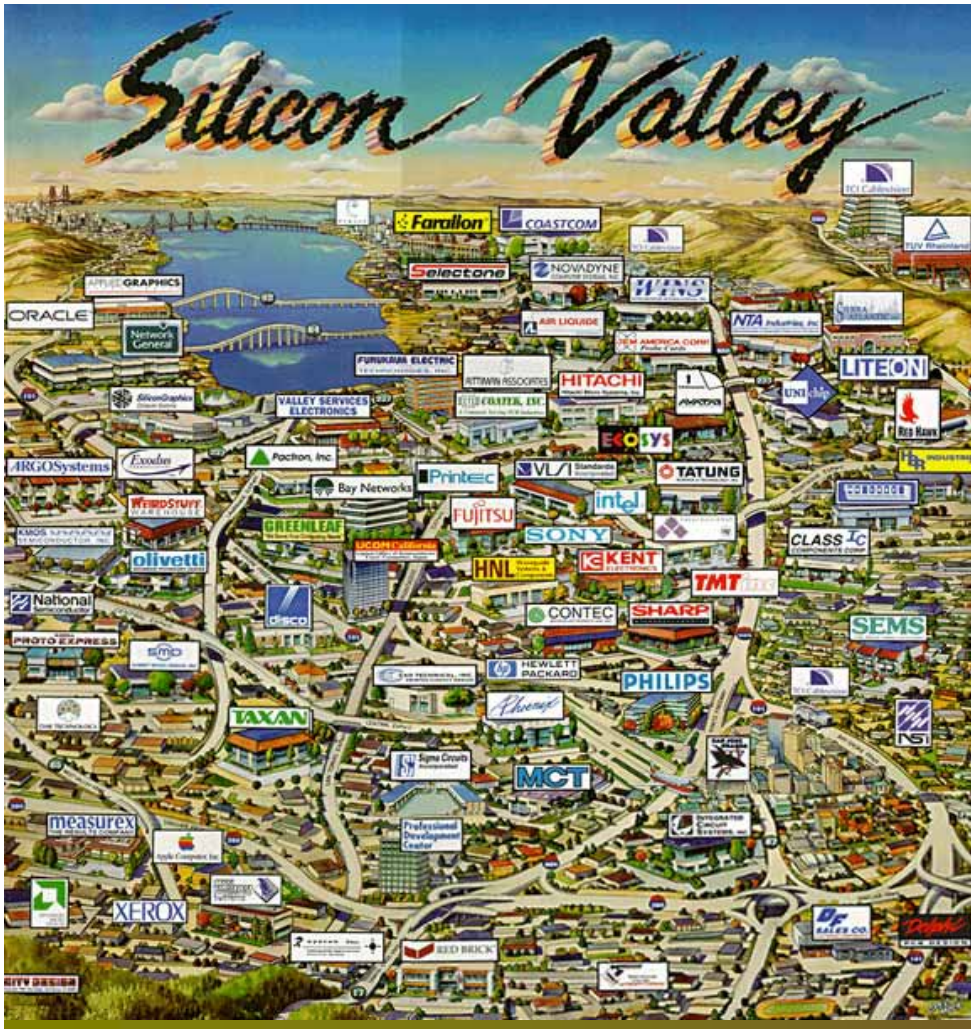


Let's Start Discussion in an Unlikely Place



M Valley Investors 'Buy' Opportunity & Potential

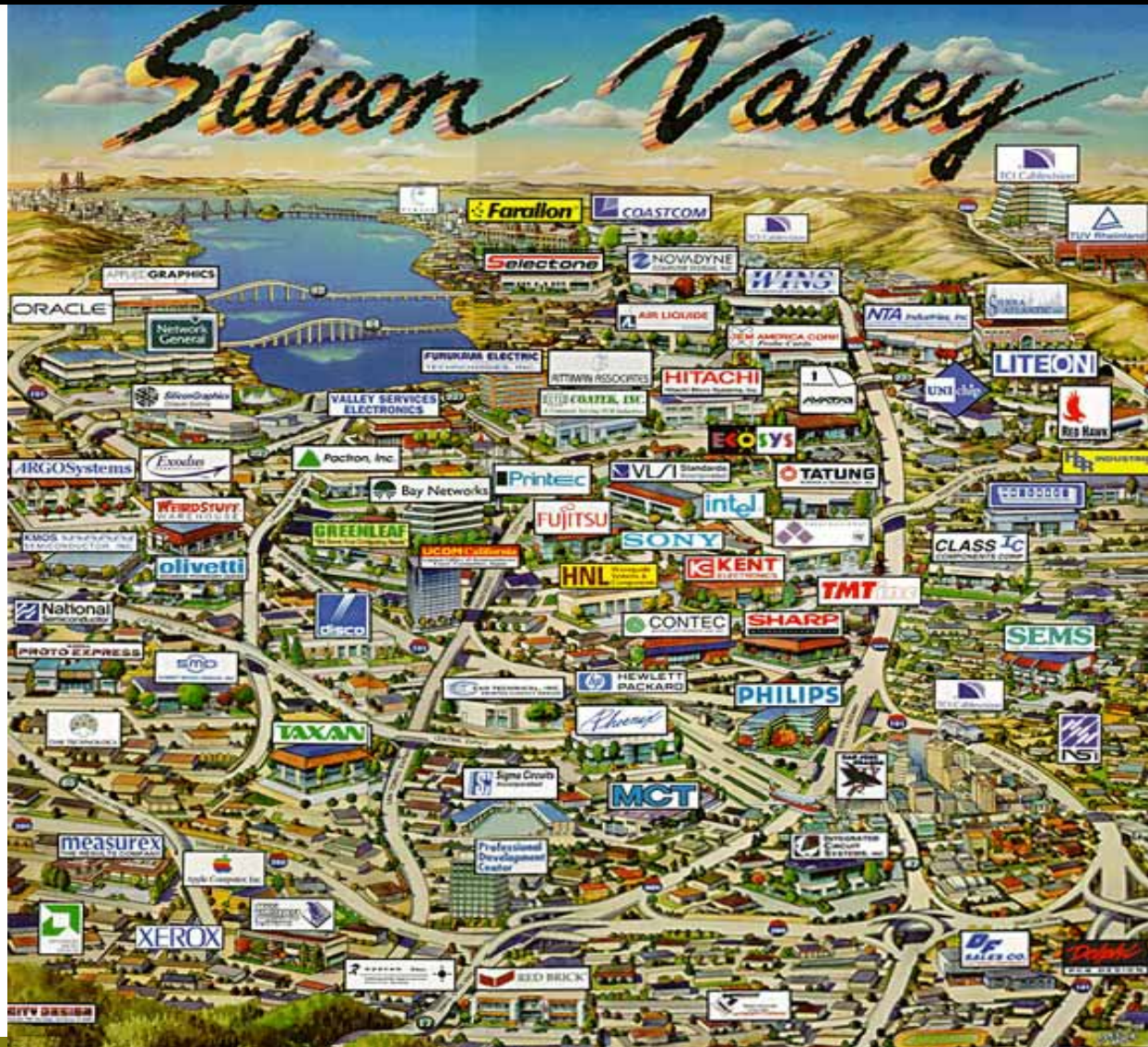
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And They Willingly Finance Failure

Financing the Future & Failure: not the Valley's Greatest Attribute

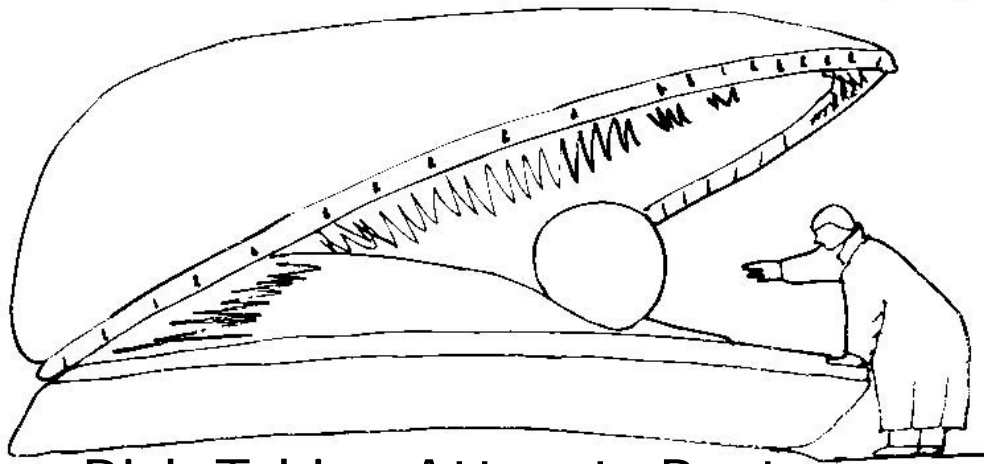




It's Attitude to Risk Is: Silicon Valley vs. World

Velocity of VC in Silicon Valley

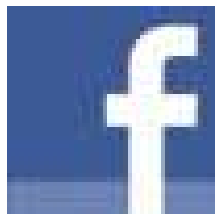
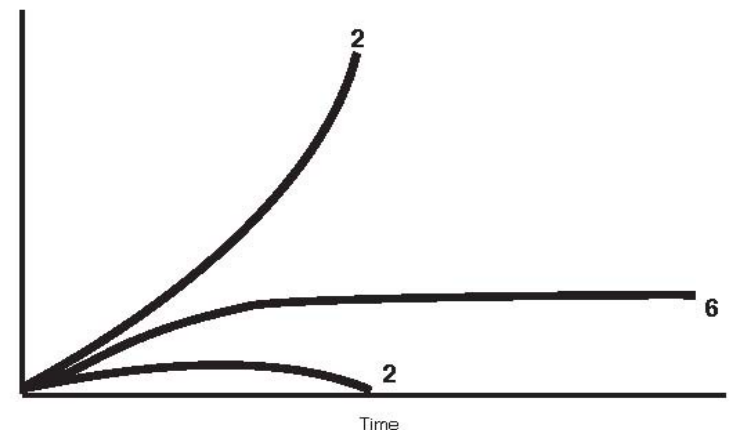
Attitude to Risk Impacts Risk Taking



Risk Taking Attracts Best Entrepreneurs with the Craziest (& Riskiest) Ideas

Accept Ambiguity & Lack of Certainty

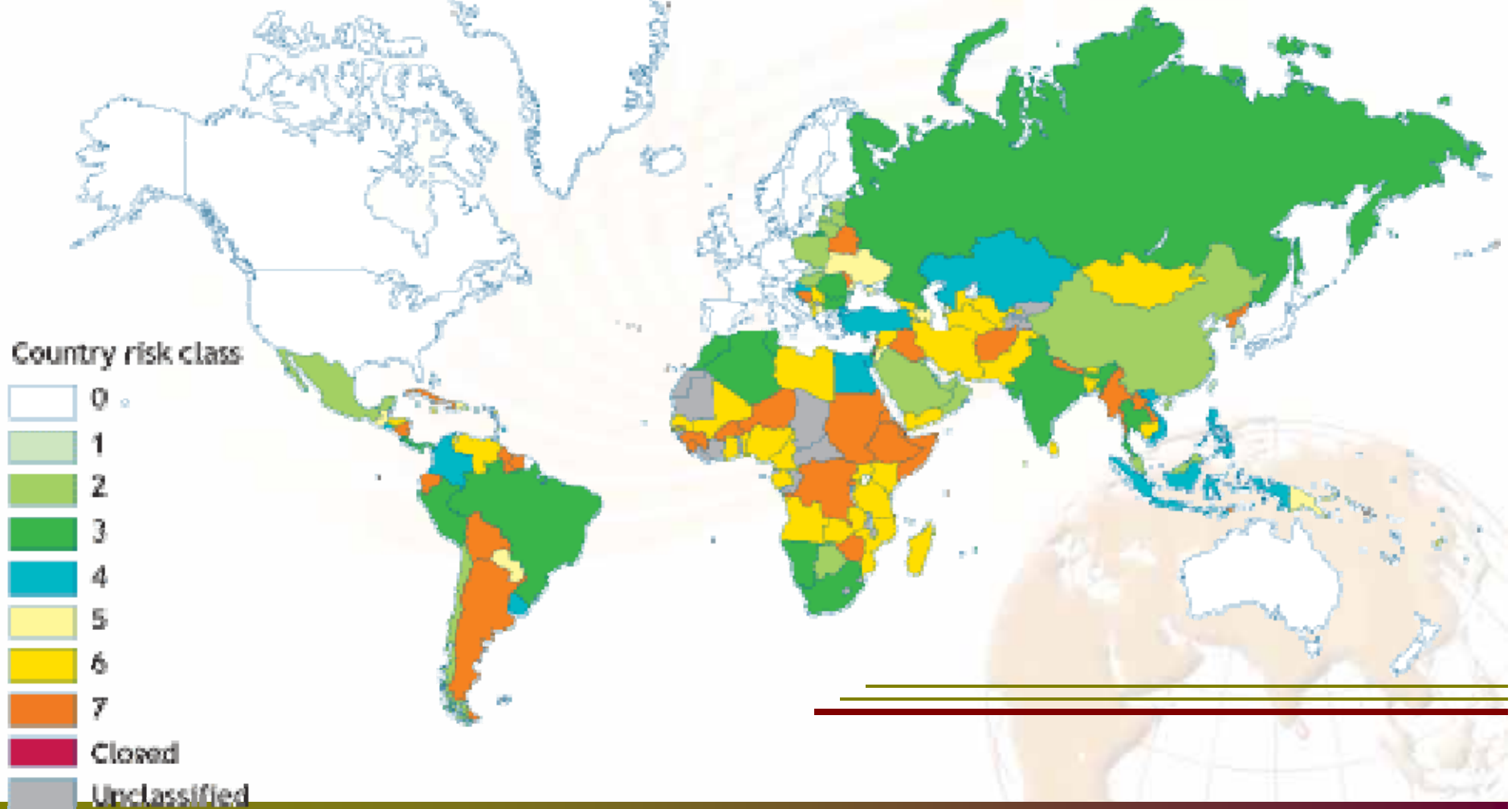
Private Equity 2-6-2
DISTRIBUTION OF RETURNS RULE





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But Cultural Attitudes to Risk Are Very Different in Emerging Markets





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Investors 'Buy' Risk They Know & Understand

Risks in Deals Like:

- Real Estate/Construction
- Food & Beverage
- Retailing
- Mfging
- Consumer Products
- Telecomm

Even in Greenfield
Projects, *Markets &
Customers Are Guaranteed*

Results are Assured if
Execution is Successful



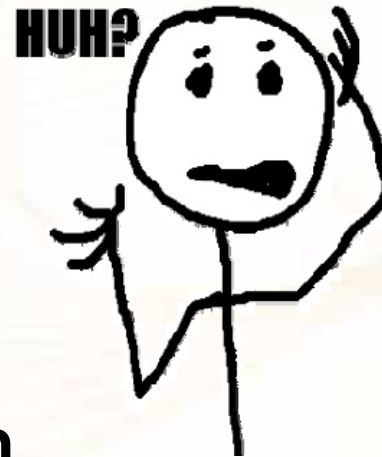
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Risks in Tech Are Too Much for Investors in the Developing World



Do Customers 'Get It?'



Will Tech Work?





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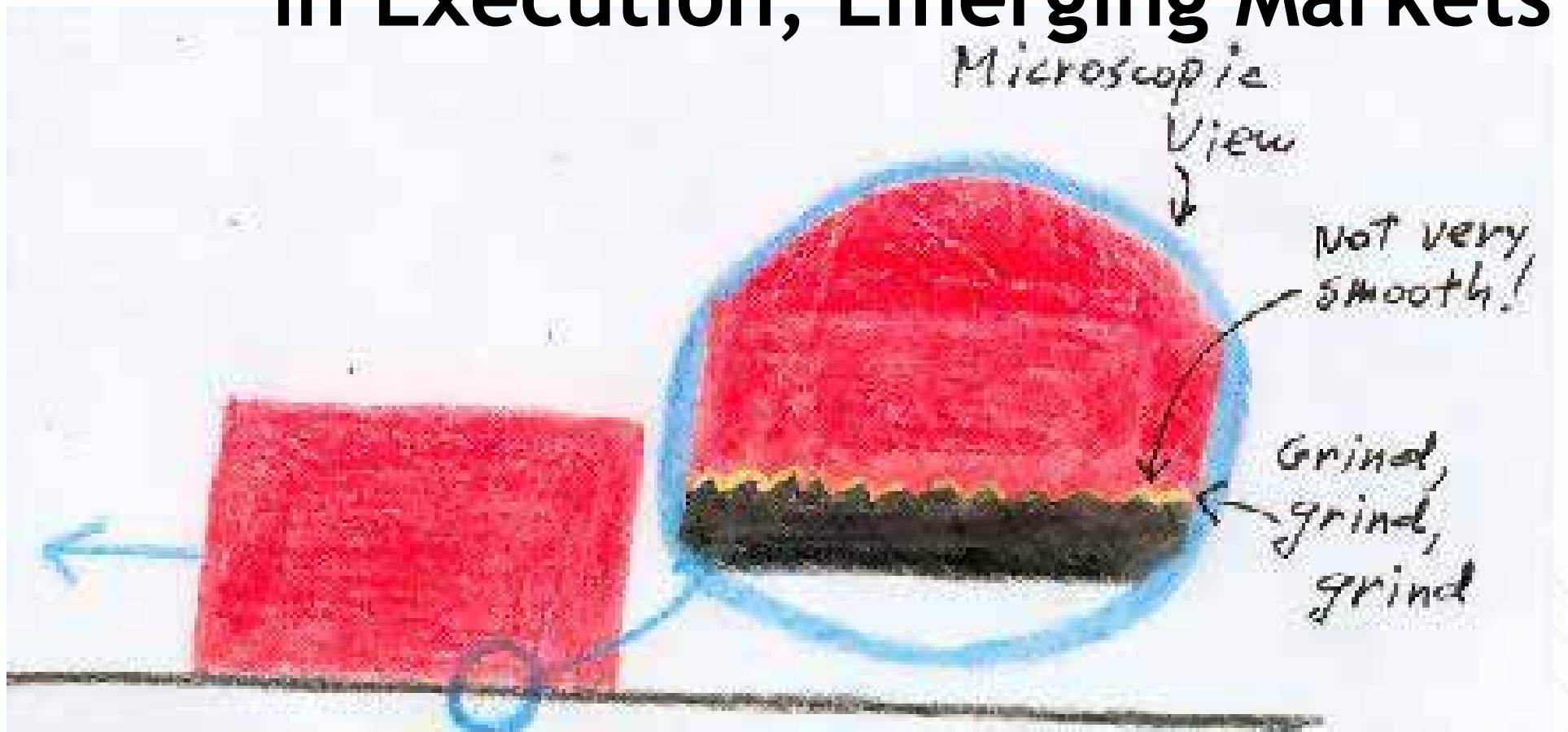
Why this Fear?





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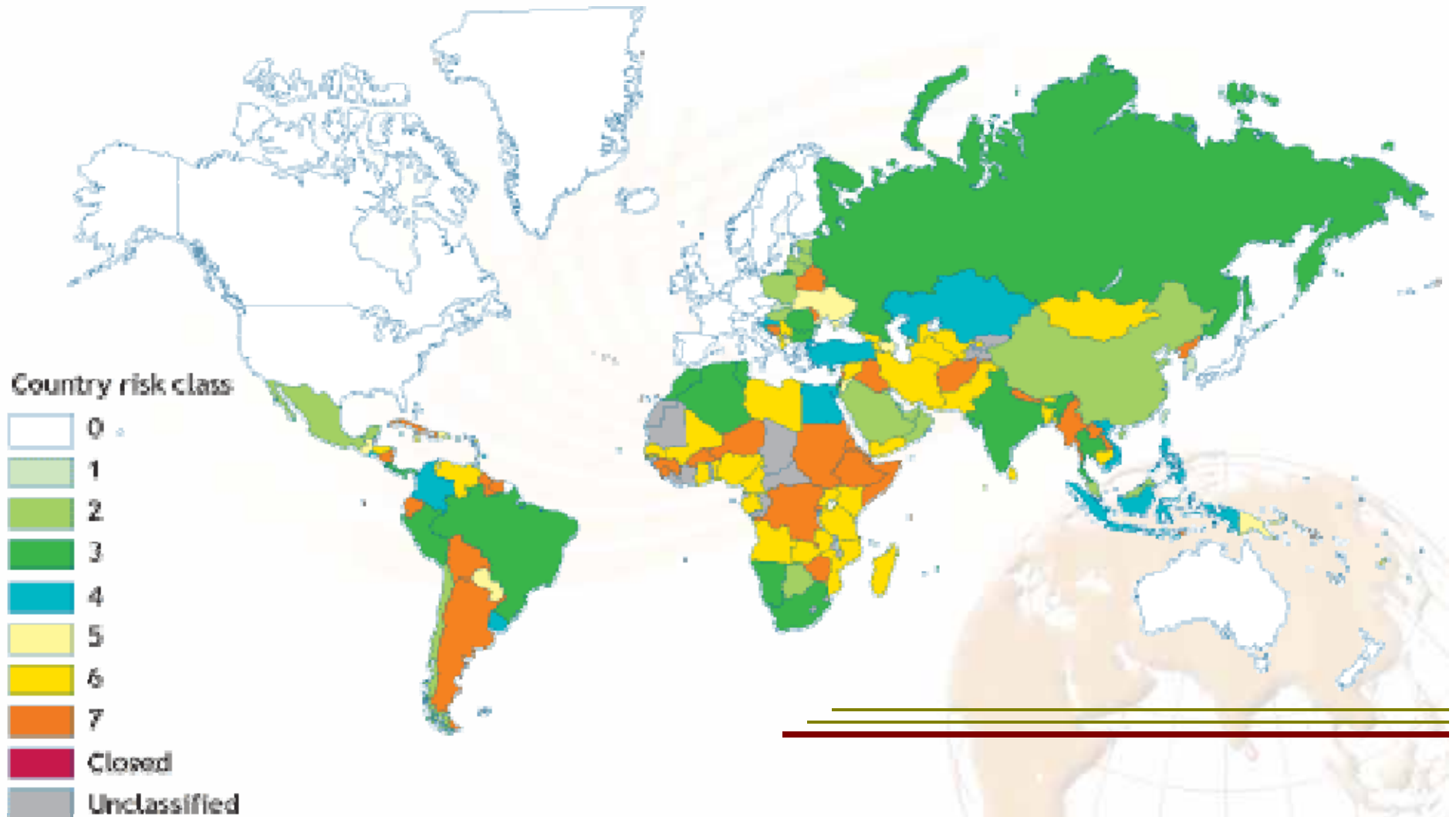
There Are So Many Friction Points in Execution, Emerging Markets



That Even the Big Guys Trip!



So Investors 'Buy' Growth with Certainty, not Potential



Where the Risks Are in Execution, & the Risks of Capturing Opportunity are Zero

**And That's The Reason Why (for
example)**

**“Croatia is a Country of
Savers, not Investors”**

‘Capital Preservation’



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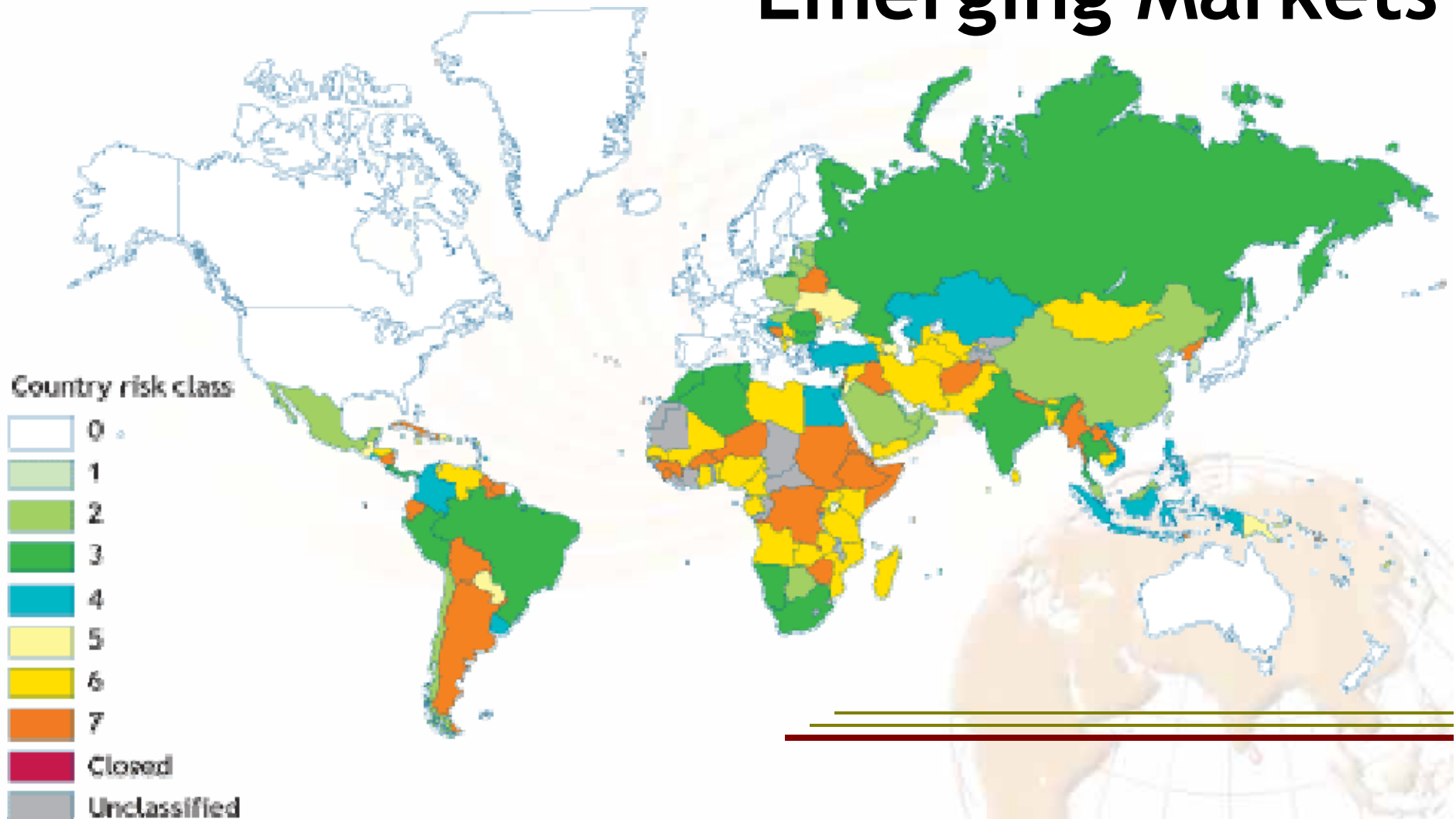
But Not Just Investors & the Culture in Croatia



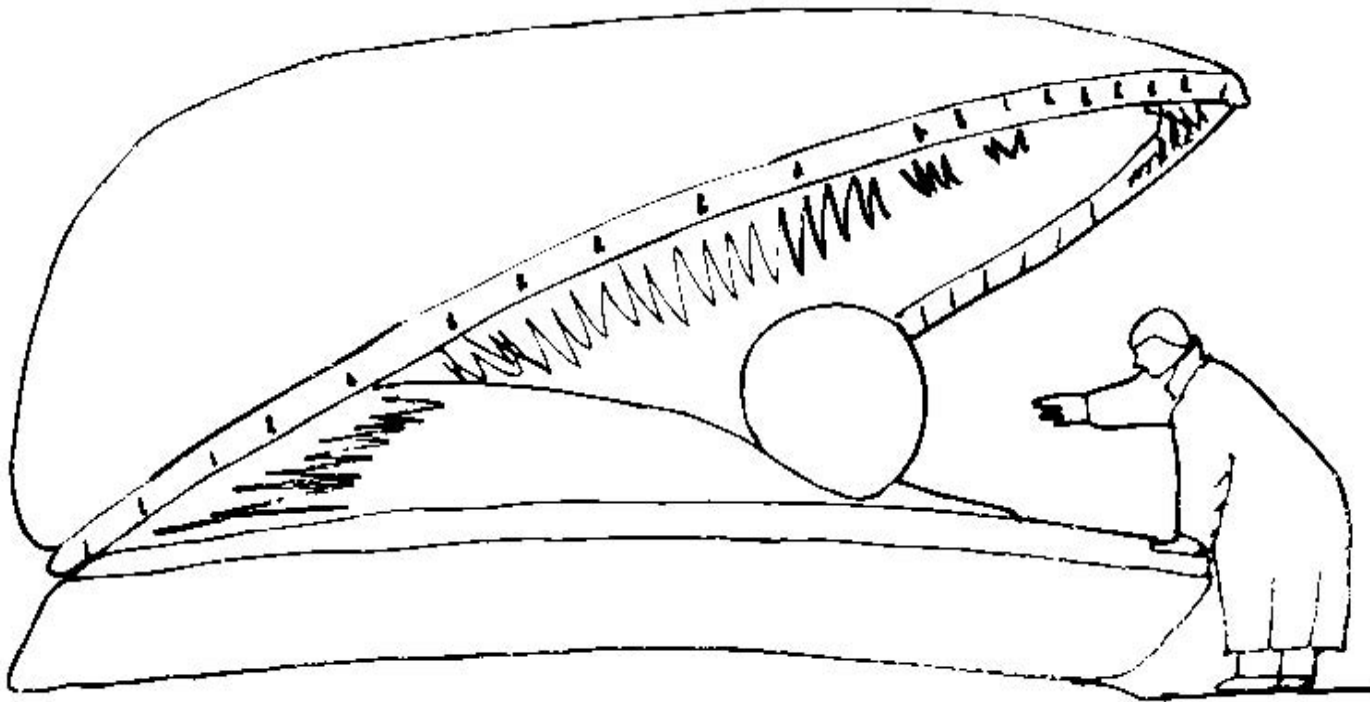


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But Most of Us Investing in Emerging Markets



Emerging Market Investors Behave Rationally to Risk



Emerging Market Investors ‘Buy’ the Risks in Execution, Not Opportunity

**Since Execution Risks are
So Numerous to Trip Us Up**



**Opportunity Must be
Assured**

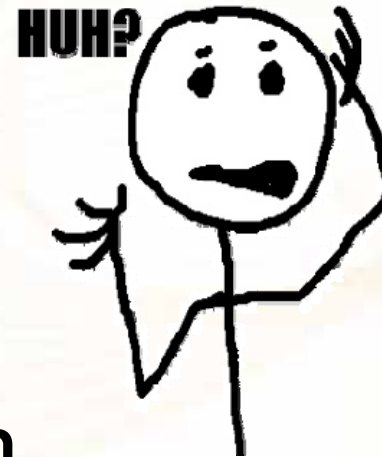
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Risks in Tech Are Too Much for Investors in the Developing World



Do Customers 'Get It?'



Will Tech Work?



Will They Pay?

So How Impact the DNA of Investors?



Models for Academic Business Development

	Flexible Licensing Terms	Progressive Policies	Business Plan Development Assistance	Help Recruit Talent	Aid in Securing Funding	Business Operations Participation	Direct Investment
Hands-in-Pockets							
Hands-Off							
Hands-On*							
Up-to-Elbows**							
	Policies		Form the Licensee		Operational Role		

← UM

* Sometimes Bus Dev Group is quasi-external to the U

** Often exclusive arrangement with Bus Dev Group that is external to the Univ

Top Start-Up Universities in USA

Rank	University	# of New Companies
1	University of Utah	20
1	Massachusetts Institute of Technology	20
2	University of Florida	14
2	California Institute of Technology	14
3	University of Michigan	13
4	Harvard University	12
4	John Hopkins University	12
5	Purdue Research Foundation	11
6	Carnegie Mellon Foundation	10
7	Brigham Young University	9
	Georgia Institute of Technology	9



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MICHIGAN VENTURE CENTER RESOURCES



OUR PARTNERS

Translational Research Funding: Coulter Program, College of Engineering Translational Research Fund, Life Sciences Institute Innovation Partnership

Innovation and Prototyping: Medical Innovation Center

Student Entrepreneurship: Center for Entrepreneurship, Zell Lurie Institute

PreSeed Funding/Business Assistance: Ann Arbor SPARK, MEDC

mvc@ivpc.com

Russian Gov't Tech & VC Initiatives



•PPP* Seeded with ≈\$1B, a
'Fund of Funds'



•PPP* Seeded with ≈\$10B,
Direct Project Financing &
'Fund of Funds'
•Nanotech



*PPP=Public/Private Partnership



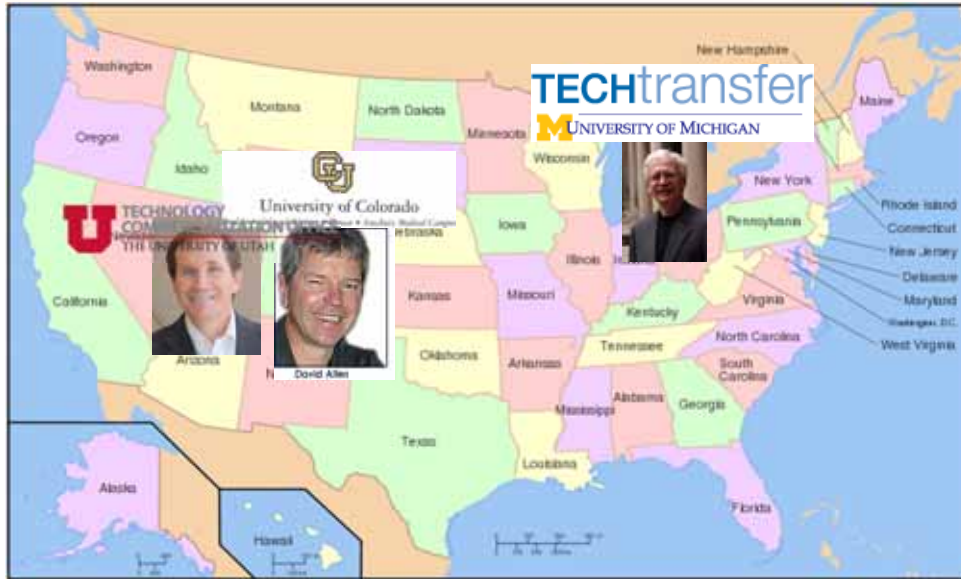
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Info@IVipe.com



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TECHNOLOGY TRANSFER OFFICE

INFORMATION FOR:

- Faculty/Staff/Student Investigators
- The Business Community

- [Introduction](#)
- [Bioscience Discovery Evaluation Grant - University Grant](#)
- [Bioscience Discovery Evaluation Grant 2010 Proposal Request](#)
- [Bioscience Discovery Evaluation Grant Guidelines](#)
- [Proof of Concept Investments](#)
- [Proof of Concept Grants](#)
- [Bioscience Discovery Evaluation Grant - Company Grant](#)
- [Renewable Energy Funding](#)
- [Market Assessment Program](#)
- [Proof of Concept Grants](#)

POC Grant Program (POCg; Founded 2005)

This program is inactive until 2012.

In the fall of 2005, a research funding program was initiated – the **Proof of Concept grant** program (POCg). The POCg provides awards to enable pilot stage development and validation of CU inventions that have promising prospects for commercialization. For example, three categories of disclosures for which a relatively small amount of research funding may yield a dramatic increase in value for the invention are:

- **Advancement of hypothesis testing** - test an idea or *in silico* prediction with *in vitro* experiments, extend *in vitro* results with *in vivo* experiments, or build a bench prototype;
- **Target validation** – screen small molecule libraries, produce antibodies, or select target-binding peptides or aptamers; and
- **Pre-commercial research** – validate academic software code for commercial application, drug formulation, or develop alternative applications for technology.

In order to apply for a POCg award (as a pre- or co-requisite) an invention disclosure for the subject technology must be on file with the TTO. POCg awards can range from \$10-25K, and the technologies are selected by a competitive application process. Proposals are reviewed by the TTO, and each award is deposited directly into a CU research account. POCg has funded 58 projects, with the following outcomes:

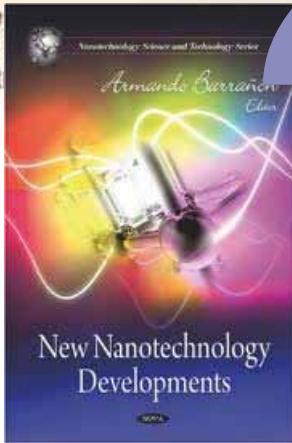
POCg PROGRAM SUMMARY			
# of Projects	58	Licensed/Optioned	21
# of Projects Active	19	Colorado Based Co.	17
nonviable	0		
Appropriate Funding:	\$	1,138,241	
Follow-on Capital	\$	11,626,749	
Therapeutic	17	Software	7
Diagnostics	6	Materials	0
Device	9	BioFuel	1



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Dollar exchange rate easing credit strains
MARKET JITTERS spending power commodities
mutual fund CREDIT CRUNCH
endorses stimulus package emergency loans
slow revival CAPITAL INVESTMENT
Financial crisis
dollar weakens STOCK MARKET
analysts **Downturn** Inflation earnings
slump Profits down
Economic disaster looming
Shares worthless **Crash!**
Stocks tumble assets
anxiety deepens Interest rates
survival in doubt RECEPTION FORECAST
risk mortgage MONETARY POLICY
Global trends **Bust!**
currencies announces trading loss
fear grows Govt. funds
risk Pension ruins dry up

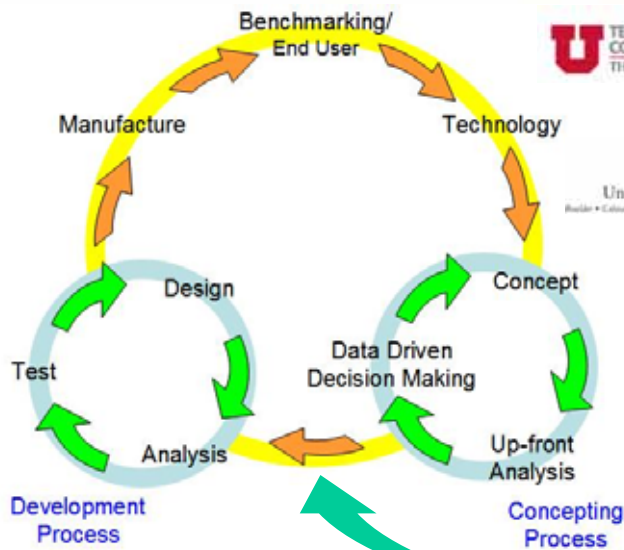
State of financial emergency
forces major cuts at GVSC
Milliken Asks \$225 Million in Cuts
GVSC cuts \$225 million
Deeper cuts needed to save
Michigan's budget
State's new budget plan may
force college to borrow



Partnering Strategy



SYGMA
Nanocent
er Tomsk
branch
SYGMA
Nanocent
er Tomsk
branch
SYGMA
Nanocent
er Tomsk
branch



U TECHNOLOGY
COMMERCIALIZATION OFFICE
THE UNIVERSITY OF UTAH

CU
University of Colorado
Boulder • Colorado Springs • Denver • Fort Collins • Greeley • Lakewood

TECHtransfer
M UNIVERSITY OF MICHIGAN





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CLOSING
REMARKS

3rd Wave 2012+?

What Does the Future Look Like?

- Continued Integration, Emerging Markets in Global Supply Chains
- More Diversification & Variety of PE Funds, Structured Finance
- Commitment to Tech Funds & Knowledge Creation

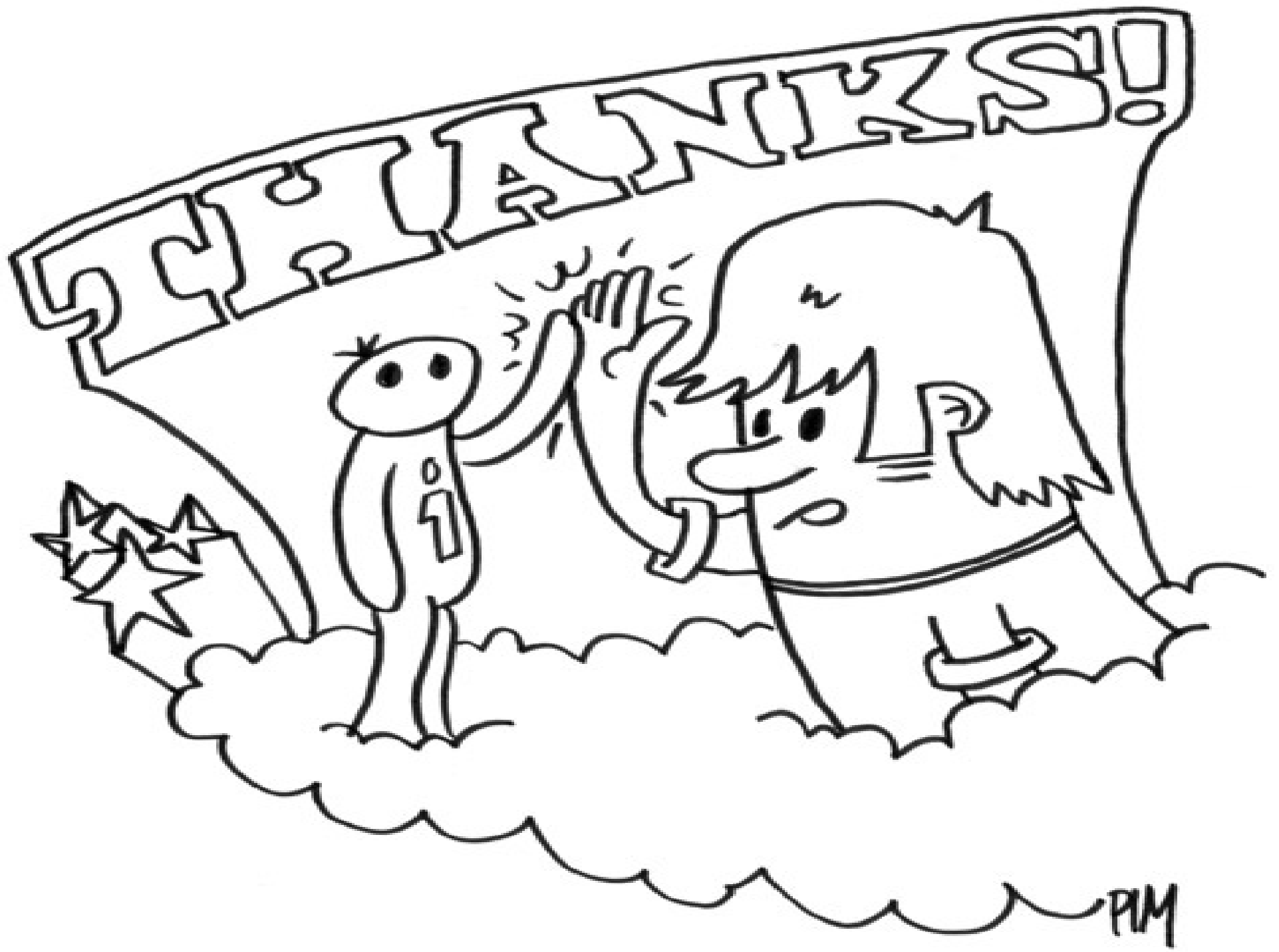
3rd Wave 2012+?

What Needed for More Growth?

- **Creation of New Funds, Provide Medium Term \$, 3-5 Years, a Huge Gap in Emerging Markets**
 - **‘Deal Flow Funds,’ to Influence Investor Behavior to Financing Early Stage Tech SMEs, in the ‘Valley of Death’**

How Will You Impact the World?

- ‘Creating Entrepreneurial Ventures in Developing Countries’
- US Start-up/VC Model Not Translate Well for Developing Countries
 - New Solutions, Education, Training, Mentoring Required





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