

**Topics of Bachelor Theses  
 Spring Semester 2020**

1.	The IPO of Spotify – DCF Analysis	<p>On April 3<sup>rd</sup>, the music-streaming company Spotify went public. 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.</p> <p>Spotify is a well-known music streaming platform that grants subscribers unlimited access to 20 million different songs. 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 in its userbase.</p> <p>The goal of the thesis is to value Spotify using DCF analysis and to determine whether the reference price was fair. To do so, the student should conduct a comprehensive analysis of the industry and understand the business model of Spotify.</p>	
2.	The IPO of Spotify – Multiples and Event Study	<p>On April 3<sup>rd</sup>, the music-streaming company Spotify went public. 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.</p> <p>Spotify is a well-known music streaming platform that grants subscribers unlimited access to 20 million different songs. 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 in its userbase.</p> <p>The goal of the thesis is to value Spotify with multiples of comparable companies and to analyze whether the reference price was fair. An analysis of the stock price reactions for Spotify's competitors should complement the analysis.</p>	

3.	The Acquisition of Red Hat by IBM – DCF Analysis	<p>On October 28<sup>th</sup>, 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%. 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.</p> <p>International Business Machines Corporation (IBM) is an American information technology company that is based in Armonk, New York. It was founded in 1911 and provides businesses with hardware, software, and consulting services. IBM is famous for its research capabilities and holds the record for most U.S. patents generated by a business for 26 consecutive years</p> <p>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.</p> <p>The goal of the thesis is to value Red Hat using DCF analysis and to estimate potential synergies from the transaction. The thesis should further investigate whether the transaction would create value for the shareholders of Red Hat and IBM and whether the offer price was fair.</p>	
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4.	The Acquisition of Red Hat by IBM – Multiples and Event Study	<p>On October 28<sup>th</sup>, 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%. 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.</p> <p>International Business Machines Corporation (IBM) is an American information technology company that is based in Armonk, New York. It was founded in 1911 and provides businesses with hardware, software, and consulting services. IBM is famous for its research capabilities and holds the record for most U.S. patents generated by a business for 26 consecutive years</p> <p>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.</p> <p>The goal of the thesis is to value Red Hat using multiples at the time of a takeover announcement and to examine whether the offer price was fair. The thesis should further examine the price reactions of IBM, Red Hat, and optionally their competitors on the announcement date using event study analysis. Besides, the author shall examine other dates during the negotiation process.</p>	
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5.	The Acquisition of Supervalu by United Natural Foods Inc. – DCF Analysis	<p>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. The hefty premium is the result of a bidding war between UNFI and competitor C&amp;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.</p> <p>Supervalu is based in Eden Prairie, Minnesota. It was founded in 1926 and was taken public in 1967. The company is the fifth-largest food retailer in the United States and employs about 29,000 people. Currently, it has retailers under the Cub, Farm Fresh, Shoppers Food &amp; Pharmacy, Shop 'n Save, and Hornbacher's brands and has wholesale operations under several other brands.</p> <p>United Natural Foods Inc. is a wholesale retailer of organic and natural foods. UNFI was established through the merger of two natural food wholesalers in 1996. The firm has had a steady income stream and employs 10,000 people across the US. The acquisition aimed 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.</p> <p>The goal of the thesis is to value Supervalu using DCF analysis and to estimate potential synergies from the transaction. The thesis should further investigate whether the transaction would create value for the shareholders of Supervalu and United Natural Foods and whether the offer price was fair.</p>	
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6.	The Acquisition of Supervalu by United Natural Foods Inc. – Multiples and Event Study	<p>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. The hefty premium is the result of a bidding war between UNFI and competitor C&amp;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.</p> <p>Supervalu is based in Eden Prairie, Minnesota. It was founded in 1926 and was taken public in 1967. The company is the fifth-largest food retailer in the United States and employs about 29,000 people. Currently, it has retailers under the Cub, Farm Fresh, Shoppers Food &amp; Pharmacy, Shop 'n Save, and Hornbacher's brands and has wholesale operations under several other brands.</p> <p>United Natural Foods Inc. is a wholesale retailer of organic and natural foods. UNFI was established through the merger of two natural food wholesalers in 1996. The firm has had a steady income stream and employs 10,000 people across the US. The acquisition aimed 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.</p> <p>The goal of the thesis is to value Supervalu using multiples at the time of a takeover announcement and to examine whether the offer price was fair. The thesis should further examine the price reactions of UNFI, Supervalu, and optionally their competitors on the announcement date using event study analysis. Besides, the author shall examine other dates during the negotiation process.</p>	
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7.	The Acquisition of First Data by Fiserv – DCF Analysis	<p>On January 16, 2019, Fiserv announced a \$22-billion deal to purchase First Data Corp. in an all-stock transaction. Under the terms of the agreement, First Data shareholders will receive a fixed exchange ratio of 0.303 Fiserv shares for each share of First Data common stock they own, for an equity value of \$22 billion. This represents \$22.74 based on closing prices as of January 15, and a premium of 29% to the five-day volume weighted average price as of that date. Following the close of the transaction, Fiserv shareholders will own 57.5% of the combined company, and First Data shareholders will own 42.5%, on a fully-diluted basis. The all-stock transaction is intended to be tax-free to First Data shareholders, the companies said.</p> <p>First Data Corporation is a financial services company headquartered in Atlanta, Georgia, United States. The company's STAR Network provides nationwide domestic debit acceptance at more than 2 million retail POS, ATM, and Online outlets for nearly a third of all U.S. debit cards. First Data has six million merchants, the largest in the payments industry. The company handles 45% of all US credit and debit transactions, including handling prepaid gift card processing for many US brands such as Starbucks. It processes around 2,800 transactions per second and \$2.2 trillion in card transactions annually, with an 80% market share in gas stations and groceries in 2014. First Data's SpendTrend Report is a key shopping metric for national news networks such as WSJ, USA Today, ESPN, The New York Times, Vox Media, and Bloomberg.</p> <p>Fiserv, Inc. is a global provider of financial services technology. The company's clients include banks, thrifts, credit unions, securities broker dealers, leasing and finance companies, and retailers. In October 2015, American Banker and BAI ranked the company third by revenue among technology providers to U.S. banks. In the summer of 2018, Fiserv obtained the naming rights to the Fiserv Forum, home to the Milwaukee Bucks, for 25 years. Fiserv has ranked in the World's Most Admired Companies in 2019 for the sixth consecutive year and 9 times in the last 11 years.</p> <p>The goal of the thesis is to value First Data using DCF analysis and to estimate potential synergies from the transaction. The thesis should further investigate whether the transaction would create value for the shareholders of First Data and Fiserv and whether the offer price was fair.</p>	
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8.	The Acquisition of First Data by Fiserv – Multiples Valuation and Event Study Analysis	<p>On January 16, 2019, Fiserv announced a \$22-billion deal to purchase First Data Corp. in an all-stock transaction. Under the terms of the agreement, First Data shareholders will receive a fixed exchange ratio of 0.303 Fiserv shares for each share of First Data common stock they own, for an equity value of \$22 billion. This represents \$22.74 based on closing prices as of January 15, and a premium of 29% to the five-day volume weighted average price as of that date. Following the close of the transaction, Fiserv shareholders will own 57.5% of the combined company, and First Data shareholders will own 42.5%, on a fully-diluted basis. The all-stock transaction is intended to be tax-free to First Data shareholders, the companies said.</p> <p>First Data Corporation is a financial services company headquartered in Atlanta, Georgia, United States. The company's STAR Network provides nationwide domestic debit acceptance at more than 2 million retail POS, ATM, and Online outlets for nearly a third of all U.S. debit cards. First Data has six million merchants, the largest in the payments industry. The company handles 45% of all US credit and debit transactions, including handling prepaid gift card processing for many US brands such as Starbucks. It processes around 2,800 transactions per second and \$2.2 trillion in card transactions annually, with an 80% market share in gas stations and groceries in 2014. First Data's SpendTrend Report is a key shopping metric for national news networks such as WSJ, USA Today, ESPN, The New York Times, Vox Media, and Bloomberg.</p> <p>Fiserv, Inc. is a global provider of financial services technology. The company's clients include banks, thrifts, credit unions, securities broker dealers, leasing and finance companies, and retailers. In October 2015, American Banker and BAI ranked the company third by revenue among technology providers to U.S. banks. In summer of 2018, Fiserv obtained the naming rights to the Fiserv Forum, home to the Milwaukee Bucks, for 25 years. Fiserv has ranked in the World's Most Admired Companies in 2019 for the sixth consecutive year and 9 times in the last 11 years.</p> <p>The goal of the thesis is to value First Data using multiples at the time of a takeover announcement and to examine whether the offer price was fair. The thesis should further examine the price reactions of Fiserv, First Data, and their competitors on the announcement date using event study analysis. In addition, the author shall examine other dates during the negotiation process.</p>	
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9.	The Acquisition of Anadarko by Chevron – DCF Analysis	<p>Chevron Corporation announced on April 12, 2019 that it has entered into a definitive agreement with Anadarko Petroleum Corporation to acquire all of the outstanding shares of Anadarko in a stock and cash transaction valued at \$33 billion, or \$65 per share. Based on Chevron's closing price on April 11, 2019 and under the terms of the agreement, Anadarko shareholders will receive 0.3869 shares of Chevron and \$16.25 in cash for each Anadarko share. The total enterprise value of the transaction is \$50 billion.</p> <p>Anadarko Petroleum Corporation is a company engaged in hydrocarbon exploration. The company was the subject of multiple environmental cases, including the largest environmental contamination settlement in American history - the 2014 settlement related to the former Tronox subsidiary of Kerr McGee, a company purchased by Anadarko in 2006. In addition to exploration and production, the company engaged in petroleum and natural gas gathering, processing, treating, and transportation. The company also participated in the hard minerals business through its ownership of non-operating joint ventures and royalty arrangements.</p> <p>Chevron Corporation is an American multinational energy corporation. Chevron is engaged in every aspect of the oil, natural gas, and geothermal energy industries, including hydrocarbon exploration and production; refining, marketing and transport; chemicals manufacturing and sales; and power generation. Chevron is one of the world's largest oil companies. Chevron's downstream operations manufacture and sell products such as fuels, lubricants, additives and petrochemicals. The company's most significant areas of operations are the west coast of North America, the U.S. Gulf Coast, Southeast Asia, South Korea, Australia and South Africa.</p> <p>The goal of the thesis is to value Anadarko using DCF analysis and to estimate potential synergies from the transaction. The thesis should further investigate whether the transaction would create value for the shareholders of Anadarko and Chevron and whether the offer price was fair.</p>	
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10.	The Acquisition of Anadarko by Chevron – Multiples Valuation and Event Study Analysis	<p>Chevron Corporation announced on April 12, 2019 that it has entered into a definitive agreement with Anadarko Petroleum Corporation to acquire all of the outstanding shares of Anadarko in a stock and cash transaction valued at \$33 billion, or \$65 per share. Based on Chevron's closing price on April 11, 2019 and under the terms of the agreement, Anadarko shareholders will receive 0.3869 shares of Chevron and \$16.25 in cash for each Anadarko share. The total enterprise value of the transaction is \$50 billion.</p> <p>Anadarko Petroleum Corporation is a company engaged in hydrocarbon exploration. The company was the subject of multiple environmental cases, including the largest environmental contamination settlement in American history - the 2014 settlement related to the former Tronox subsidiary of Kerr McGee, a company purchased by Anadarko in 2006. In addition to exploration and production, the company engaged in petroleum and natural gas gathering, processing, treating, and transportation. The company also participated in the hard minerals business through its ownership of non-operating joint ventures and royalty arrangements.</p> <p>Chevron Corporation is an American multinational energy corporation. Chevron is engaged in every aspect of the oil, natural gas, and geothermal energy industries, including hydrocarbon exploration and production; refining, marketing and transport; chemicals manufacturing and sales; and power generation. Chevron is one of the world's largest oil companies. Chevron's downstream operations manufacture and sell products such as fuels, lubricants, additives and petrochemicals. The company's most significant areas of operations are the west coast of North America, the U.S. Gulf Coast, Southeast Asia, South Korea, Australia and South Africa.</p> <p>The goal of the thesis is to value Anadarko using multiples at the time of a takeover announcement and to examine whether the offer price was fair. The thesis should further examine the price reactions of Chevron, Anadarko, and their competitors on the announcement date using event study analysis. In addition, the author shall examine other dates during the negotiation process.</p>	
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11.	The Acquisition of Celgene by Bristol-Myers Squibb – DCF Analysis	<p>On January 3<sup>rd</sup>, 2019, Bristol-Myers Squibb Co. agreed to buy Celgene Corp. in a deal valued at about \$74bn, representing one of the largest transactions to have ever happened in the pharmaceuticals industry. The offer price represents a 54% premium based on Celgene's previous closing price. In a cash-and-stock offer, Bristol-Myers Squibb and Celgene shareholders are expected to own 69% and 31% of the merged entity, respectively. Share prices of both firms experienced strong one-day announcement returns – in opposite directions. While Bristol-Myers shares lost more than 13% of their value, Celgene's stock price was up by about 24%.</p> <p>Bristol-Myers Squibb (BMS) is a pharmaceutical company that was created in a merger of Bristol-Myers Company and Squibb Corporation in 1989. The firm is headquartered in New York City and its current CEO is Dr. Giovanni Caforio. With revenues of more than \$22bn and net income of about \$5bn, the firm is one of the largest and most profitable pharma companies in the world.</p> <p>The target firm Celgene is an American biotechnology company founded in 1986 and is headquartered in New Jersey. One of the firm's major products is Revlimid, which serves as a treatment for multiple myeloma. The company experienced significant revenue growth over the past few years and is highly profitable with a profit margin of about 25%.</p> <p>The goal of the thesis is to value Celgene using DCF analysis and to estimate potential synergies from the transaction. The thesis should further investigate whether the transaction would create value for the shareholders of Celgene and Bristol-Myers Squibb and whether the offer price was fair.</p>	
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12.	The Acquisition of Celgene by Bristol-Myers Squibb – Multiples Valuation and Event Study Analysis	<p>On January 3<sup>rd</sup>, 2019, Bristol-Myers Squibb Co. agreed to buy Celgene Corp. in a deal valued at about \$74bn, representing one of the largest transactions to have ever happened in the pharmaceuticals industry. The offer price represents a 54% premium based on Celgene's previous closing price. In a cash-and-stock offer, Bristol-Myers Squibb and Celgene shareholders are expected to own 69% and 31% of the merged entity, respectively. Share prices of both firms experienced strong one-day announcement returns – in opposite directions. While Bristol-Myers shares lost more than 13% of their value, Celgene's stock price was up by about 24%.</p> <p>Bristol-Myers Squibb (BMS) is a pharmaceutical company that was created in a merger of Bristol-Myers Company and Squibb Corporation in 1989. The firm is headquartered in New York City and its current CEO is Dr. Giovanni Caforio. With revenues of more than \$22bn and net income of about \$5bn, the firm is one of the largest and most profitable pharma companies in the world.</p> <p>The target firm Celgene is an American biotechnology company founded in 1986 and is headquartered in New Jersey. One of the firm's major products is Revlimid, which serves as a treatment for multiple myeloma. The company experienced significant revenue growth over the past few years and is highly profitable with a profit margin of about 25%.</p> <p>The goal of the thesis is to value Celgene using multiples at the time of a takeover announcement and to examine whether the offer price was fair. The thesis should further examine the price reactions of Bristol-Myers Squibb, Celgene, and their competitors on the announcement date using event study analysis. In addition, the author shall examine other dates during the negotiation process.</p>	
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13.	IPO of Adyen Nv.- DCF analysis.	<p>Adyen Nv. announced its IPO on June 12, 2018. Adyen announced offering 13.4% (3,945,362) of its common shares at 240€. This amounts to a market capitalization of 7.1B€ and proceeds of 849 M€. On the first trading date, the price opened at 400€ (+66% w.r.t. the IPO price) and reached 455€ (+90%) at the end of the day, which is equivalent to a valuation of 13.4 B€ for the company. This shows investors substantial optimism toward Adyen Nv.</p> <p>Adyen is a Fintech company founded at 2006 and based in the Netherlands. The company's business relies on settlement fees and processing fees charged per transaction. The list of its major clients includes Uber, Facebook, Netflix, Spotify, and rather recently, eBay. Even though most of the startups are not profitable before their IPOs, Adyen was profitable for several years and made 71.3 B€ of net income in 2017.</p> <p>The goal of the thesis is to value Adyen using DCF analysis and to determine whether the reference price was fair. To do so, the student should conduct a comprehensive analysis of the industry and understand the business model of Adyen.</p>	
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14.	The T-Mobile and Sprint Merger – Multiples Valuation and Event Study Analysis	<p>On Apr. 29. 2018, T-Mobile and Sprint clinched an all-stock merger deal, uniting the third and fourth-largest telecommunications carriers in the US. Under the terms of the agreement, a fixed exchange ratio is set at 0.10256 T-Mobile shares for each Sprint share, which sets the implied enterprise value at approximately \$59 billion for Sprint and at \$146 billion for the combined company based on the closing price on Apr. 27. 2019. While according to T-Mobile, the merger would pose the new company as a force for positive change in the US wireless, video, and broadband industries, and a strong competitor in the 5G era, the deal was expected to face an ambiguous regulatory backdrop. On Jul. 26. 2019, the Trump administration formally blessed this takeover from T-Mobile as the Department of Justice said it would not try to block the transaction after T-Mobile and Sprint agreed to divest \$5bn of assets to satellite television provider Dish and give it access to their wireless spectrum for seven years.</p> <p>T-Mobile US, Inc., commonly shortened to T-Mobile, is a United States-based wireless network operator, whose majority shareholder is the German telecommunications company Deutsche Telekom (DT). Its headquarters are located in Bellevue, Washington, in the Seattle metropolitan area. T-Mobile is the third largest wireless carrier in the United States with 83.1 million customers as of the end of Q2 2019. T-Mobile US provides wireless voice and data services in the United States, Puerto Rico and the U.S. Virgin Islands under the T-Mobile and Metro by T-Mobile brands (which it acquired in a reverse takeover in 2013, resulting in the company going public on the NASDAQ stock exchange), and also serves as the host network for many mobile virtual network operators. The company has annual revenues of over \$40 billion.</p> <p><b>Sprint Corporation</b> is an American telecommunications company that provides wireless services and is an internet service provider, based in Overland Park, Kansas. It is the fourth-largest mobile network operator in the United States and serves 54.5 million customers as of March 2019. The company also offers wireless voice, messaging, and broadband services through its various subsidiaries and wholesale access to its wireless networks to mobile virtual network operators. In July 2013, a majority of the company was purchased by Japanese telecommunications company SoftBank Group Corp., although the remaining shares of the company continue to trade on the New York Stock Exchange.</p> <p>The goal of the thesis is to value Sprint and the said transaction using multiples to examine whether the offer price was fair. The thesis should further examine the price reactions of</p>	
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		T-mobile, Sprint, and their competitors on the announcement date using event study analysis. In addition, the author shall examine other dates that are informative of the deal.	
15.			