FAKULTÄT FÜR BETRIEBSWIRTSCHAFTSLEHRE
Lehrstuhl für Corporate Finance
Prof. Ernst Maug, Ph.D.

UNIVERSITÄT MANNHEIM

M A S T E R T H E S I S
Spring Term 2019
(As of 1. März 2019)

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: The IPO of Spotify

Supervisor: Peter Severin

On April 3rd, the music-streaming company Spotify went public. Interestingly, Spotify defied the general IPO procedure by directly listing on the NYSE instead of placing its shares with institutional investors at a road show first. Due to this unusual procedure, market participants expected high stock price volatility in the first month of trading. However, the realized volatility after the event was surprisingly low suggesting that we might see further direct listings in the future. Spotify's shares opened trading at $165.90, which is 25.68% above the $132 reference price suggested by Morgan Stanley. With a total market value of $29.5bn, the IPO of Spotify was the largest VC-backed tech listing since Facebook went public in 2012.

Spotify is a well-known music streaming platform that grants subscribers unlimited access to 20 million different songs. Unlike physical or download sales, Spotify pays royalties to artists based on the number of times their songs were played. One of the criticisms of Spotify involves the adequate compensation of the artists, who receive on average about $0.007 per play. The company was launched in 2008 and is headquartered in Stockholm, Sweden.

In total, 200 million active users listen to Spotify, of which 87 million are paying subscribers. The company employs about 4,000 people and has more than $1bn in revenue. Since the company does not have sufficient earnings to justify an almost $30bn valuation, its investors must expect significant earnings growth in the future. In the recent past, Spotify experienced high double-digit growth figures with respect to its user base.

The goal of this thesis is to value Spotify and to determine whether the reference price of $132 per share was fair. To that end, the student should first conduct a comprehensive industry analysis. In the next step, she should perform a fundamental and multiples-based valuation. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions for Spotify's competitors. In addition, she should elaborate on the unusual direct listing procedure by looking at the relevant academic literature.

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

Introductory Literature:

Degeorge, François, François Derrien, and Kent L. Womack, 2010, Auctioned IPOs: The US evidence, Journal of Financial Economics 98:2, pp. 177-194

Jagannathan, Ravi, Andrei Jirnyi, and Ann Guenther Sherman, 2015, Share auctions of initial public offerings: Global evidence, Journal of Financial Intermediation 24:3, pp. 283-311

Official announcement, 28th February 2018:
https://www.cnbc.com/2018/02/28/spotify-files-for-ipo.html

Direct listing, 3rd April 2018:
https://www.reuters.com/article/us-spotify-ipo/spotify-shares-jump-in-record-setting-direct-listing-idUSKCN1HA12B

Prospectus Spotify, 3rd April 2018:
https://investors.spotify.com/financials/sec-filings/sec-filings-details/default.aspx?FilingId=12663902

Topic 2: The Asset Swaps involving Innogy SE, E.ON SE, and RWE AG

Supervisor: Peter Severin

On March 11th, Germany's two largest utility companies RWE and E.ON, announced their plans to break up Innogy SE. The renewable energy and network company Innogy had earlier been carved-out from RWE, which had kept a 76.8% interest in the company. In the EUR 5.2bn deal, E.ON plans on taking over Innogy's regulated energy networks and customer operations. At the same time RWE will become a significant shareholder of E.ON through a complex structure of asset swaps. In the transaction, E.ON offered to pay EUR 40.00 per Innogy share, a premium of 15.84% when compared to the closing price of EUR 34.53. The approval of German and European regulators is still pending.

The German utilities industry has seen significant turmoil since chancellor Angela Merkel decided to abandon nuclear power after Japan's Fukushima nuclear accident in 2011. As a response, E.ON spun off Uniper to separate its renewable energy business from its traditional energy production in January 2016. RWE announced to carve out Innogy in late 2016 for similar reasons. Reintegrating Innogy into both DAX30 companies is the next move in the restructuring of the German utility industry.

E.ON's stock price jumped after the announcement of the asset swap, indicating investors' optimism towards the deal. Overall, both E.ON and RWE have seen significant stock price declines over their recent past.

The goal of this thesis is to value Innogy and to determine whether the offer price of EUR 40 per share is fair. As a first step, the student should critically evaluate the deal rationale and put it into the context of previous transactions. She should then conduct a comprehensive industry analysis taking into considerations the recent history of the German utility sector. In a 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 or Stata. Capability to speak German is helpful.

Introductory Literature:
Official announcement, 11th March 2018:
https://www.reuters.com/article/us-e-on-innogy-rwe/rwe-e-on-reshape-german-power-sector-in-innogy-asset-swap-deal-idUSKCN1GN02P

Share prices after announcement, 12th March 2018:
https://www.cnbc.com/2018/03/12/innogy-rwe-eon-shares-soar-in-pre-market-on-break-up-plans.html

Innogy agreement to the deal, 19th July 2018:
https://www.reuters.com/article/us-innogy-m-a-e-on/innogy-agrees-with-e-on-and-rwe-on-planned-transaction-idUSKBN1K90IJ

Topic 3: The Acquisition of Red Hat by IBM

Supervisor: Peter Severin

On October 28th, IBM announced its intention to acquire Red Hat in a deal valued at $34bn. IBM offered to pay $190 in cash for each Red Hat share previously valued at $116.68. This offer represents a considerable premium of 62.84%. Investors were not thrilled about the deal and IBM's stock plunged by about 3% on the next trading day. The deal is meant to strengthen IBM's position in the cloud computing business, where it has lost ground to competitors such as Amazon and Microsoft. A similar recent acquisition of GitHub by Microsoft might have set a precedent for this takeover.

International Business Machines Corporation (IBM) is an American information technology company that is based in Armonk, New York. IBM is famous for its research capabilities and holds the record for most U.S. patents generated by a business for 26 consecutive years. It was founded in 1911 and provides businesses with hardware, software, and consulting services. With a market cap of more than $100bn and revenues amounting to about $80bn, IBM is a considerable player in the technology industry.

Red Hat Inc. is an open-source software provider headquartered in Raleigh, North Carolina. The firm is mostly associated with its enterprise operating system Red Hat Enterprise Linux. It was founded in 1993 and employs about 12,600 people. Its last year revenues of $2.9bn with a profit margin of less than 10% hardly justify the offer price of $34bn. Therefore, IBM must expect strong growth opportunities and/or a significant potential for synergies.

The goal of this thesis is to value Red Hat and to determine whether the offer price of $190 per share is fair. To that end, the student should first conduct a comprehensive industry analysis. In a 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 or Stata.

Introductory Literature:
Official announcement, 28th October 2018:
https://www.cnbc.com/2018/10/28/ibm-to-acquire-red-hat-in-deal-valued-at-34-billion.html

Stock price reaction, 28th October 2018:
https://uk.reuters.com/article/uk-red-hat-m-a-ibm/red-hat-jumps-ibm-shares-dip-on-cloud-mega-merger-idUKKCN1N20N5

Deal rationale, 18th November 2018:
https://www.forbes.com/sites/jasonbloomberg/2018/11/18/three-things-ibm-must-do-to-keep-red-hat-acquisition-from-sinking-the-company/

Topic 4: Private Equity and Innovation

Supervisor: Peter Severin

With more than $3 trillion assets under management as of 2017 and growing, private equity will soon be the largest alternative asset class. This growing importance leads regulators to ask how private equity firms create shareholder value. The bright side view argues that targeted companies increase in value through operating efficiencies and better aligned incentive contracts. The dark side view points towards value extraction from other stakeholder or corporate short-termism. While companies' performance in the short-run seems to be strong under private equity governance (Boucly et al., 2011), it is not clear how target firms are prepared for the long-run. One might, for example, conceive that firms engage in cost-cutting of research and development activities in order to boost short-term profits.

Kaplan and Stromberg (2009) review the recent literature on private equity. Due to the lack of a comprehensive dataset on PE transactions in the US, many questions so far have remained unanswered. Recent advances in the literature are represented by Antoni et al. (forthcoming), who show employment consequences of Leveraged Buyouts (LBOs) in Germany, and Boucly et al. (2011), who investigate post acquisition growth for LBOs in France. While Attanasov (2013) looks at the effect of hedge fund activity on firms' innovative capabilities, no paper so far has analyzed the impact of private equity ownership on firms' innovation.

The thesis should answer the question whether firms under private equity governance innovate less than comparable firms that are not backed by a private equity investor. At the beginning of her thesis, the student will be equipped with three datasets; Zephyr data of European private equity transactions, Orbis financial data for European firms, and Bureau van Dijk patent data. The student will then be required to merge these three datasets. To compare how targeted firms behave differently from similar non-targeted firms, the student should conduct a matching of treated to non-treated companies. In a next step, a difference-in-differences methodology should be used to analyze the effect of an ownership change on the target firms' innovation.

Preliminaries: Ability to work with large data sets in Stata, collect data from public sources as well as databases, and basic econometric skills.

Introductory Literature:

Antoni, M., Maug, E. G. and Obernberger, S. (forthcoming), 'Private equity and human capital risk', *Journal of Financial Economics*

Attanasov, J. (2013), 'Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting', *Journal of Finance* 68(3), 1097-1131

Boucly, Q., Sraer, D. and Thesmar, D. (2011), 'Growth lbos', *Journal of Financial Economics* 102(2), 432-453

Kaplan, S. N. and Stromberg, P. (2009), 'Leveraged buyouts and private equity', *Journal of Economic Perspectives* 23(1), 121-146

Topic 5: The Acquisition of Supervalu by United Natural Foods Inc.

Supervisor: Tamas Barko

On July 26, 2018, United Natural Foods Inc. (UNFI) announced the acquisition of Supervalu at a share price of $32.50. The offer represents a 67% premium relative to the closing price the previous day, bringing the deal to a total value of $2.9 billion, comprised of $1.3 billion in equity and assuming $1.6 billion in the target's debt and liabilities. Trailing the announcement, the stock of UNFI dropped by 16.3%, while the price of Supervalu jumped to $32.50, representing the 67% offer premium. The hefty premium is the result of a bidding war between UNFI and competitor C&S Wholesale Grocers. The takeover comes on the tail of an acquisition wave in the grocery industry, where Amazon has been increasing its market share with high-profile deals, such as the acquisition of Whole Foods Market. At the same time, heavy-weight (grocery) retailer Walmart is branching out to solidify its position with online distribution channels. As UNFI generates a third of its revenues from a contract with Whole Foods that runs until 2025, the acquisition is a move to make UNFI less dependent on a single client. The deal was completed on October 22, 2018.

Supervalu is based in Eden Prairie, Minnesota. The company was founded in 1926 and was taken public in 1967. The company is the fifth largest food retailer in the United States and was an S&P 600 constituent prior to acquisition. The company currently has retailers under the Cub, Farm Fresh, Shoppers Food & Pharmacy, Shop 'n Save, and Hornbacher's brands and has wholesale operations under several other brands. The company reported declining sales in 2017, albeit with a net income up from the previous period. Supervalu operates nationwide and employs about 29,000 people.

United Natural Foods Inc. is located in Providence, Rhode Island and is a wholesale retailer of organic and natural foods. UNFI was established through the merger of two natural food wholesalers in 1996 and currently is an S&P 400 constituent. The firm has had a steady income stream and employs 10,000 people across the US. The aim of the acquisition was to improve UNFI's competitive position in the wholesale market and focus on organic grocery products. As a first step after the deal, UNFI wants to divest from some retail brands of Supervalu, starting with Cub.

The goal of this thesis is to value Supervalu, and to determine whether the offer price of $32.50 per share was fair. To that end, the student should first conduct a comprehensive industry analysis. In a next step, the candidate should perform a fundamental and a multiples-based valuation of the standalone 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 or Stata.

Introductory Literature:
https://www.reuters.com/article/us-supervalu-m-a-united-natural-foods/united-natural-foods-to-buy-supermarket-operator-supervalu-in-2-9-billion-deal-idUSKBN1KG1IU

http://www.startribune.com/supervalu-is-being-acquired-in-a-nearly-3-billion-deal/489218481/

https://seekingalpha.com/article/4191596-united-natural-foods-supervalu-creating-super-value

Topic 6: Board Composition Following Corporate Scandals

Supervisor: Tamas Barko

On August 7, 2018, Elon Musk tweeted that he had the funds to take Tesla private at $420 per share to stop the market from speculating on the success of the company's cars. The deal never took place and Musk was subsequently indicted for stock price manipulation. As a plea deal with the SEC, Musk agreed to pay a fine of $20 million and to step down as the chairman of the company. Yet, the resignation is not viewed as a step-down by company officials.

There is a growing literature on fraud by firms and their subsequent performance. As Reeb et al. (2017) suggest, fraud and misrepresentation is much more prevalent in family (founder) firms. Karpoff et al. (2008) find that it is harmful for managers to engage in fraud, and Marcel et al. (2014) show that firms experience a larger director turnover in boards following fraudulent events.

The purpose of this thesis is to evaluate the effect of family and friends staying on controlling positions following corporate fraud events. The candidate should first compile a database of relevant events (fraud events to be provided by the supervisor) and subsequent board changes. The candidate should further identify connections between pre- and post-fraud directors and executives. The established network should be used in follow-up steps.

The candidate is expected to conduct event studies around director/executive changes, with a special focus on how director changes affect stock prices (short run) and operational performance (long term).

Preliminaries: Ability to work with statistical software, like Stata; understanding standard financial datasets; solid econometric skills.

Introductory Literature:

https://www.cnbc.com/2018/10/16/judge-approves-elon-musks-settlement-with-sec.html

https://www.cnbc.com/2018/10/02/tesla-ceo-elon-musk-resigns-as-chairman--heres-what-that-really-means.html

https://www.davidreeb.net/uploads/4/8/0/7/48079951/financial_misconduct_and_family_firms_16ajune2017.pdf

Karpoff, Jonathan M., D. Scott Lee, and Gerald S. Martin. "The consequences to managers for financial misrepresentation." Journal of Financial Economics 88.2 (2008): 193-215.

Marcel, Jeremy J., and Amanda P. Cowen. "Cleaning house or jumping ship? Understanding board upheaval following financial fraud." Strategic Management Journal 35.6 (2014): 926-937.

Topic 7: P&G acquires Merck KGaA's consumer health!

Supervisor: Hamed Davari

Procter & Gamble Co. and Merck KGaA announced on 4/19/2018 that P&G acquires German-based Merck KGaA's consumer health unit for $4.2 billion (3.4 billion euros) all in cash. The deal became effective on Dec, 1, 2018.

Merck KGaA's consumer health business is active in 44 countries and includes more than 900 products. It offers a wide range of over-the-counter (OTC) products to consumers in more than 100 countries and belongs to the global top 20 of the most successful companies in the OTC industry. Merck's OTC products include cough and cold remedies, diet supplements, everyday health supplements, and women's and children´s health products. Europe accounts for around 65% of the global sales, 32% is made in emerging markets and 3% is achieved elsewhere.

Globally, a large number of acquisitions, mergers, and shutdowns has resulted in industry consolidation and a large market share is controlled by the top 10 firms. As claimed, the acquisition of Merck's consumer-health business gives P&G a range of products with sales growth of 6 percent in the past two years, double the pace of traditional consumer goods. It will also improve P&G's geographic scale.

The goal of this thesis is to value Merck and to determine whether the paid price was fair. To that end, the student should first conduct a comprehensive industry analysis. In a next step, she should perform a fundamental and a multiples-based valuation. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions for Merck's competitors.

Preliminaries: Ability to conduct company valuations and event studies in Excel or Stata.
Introductory Literature:

https://www.nasdaq.com/article/pg-pg-acquires-merck-kgaas-consumer-health-business-cm1064360

https://www.merckgroup.com/content/dam/web/corporate/non-images/investors/events-and-presentations/webcasts-and-presentations/2018/en/CH_Disposal_Slides_Final.pdf

https://www.bloomberg.com/news/articles/2018-04-19/procter-gamble-pledges-more-change-as-sales-start-to-climb

Topic 8: The acquisition of Loxo Oncology Inc by Eli Lilly & Co

Supervisor: Hamed Davari

Lilly & Co announced the acquisition of Loxo Oncology Inc for USD 6,973.93M ($235 per share) all in cash. The transaction was announced on Jan 7th, 2019 and completed on Feb 19th, 2019. Loxo's price experienced a 68 percent premium to Loxo's last trading day share price, before the announcement.

Loxo Oncology is a biopharmaceutical company dedicated to developing medicines for patients with genomically defined cancers, based in Stamford, CT with sites in San Francisco, CA and Boulder, CO. Loxo gained prominence in 2017 - just three years after going public - with impressive clinical trial results showing its drug to be highly effective on cancers.

Eli Lilly and Company is a global pharmaceutical company headquartered in Indianapolis, Indiana, US, with offices in 18 countries. Its products are sold in approximately 125 countries. In 2018, the company a revenue of US$22.556 billion that shows a 7.4% growth rate over 2017. Acquiring Loxo is expected to expand the business' oncology offerings, larotrectinib and LOXO-292 are the main targeted products; "These two assets, and their counterparts designed to deal with developing resistance are sufficient to warrant the $8 billion price that Lilly is paying," Sam Fazeli and Asthika Goonewardene wrote on Bloomberg.

The goal of this thesis is to value Loxo and to determine whether the paid price was fair. To that end, the student should first conduct a comprehensive industry analysis. In a next step, she should perform a fundamental and a multiples-based valuation. To assess the market reactions to the announcement, the student is further required to analyze the stock market reactions for Loxo's competitors.

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

Introductory Literature:
https://www.bloomberg.com/news/articles/2019-01-07/wall-street-cheers-lilly-s-8-billion-loxo-deal-for-cancer-drugs

https://www.reuters.com/article/us-loxo-oncology-m-a-lilly-idUSKCN1P10YZ

Topic 9: Product Market Competition and Board Composition

Supervisor: Mattia Colombo

Among the many factors that affect corporate performance, competition plays a major role. Changes in the competitive environment lead to organizational restructurings and have an impact on firm profitability. Analyzing how this process works may provide useful insights into corporate governance.

Tariff cuts represent one form of competition shock. Following a reduction in tariffs, domestic firms become exposed to competition from lower-cost foreign producers and need to improve their operating efficiency in order to survive. Organizational responses include more decentralization, technological upgrades, dismissal of inefficient CEOs, and higher incentive pay for top executives (see Dasgupta, Li and Wang (2018)).

The goal of the thesis is to study the impact of competitive shocks on the composition of the board of directors. Boards play a central role in firms' decision process and they are ultimately responsible for ensuring corporations create value for their stakeholders, Adams (2017). Is director turnover higher after a tariff reduction? If yes, what are the characteristics of the newly appointed directors? For example, firms may seek board connections with companies that help them to increase product differentiation relative to their rivals.

The Chair will provide US director data as well as the corresponding Compustat matching table. US tariff data for the period 1974-2005 is available on Philipp Valta's website. The candidate should download it and expand it to 2017 following the methodology in Valta and Frésard (2016). Once the dataset is completed, the student should conduct a difference-in-differences analysis on director turnover and characteristics following major tariff cuts.

Preliminaries: Ability to work with Stata and large data sets, ability to collect data from public sources and databases, basic econometric skills.

Introductory Literature:

Sudipto Dasgupta, Xi Li, Albert Y Wang; Product Market Competition Shocks, Firm Performance, and Forced CEO Turnover, *The Review of Financial Studies*, Volume 31, Issue 11, 1 November 2018, Pages 4187–4231, https://doi.org/10.1093/rfs/hhx129

Laurent Frésard, Philip Valta; How Does Corporate Investment Respond to Increased Entry Threat?, *The Review of Corporate Finance Studies*, Volume 5, Issue 1, 1 March 2016, Pages 1–35, https://doi.org/10.1093/rcfs/cfv015

Adams, Renée B., Chapter 6 - Boards, and the Directors Who Sit on Them, *The Handbook of the Economics of Corporate Governance* Volume 1, December 2017, Pages 291–382, https://doi.org/https://doi.org/10.1016/bs.hecg.2017.11.007

Topic 10: The IPO of HelloFresh

Supervisor: Alison Schultz

On November 2nd, 2017 the German meal-kit delivery group HelloFresh went public on the Frankfurt stock exchange. HelloFresh's shares started trading at a price of €10.60 after being issued for €10.25 per share (+3.4%). The company, which is majority-owned by the German e-commerce group Rocket Internet raised about €318 million, resulting in a firm value of about €1.7 billion. The 2017 listing was the second attempt after HelloFresh had cancelled an IPO plan in 2015 when investors rejected a valuation above €2 billion. The 2017 IPO was realized despite HelloFresh's persistent losses and the 50% decline in share value suffered by rival Blue Apron after its IPO in June 2017.

HelloFresh prepares ingredients needed for a meal and delivers them to customers who cook at home with relatively little effort following the enclosed recipe. Customers can chose from about 15 different recipes and pay about $60 to $70 for three two-person meals. HelloFresh was founded in 2011 in Berlin and initially funded by the German startup studio company Rocket Internet. Today, it operates in 11 countries with the Unites States as the largest market, accounting for 56% of revenue in the last quarter of 2018.

The company faces fierce competition both with meal-kit deliveries such as Blue Apron and Plated, which was recently acquired by the U.S. supermarket chain Albertsons, and with delivery services more generally, such as Amazon.com, which moves to increase food delivery with its acquisition of Whole Foods. HelloFresh tries to stand the competition with aggressive TV and radio advertising and numerous discount offers. However, despite the company's immense marketing expenses, nearly half of the HelloFresh subscribers cancel within a month and only 20% stay for at least six months, which has raised concerns about the sustainability of the company's business model.

The goal of this thesis is to value HelloFresh and to determine if the reference price of €10.25 ($11.91) per share was fair. To that end, the student should first conduct a comprehensive industry analysis. In a next step, she should perform a fundamental and a multiples-based valuation. To investigate the market reaction to the announcement, the stock market reactions of HelloFresh's competitors should be analyzed. The student should further elaborate on the stock price movements observed in the first days after the IPO as well as in the following months. The observed patterns should be compared to the patterns discussed in the academic literature on IPOs (such as underpricing and long-term under-performance, see Ritter/Welch (2002)).

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

Introductory Literature:
Official announcement, 10th October 2017:
https://www.cnbc.com/2017/10/10/hellofresh-plans-initial-public-offering.html
Background information on HelloFresh and its controversies:
https://www.inc.com/magazine/201808/burt-helm/hellofresh.html
Prospectus HelloFresh, 28th October 2017:
https://boersengefluester.de/wp-content/uploads/assets/annuals/2016/A16140.pdf
Survey of academic literature on IPOs:
Ritter/Welch (2002): A Review of IPO Activity, Pricing, and Allocations. The Journal of Finance 57(4):1795-1828

Topic 11: The Acquisition of Andeavor by Marathon Petroleum

Supervisor: Alison Schultz

On April 30th, 2018, Marathon Petroleum, an American petroleum refining, marketing, and transportation company, announced its intention to acquire rival Andeavor for more than $23 billion. Against the backdrop of increased U.S. crude production from shale oil fields, the company expected to benefit from Andeavor's capacity to refine light crude as well as from extending its network of refineries to other U.S. states. The cash-and-stock deal valued Andeavor at about $152 per share, offering a 24% premium to the previous day's closing price. Including the acquired debt, Marathon paid $35.6 billion for 66 percent of the combined company. The announcement was followed by an increase of Andeavor's share prices by 14.5%. On October, 1st, 2018, the deal was completed forming the largest independent U.S. refiner by capacity.

Marathon Petroleum Corporation, headquartered in Findlay, Ohio, refines, transports and markets petroleum. The company was a subsidiary of Marathon Oil until a corporate spin-off in 2011. Before the Andeavor acquisition, Marathon Petroleum's operations were largely Mid-West and Gulf Coast-based and the company employed 43,800 workers. In the first quarter of 2018, the months preceding the acquisition announcement, Marathon's profit jumped by 23%. Thanks to U.S. record shale output and cheap crude from Canada, refining and marketing margins had risen to $1.81 billion increasing the quarter's net income to $37 million. Today, the company processes over 3 million barrels per day using 16 refineries. With a large network of oil and natural gas pipelines and filling stations, the retail and marketing business includes approximately 3,900 company-owned and company-operated stores and 7,800 branded locations.

Andeavor was an independent refiner and marketer of petroleum products, headquartered in San Antonio, Texas. It operated ten refineries in the Western U.S. with a combined rated crude oil capacity of about 1.2 billion barrel per day. The company's marketing and retail included about 3,000 branded retail gas stations operating under its brand name Tesoro as well as under the brands Shell, ExxonMobil, ARCO and USA Gasoline. In 2017, Andeavor had 14,000 employees and reported annual revenues of $35 billion.

The goal of this thesis is to value Andeavor and to determine whether the terms of the deal were fair. To that end, the student should first conduct a comprehensive industry analysis. In a next step, the candidate should perform a fundamental and a multiples-based valuation of the standalone firm, as well as potential synergies. To assess the market reactions to the announcement, the student should further 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 or Stata.

Introductory Literature:
Official announcement, 30th April 2018:
https://www.cnbc.com/2018/04/30/marathon-petroleum-to-acquire-andeavor.html
Deal closing, 1st October 2018:
https://csnews.com/done-deal-marathon-andeavor-close-233b-merger
Deal rationale, 1st May 2018:
https://csnews.com/how-marathon-petroleum-andeavor-merger-will-create-retail-marketing-powerhouse

Topic 12: The Acquisition of C.R. Bard by Becton Dickinson

Supervisor: Alison Schultz

On April 23, 2017, medical supplier Becton Dickinson announced its intention to acquire C.R. Bard in a $24 billion cash-and-stock deal. The deal values Bard at $317 per share, a 25 percent premium over the previous day's closing price. Bard shareholders will receive $222.93 in cash and 0.5077 shares of Becton Dickinson for each Bard share, as they will own about 15 percent of the combined company. The acquirer rationalized the deal with its desire to focus on the treatment of disease states beyond diabetes, to include peripheral vascular disease, urology, hernia and cancer. The deal was preceded by Becton Dickinson's acquisition of CareFusion Corp for $12 billion in 2014 and is part of increasing number of acquisitions in the medical technology sector. By buying other medical firms, manufacturers hope to extend their product range, strengthen their market position and thereby eventually boost profit margins. The C.R. Bard deal was closed on December 29, 2017, after China's commerce ministry had conditionally approved the takeover.

Becton Dickinson, headquartered in Franklin Lakes, New Jersey, is a U.S. medical technology company that produces and sells medical devices, instrument systems and reagents. Founded in 1897, it is a market leader in medication management and infection prevention. The company currently operates in more than 50 countries around the world, employing more than 40,000 people.

C.R. Bard, headquartered in Murray Hill, New Jersey, develops, manufactures and markets medical technologies in the fields of vascular, urology, oncology, and surgical specialties. The company was founded in 1907. From 2013 on, it was alleged more than 30,000 legal claims related to implantable vaginal meshes and blamed for having submitted false claims to Medicare. Before its acquisition, the company employed about 14,000 people.

The goal of this thesis is to value C.R. Bard 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 the standalone firm, as well as of the potential synergies. To assess the market reactions to the announcement, the student should further 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 or Stata.

Introductory Literature:
Official announcement, 23th April ,2017 (article revised on 24th April, 2017):
https://www.reuters.com/article/us-cr-bard-m-a-bd-idUSKBN17P0ZS

Approval and closing of the deal, 29th December, 2017 (article of 28th December):
https://www.reuters.com/article/cr-bard-ma-bd-china/update-1-becton-dickinsons-24-bln-takeover-of-c-r-bard-set-to-close-after-china-nod-idUSL4N1OS2U5

Deal rationale, 26th April 2017:
https://marketrealist.com/2017/04/a-look-at-bds-deal-rationale-in-its-c-r-bard-acquisition