



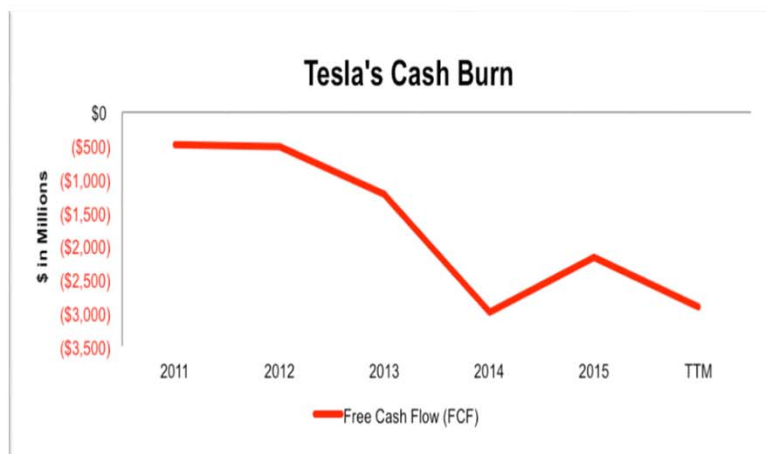
POLITECNICO
MILANO 1863

Management Engineering MSc Stream: Finance

Scenario and market needs

Finance

- Probably **many successful and innovating companies would not exist today, if they had not found support from financial markets**, including banks, professional investors, funds, asset management companies
- **Finance is fundamental** to grant access to money and opportunity for any investment in growth, manufacturing, operations, ICT, R&D and innovation



Uber's Massive Cash Burn Problem: 2016 Loss Set To Hit A Record \$3 Billion

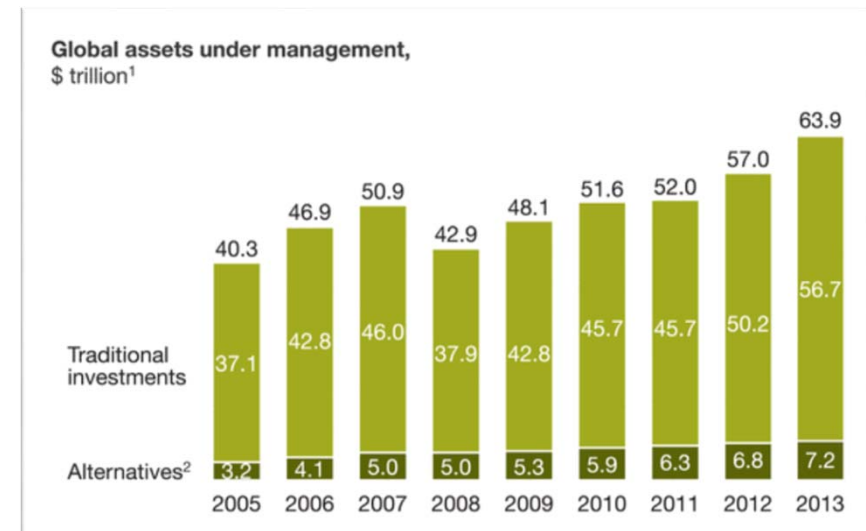
And yet, despite its eye-popping valuation courtesy of a growth curve which until recently was truly unprecedented (at least until the company's sudden withdrawals from China), Uber has a big problem: an unprecedented cash burn, which if not getting worse with every passing quarter, is certainly not getting better.

Back in August, [Bloomberg reported](#) that Uber's first half loss was roughly \$1.4 billion (\$580MM in Q1 and well over \$800MM in Q2) on just over \$2 billion in revenue (\$960MM in Q1 and \$1.1BN in Q2): it was burning approximately \$1.6 dollars in costs and overhead (mostly in the form of an ongoing attempt to price the competition out of business by subsidizing drivers using VC cash).

This follows a loss of \$2 billion in 2015, and had, as of Q2, lost at least \$4 billion in the history of the company. Of this, however, Uber reportedly lost at least \$2 billion in China as a result of a failed attempt to penetrate the local market which it abandoned later in the summer, which while sapping growth potential in China, also supposedly stem losses associated with the Chinese market.

Finance

- Financial markets have become **more and more complex** in terms of actors, tools, regulations and global interactions
- Around the world **investors and investments are growing at a fast pace**, this requiring **skilled professionals** to manage the interrelatedness of global markets and the demand for capital
- The **integration between finance and technology ('fintech')** creates tremendous opportunities for engineers
- In the Finance arena, **management engineers** are able to provide rationality, quantitative skills, evaluation tools, modelling competences in order to manage efficiently a market that is growing around the world

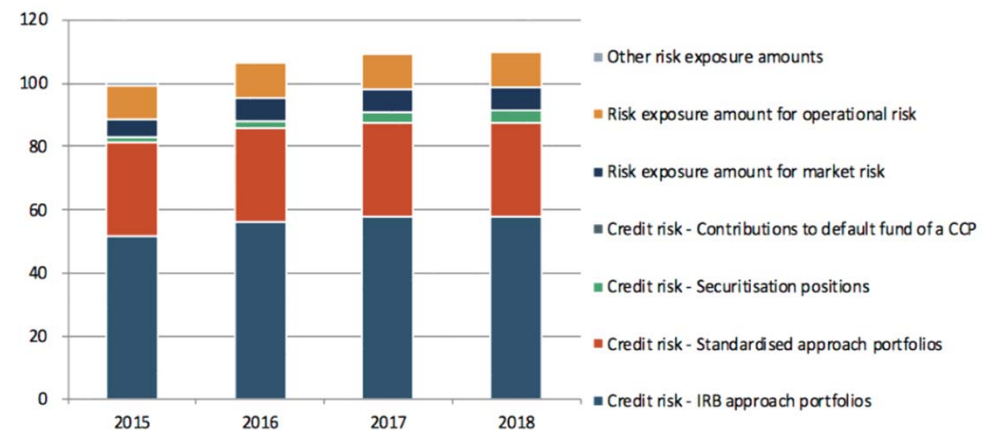


Scenario and market needs

Finance

- **Banking institutions** are facing a challenging, yet precarious, time
- Financial Authorities, not only as a consequence of regional problems but also of the global landscape, are improving their effort to build more robust and sound financial systems
- Further, as banks and the financial system is increasing in scale and complexity, the importance of monitoring rapidly changing risk exposures with **sophisticated financial risk management techniques** is trivial

Figure 12: Evolution of risk exposure amount by risk type under the adverse scenario (2015 = 100)

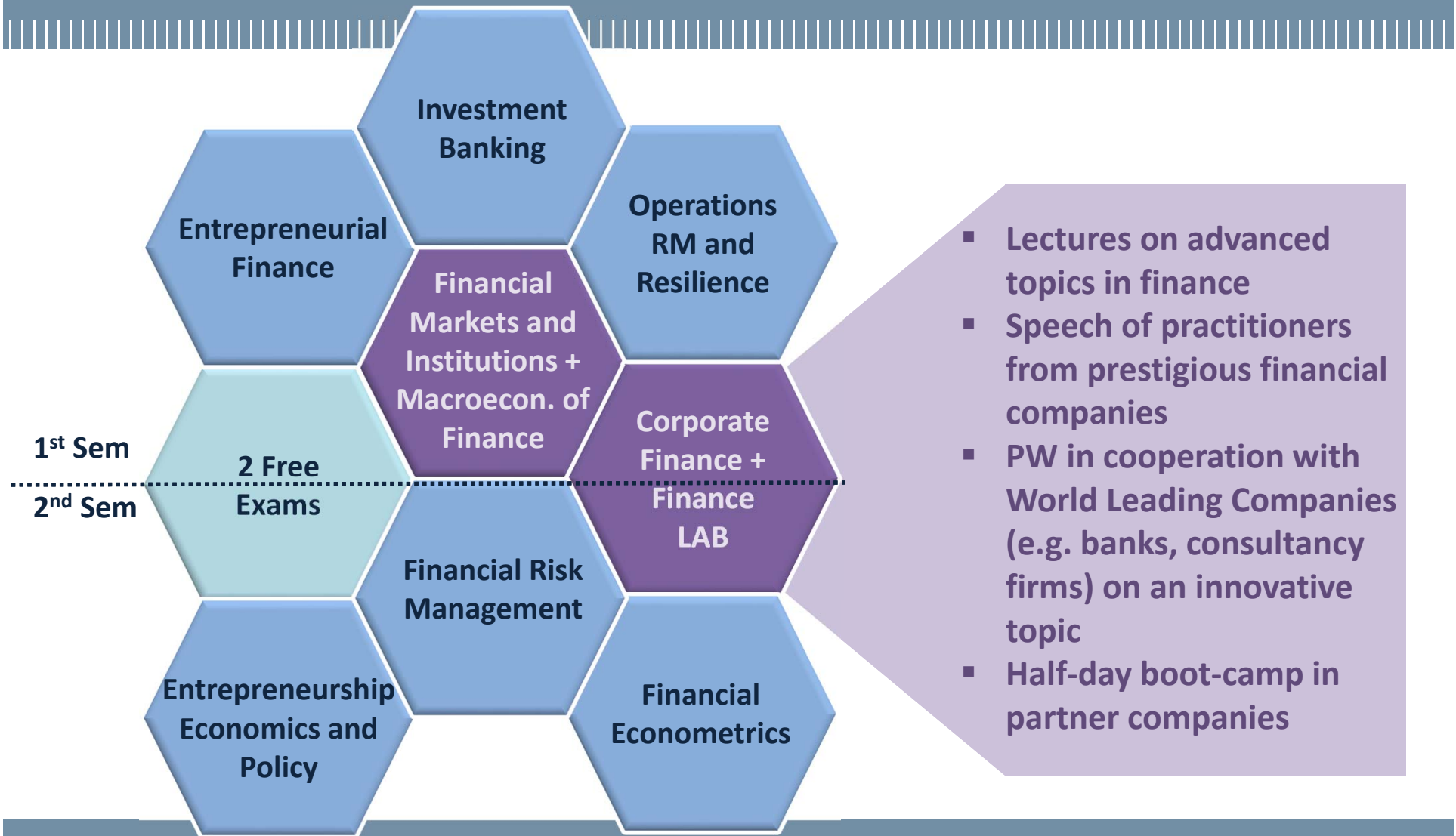


- Knowledge of **financial markets** and their structure
- Knowledge of the main **financial intermediaries**
- Knowledge of the **financial management** in large firms
- Knowledge of main **risk categories**, both financial and non-financial
- Knowledge of financing methods available to firms to **raise financial resources** during their life cycle especially in the **startup phase**
- Knowledge of the **main financial instruments** (e.g. bonds, shares, derivatives, supports to internationalization)

- Graduated students are employed mostly in financial companies, consulting, service and manufacturing companies in Italy as well as abroad (London and EU, USA, Dubai, Singapore, ...). Typical functions are:
 - **Asset & Investment Management**
 - **Corporate Finance**
 - **Investment & Commercial Banking**
 - **Risk Management**
 - **Accounting & Finance**
 - **Research and financial rating**
- There is a **tremendous request** at the moment for Management Engineers with a Finance background
- **Salaries are competitive**, compared to other engineering professions

Stream architecture

Finance (second year)



Stream architecture
Finance Lab

- The Finance Lab is the **'core' activity** of the stream. It is organised into two different parts:
 1. Lessons on **advanced topics in finance** and **interventions from practitioners** from prestigious financial companies (private banks, funds, ...)
 2. **Project work**: students develop a project on an innovative topic in **strict cooperation with companies**. Here are some examples of past projects:

Financing Industry 4.0

Health coverage innovation in Italy

Capital requirements of Italian banks

Italian banking foundations



7 Companies

13 Company Tutors

5 Academic Tutors

1 Leading AM Fund

4 Top Consultancy firms

1 International Bank

1 Financial Advisor

8 Students directly appointed (PW considered as an internship)

Stream architecture
Finance Lab

- Students are also involved in other activities in order to increase their knowledge of the industry and mature experiences before the graduation



CFA Research Challenge 2016
Politecnico di Milano
Italian and EMEA Champion
Top 4 World Universities



Study tour in London, 2016