

# RESEARCH AND INNOVATION IN FINANCE

THE GOALS OF THE FINANCIAL  
INDUSTRY CLUSTER

# COMPETITIVENESS CLUSTER

- **To concentrate, in an advanced technology the academic community, national lab. and industry.**
  - **Examples: Saclay; Energy, I.T.**
    - **Grenoble; Microelectronics**
- **Advantages: Synergy, critical mass**
  - **Pre-competitive research**
  - **Classical example of Roadmap in Microelectronics.**

# Financial Industry

- **Can we have similar clusters?**
- **Difficulty: what is pre-competitive research in financial industry?**
  - **Where does classified information stop?**
- **Examples: in France, Competitiveness Cluster: financial industry, technology and innovation**
  - ❖ **Wall Street**
  - ❖ **City**

# Financial Industry

## ➤ Possible topics

- Extreme risks with low probability
- Standards and regulation
- Mathematical tools
- Software tools

## ➤ Who can initiate clusters?

- Universities and National Lab
- Government
- Industry

# Financial Methodology outside Financial industry

- **Risk and Decision Analysis: Convergence between Finance and Industry**
  - **Real Options**
  - **Probabilistic Risk Assessment**
  - **Cost-Benefit Analysis**
  - **Statistical Methods**
  - **Optimization**

# Financial Methodology outside Financial industry

- **These clusters can include different industrial sectors:**
  - **Pharmaceutical industry**
  - **Semi-conductor industry**
  - **Automotive industry**
  - **Aerospace industry**
  - **....**

# Financial Methodology outside Financial industry

- **No competition**
- **Learning from various examples**
- **Comparing valuation approaches**
- **Organizational aspects**

# Real Options: Two main ideas

- **Valuation concepts inspired from financial markets ( hedging, portfolio...)**
- **Flexibility of decisions**
  - **When to invest?**
  - **Abandonment**
  - **Scalability**
  - **Portfolio**

# Real Options: Two main ideas

## ➤ Difficulties

- Lack of data
- No market
- Diversity of situation

## ➤ However

- Need is real: complexity of situations
- Can we do better than the DCF?
- Markets emerge
- Research is progressing

# Conclusion

- **Competitiveness clusters make a lot of sense for financial methods outside financial industry**
- **Extension of competitiveness cluster for financial industry.**