M A S T E R T H E S I S
Spring Term 2020
(As of 5. März 2020)

Prerequisites:
- Proficiency in Microsoft Excel and willingness to become acquainted with statistical analysis software (e.g., Stata)
- Solid command of English
- Ability to conduct own data research
- Good knowledge of methods in Corporate Finance (company valuation etc.)

Topics are either case studies or empirical studies in corporate finance. Therefore, conducting literature research in research journals and especially in books is generally less important compared to data research in newspapers, databases and/or homepages.

The thesis can be written in German or English. Specific requirements are noted in the individual topic descriptions.

Please refer to the information available on our homepage at https://www.bwl.uni-mannheim.de/maug/lehre/masterlehre/masters-thesis/ , especially the document "How to Write a Thesis".

For case studies, please regard the following references:

Company valuation:
- In general: see literature references for the course Corporate Finance 1 on our homepage
- Banks: Copeland, T. E., Koller, T., Murrin, J., 2000, Valuation, 3rd Ed., Wiley, Chapter 21
- Implementation in Excel: Benninga, S., 2008, Financial Modeling, 3rd Ed., MIT Press

Event studies:
- Lecture Slides, Corporate Finance 1, Event Study Methodology
- Example: Weston, J. F., Siu, J. A., Johnson, B. A., Takeovers, Restructuring, and Corporate Governance, 3rd Ed., Prentice Hall, Appendix B, pp. 171-185
- Formal representation: Campbell, J. Y., Lo, A. W., and MacKinlay, A. C., 1997, The Econometrics of Financial Markets, Chapter 4
- Additional Method for very (!) many events: Dittmann, I., Maug, E., Schneider, C. (2008), How Preussag became TUI: A Clinical Study of Institutional Blockholders and Restructuring in Europe, Financial Management, 37 (3), pp. 571-598

Topic 1: Traton SE IPO

Supervisor: Marc Gabarro

Traton SE, formerly known as Volkswagen Truck & Bus, is the commercial vehicle subsidiary of Wolkswagen. It produces commercials vehicles under different brands, such as MAN and Scania. Traton SE is one of the largest commercial vehicle manufacturers in the world selling about 233,000 vehicles; ranging from light commercial vehicles to trucks and busses. Traton SE has 26 billion euros in revenue and employs 81,000 people in 29 different factories. Traton SE competes with market leaders Daimler AG and Volvo AB.

On June 28 2019, Traton SE started trading at the Frankfurt and Stockholm stock exchanges. Volkswagen AG Holding raised 1.55 billion Eur from listing 11,5% of Traton SE shareholder capital, with Volkswagen explicitly stating it will remain "a committed majority shareholder" of Traton SE. The floating price was 27 Eur, on the lower bound of the 27-33 Eur per share price range.

Traton SE IPO is the latest stage in a series of restructuring measures Volkswagen undertook in its commercial vehicles division. Wolkswagen AG argues Traton SE IPO will increase its financial flexibility and innovation. Both characteristics may prove crucial in light of the current disruptive innovations on vehicle electrification and self-driving capabilities. On the other hand, the complex holding structure and the poor corporate governance within the Wolkswagen group have historically stood on the way of needed structural changes.

The goal of this thesis is to value Traton SE to determine whether the offer price of 27 eur per share was fair. To do so, the student should perform a comprehensive analysis of the industry. Then, the student should perform a fundamental valuation and a multiples-based valuation. To assess the market reactions to the announcement, the student is required to perform a study of the Traton SE's competitors. The student should elaborate on the first day return by looking at the relevant academic literature on the first day IPO returns. The student should explore the motivation for this carveout and discuss the role of VW's governance..

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:

Traton SE investor relations (including prospectus) https://ir.traton.com/websites/traton/English/1/investor-relations.html

Allen, Jeffrey W., 1998, Capital Markets and Corporate Structure: The Equity Carve-Outs of Thermo Electron, *Journal of Financial Economics* 48:1, pp. 99-124.

Topic 2 Capgemini acquires Altran Technologies

Supervisor: Mengqiao Du

On June 24th, 2019, Capgemini SE entered into exclusive negotiations to acquire France-based Altran Technologies SA through a cash offer of €14 per Altran share, valuing the acquisition at €3.6 billion. The proposed aggregate cash consideration excludes net financial debt of about €1.4 billion.

Altran Technologies SA is a global innovation and engineering consulting firm founded in 1982 in France. Altran operates primarily in high technology and innovation consultancy, which accounts for nearly 75% of its turnover. Administrative and information consultancy accounts for 20% of its turnover with strategy and management consulting making up the rest. The firm is active in most engineering domains, particularly electronics and IT technology. In 2018, Altran generated €2.916 billion in revenues and employed over 46,693 people around the world.

Capgemini SE is a French multinational corporation that provides consulting, technology, and digital transformation services. It is headquartered in Paris, France. Capgemini has over 200,000 employees in over 40 countries, of whom nearly 100,000 are in India.

The goal of this thesis is to value Altran Technologies and to determine whether the offer price of €3.6 billion is fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, the candidate should perform a fundamental and a multiples-based valuation of the stand-alone firm, as well as potential synergies. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions of the companies involved in the deal and their competitors.

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:

- Bloomberg deals, June 24th, 2019, by Nico Grant and Francois De Beaupuy: Capgemini Buys Altran for $4.1 Billion to Expand in Tech
- Capgemini press release: Capgemini and Altran create a global digital transformation leader for industrial and tech companies

Topic 3: Worldline acquires Ingenico
Supervisor: Mengqiao Du

On February 3rd, 2020, Worldline announced that it would acquire Ingenico for €7.8 billion in a stock and cash deal. The combination would give the new entity broad reach across Europe – blending Ingenico's strength in Germany, the Nordic countries, and France, with Worldline's strong presence in Switzerland and Austria. The acquisition also will help the companies expand and take advantage of opportunities in the U.S., Asia, and Latin America.

Ingenico is a French-based company, whose business is to provide the technology involved in secure electronic transactions. Its traditional business is based on the manufacture of point of sale (POS) payment terminals, but it also includes complete payment software and related services, also software for merchants. On June 4th, 2014 Ogone announced that Ogone is becoming Ingenico Payment Services, the Ingenico Group's flagship brand for digital payment services. All activities will be structured around three major brands: Ingenico Smart Terminals, Ingenico Mobile Solutions, and Ingenico Payment Services. Ingenico Payment Services groups the activities of acquisitions made by Ingenico over the past years, including Ogone, TUNZ, easycash, easycash Loyalty Solutions, and AXIS.

Worldline is a listed French company operating in the field of payment and transaction services. The company is headquartered in Bezons, France. Worldline is the European leader in the payments and transactional services industry. With 45 years of experience, we are a highly innovative pan-European company with global reach, providing secure payments and transactional services, covering the entire payments value chain.

The goal of this thesis is to value Ingenico and to determine whether the offer price of €7.8 billion is fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, the candidate should perform a fundamental and a multiples-based valuation of the stand-alone firm, as well as potential synergies. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions of the companies involved in the deal and their competitors.

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:

- CNBC news by Ryan Browne: Payments giant Worldline to buy rival Ingenico in $8.6 billion deal as fintech competition heats up
- Worldline operation disclamer: Creation of a new world-class leader in payment services Worldline to acquire Ingenico

Topic 4: Network International Holdings IPO

Supervisor: Marc Gabarro

Network International Holdings provides technology-enabled payment solutions to merchants and banks in Africa and the Middle East. Network International Holdings is headquartered in Dubai and it was the first Mastercard- and Visa-certified vendor in the MENA region. Network International Holdings operates its digital payments through Network One and Network Lite networks and the N-Genius payments operating platform. Furthermore, Network International Holdings aims at improving e-commerce in the region providing the best international standards together with local knowledge and support.

In April 2019, Network International Holdings started trading at the London stock exchange at 435p per share. Network International Holdings placed 40% of its shares, achieving a 2.2 billion sterling pounds; the largest float of the year at that point. Furthermore, Mastercard agreed to invest 300 million dollars in Network International Holdings IPO for up to 9.99% of the shares as a so-called corner investor.

Chief executive officer Simon Haslam, who joined the firm in 2017, argues Network International Holdings is well positioned for future growth given the low penetration but large adoption rates of electronic payments in the Middle East and Africa. He claims the IPO will help the firm realize its "structural growth opportunity".

The goal of this thesis is to value Network International Holdings to determine whether the offer of 2.2 billion sterling pounds was fair. To do so, the student should perform a comprehensive analysis of the industry. Then, the student should perform a fundamental valuation and a multiples-based valuation. To assess the market reactions to the announcement, the student is required to perform a study of the Network International Holdings competitors. The student should elaborate on the first day return by looking at the relevant academic literature on the first day IPO returns. Exploring the role of foreign listing on corporate governance is encouraged.

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:

Network International Holdings investor relations (including prospectus) https://investors.networkinternational.ae/investors/

Topic 5: M&As effect on target post-merger performance and its inventors

Supervisor: Hamed Davari

Mergers potentially change targets drastically; from the composition of the management team and strategies to routine procedures are all subject to change. This could be interpreted as a disruption in the target company's working environment, which in turn, may affect employees' decision. For instance, the employees might then leave the target, or the merger could influence their incentives and their productivity. In this thesis, the objective is to specifically focus on, first, the innovative output of the target after the merger, both at the firm and at the inventor's level, second, inventors' decision regarding leaving or staying with the target, and third, the characteristics of inventors who stayed and those who left.

The candidate is expected to review the empirical and theoretical literature on employees' decision and incentives during and after a merger. Next, (s)he should retrieve and match the patent level data with inventors, the target they work for and track their innovative performance and employer after the merger. Further, the candidate is expected to construct various measures for inventors' characteristics, e.g., field(s), expertise, experience, value creation potential, etc. Finally, using a difference-in-difference research design, (s)he is expected to answer the questions above, i.e., how do the inventors react and adjust their decisions with regard to staying or leaving the firm, how does innovative output change at target and inventor level, and is there any pattern in inventors' characteristics who decide to stay and, respectively, those who decide to leave?

The candidate needs to use patent and inventor data form patentsview.org and other resources, which are available online. The datasets for merger characteristics (SDC terminal), company characteristics (Compustat) are accessible at the Chair of Corporate Finance.
Preliminaries: Solid econometrics skills. Ability to work with large datasets, name matching in any common data analysis language, preferably R, however, Stata, or Python are also fine.

Introductory Literature:
Seru, Amit. "Firm Boundaries Matter: Evidence from Conglomerates and R&D Activity." *Journal of Financial Economics* 111, no. 2 (2014): 381–405. https://doi.org/10.1016/j.jfineco.2013.11.001.

Fulghieri, Paolo, and Merih Sevilir. "Mergers, Spinoffs, and Employee Incentives." *Review of Financial Studies* 24, no. 7 (2011): 2207–41. https://doi.org/10.1093/rfs/hhr004.

Phillips, Gordon M., and Alexei Zhdanov. "R&D And the Incentives from Merger and Acquisition Activity." *Review of Financial Studies* 26, no. 1 (2012): 34–78. https://doi.org/10.1093/rfs/hhs109.

Topic 6: The Merger between Fiat Chrysler and Peugeot

Supervisor: Mattia Colombo

On October 30, 2019, Fiat Chrysler automobiles (FCA) and Peugeot (PSA) announced that they entered into merger negotiations and released the details of the final agreement in a joint statement on December 18, 2019. Shares of merged entity will be equally split among the two firms (i.e., merger of equals). PSA's Carlos Tavares will be chief executive officer and PSA will appoint six of the 11 initial directors, while Fiat's founding family representative, John Elkann, will be the Chairman. The merged entity will be the fourth-largest carmaker in the world, with revenues around €170 billion and an operating margin of 6.6%. Synergies will mostly stem from savings in sharing investments in vehicle-platforms, engines and new technologies. The largest shareholders of the two companies (including Peugeot and Fiat founding families) and the French government, which owns 12 percent of PSA, have already agreed to back the merger.

FCA is an Italian-American car manufacturer established in 2014 by the merger of Fiat S.p.A. and Chrysler Group LLC. The company is based in the Netherlands and is the eight-largest car producer in the world. Its portfolio comprises several automotive brands like Fiat, Chrysler, Jeep, and Alfa Romeo. Fiat's founding family still detains control of the firm with a 40% voting rights via its holding company Exor. Prior to the negotiations with Peugeot, FCA attempted to acquire its competitor Renault but the proposal was withdrawn.

PSA is a French multinational automaker founded in 1976 with the merger of Peugeot and Citroën. The company has historically focused on the European market, which represented the main source of revenue. Following the 2011 European sovereign debt crisis, PSA experienced great losses and it was rescued by the French government and Chinese automaker Dongfeng Motor, which acquired 13 percent of the shares each. Between 2014 and 2016, the newly appointed CEO Carlos Tavares implemented several cost-cutting measures that reduced PSA's debt and restored profitability. In 2016, PSA announced a new global expansion plan to enter the North American and Asian markets and, in 2017, it acquired Opel and Vauxhall Motors from General Motors.

The goal of this thesis is to value both FCA and PSA and to determine whether the terms of the deal fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, the candidate should perform a fundamental and a multiples-based valuation of both firms, as well as potential synergies. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions of the companies involved in the deal and their competitors.

Preliminaries:

Introductory Literature:

FCA-PSA joint statement: https://www.fcagroup.com/en-US/media_center/fca_press_release/FiatDocuments/2019/december/Groupe_PSA_and_FCA_agree_to_merge.pdf

DW news: https://www.dw.com/en/peugeot-and-fiat-chrysler-finalize-merger-to-create-fourth-largest-automaker/a-51716786

CNBC news by Michael Wyland and Phil LeBeau: https://www.cnbc.com/2019/10/30/another-merger-of-equals-fiat-chrysler-peugeot-tie-up-comes-with-risks-rewards.html

Bloomberg new by Anthony Palazzo https://www.bloomberg.com/news/articles/2019-12-18/in-a-merger-of-equals-fiat-shareholders-walk-away-with-premium

Topic 7: Axel Springer takeover by KKR

Supervisor: Yichun Dong

On Oct. 18, 2019, US private equity group KKR notified the European Commision of their intention to buy out minority shareholders in German media group Axel Springer in a deal that values the publisher of the country's best-selling newspaper Bild at €6.7bn. The offer, which is pitched at €63 a share and is backed by Friede Springer, the widow of the company's founder, and its chief executive, Mathias Döpfner, requires the approval of 20 per cent of the remaining shareholders, KKR said. The offer represents a 40 per cent premium to Axel's closing price of €45.10 per share on May 29, when news of the potential transaction first emerged. However, it is significantly below last year's high of €73. Springer shares jumped 12 per cent in early trading.

The deal comes at a time when private equity groups are hunting for acquisitions after raising their largest funds in record speed. KKR has been active in Germany, where it has invested more than $5bn of equity in about 20 companies in the past two decades. More recently, the US buyout group partnered with a large shareholder to acquire market research company GFK, a deal similar to the Springer transaction.

KKR & Co. Inc. is an American global investment firm that manages multiple alternative asset classes, including private equity, energy, infrastructure, real estate, credit, and, through its strategic partners, hedge funds. The firm has completed more than 280 private equity investments in portfolio companies with approximately $545 billion of total enterprise value as of June 30, 2017.

Axel Springer SE is a European digital publishing house which is the largest in Europe, with numerous multimedia news brands, such as Bild, Die Welt, and Fakt and more than 15,000 employees. It generated total revenues of about €3.3 billion and an EBITDA of €559 million in the financial year 2015. The digital media activities contribute more than 60% to its revenues and nearly 70% to its EBITDA. Axel Springer's business is divided into three segments: paid models, marketing models, and classified ad models. Headquartered in Berlin, Germany, the company is active in more than 40 countries with subsidiaries, joint ventures, and licensing.

The goal of this thesis is to value Axel Springer, and to determine whether the terms of the deal were fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, the candidate should perform a fundamental and a multiples-based valuation of both firms, as well as potential synergies. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions of the companies involved in the deal and their competitors.

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:

Axel Springer:
https://www.axelspringer.com/en/investor-relations/voluntary-public-takeover-offer-by-kkr
Financial Times:
https://www.ft.com/content/72981ca4-8cd5-11e9-a1c1-51bf8f989972

Topic 8 : Alstom's strategic acquisition of Bombardier Transportation

Supervisor: Yichun Dong

On Feb. 17. 2020, French high-speed rail maker Alstom has agreed to buy Canadian Bombardier's train unit in a deal worth close to €7.5bn, as it looks to bulk up in the face of rising Chinese competition and growing demand in Europe.

The deal with Bombardier will create a group with revenues of €15.5bn that becomes the second largest in the world in rail equipment. In a statement Bombardier said Alstom was paying €7.45bn, including debt, while Alstom put the acquisition price at between €5.8 and €6.2bn, with advisers explaining the difference was made up of working capital and pension liabilities. Alstom said it would pay through a mix of cash and new shares.

EU competition chiefs shut down a proposed merger between Alstom and Siemens last year, arguing it could increase costs for signaling and next-generation high-speed trains and dismissing a view that a tie-up was necessary if Europe was to compete with state-backed Chinese rivals. It is likely that the Alstom-Bombardier deal will face similarly close, if probably less problematic, scrutiny from competition officials, said analysts. Alstom expects the deal to close in the first half of next year.

Bombardier Inc. is a Canadian multinational manufacturer of business jets. It was also formerly a manufacturer of commercial jets, public transport vehicles, and high-speed rail train sets. Its aviation division, Bombardier Aviation, is headquartered in Montreal and its public transport division, Bombardier Transportation, is headquartered in Berlin, Germany.

Alstom SA is a French multinational company operating worldwide in rail transport markets, active in the fields of passenger transportation, signaling and locomotives, with products including the AGV, TGV, Eurostar and Pendolino high-speed trains, in addition to suburban, regional and metro trains, as well as Citadis trams.
The goal of this thesis is to value both Alstom and Bombardier, and to determine whether the terms of the deal fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, the candidate should perform a fundamental and a multiples-based valuation of both firms, as well as potential synergies. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions of the companies involved in the deal and their competitors.

Preliminaries: Ability to conduct company valuations and event studies in Excel

Introductory Literature:
Financial Times:
https://www.ft.com/content/5556102c-515d-11ea-90ad-25e377c0ee1f
Bloomberg:
https://www.bloomberg.com/news/articles/2020-02-17/alstom-to-buy-bombardier-train-unit-for-up-to-6-7-billion
Alstom Press Release:
https://www.alstom.com/press-releases-news/2020/2/acquisition-bombardier-transportation-accelerating-alstoms-strategic