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New Challenges and Value Creation Opportunities in Regulated Industries

A presentation for the Enel Cascade

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Introduction

- **The landscape for regulated industries has changed profoundly**
  - With market liberalization, monopoly markets have developed into oligopolies or even more competitive markets
  - Competition gradually shifts from price-based to innovation-based
  - Market volatility has increased, and idiosyncratic risks have arisen
  - The issues that regulators are required to address have increased in complexity
- **To complicate things even further, in 2008 the most severe economic and financial crisis since 1929 struck the global economy, triggering persistent economic and financial hardship across industries**
- **In this context, regulators strive to address challenges arising from a more and more complex environment, while regulated firms seek new avenues of value creation**
- **The purpose of this presentation is to:**
  - Characterize the current situation and new challenges for regulated industries
  - Illustrate how the roles of regulators and regulated firms have changed
  - Introduce a preliminary discussion on some new opportunities of value creation
  - Sketch some interesting experiences in other regulated industries

Current Situation

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- In the last 20 years, how successful has economic regulation been in delivering benefits to consumers?

Enable competition

- Extensive new entries in markets that sustained competition
- Emulating competitive constraints in markets that did not sustain competition

Efficient outcomes

- Static efficiency (i.e., low cost and prices)
- Dynamic efficiency (i.e., investments needed to match demand)
  - Often belatedly chased after the arising of capacity shortage

Increase of consumer surplus

- Likely increase in consumer surplus (under the assumption of price-based competition and homogeneous products paradigms)

- Regulatory intervention was successful in delivering some (short-term?) benefits to consumers
- However, the sophistication of the tools employed by the regulatory practice developed more slowly than the complexity of the problems it tried to address

Challenges

Coping with innovation	Revisiting product definition	Addressing market volatility and risks	Surfing the wave of "creative destruction"
▪ Price-based competition is not the only paradigm ▪ Competition is increasingly innovation-based ▪ What regulation safeguards firms' incentives to innovate? ▪ Innovation drives growth and prosperity	▪ Services are increasingly differentiated to match consumers' preferences for variety ▪ What regulation is suitable if services are differentiated? ▪ Matching preferences increases consumers' surplus	▪ Volatility increases investment risks ▪ Idiosyncratic risks create real options and require additional capital remuneration ▪ Regulated firms invest if proper flexibility and remuneration is allowed	▪ Long downturns in cycles/depressions – Disrupt firms' current value creation process – Open new sources of value creation ▪ Successful firms will surf this wave of creative destruction and revisit their business models to find new sources of sustained competitive advantage

- **The regulatory practice is still developing effective tools to address the above challenges.**
- **Regulators and firms need to work together to cope with the challenges, but should their interaction change? If so, how?**

On the Interaction Between Regulators and Regulated Firms (1/2)

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- The relationship between regulators and regulated companies has been characterized by asymmetric information (the better informed agent being the regulator and the less informed one being the regulated company)
- On more innovative issues , however, this is not true: Instead of observing an information asymmetry, we observe a situation where neither companies nor regulators know enough to take informed decisions

Traditional challenge

- Asymmetric information in favor of regulated firms
- Regulators and firms confront each other
- Regulators design incentives that induce firms to reveal their costs

The non-cooperative game shifts toward the cooperative game

New challenges

- Asymmetric information in favor of firms, but new challenges give rise to an information gap *for both* regulators and firms
- Little or no room for confrontation
- Information gap can be closed by cooperation

More specifically, how would the interaction between regulators and firms need to change in order to avoid coordination failures?

On the Interaction Between Regulators and Regulated Firms (2/2)

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FIRMS

Proactive approach customized to the specifics of each case

EU policies are considered best practice

Good to be inspired by EU policy, but solutions to specific problems in specific jurisdictions need to be customized

Proactivity allows to lead the regulatory agenda

BOTH

Develop novel and more powerful tools of economic analysis

Qualitative and quantitative analyses required in order to develop proposals, anticipate their impact, and inform regulatory decisions

REGULATORS

Restructured and transparent regulatory process

Well-structured and transparent regulatory process allows regulators to adopt "tentative" remedies and, if needed, rely on fixing measures

Stakeholders' cooperation effective in preventing coordination failures

Four High-level Opportunities of Value Creation

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CHALLENGES

Incentivizing innovation	Revisiting product definition	Surfing the wave of “creative destruction”	Addressing market volatility and risks

NEW OPPORTUNITIES

1. Price premium on new and differentiated services
2. Appropriate remuneration for systematic and idiosyncratic risk
3. Proper intellectual property management and strategy
4. Sharing practices and replication of successful business cases

Cashing in on these opportunities enables substantial value creation

Some Interesting Experience in Other Regulated Industries (1/2)

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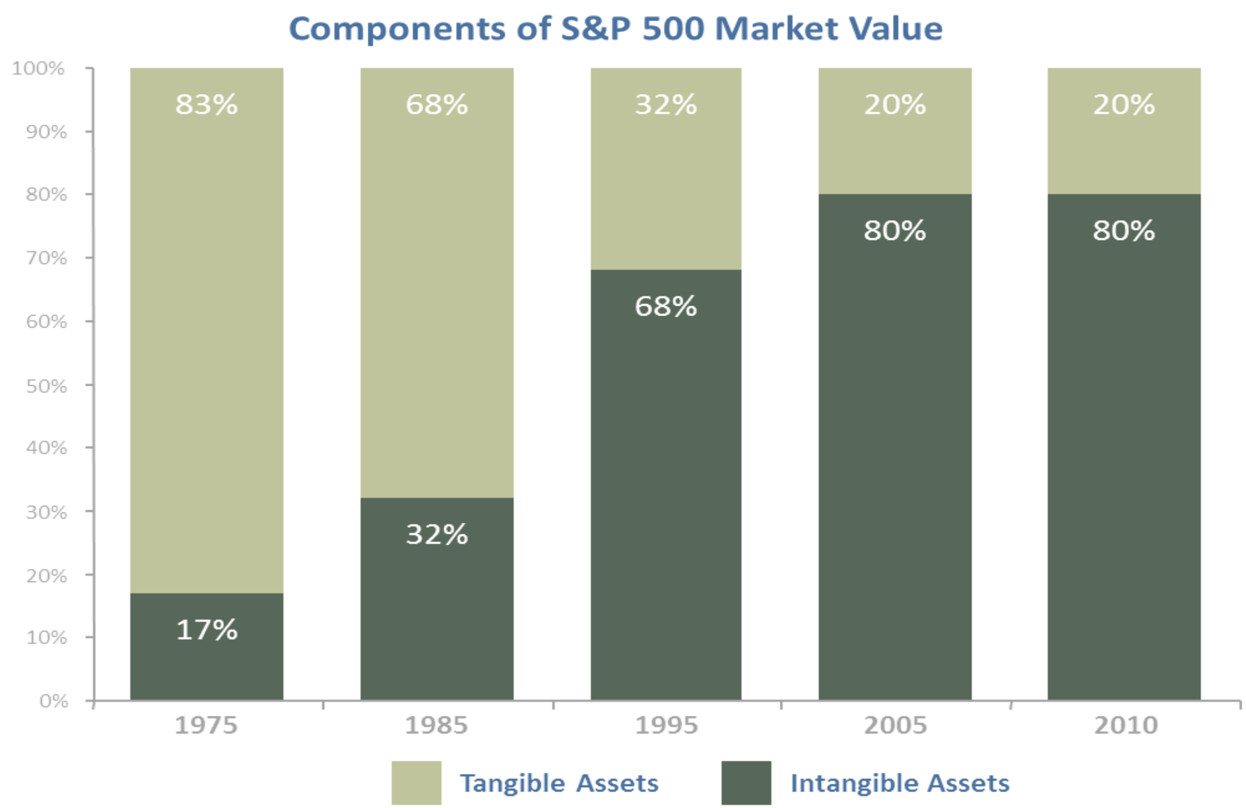
- **Addressing risks and volatility**
  - Adoption of long-term price caps and long-term service contracts in the airport industry (Heathrow T5 in the United Kingdom; airports services to airlines in the United States)
- **Remunerating idiosyncratic risks**
  - Real options in the fixed broadband industry (OPTA, the Netherlands)
- **Management and strategy of intellectual property**
  - Surge of IP management and strategy in the IT industry (IBM, U.S.)
- **Preventing coordination failures by revisiting the regulatory process**
  - Proactive creation and sharing of economic quantitative tools with regulators (SAWS meteo services, South Africa)
- **Short-term static efficiency versus long-term dynamic efficiency**
  - Static efficiency achieved by low termination rates hinders operators' ability to invest in the EU (the deployment of fiber networks would have reduced termination costs anyway)
- **Complementarities between product innovation and services differentiation**
  - Impact of smartphones on deployment and use of 3G networks
- **Long- versus short-term investment objectives**
  - Water companies must assess the likely future (at least 25 years) impact of climate change on their plans and report on the implications for their water supplies (Ofwat and the Environment Agency, UK)

Some Interesting Experience in Other Regulated Industries (2/2)



Source: Ocean Tomo

IP research shows that a substantial portion of the S&P 500 market value is due to intangible assets

Source: Ocean Tomo, *Ocean Tomo's Annual Study of Intangible Asset Market Value* (2011)

Some Interesting Take-Aways

- **Economic disruptions give rise to value creation opportunities:**
  - Anticipate and analyze events
  - Assess their risks
  - Identify opportunities
- **Gaining intellectual leadership on new economic issues and employing more advanced economic tools are key in order to design a business model to achieve sustained competitive advantage**
- **Engage relevant stakeholders (e.g., regulators, partners) in a proactive way through transparent quantitative analyses that can be shared with the same stakeholders**
- **Share practices across jurisdictions and replicate successful business cases by customizing appropriately on the basis of local specifics**

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