A Work Project, presented as part of the requirements for the Award of a Master’s degree in Management from the Nova School of Business and Economics.

XEROX'S ATTEMPT TO ACQUIRE HP

TOM MESSER

Work project carried out under the supervision of:

Pranav Pradeep Desai

30/05/2023

Abstract

Printer manufacturer Xerox had to contend with a difficult market environment characterized by numerous structural problems. To achieve synergies and to improve its competitiveness the company attempted to take over the significantly larger PC and printer manufacturer HP at the beginning of November 2019. HP showed little interest in an acquisition, hence Xerox, supported by activist investor Carl Icahn, approached HP's shareholders directly. However, the implementation of takeover defenses and the consequences of the Corona pandemic outbreak complicated these intentions. Now Xerox CEO John Visentin had to make a decision on how to proceed, further ambiguity damaged both companies.

Keywords

Mergers & acquisitions, hostile takeover, tender offer, takeover defense, shareholder activism, printing industry, Covid impact

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

Part A – Case study

Introduction

"They want to block us with a poison pill, telling their investors they aren't bright enough to make up their own minds […] that really annoys me!" – John Visentin (CEO of Xerox) quoted in Fortune on 16th of March 2020 (Tully 2020).

Taking over HP turned out to be more difficult than John Visentin, CEO of Xerox, would have wished. After the HP management showed no interest in the friendly takeover attempt, Xerox addressed HP's shareholders directly (HP Inc. 2020e; Xerox Corp. 2020c). In reaction, the HP management introduced takeover defense mechanisms to protect the company from a hostile takeover (Hu and Roumeliotis 2020). The acquisition plans, which were already ambitious from the beginning, became even more complicated with the outbreak of the Corona virus, which had a significant impact on the market environment and the transaction as such (Demling 2020). A clear decision from John Visentin on the further procedure was inevitable.

The struggling printing industry

The printing industry has fought structural problems in the past years. A continuous reduction of the market size from $ 213bn in 2010 to $ 206bn in 2019 was the consequence. Also, the future growth prospects for the industry looked bleak, which forced players to gain market share to achieve positive business growth (Hahn 2020; HP Inc. 2019a; Roumeliotis 2020). This also increased the consolidation pressure in the industry due to the need for cost reductions and efficiency maximization to maintain a strong industry position. One structural problem of the industry was the ongoing shift towards digital documents to save costs and most importantly protect the environment. This digitalization trend had a significantly negative impact on the demand for printed paper which affected nearly the whole printing industry (Kort 2019; Roumeliotis 2020). Another structural problem was that ink cartridges, which were traditionally the profitability drivers in the otherwise low-margin business field, were increasingly purchased online from cheap no-name alternatives. One of the few emerging segments was 3D printing. In this process, physical objects from a wide range of industries are produced using digital templates. The comparatively still quite small adjacent market area was predicted to show strong growth and high profitability in the future (Hecking 2019; Kerkmann 2020).

The printing market was dominated by a few market participants while the consumer printing market (top 6 players accounted for ca. 96% of the market) was even more concentrated than the commercial printing market (top 6 players accounted for ca. 67% of the market). HP led the market (market share of ca. 19%), followed by Canon (market share of ca. 16%), Ricoh (market share of ca. 12%), Konica Minolta (market share of ca. 9%) and Xerox (market share of ca. 9%). All other companies accounted for ca. 35% of the market (Cabral, Knauff and Allen 2019b).

Therefore, the main competitors of Xerox and HP in the printing market were Canon, Ricoh, and Konica Minolta (exhibit 1). Further competitors in the printing market worth mentioning were Seiko Epson and Brother, which were mainly active in the consumer printing sector and didn't have a relevant market position in the commercial print area (Cabral, Knauff and Allen 2019b).

Xerox – a leading office printing company

Established in 1906 and headquartered in Norwalk, Connecticut, USA, Xerox sold, serviced, maintained and rented printers, copiers, and connected supplies. The offering included both hardware as well as software products and was focused on the commercial printing market with a comparatively small share of the consumer printing market. Xerox generated revenues of $ 9,066mn as well as an EBIT of $ 822mn in 2019A (exhibits 2-4). Furthermore, the company had ca. 27,000 employees globally and was listed on the New York Stock Exchange. Sales accounted for a smaller portion of revenues (ca. 36%) than services, maintenance, and rental (ca. 62%). Geographically, revenues were mainly generated in the US (ca. 60%) and Europe (ca. 26%) (exhibit 5) (Cabral, Knauff and Allen 2019b; Suva and Cadiz 2020; Xerox Corp. 2020a; n.d.c).

The company had a broad customer base from small- and mid-sized businesses to governmental entities and large corporations. In its distribution, Xerox focused on direct distribution through its own sales force but also used indirect channels. Manufacturing was partly conducted in its facilities and partly outsourced to manufacturing partners (Xerox Corp. 2020a).

In the past years, the revenues of the company steadily reduced (exhibit 2) mainly driven by high competitive pressure in a mature and declining market environment with very limited organic growth opportunities (Hecking 2019; Xerox Corp. 2020a).

The key person responsible for stopping this trend was CEO John Visentin. Before replacing former CEO Jeff Jacobson in May 2018, he was a senior advisor of Exela Technologies, an operating partner for Advent International, and had management positions at Hewlett-Packard and IBM (Xerox Corp. 2019a; n.d.b). The replacement was part of a management exchange mainly driven by the activist investors Carl Icahn and Darwin Deason (Inagaki 2018). He implemented four major strategic pillars to transform the business. The first one was the introduction of “Project Own It" in the second half of 2018, a program targeted to increase profitability, e.g., through rationalization of the IT infrastructure or a reduction of the real estate portfolio. In addition, he aimed to increase revenues through stronger integration of its software, services, and technology solutions to offer an end-to-end solution to the clients. Also, he wanted to enter innovative markets outside of the core business such as 3D printing and digital manufacturing to accelerate growth. Lastly, he underlined that the focus of the business should be on generating cash flow and increasing returns (Xerox Corp. 2020a). The new strategy seemed to show the first successes from the end of 2018, the share price increased from the 24th December 2018 to the 1st November 2019 by 75.9% after strongly declining in the previous year (exhibit 6) (Yahoo Finance 2016–2020b).

Historically, the company has also taken occasional inorganic measures to drive the company's growth but has largely focused on acquiring smaller market players with a specialized offering. It was inevitable that Xerox would have to reinvent itself to stop the negative development and not perish in the difficult market environment (Xerox Corp. 2020a; n.d.a).

The first step in this process was the termination of a 57-year-lasting JV with Fujifilm through the sale of its 25% stake for $ 2.3bn to its JV partner. Xerox mainly distributed its products in the APAC area through the joint venture and now needed to find a new solution. As part of the deal, Fujifilm also accepted to drop a $ 1bn lawsuit against Xerox, which resulted from a failed merger between the two companies in 2018. But this measure was just the start, there was the need for more change (Hecking 2019; Iyengar 2018; Lombardo 2019b).

HP – a leading PC and printing company

Established in 1939 and headquartered in Palo Alto, California, USA, HP was a provider of personal computers, further access devices, printing & imaging products as well as connected solutions and services. Although the company was leading in both fields, its market share in the consumer printing area was significantly higher than in the commercial printing area. In the personal computer field, HP had the second highest market share (ca. 21%) after Lenovo (ca. 25%), in a relatively consolidated market (the top 3 companies had a combined market share of over 60%). HP generated revenues of $ 58,756mn as well as an EBIT of $ 3,877mn in 2019A (exhibits 7-9). Also, the company had ca. 56,000 employees globally and was listed on the New York Stock Exchange. Its Personal Systems segment accounted for the largest part of the revenues (ca. 66%). The segment mainly comprised notebooks (ca. 59% of segment) as well as desktops (ca. 31% of segment). Its Printing segment also had a significant revenue share (ca. 34%) and included supplies (ca. 64% of segment), commercial hardware (ca. 23% of segment) as well as consumer hardware (ca. 13% of segment). Geographically, revenues were generated in the US (ca. 35%) and the rest of the world (ca. 65%) (exhibit 10) (Cabral, Knauff and Allen 2019a; 2019b; HP Inc. 2019a).

Customers include both individual customers as well as businesses of all sizes. HP distributed its products mainly indirectly through partners but also had direct sales channels. For the manufacturing of its products, the company had a broad range of outsourcing partners but also its own capabilities to produce finished products using components and sub-assemblies from various vendors. For example, most of the A4 and some A3 laser printer engines and cartridges were sourced from Canon (HP Inc. 2019a; Xerox Corp. 2019c).

Strategically, the company wanted to grow profitably in the personal systems area through market segmentation, while in printing the company targeted contractual solutions and graphics as well as 3D printing and digital manufacturing. In 3D the company has already had its first successes and was able to offer solutions to its customers (HP Inc. 2019a; 2019f).

M&A was a relevant part of HP's history. Examples include the acquisition of Compaq announced at the end of 2001 for $ 25bn or the takeover of the printer business of Samsung Electronics for $ 1bn in 2017. In 2014, the company also announced a larger internal restructuration, with the spin-off of its corporate hardware and service operations business (“Hewlett Packard Enterprise”) from its computer and printer business (“HP”) to be able to more effectively respond to shifts in the market environment (Gold 2002; Hardy and Gelles 2014; HP Inc. 2017).

HP fought with very dynamic and uncertain times, as its share price fell from its high on the 2nd October 2018 to the 1st November 2019 by 31.8% after significantly rising in the previous year (exhibit 6) (Yahoo Finance 2016–2020a). The printing business especially caused problems for the company. In its Q3 2019 results, the segment reported a 5% revenue decline year over year. In the same context, the company also announced the succession of President and CEO Dion Weisler by Enrique Lores effective 1st November of 2019. Enrique Lores started his career at HP in 1989 and previously was the President of HP's Imaging, Printing, and Solutions business (Demling and Kerkmann 2020; HP Inc. 2019b; 2019e; n.d.).

His first major project was the implementation of a restructuring plan that Xerox announced at the end of 2019. The plan aimed to simplify operations and accelerate digitalization. It included headcount reductions by ca. 7,000-9,000 employees and should generate run-rate cost savings of ca. $ 1bn. Enrique Lores had a difficult task, he had to lead the ailing company back to its former strength. As it turned out, his first days in the position were immediately marked by a high degree of dynamism (Demling and Kerkmann 2020; HP Inc. 2019d).

The unsolicited takeover offer

On the fifth official workday of HP's new CEO Enrique Lores and the day of Xerox's announcement of the termination of the JV with Fujifilm, major rumors came to the public. According to the Wall Street Journal, Xerox considered taking over HP (exhibit 11) (Lombardo 2019a; Xerox Corp. 2019e). Two days later, CNBC first reported details about the in the meanwhile confirmed takeover offer. Sources said that Xerox offers $ 22 per HP share comprised of 77% cash and 23% stock payment, representing a 22% premium over the last closing price before the first takeover rumors (Franck 2019). The capital market also showed a positive reaction and both the share price of HP and Xerox rose by over 8% in the first two trading days (exhibit 12) (Yahoo Finance 2016–2020a; 2016–2020b). At first glance, a takeover of HP by Xerox seemed rather surprising. The revenue of HP was more than 6 times higher than the revenue of Xerox (exhibit 13) and HP's market capitalization was more than three times that of Xerox (Kort 2019). On closer examination, however, a takeover seems somewhat less far-fetched. In June 2019 the companies already announced a partnership in sourcing as well as in the Device as a Service market (Xerox Corp. 2019b). Also, CNBC reported that cost synergies of $ 2bn were expected, which could improve the positioning of both players in the difficult market environment (Franck 2019). Bloomberg analyst Robert Schiffman commented on the potential takeover "Financing a 30 billion acquisition of HP with debt could be a real challenge for Xerox, but not an insurmountable obstacle" (Kort 2019).

However, the management of HP was not convinced by Xerox's offer and rejected it in an open letter on the 17th of November 2019. They stated that the offer "…significantly undervalues HP and is not in the best interest of HP shareholders" (HP Inc. 2019c). Furthermore, they underlined the uncertainty of the proposal and the high debt level a combined entity would have (HP Inc. 2019c). Xerox responded a couple of days later and affirmed the fairness of the offer price and highlighted that the completion of the transaction is not subject to fulfillment of financing conditions. Moreover, Xerox threatened to go directly to HP's shareholders if the management refused to agree to mutual due diligence (Xerox Corp. 2019d). As HP management didn't want to change its opinion and questioned Xerox's ability to raise the required cash amount (HP Inc. 2019g), Xerox announced that it would carry out its threat and approach HP's shareholders directly. In addition, they mentioned that the positive share price reaction to the plans would show that the shareholders were interested in a combination (Xerox Corp. 2019f).

The merits of a combination

To obtain further consent from HP shareholders for a combination of the two companies, investor Carl Icahn, who was one of the largest single shareholders of HP and Xerox, published an open letter. He wrote: "[…] the combination of HP and Xerox is one of the most obvious no-brainers I have ever encountered in my career." (Icahn 2019), with which he demonstrated his conviction of the meaningfulness of a takeover. Further, he questioned whether HP management's actions were not simply delaying tactics to avoid losing their lucrative jobs (Icahn 2019). However, it did not remain with this measure. A few days later, Xerox published a document addressed to HP shareholders in which detailed information about the planned synergies of the two companies was provided. In the presentation, Xerox highlighted that the cash flow of the combined entity would allow for fast de-leveraging and that within 24 months run-rate cost synergies of minimum $ 2bn could be achieved. For the cost synergies, the company showed concrete examples of how they could be reached such as a reduction of the supplier base or the rationalization of the real estate portfolio (exhibit 14). As additional proof, the company named its cost savings project "Project Own It", which allowed Xerox to reduce its cost base by $ 1bn within 18 months, only generating restructuring costs of $ 0.35 per $ 1.00 cost savings. Also, potential revenue synergies of $ 1-1.5bn were presented in the document. The complementary relationship of the product portfolio as well as the distribution channels were identified as the main enablers. While HP had a very strong presence in the consumer printing market, Xerox's offering targeted the commercial printing market. Also, Xerox focused on direct distribution and HP on indirect channels (Xerox Corp. 2019c).

Takeover defense measures to stop Xerox

To further underpin the seriousness of its interest in acquiring HP, Xerox announced in early January 2020 that it secured $ 24bn in binding financing commitments from a bank consortium comprising Citi, Mizuho, and Bank of America (Xerox Corp. 2020d). However, this did little to convince HP's management, that made clear that Xerox's offer was still too low and not in the best interest of the shareholders (HP Inc. 2020f.). Since HP management continued to be uncooperative, Xerox stepped up its measures. On the 23rd of January 2020, the company announced that it plans to replace the Board of Directors of HP through the nomination of 11 new candidates at HP's next annual meeting of stockholders (Xerox Corp. 2020e). In the next step, Xerox reported on the 10th of February 2020 that it plans to launch a tender offer for all outstanding HP shares at an increased price of $ 24 per share in early March 2020, corresponding to a total volume of approx. $ 35bn. The offer should consist of $ 18.40 in cash and 0.149 shares of Xerox per HP share and should not be tied to any due diligence or financing condition (exhibit 15) (Xerox Corp. 2020b).

In reaction to the announcement of the hostile attempts by Xerox, HP launched a shareholder rights plan. This plan was targeted to prevent single shareholders from acquiring more than 20% of the company. If any shareholder reached the threshold all other shareholders would have the option to buy additional shares at a discounted price leading to a dilution of the ownership in the group. HP justified the action by saying it was important to give shareholders enough time to consider the tender offer (HP Inc. 2020b; Malara and Chandra Eluri 2020). Only a few days later, HP management acted again. While announcing the Q1 2020 results, the HP management presented a new strategic and financial value creation plan. The plan was designed to show how HP could generate significant shareholder value without a combination with Xerox and highlighted the enormous risks of an acquisition. As part of the plan, HP reported that it increased the share repurchase authorization from $ 5bn to $ 15bn. This should further complicate a hostile takeover for Xerox (HP Inc. 2020c; 2020d; Hu and Roumeliotis 2020).

However, Xerox was not deterred by these measures and launched its tender offer for all outstanding HP shares at the beginning of March as previously announced (Xerox Corp. 2020c). HP reacted by publishing a document with multiple reasons why the shareholders shouldn't accept the offer. It also quoted CEO Enrique Lores stating: "At HP, we're creating value, not risk." (HP Inc. 2020e).

The positions of the management teams could not have been more different, and a friendly solution continued to seem far away.

The influence of activist investor Carl Icahn

The actions and influence of activist investor Carl Icahn in the takeover attempt appear to go well beyond the publication of the open letter to shareholders of HP (Icahn 2019; Roumeliotis 2019). Typically, his strategy is to invest in companies he considers undervalued and then to increase the value of his investment by actively influencing operational decisions and the occupation of management positions (Hahn 2019). An example of his assertiveness was the spin-off of PayPal from eBay, which was announced in 2014, to which Carl Icahn had moved the management with a share of only 2.5% (Postinett 2014). Moreover, he prevented Xerox from being acquired by Fujifilm in 2018 together with activist investor Darwin Deason (Inagaki, Fontanella-Khan and Fortado 2018). They advocated the replacement of management positions, especially the CEO. New to the position was current Xerox CEO John Visentin (Singh and Chang 2018). Now Carl Icahn, who held large stakes in both Xerox and HP, should again assume a central role in an M&A transaction. Company minutes showed that Carl Icahn was in regular communication with the management teams of HP and Xerox and the question arose when his influence really began (HP Inc. 2020g).

However, as it turned out, completely unexpected factors occurred which caused a shift in the balance of power in the takeover attempt (Demling 2020).

Uncertainty and change due to the Covid hit

The virus, which was first discovered in Wuhan, China in late December 2019, initially received limited global attention (exhibit 16). However, this was to change quickly due to the rapid spread of the virus across the world. On 11th March 2020, the virus, which in the meantime received the name Covid-19, was classified as a pandemic by the WHO. Two days later, a national emergency was declared in the USA after the FED had already lowered the interest rate by 0.5% to support the US economy. The fact that this rate cut was the first unplanned reduction since 2008 underlined the seriousness of the situation (CNN Editorial Research 2021).

In addition to its social impact, Covid was also expected to have massive economic consequences. On the one hand, it was assumed that contact restrictions to slow down the spread of the virus would have a direct negative effect on production volume. Also, transportation restrictions were expected to cause supply chain disruptions which were particularly precarious for companies that depended on intermediary goods for their production. Furthermore, the financial markets reacted to the uncertainty driven by the Corona pandemic with a sharp drop in share prices (exhibit 17) and valuation levels (exhibit 18). A recession was seen as very likely, and many companies reacted with a hiring freeze or even headcount reductions. Along with this, it was also anticipated that consumption would further decline. Moreover, it was observed that lenders became much more reluctant to provide financing, which put many companies in difficult financial situations (Bachman 2020; Donthu and Gustafsson 2020; Kengelbach et.al. 2020; Levitt 2020; Seetharaman 2020).

The pandemic impacted companies to a varying degree. Especially sectors required to travel, tourism, as well as the personal service sectors, had to struggle with major losses. Companies had to modify both their internal operations as well as their interaction with external parties. The adjusted internal working practices were mainly characterized by a shift towards remote working and the digitalization of tasks. Furthermore, companies that already had sophisticated online distribution channels profited while companies that previously relied exclusively on offline channels were practically forced to digitalize their distribution. Therefore, the Corona pandemic can be seen as an accelerator of the digitalization trend that was already prevalent before the pandemic (Almeida, Duarte Santos and Augusto Monteiro 2020; Bachman 2020; Donthu and Gustafsson 2020; LaBerge et.al. 2020).

Both HP and Xerox experienced the full impact of the Corona pandemic, but the companies' unequal product focus created a shift in power in the takeover attempt (HP Inc. 2020a; LaBerge et.al. 2020).

The options for Xerox CEO John Visentin

Acquiring HP turned out to be more difficult than John Visentin would have wished. The HP management continued to be clearly opposed to an acquisition and used defense tactics to protect itself from a hostile takeover. The structurally weakened printing industry required major strategic measures, but the sudden emergence of the Corona pandemic created a tense and uncertain market environment (Hecking 2019; Roumeliotis 2020; Tully 2020).

The time had come for John Visentin to make a crucial decision. Should he continue to pursue the takeover of HP against all opposition, or would it be more sensible to terminate the plans?

Continue with the takeover attempt:

An argument for continuing with the takeover attempt was that Xerox had only limited organic growth opportunities in the declining printing market and had a strong need for a major operational change. The complementary nature of the product portfolio and the distribution channels of Xerox and HP would also have enabled the creation of a new industry giant in the printing sector. In addition, cost synergies could have generated an improved level of profitability with which one could better face the competition. The attractiveness of the offer price could also have been a relevant argument, but John Visentin wanted to get advice from an independent observer here first (see assignment question 3) (Hecking 2019; Xerox Corp. 2019c). Further, the partnership agreement that the companies announced in June 2019 could be seen as a first small step towards business integration that was already accomplished (Xerox Corp. 2019b). Another argument is that higher cash flows through the achievement of synergies would have given the company more room to invest in new technology. In 3D printing, HP has already demonstrated success, which made the company even more interesting for Xerox (Hecking 2019; Xerox Corp. 2019c). Moreover, Xerox would have had the opportunity to benefit from HP's supplier and distributor network in APAC. After the termination of the joint venture with Fujifilm, which was its main distribution channel in the APAC region, Xerox still had to find a suitable alternative (Hecking 2019; HP Inc. 2019a). Lastly, John Visentin may also have faced the personal risk that Carl Icahn, who presumably continued to back a takeover (Icahn 2019), might replace him in the event of withdrawing from the takeover plans.

Terminating the takeover plans:

In favor of terminating the takeover attempt was the fact that Xerox, in contrast to the time of the first rumors of a takeover bid, was no longer in a phase of strong growth momentum, instead the share price has fallen strongly since then (exhibit 12). In addition, the value of the share portion of Xerox’s tender offer to HP shareholders (exhibit 15) has decreased, which made it relatively less attractive for them to accept the offer. At the same time, HP was able to slow down its negative trend, which prevailed in the months before the first takeover rumors and has since then experienced smaller share price losses than Xerox. The main reason for this was that the companies were affected to different degrees by the consequences of the Corona pandemic. Therefore, it could not be ruled out that a further increase in the offer would be necessary to obtain sufficient acceptance from the shareholders (Kort 2019; Roumeliotis 2020; Xerox Corp. 2020c; Yahoo Finance 2016–2020a; 2016–2020b).

There was also the risk that Xerox overestimated the synergies of a combination with HP (HP Inc. 2020e). One argument supporting this thesis was that the takeover attempt of Xerox had a hostile character, which could have made integration more difficult. Also, Xerox had no experience in the PC space, so a sale or spin-off of this business would have to be considered after a takeover (Kerkmann 2020). In addition, both companies have already undertaken cost-cutting programs in past years (Xerox Corp. 2019c), which posed the risk that further cost-cutting measures could be implemented at the expense of long-term value generation. Moreover, HP's management refused to allow comprehensive due diligence, which generally limited the accuracy of synergy estimates (HP Inc. 2019g).

Another argument was that the leverage the combined company would have in the event of a takeover by Xerox could have been precarious, due to the uncertain market environment in connection with the corona pandemic (CNN Editorial Research. 2021; HP Inc. 2020e). With these market conditions it was also more difficult to obtain debt financing and there was generally a risk that the higher leverage would lead to a rating downgrade, which would have been associated with significantly higher interest payments. These were certainly not ideal conditions for Xerox, which would have had to look for a refinancing solution for its bridge facilities (exhibit 15) after a successful takeover (HP Inc. 2020g).

In addition to these arguments, extensive antitrust approvals would be required in the event of sufficient shareholder approvals and HP management did not seem to be averse to further takeover defense measures to prevent a takeover (HP Inc. 2020g). The announcement of a value creation plan at the end of February 2020 also provided the shareholders with a clear strategy for how HP could generate shareholder value independently of Xerox (HP Inc. 2020c).

Xerox had rather limited possibilities to achieve structural changes through organic measures, but the takeover of an Asian competitor could have been a suitable alternative to the takeover of Xerox, especially after the termination of the JV with Fujifilm (Hecking 2019).

Conclusion

There were many advantages and disadvantages both for and against a continuation of the HP takeover attempt. Now it was the responsibility of John Visentin, the CEO of Xerox, to carefully evaluate the arguments and to clearly decide on one path.

Part B – Teaching notes

Synopsis

The case study analyzes the takeover attempt of the PC and printer manufacturer HP by the significantly small printer manufacturer Xerox that started in November 2019. The printer market was struggling with falling demand and deteriorating profitability driven by increasing digitalization and rising competition from no-name alternatives. With the takeover of HP, Xerox planned to achieve synergies to be able to better assert itself in the market. Since the management of HP was not interested in an acquisition, arguing that the offer wouldn't be in the best interest of its shareholders, Xerox approached them directly with a tender offer to improved conditions. The main supporter of the takeover intentions was the activist investor Carl Icahn, who held stakes in both companies. HP responded with defense mechanisms to protect itself from a hostile takeover. The emergence of the Corona pandemic eventually caused a shift in power in the takeover battle, and further complicated the already ambitious takeover intentions. In mid of March 2020, Xerox CEO John Visentin was now faced with the choice of whether to continue with the takeover attempt despite all the obstacles or to terminate the plans.

Targeted courses

The case study is aimed at master's students pursuing a degree in the field of finance. Within this field, it would be particularly suitable in mergers & acquisitions, corporate finance, or advanced financial management courses.

Pedagogical objectives

The case study has five pedagogical objectives:

1. It enables the students to learn what consequences extraordinary events can have on M&A transactions. Hereby, students will figure out that such events can affect the distribution of

bargaining power of the involved parties as well as have a significant impact on the assumptions and appropriateness of methods for company valuation.

2. It demonstrates that the Corona pandemic has not only had short-term effects but has caused structural changes in the business world that are likely to persist in the long term.
3. It provides the opportunity to become familiar with the use of different valuation methods (DCF and multiples) to value a company in a transaction context. Furthermore, it teaches to make reasonable synergy assumptions and consider them in the valuation process.
4. It allows students to understand the impact activist investors can have on management decisions and the success of M&A transactions. In this case, however, it is also illustrated that the influence of even very successful investors such as Carl Icahn is sometimes limited and that they do not always manage to push through their goals.
5. It highlights that companies with takeover intentions do not necessarily have to be larger than their target but that this usually leads to higher leverage of the combined entity.

General teaching process remarks

The case study is designed for a 90-minute class and requires preparatory work by the students. Students should read the case study and complete the assignment questions in advance. Optionally, the instructor may also provide the students with a newspaper article (Lombardo 2019) or a link to a YouTube video (Faber 2019) to better prepare students to discuss the case study. Additional relevant materials are mentioned during the analysis of the questions. The results of the assignment questions should then be discussed in groups of 3-4 people in class. After a certain time, the teacher asks individual groups to present their results. Then the teacher asks the corresponding in-class question(s), which are supposed to be answered by voluntary students. The assignment questions and the in-class questions must be considered in combination, as this is the only way to achieve the desired learning objectives. The assignment questions aim to build prior knowledge and include parts where students can easily get minor errors. On the other hand, the related in-class questions represent extensions and reveal potential sources of mistakes in answering the assignment questions.

A detailed proposal of the time structure can be found in the appendix (TN-1).

Assignment questions

1. Was HP an attractive target for Xerox from a strategic standpoint?
2. What were the effects of Covid-19 on the likelihood of the success of the takeover attempt?
3. Imagine you were an independent observer of the takeover attempt. Do you think that the tender offer of $24.00 per share launched by Xerox was appropriate? Please perform a valuation of HP using the DCF as well as the multiples approach. For the sake of simplicity, you can take the 31st of January 2020, the date of the last quarterly report, as the valuation date for the DCF. Also, consider the potential synergies of the transaction. using provided information in the appendix (exhibits 14, 15, 19, 20, 21).
4. The Board of Directors of HP argued in their response to the tender offer of Xerox that it "…would create an irresponsible capital structure…". Calculate the leverage (net debt/EBITDA) a combined entity would have in case of an acquisition of HP by Xerox using the assumptions in the appendix (exhibit 22). Afterward, calculate the leverage a combined entity would have in case of an acquisition of Xerox by HP. What conclusion do you draw from your results?

In-class questions

1. What role did Carl Icahn play in the takeover ambitions of Xerox and how independent do you think John Visentin's strategic decisions were? (related to assignment question 1)
2. Do you think Covid-19 had only short-term effects or caused structural changes? What impact did the Corona pandemic have on the perpetual growth rate of HP and Xerox? (related to assignment question 2)

3. Who included the precedent transactions in their valuation? Why might it be inappropriate to use them for the valuation in this case? (related to assignment question 3)
4. What synergy assumptions did you use? What information regarding synergies is not given in the appendix? What could serve as an orientation for making reasonable assumptions here? (related to assignment question 3)
5. Which of the two scenarios would you consider more economically rational, given the outbreak of the Corona pandemic? (related to assignment question 4)
6. If you were in John Visentin's situation, would you continue with the takeover attempt or terminate the takeover plans?

Question analysis & relevant materials

<u>Assignment question 1:</u>

Overall, there were many arguments suggesting that an acquisition of HP made sense for Xerox from a purely strategic perspective. Xerox was operating in a declining printer market with limited organic growth opportunities, which meant that inorganic measures were the primary option for Xerox. Furthermore, since June 2019, Xerox has already had a strategic partnership with HP that may already have represented a first step in the integration of the two companies. Moreover, the product portfolios, and the distribution channels of the two companies were complementary to each other, which presented potential for revenue synergies. There was also the possibility of achieving cost synergies e.g., by streamlining the supplier portfolio. However, it must also be noted that Xerox had no experience in the PC area, which was HP's actual core business. A spin-off or sale could solve this problem. Another strategic advantage of the acquisition was that HP had already achieved its first success in the field of 3D printing, which was a focus area of Xerox's future strategy. A higher cash flow enabled through the synergies, could have been used for investments in new technologies. Moreover, following the termination of the joint venture with Fujifilm, Xerox needed an alternative for the distribution of its products in the APAC region. Acquiring an Asian competitor could also have been an alternative, but such a company would probably be more difficult to integrate than another American company.

In-class question 1:

To introduce this question the teacher could provide the students with the open letter of Carl Icahn to the HP shareholders (Icahn 2019) or show them a YouTube video (Ross 2020).

Activist investor Carl Icahn was a driving force behind Xerox's takeover plans. He held large stakes in both HP and Xerox and tried to convince the HP shareholders of the merits of a combination with an open letter. Company minutes also showed that Carl Icahn had a high level of communication with the management teams of HP and Xerox. In the past, Carl Icahn has also demonstrated that he can exert massive influence on management decisions (e.g., at the spin-off of PayPal from eBay). One could even argue that Carl Icahn is the actual initiator of the Xerox takeover plans. It would be plausible that he already had this idea in mind when he prevented the acquisition of Xerox by Fujifilm in 2018. In the course of this, a new CEO was appointed at Xerox in the person of John Visentin. Therefore, it can be strongly assumed that John Visentin's mission from the beginning was to realize Carl Icahn's plans, and hence his decisions were hardly independent.

Assignment question 2:

The outbreak of the Corona pandemic led to a shift in power in the Xerox takeover attempt toward HP. Since the outbreak of the Corona pandemic, Xerox's share price has fallen much more than HP's (exhibit 17), causing the market capitalization to diverge even more than it did at the beginning of the takeover attempt. This drop in the share price also reduced the value of the share component of Xerox's tender offer, making the offer relatively less attractive to HP shareholders. The main reason for the uneven development was that the Corona pandemic and the associated lockdowns led to an increase in remote working. HP benefited from this because they could expect higher demand for their PCs and consumer printer products. Xerox, on the other hand, which specialized mainly in large office printers, had to face greater losses. Furthermore, the uncertainty in connection with Covid also led to more conservative lending. This also proved to be problematic for Xerox, as it had only secured bridge financing commitments for the acquisition of HP (exhibit 15) and was therefore exposed to significant refinancing risk in the future. Lastly, operational overheads due to supply chain disruptions have also contributed to making a takeover less likely.

In this context, students could also be provided with an article to familiarize themselves with the topic in more detail (LaBerge et. al. 2020).

<u>In-class question 2:</u>

Covid-19 had not only one-off effects but also led to structural changes. The outbreak of the Corona pandemic has forced companies to digitalize their internal and external processes. While this has initially resulted in higher costs for many companies, in the long run, it allowed for more efficient operations and will therefore mostly remain in place even after the Corona pandemic. Furthermore, the Corona pandemic has had a lasting impact on the needs of customers and employees. While customers are still interested in digital distribution solutions after the Corona pandemic, employees have developed an enduring interest in a more flexible workplace. The higher level of digitalization resulting from the Corona pandemic has a long-term negative impact on the printing industry in general. An increase in remote working will have a positive effect on HP, especially in the long term, as they offer mainly consumer solutions. Xerox, on the other hand, which mainly manufactures large printers for offices, will, unfortunately, suffer in the long term. Therefore, HP's perpetual growth rate will probably increase slightly and Xerox's will decrease compared to before the pandemic.

Assignment question 3:

To prepare the students for this question the teacher can use literature (Berk and DeMarzo 2019; DePamphilis 2022; Koller, Goedhart, and Wessels 2020; Pyles 2021; Rosenbaum and Pearl 2020), a news article (Xerox 2020) or a YouTube video (Hammond and Lores 2020).

The operating assumptions for HP's future development (exhibit 19) used for the DCF were mainly derived from an UBS equity research report (Shah 2020) and were only modified in a few cases by the author. Own assumptions were made for the net working capital change using the average of the net working capital as a percentage of revenue of the last historical years. The operational assumptions for Q2 - Q4 2020 were also calculated manually by the author taking the already reported results for Q1 2020 and the estimates for the full year 2020. For the WACC and the terminal growth rate, another UBS equity research report served as orientation (Roy 2019). As a result of the lasting change in the market structure caused by the Corona pandemic, the pre-pandemic assumption on the perpetual growth rate was slightly revised upwards by the author (check the answer to in-class question 2 for more details). The synergies were calculated using data from a Credit Suisse equity research report (Cabral, Knauff and Allen 2020). In each year, the achievement of 75% of the cost synergies forecast by Xerox was assumed. Revenue synergies were not included following the broker assumptions and additional restructuring expenses were considered (check the answer to in-class question 4).

The assumptions are used to calculate the unlevered free cash flow for the planning period. For the remaining periods, the terminal value is calculated with the help of the Gordon Growth Model, but the use of an exit multiple would also be conceivable in principle (TN-2). This gives an enterprise value of $ 42.2bn and an equity value of $ 41.6bn, taking synergies into account. The EV-equity adjustments can also be determined from the appendix (exhibit 8). This leads to an equity value per share of $ 28.46, which is above the tender offer of $ 24.00 per share.

Therefore, based on the result of the DCF, it can be concluded that Xerox's offer is below the maximum value of the share. Even slight deviations from the assumptions, which were examined with the help of a sensitivity analysis (TN-3), lead to the same conclusion. An analysis of the range of bid prices also shows that Xerox's bid price is only slightly higher than HP's value without considering synergies and therefore Xerox would claim most of the synergies (TN-4).

For the comparable company analysis, multiples of peers of HP are available in the appendix (exhibit 20). More information on the origin of the multiples is also provided here. The analysis shows a median EV / EBITDA 2020E of 5.9x and a median EV / EBITDA 2021E of 5.2x.

The comparison of the valuation ranges in a football field shows that the DCF method with synergies leads to the highest result (TN-5). This is followed by the DCF without synergies and then the trading multiples. The valuation ranges are derived from the 30% and 70% percentiles of the multiples and slight variations of the DCF assumptions. To be able to assess the appropriateness of the tender offer price, the pro forma equity value per share should also be determined (TN-6). Without synergies, the valuation methods lead to an average equity value per share of \$ 20.47 and with synergies to a value per share of \$ 25.91. Since Xerox's tender offer of \$ 24.00 is between the value of the scenario without and the scenario with synergies, it can be concluded that the offer is appropriate. Nevertheless, it should be noted that the sharp fall in Xerox's share price has reduced the value of the share portion of the offer, so the real value of the offer as per 16th of March 2020 is only \$ 21.36 instead of \$ 24.00 per share. But this value is also within the range, which is why the conclusion does not change.

Lastly, it should be mentioned that the slightly differing valuation dates between the valuation methods due to data limitations lead to slight inaccuracies, which however do not have a significant impact on the meaningfulness of the outcomes.

In-class question 3:

The precedent transactions (exhibit 21) had a median EV / EBITDA multiple of 11.8x, which is significantly above the level that the trading multiples (exhibit 20) indicate. However, transaction premiums are only responsible for a small part of this difference. The main reason is the tense market environment which has led to a collapse in the valuation level (exhibit 18). Therefore, the use of transaction multiples would lead to a significant overvaluation of the company, which is why they should not be used in this case.

In-class question 4:

Given the fact that the task asks you to take an independent role, the assumptions for the synergies should be as objective as possible. Hence, in this case, it would not be correct to take the synergy indications from Xerox. Such numbers are often biased upwards, which is why in this case information from the broker quotes for the synergy assumptions should be used. Regarding synergies, there is no information in the notes on the restructuring expenses that are expected to be necessary to achieve the planned synergies. As a orientation, the information on "Project Own It" can be used, where each $ 1.00 cost saving was offset by expenses of $ 0.35. However, since this is not an internal project, it would be plausible to expect restructuring expenses to be twice as high ($ 0.70 expenses per $ 1.00 cost saving). Since restructuring is not permanent, it makes sense to assume the period as necessary to achieve the run-rate synergies.

Assignment question 4:

For the preparation of answering this question, literature can be used to provide the students with sufficient technical prior knowledge (Berk and DeMarzo 2019; DePamphilis 2022; Koller, Goedhart and Wessels 2020; Pyles 2021; Rosenbaum and Pearl 2020).

Using the assumptions provided in the appendix (exhibit 22), net debt / EBITDA of the combined company can be calculated for both scenarios. A detailed explanation of the origin of the assumptions and the calculation methods for the teacher can be found in TN-7. The analysis shows that the leverage in scenario 2, the acquisition of Xerox by HP, is significantly lower than in scenario 1, the acquisition of HP by Xerox. Hence scenario 2 could enable the same synergies as scenario 1 but would create a much more financially stable combined entity.

In-class question 5:

The outbreak of the Corona pandemic led to a high degree of uncertainty, as it spread rapidly and the severity of the disease could not yet be adequately assessed. This also prevented the adequate estimation of the future development of financial indicators at that time. In addition, the financial markets were tense at the time, making it difficult to raise capital and obtain potential refinancing. The second scenario leads to significantly lower leverage of the combined entity. Therefore, considering the market environment, it would be more rational.

In-class question 6:

To better illustrate the situation John Visentin found himself in, an excerpt from a newspaper article quoting John Visentin at the time can be made available to the students (Tully 2020).

There are numerous arguments for both of John Visentin's options (TN-8), so there is no clear right answer. Most students will likely choose to terminate the takeover attempt, but it is also conceivable that students will choose to continue. This can lead to an interesting discussion.

What happened in reality?

Xerox announced the withdrawal of its tender offer on the 31st of March 2020. The main reason cited by Xerox was the tense market environment resulting from the outbreak of the Corona pandemic. For clarification, either a newspaper article can be provided (Roumeliotis 2020) or a YouTube video can be watched together (Faber 2020).

References

Almeida, Fernando, Duarte Santos, José and Augusto Monteiro, José. 2020. "The Challenges and Opportunities in the Digitalization of Companies in a Post-COVID-19 World" *IEEE Engineering Management Review* 48 (3): 97-101. https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9153093.

Berk, Jonathan and DeMarzo, Peter. 2019. *Corporate finance*. 5th edition. Harlow: Pearson

Bachman, Daniel. 2020. "The economic impact of COVID-19 (novel coronavirus)" *Deloitte Insights*, March 3. https://www2.deloitte.com/us/en/insights/economy/covid-19/economic-impact-covid-19.html (accessed April 1, 2023).

Cabral, Matthew, Knauff, Dan and Allen, Michael. 2019a. "HP Inc.: F4Q19 Preview: Lots of Moving Pieces" *Credit Suisse Equity Research*. November 21.

Cabral, Matthew, Knauff, Dan and Allen, Michael. 2019b. "Xerox Reportedly Looking to Acquire HP Inc." *Credit Suisse Equity Research*. November 6.

Cabral, Matthew, Knauff, Dan and Allen, Michael. 2020. "Xerox Raises Bid for HP Inc.: Our Thoughts" *Credit Suisse Equity Research*. February 10.

Canon Inc. 2020. "Canon Annual Report 2019". January 29. https://global.canon/en/ir/annual/canon-annual-report-2019.pdf (accessed March 10, 2023).

Capital IQ. 2012–2020. "Screening". https://www.capitaliq.com/ciqdotnet/login-sso.aspx? (accessed March 22, 2023).

Capital IQ. 2013–2020. "Charting". https://www.capitaliq.com/ciqdotnet/login-sso.aspx? (accessed March 16, 2023).

CNN Editorial Research. 2021. "Covid-19 Pandemic Timeline Fast Facts" *CNN*, August 9. https://edition.cnn.com/2021/08/09/health/covid-19-pandemic-timeline-fast-facts/index.html (accessed April 1, 2023).

Coster, Paul, Chung, Paul and Strouse, Mark. 2020. "Xerox Holdings Corp: Trimming Estimates, Trimming Price Target" *J.P. Morgan Equity Research*. March 16.

DePamphilis, Donald. 2022. *Mergers, Acquisitions, and Other Restructuring Activities: An Integrated Approach to Process, Tools, Cases, and Solutions*. 11th edition. London: Elsevier

Demling, Alexander and Kerkmann, Christof. 2020. "HP-Chef Enrique Lores steht unter Druck" *Handelsblatt*, February 26. https://www.handelsblatt.com/technik/it-internet/hewlett-packard-hp-chef-enrique-lores-steht-unter-druck/25579956.html (accessed March 20, 2023).

Demling, Alexander. 2020. "Xerox gibt den Kampf um HP auf" *Handelsblatt*, April 1. https://www.handelsblatt.com/technik/it-internet/geplatzte-uebernahme-xerox-gibt-den-kampf-um-hp-auf/25702650.html (accessed April 1, 2023).

Donthu, Naveen and Gustafsson, Anders. 2020. "Effects of COVID-19 on business and research" *Journal of Business Research* 117 (9): 284–289. https://doi.org/10.1016/j.jbusres.2020.06.008.

Faber, David. 2019. "Xerox offers $22 a share in takeover bid for HP, sources tell CNBC". November 7. CNBC YouTube video. 7:04. https://www.youtube.com/watch?v=W5K7yVufh7A.

Faber, David. 2020. “Xerox will end its HP takeover bid due to the coronavirus”. March 31. CNBC YouTube video. 3:04. https://www.youtube.com/watch?v=oSoNJe_AEGM&t=15s.

Franck, Thomas. 2019. “Xerox offers to buy HP for $22, sources say, more than 30% higher than where it traded a month ago” *CNBC,* November 7. https://www.cnbc.com/2019/11/07/xerox-offers-hp-22-a-share-in-takeover-bid-sources-say.html (accessed March 22, 2023).

Gaur, Vandana. 2018. “Xerox names John Visentin as new CEO” *CNBC*, May 16. https://www.cnbc.com/2018/05/16/reuters-america-xerox-names-john-visentin-as-new-ceo.html (accessed March 15, 2023).

Gold, Miriam. 2002. “HP/Compaq - Acquisition timeline” *Computerworld*, February 8. https://www.computerworld.com/article/2792680/hp-compaq---acquisition-timeline.html (accessed March 18, 2023).

Hahn, Nicola. 2019. “HP: Milliardär bläst zum Angriff” *Der Aktionär*, December 4. https://www.deraktionaer.de/artikel/aktien/hp-milliardaer-blaest-zum-angriff-20194098.html (accessed March 28, 2023).

Hahn, Nicola. 2020. “HP: Kommt jetzt doch die Fusion mit Xerox?” *Der Aktionär*, February 25. https://www.deraktionaer.de/artikel/medien-ittk-technologie/hp-kommt-jetzt-doch-die-fusion-mit-xerox--20197227.html (accessed March 2, 2023).

Hammond, Ed and Lores, Enrique. 2020. “Xerox Hostile Offer Undervalues HP, Synergies 'Unrealistic': CEO Lores”. March 5. Bloomberg Markets YouTube video. 6:04. https://www.youtube.com/watch?v=lwPVFEeeBPI.

Hardy, Quentin and Gelles, David. 2014. "Hewlett-Packard Announces Breakup Plan as Technology Landscape Shifts" *The New York Times*, October 6. https://www.nytimes.com/2014/10/07/business/hewlett-packard-announces-breakup-plan.html (accessed March 18, 2023).

Hecking, Mirjam. 2019. "Wie aus zwei wankenden Riesen eine Erfolgsstory werden soll". November 7. https://www.manager-magazin.de/unternehmen/artikel/xerox-will-hp-kaufen-was-die-elefantenhochzeit-bringen-soll-a-1295168.html (accessed March 7, 2023).

HP Inc. 2017. "HP Completes Acquisition of Samsung Electronics Co., Ltd. Printer Business". November 1. https://press.hp.com/us/en/press-releases/2017/hp-completes-acquisition-of-samsung-electronics-co---ltd--printe.html (accessed March 18, 2023).

HP Inc. 2019a. "2019 Financial Report". November 26. https://s2.q4cdn.com/602190090/files/doc_financials/2019/ar/hp-inc_10-ka-(1).pdf (accessed March 17, 2023).

HP Inc. 2019b. "HP Announces CEO Succession". August 22. https://investor.hp.com/news/press-release-details/2019/HP-Announces-CEO-Succession/default.aspx (accessed March 20, 2023).

HP Inc. 2019c. "HP Board of Directors Unanimously Rejects Unsolicited Xerox Proposal". November 17. https://investor.hp.com/news/press-release-details/2019/HP-Board-of-Directors-Unanimously-Rejects-Unsolicited-Xerox-Proposal/default.aspx (accessed March 23, 2023).

HP Inc. 2019d. "HP Inc. Announces Fiscal 2020 Financial Outlook & Restructuring Plan". October 3. https://investor.hp.com/news/press-release-details/2019/HP-Inc-

Announces-Fiscal-2020-Financial-Outlook--Restructuring-Plan/default.aspx (accessed March 21, 2023).

HP Inc. 2019e. "HP Inc. Reports Fiscal 2019 Third Quarter Results". August 22. https://investor.hp.com/news/press-release-details/2019/HP-Inc-Reports-Fiscal-2019-Third-Quarter-Results/default.aspx (accessed March 19, 2023).

HP Inc. 2019f. "HP Leads Digital Manufacturing Forward". May 9. https://press.hp.com/us/en/press-releases/2019/hp-leads-digital-manufacturing-forward-with-powerful-new-3d-printing-solution.html (accessed March 21, 2023).

HP Inc. 2019g. "HP Sends Letter to Xerox". November 24. https://investor.hp.com/news/press-release-details/2019/HP-Sends-Letter-to-Xerox/default.aspx (accessed March 23, 2023).

HP Inc. 2020a. "2020 Form 10-K". November 24. https://s2.q4cdn.com/602190090/files/doc_financials/2020/ar/dc81129d-f0cd-4a42-b6e8-46b29044d9b6.pdf (accessed April 9, 2023).

HP Inc. 2020b. "HP Adopts Limited Duration Shareholder Rights Plan". February 20. https://investor.hp.com/news/press-release-details/2020/HP-Adopts-Limited-Duration-Shareholder-Rights-Plan/default.aspx (accessed March 25, 2023).

HP Inc. 2020c. "HP Announces Strategic and Financial Value Creation Plan". February 24. https://investor.hp.com/news/press-release-details/2020/HP-Announces-Strategic-and-Financial-Value-Creation-Plan/default.aspx (accessed March 26, 2023).

HP Inc. 2020d. "HP Inc. Reports Fiscal 2020 First Quarter Results". February 24. https://investor.hp.com/news/press-release-details/2020/HP-Inc-Reports-Fiscal-2020-First-Quarter-Results/default.aspx (accessed March 26, 2023).

HP Inc. 2020e. "HP Rejects Unsolicited Exchange Offer from Xerox". March 5. https://investor.hp.com/news/press-release-details/2020/HP-Rejects-Unsolicited-Exchange-Offer-from-Xerox/default.aspx (accessed March 27, 2023).

HP Inc. 2020f. "HP Responds to Xerox". January 8. https://press.hp.com/us/en/press-releases/2020/hp-responds-to-xerox-january-8.html (accessed March 24, 2023).

HP Inc. 2020g. "Statement of Ownership: Solicitation". March 5. https://d18rn0p25nwr6d.cloudfront.net/CIK-0000047217/a53bf678-d99b-4612-96bd-bdbdb8a31613.pdf (accessed March 29, 2023).

HP Inc. 2020h. "Strategic & financial plan for value creation". February 24. https://s2.q4cdn.com/602190090/files/doc_financials/2020/q1/Value-Creation-for-web-posting-(1).pdf (accessed March 5, 2023).

HP Inc. n.d. "Executive Biography: Enrique Lores". n.d. https://press.hp.com/content/dam/hpi/press/press-kits/2020/hp-response-covid-19/Enrique%20Lores%20CEO%20bio%20.pdf (accessed March 20, 2023).

Hu, Krystal and Roumeliotis, Greg. 2020. "Defending against Xerox, HP doubles down on share buybacks, cost cuts" *Reuters*, February 24. https://www.reuters.com/article/us-hp-results-idUSKCN20I2G6 (accessed March 27, 2023).

Icahn, Carl. 2019 "Carl C. Icahn Issues Open Letter to HP Inc. Shareholders". December 4. https://carlicahn.com/open-letter-to-hp-inc-shareholders/ (accessed March 23, 2023).

Inagaki, Kana, Fontanella-Khan, James and Fortado, Lindsay. 2018. "How Carl Icahn beat Fujifilm in the battle for Xerox" *Financial Times*, May 14. https://www.ft.com/content/10eeb3ba-54f4-11e8-b3ee-41e0209208ec (accessed March 29, 2023).

Iyengar, Rishi. 2018. “Fujifilm is suing Xerox for more than $1 billion over failed merger” *CNN Business*, June 19. https://money.cnn.com/2018/06/19/investing/fujifilm-xerox-lawsuit-billion/index.html (accessed March 15, 2023).

Kengelbach, Jens, Gell, Jeff, Keienburg, Georg, Degen, Dominik and Kim, Daniel. 2020. “COVID-19’s Impact on Global M&A” *BCG Publications*, March 26. https://www.bcg.com/publications/2020/covid-impact-global-mergers-and-acquisitions (accessed April 1, 2023).

Kerkmann, Christof. 2020. “Der letzte Kampf der IT-Dinosaurier: Xerox ist bereit für den Übernahmekampf”. January 11. https://www.handelsblatt.com/technik/it-internet/druckerhersteller-hp-der-letzte-kampf-der-it-dinosaurier-xerox-ist-bereit-fuer-den-uebernahmekampf/25405526.html (accessed March 9, 2023).

Koller, Tim, Goedhart, Marc and Wessels, David. 2020. *Valuation: measuring and managing the value of companies*. 7th edition. Hoboken: Wiley

Konica Minolta Inc. 2020. “Konica Minolta Inc. Integrated Report 2020”. n.d. https://www.konicaminolta.com/shared/changeable/investors/include/ir_library/ar/ar2020/pdf/konica_minolta_ar2020_e.pdf (accessed March 11, 2023).

Kort, Katharina. 2019. “Xerox bietet mehr als 32 Milliarden Dollar für HP – Welche Rolle spielt Carl Icahn?”. November 7. https://www.handelsblatt.com/technik/it-internet/it-konzerne-xerox-bietet-mehr-als-32-milliarden-dollar-fuer-hp-welche-rolle-spielt-carl-icahn/25200968.html (accessed March 7, 2023).

LaBerge, Laura, O’Toole, Clayton, Schneider, Jeremy and Smaje, Kate. 2020. “How COVID-19 has pushed companies over the technology tipping point—and transformed business forever” *McKinsey Publications*, October 5. https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever (accessed April 7, 2023).

Levitt, Howard. 2020. "Some employers may be using pandemic as excuse to fire employees protected by human rights codes" *Financial Post*, April 21. https://financialpost.com/executive/careers/some-employers-may-be-using-pandemic-as-excuse-to-fire-employees-protected-by-human-rights-codes (accessed April 5, 2023).

Lombardo, Cara. 2019a. "Xerox Considers Takeover Offer for HP" *The Wall Street Journal*, November 5. https://www.wsj.com/articles/xerox-considers-takeover-offer-for-hp-11573012201 (accessed March 22, 2023).

Lombardo, Cara. 2019b. "Xerox to Sell Stake in Joint Venture to Fujifilm for About $2.3 Billion" *The Wall Street Journal*, November 5. https://www.wsj.com/articles/xerox-to-sell-stake-in-joint-venture-to-fujifilm-for-2-2-billion-11572931801?mod=article_inline (accessed March 15, 2023).

Malara, Neha and Chandra Eluri, Krishna. 2020. "HP adopts poison pill after Xerox's buyout attempts" *Reuters*, February 20. https://www.reuters.com/article/us-hp-m-a-xerox-hlngs-idUSKBN20E2XZ (accessed March 26, 2023).

Mergermarket. 2012–2020. "Deals". https://www.mergermarket.com/login?d=1 (accessed March 22, 2023).

Ong, Jeriel and Seymore, Ross. 2020. "$2 raise to $24. Our take on what happens from here" *Deutsche Bank Equity Research*. February 10.

Our World in Data. 2019–2020. "Coronavirus (COVID-19) Deaths". https://covid.ourworldindata.org/data/owid-covid-data.xlsx (accessed March 29, 2023).

Postinett, Axel. 2014. "Ebay knickt vor Icahn ein" *Handelsblatt*, October 1. https://www.handelsblatt.com/finanzen/maerkte/ipo/verkauf-von-paypal-ebay-knickt-vor-icahn-ein/10777866.html (accessed March 28, 2023).

Pyles, Mark. 2021. *Applied corporate finance: making value-enhancing decisions in the real world*. 2rd edition. Cham: Springer

Rakers, Aaron, Quatrochi, Joe, Wilhelm, Jake and Tsvetanov, Michael. 2019. "HPQ: Xerox Details Proposed Synergies" *Wells Fargo Equity Research*. December 9.

Ricoh Company Ltd. 2019. "Ricoh Group Integrated Report 2019". October 23. https://www.ricoh.com/-/media/Ricoh/Sites/com/about/integrated-report/pdf2019_e/All_en.pdf?rev=b52309c96dd7423d9cab372c7e01e533&sc_lang=ja-JP (accessed March 10, 2023).

Rosenbaum, Joshua and Pearl, Joshua. 2020. *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd edition. Hoboken: Wiley

Ross, Andrew. 2020. "Carl Icahn reveals he has a stake in HP and is pushing for a deal with Xerox". November 14. CNBC YouTube video. 1:47. https://www.youtube.com/watch?v=blQjM4k4U5s.

Roumeliotis, Greg. 2019. "Xerox in $33 billion bid for HP: sources" *Reuters*, November 6. https://www.reuters.com/article/us-hp-m-a-xerox-hlngs-idUKKBN1XG0EQ (accessed March 28, 2023).

Roumeliotis, Greg. 2020. "Xerox abandons $35 billion hostile bid for HP" *Reuters*. March 31. https://www.reuters.com/article/us-hp-m-a-xerox-hlngs-idUSKBN21I3C0 (accessed March 3, 2023).

Roy, John. 2019. "HP Inc: Tough Year Ahead for Supplies and PCs; Downgrade to Neutral" *UBS Global Research*. September 16.

Seetharaman, Priya. 2020. "Business models shifts: Impact of Covid-19" *International Journal of Information Management* 54 (10): 1-4. https://doi.org/10.1016/j.ijinfomgt.2020.102173.

Shah, Munjal. 2020. "HP Inc: Aggressive Value Creation Plan Likely the Correct Strategy; Increase Estimates and Price Target" *UBS Global Research*. February 24.

Singh, Kanishka and Chang, Richard. 2018. "Xerox names John Visentin as new CEO" *CNBC*, May 16. https://www.cnbc.com/2018/05/16/reuters-america-xerox-names-john-visentin-as-new-ceo.html (accessed March 15, 2023).

Suva, Jim and Cadiz, Michael. 2020. "Xerox Holdings Corp (XRX): Helping Society But Society Slows Down" *Citi Equity Research*. April 28.

Suva, Jim, Merchant, Asiya and Cadiz, Michael. 2020. "Resuming Coverage: Xerox Sell; HP Neutral" *Citi Equity Research*. April 9.

Tully, Shawn. 2020. "Inside Xerox's audacious quest to buy much bigger rival HP" *Fortune*, March 16. https://fortune.com/2020/03/16/xerox-hp-takeover/ (accessed April 10, 2023).

Xerox Corp. 2019a. "2018 Annual Report". April 24. https://www.news.xerox.com/_gallery/get_file/?file_id=5cc0b1ec2cfac22a22f7db2c&ir=1&file_ext=.pdf (accessed March 15, 2023).

Xerox Corp. 2019b. "HP and Xerox Expand Business Relationship". June 4. https://www.news.xerox.com/news/HP-and-Xerox-expand-business-relationship (accessed March 22, 2023).

Xerox Corp. 2019c. "Xerox + HP: A Value-Creating Combination". December 9. https://www.news.xerox.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/84/files/201911/XRXHP-A-Value-Creating-Combination.pdf (accessed March 17, 2023).

Xerox Corp. 2019d. "Xerox Issues Letter to HP". November 21. https://www.news.xerox.com/news/Xerox-issues-letter-to-HP (accessed March 23, 2023).

Xerox Corp. 2019e. "Xerox Restructures FUJIFILM Relationship, Will Receive $2.3B from Related Transactions". November 5. https://www.news.xerox.com/news/Xerox-restructures-FUJIFILM-relationship (accessed March 22, 2023).

Xerox Corp. 2019f. "Xerox Sends Letter to HP". November 26. https://www.news.xerox.com/news/Xerox-sends-letter-to-HP-2019Nov26 (accessed March 22, 2023).

Xerox Corp. 2020a. "2019 Annual Report". February 28. https://www.news.xerox.com/_gallery/get_file/?file_id=5e8da8b62cfac236368c968c&ir=1&file_ext=.pdf (accessed March 13, 2023).

Xerox Corp. 2020b. "Xerox Increases Offer Price for HP Inc. to $24 Per Share". February 10. https://www.news.xerox.com/news/Xerox-increases-offer-price-for-HP (accessed March 25, 2023).

Xerox Corp. 2020c. "Xerox Launches Tender Offer to Acquire All Outstanding Shares of HP for $24 Per Share in Cash and Stock". March 2. https://www.news.xerox.com/news/Xerox-launches-tender-offer-to-acquire-all-outstanding-shares-of-HP (accessed March 27, 2023).

Xerox Corp. 2020d. “Xerox Secures $24 Billion in Binding Financing Commitments for HP Acquisition”. January 6. https://www.news.xerox.com/news/Xerox-secures-24-billion-in-binding-financing-commitments-for-HP-acquisition# (accessed March 24, 2023).

Xerox Corp. 2020e. “Xerox to Nominate Full Slate of Directors for Election at HP’s 2020 Annual Meeting”. January 23. https://www.news.xerox.com/news/Xerox-to-nominate-full-slate-of-directors-for-election-at-HPs-2020-annual-meeting (accessed March 25, 2023).

Xerox Corp. 2021. “2020 Annual Report”. April 7. https://www.news.xerox.com/_gallery/get_file/?file_id=606b2a59b3aed3397046741d&ir=1&file_ext=.pdf (accessed April 9, 2023).

Xerox Corp. n.d.a. “Acquisitions”. n.d. https://www.news.xerox.com/investors/acquisitions (accessed March 13, 2023).

Xerox Corp. n.d.b. “John Visentin”. n.d. https://www.xerox.com/downloads/usa/en/corporate-officers/John-Visentin.pdf (accessed March 15, 2023).

Xerox Corp. n.d.c. “Xerox History Timeline”. n.d. https://www.xerox.com/en-us/about/history-timeline (accessed March 13, 2023).

Yahoo Finance. 2016–2020a. “HP Inc. (HPQ): Historical Data”. https://finance.yahoo.com/quote/HPQ?fr=sycsrp_catchall (accessed March 16, 2023).

Yahoo Finance. 2016–2020b. “Xerox Holdings Corporation (XRX): Historical Data”. https://finance.yahoo.com/quote/XRX?fr=sycsrp_catchall (accessed March 16, 2023).

Appendix

Part A – Case study

Exhibit 1: Details on key competitors

<u>Canon:</u>

Established in 1937 and headquartered in Tokyo, Japan, Canon was a manufacturer of printers, office multifunction devices, cameras, medical equipment and lithography equipment. In both the consumer print as well as the commercial print market, the company had a leading market position. Geographically, revenues were generated in Japan (ca. 24%), Americas (ca. 29%), Europe (ca. 25%) and rest of Asia and Oceania (ca. 23%) (Cabral, Knauff and Allen 2019b; Canon Inc. 2020).

<u>Ricoh:</u>

Established in 1936 and headquartered in Tokyo, Japan, Ricoh was a provider of office printing, office service, commercial & industrial printing as well as thermal media solutions. While the company had the third highest market share in the commercial printing area, its activity in the consumer print market was not significant. Geographically, revenues were generated in Japan (ca. 40%), Americas (ca. 28%), EMEA (ca. 23%) and rest of the world (ca. 9%) (Cabral, Knauff and Allen 2019b; Ricoh Company Ltd. 2019).

<u>Konica Minolta:</u>

Established in 1873 and headquartered in Tokyo, Japan, Konica Minolta operated the segments Digital Workplace, Professional Print, Healthcare and Industry. The printer offering included multifunction printers, UV inkjet printers, label printers, production printers as well as digital printers. While the company had the fourth highest market share in the commercial printing area, it didn't have a strong market position in the consumer printing area. Geographically, revenues were generated in Japan (ca. 19%), Europe (ca. 30%), North America (ca. 28%) and rest of the world (ca. 23%) (Cabral, Knauff and Allen 2019b; Konica Minolta Inc. 2020).

Exhibit 2: Xerox – Consolidated statement of income

FYE 31-Dec; In $ mn, except per share amounts	2017A	2018A	2019A
Revenues	**9,991**	**9,662**	**9,066**
Sales	3,412	3,454	3,227
Services, maintenance and rentals	6,285	5,940	5,595
Financing	294	268	244
Costs and expenses	(9,466)	(9,113)	(8,244)
Cost of sales	(2,133)	(2,188)	(2,097)
Cost of services, maintenance and rentals	(3,654)	(3,473)	(3,188)
Cost of financing	(133)	(132)	(131)
Research, development and engineering expenses	(424)	(397)	(373)
Selling, administrative and general expenses	(2,514)	(2,379)	(2,085)
Restructuring and related costs	(216)	(157)	(229)
Amortization of intangible assets	(53)	(48)	(45)
Transaction and related costs, net	(9)	(68)	(12)
Other expenses, net	(330)	(271)	(84)
Income before income taxes and equity income	**525**	**549**	**822**
Income tax expense	(468)	(247)	(179)
Equity in net income of unconsolidated affiliates	13	8	8
Income from continuing operations	**70**	**310**	**651**
Income from discontinued operations, net of tax	137	64	710
Net income	**207**	**374**	**1,361**
Income attributable to noncontrolling interests	(12)	(13)	(8)
Net income attributable to Xerox Holdings	**195**	**361**	**1,353**

Source: Xerox Corp. (2020a)

Exhibit 3: Xerox – Consolidated balance sheet

FYE 31-Dec; In $ mn	2017A	2018A	2019A
Current assets	**5,230**	**4,713**	**6,140**
Cash and cash equivalents	1,293	1,081	2,740
Accounts receivable, net	1,357	1,270	1,236
Billed portion of finance receivables, net	112	105	111
Finance receivables, net	1,317	1,218	1,158
Inventories	915	829	694
Assets of discontinued operations	0	19	0
Other current assets	236	191	201
Non-current assets	**10,716**	**10,161**	**8,907**
Finance receivables due after one year, net	2,323	2,149	2,082
Equipment on operating leases, net	454	442	364
Land, buildings and equipment, net	629	498	426
Intangible assets, net	268	220	199
Goodwill	3,930	3,858	3,900
Deferred tax assets	1,026	740	598
Assets of discontinued operations	0	1,352	0
Other non-current assets	2,086	902	1,338
Total assets	**15,946**	**14,874**	**15,047**
Current liabilities	**2,741**	**3,251**	**3,435**
Short-term debt and current portion of long-term debt	282	961	1,049
Accounts payable	1,108	1,073	1,053
Accrued compensation and benefits costs	444	348	349
Liabilities of discontinued operations	0	21	0
Accrued expenses and other current liabilities	907	848	984
Non-current liabilities	**7,698**	**6,370**	**5,804**
Long-term debt	5,235	4,269	3,233
Pension and other benefit liabilities	1,595	1,482	1,707
Post-retirement medical benefits	662	350	352
Other non-current liabilities	206	269	512
Convertible preferred stock	**214**	**214**	**214**
Total equity	**5,293**	**5,039**	**5,594**
Common stock	255	232	215
Additional paid-in capital	3,893	3,321	2,782
Treasury stock, at cost	0	(55)	(76)
Retained earnings	4,856	5,072	6,312
Accumulated other comprehensive loss	(3,748)	(3,565)	(3,646)
Noncontrolling interests	37	34	7
Total liabilities and equity	**15,946**	**14,874**	**15,047**

Source: Xerox Corp. (2019a; 2020a)

Exhibit 4: Xerox – Consolidated statement of cash flows

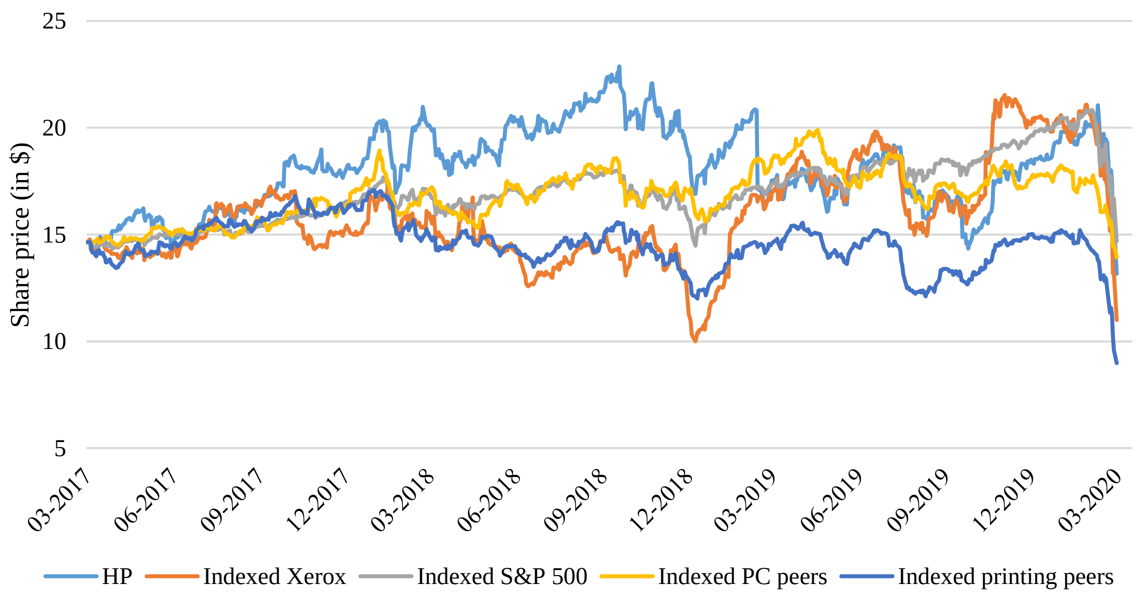
FYE 31-Dec; In $ mn	2017A	2018A	2019A
Cash flows from operating activities	**(267)**	**1,140**	**1,333**
Thereof from continuing operations	(249)	1,082	1,244
Thereof from discontinued operations	(18)	58	89
Net earnings	207	374	1,361
Income from discontinued operations, net of tax	(137)	(64)	(710)
Income from continuing operations	70	310	651
Adjustments	(319)	772	593
Depreciation and amortization	527	526	430
Provisions	73	70	73
Deferred tax expense	399	135	124
Net gain on sales of businesses and assets	(15)	(35)	(21)
Stock-based compensation	52	57	50
Restructuring and asset impairment charges	197	156	127
Payments for restructurings	(220)	(169)	(93)
Defined benefit pension cost	194	175	109
Contributions to defined benefit pension plans	(836)	(144)	(141)
Changes in operating assets and liabilities, net	(690)	1	(65)
Changes in accounts receivable and billed portion of finance receivables	(531)	31	10
Changes in inventories	(73)	17	109
Changes in equipment on operating leases	(217)	(248)	(153)
Changes in finance receivables	162	166	101
Changes in other current and long-term assets	(20)	29	(14)
Changes in accounts payable	1	1	(47)
Changes in accrued compensation	(28)	(111)	(94)
Changes in other current and long-term liabilities	(79)	52	40
Changes in income tax assets and liabilities	11	41	(34)
Changes in derivative assets and liabilities	75	(14)	11
Changes in other operating	9	37	6
Cash flows from investing activities	**165**	**(29)**	**2,148**
Thereof from continuing operations	165	(29)	(85)
Thereof from discontinued operations	0	0	2,233
Cost of additions to land, buildings, equipment and software	(105)	(90)	(65)
Proceeds from sales of businesses and assets	23	59	21
Acquisitions, net of cash acquired	(87)	0	(42)
Collections of deferred proceeds from sales of receivables	213	0	0
Collections on beneficial interest from sales of finance receivables	21	0	0
Other investing, net	100	2	1
Cash flows from financing activities	**(985)**	**(1,301)**	**(1,834)**
Net (payments) proceeds on short-term debt	2	(5)	0
Proceeds from issuance of long-term debt	1,008	9	10
Payments on long-term debt	(1,832)	(311)	(960)
Dividends	(291)	(269)	(243)
Payments to acquire treasury stock, including fees	0	(700)	(600)
Other financing, net	128	(25)	(41)
Effect of exchange rate changes	**53**	**(30)**	**0**
(Decrease) Increase in cash and cash equivalents	**(1,034)**	**(220)**	**1,647**
Cash and cash equivalents at BoP	**2,402**	**1,368**	**1,148**
(Decrease) Increase in cash and cash equivalents	(1,034)	(220)	1,647
Cash and cash equivalents at EoP	**1,368**	**1,148**	**2,795**

Source: Xerox Corp. (2020a)

Exhibit 5: Xerox – Revenue splits 2019A

Source: Xerox Corp. (2020a)

Exhibit 6: Adjusted closing price development of HP vs. benchmarks (last 3 years)



Source: Graphical illustration created by the author using data from Yahoo Finance

Note: Adjusted closing prices of Xerox, S&P 500, PC peers and printing peers indexed to share price of HP from 17.03.2017; PC peers is a manually built index including Acer, ASUSTeK, Compal, Dell, Lenovo and Quanta; Printing peers is a manually built index including Brother, Canon, Konica Minolta, Ricoh, Seiko Epson and Xerox

Performance comparison:

Period	HP	Xerox	S&P 500	PC peers	Printing peers
Last 3 years	(10.1)%	(24.8)%	0.3%	(4.8)%	(38.6)%
Last 2 years	(34.6)%	(31.2)%	(13.3)%	(18.7)%	(39.9)%
Last 1 year	(24.9)%	(35.0)%	(15.5)%	(24.7)%	(38.4)%
YTD	(29.0)%	(45.9)%	(26.1)%	(21.5)%	(39.5)%

Note: Calculation by the author

Exhibit 7: HP – Consolidated statement of earnings

FYE 31-Oct; In $ mn, except per share amounts	2017A	2018A	2019A	Q1 2020A
Net revenue	**52,056**	**58,472**	**58,756**	**14,618**
Personal systems	33,321	37,661	38,694	9,892
Printing	18,728	20,805	20,066	4,724
Corporate investments	8	5	2	1
Other	(1)	1	(6)	1
Costs and expenses	(48,688)	(54,641)	(54,879)	(13,753)
Cost of revenue	(42,478)	(47,803)	(47,586)	(11,746)
Research and development	(1,190)	(1,404)	(1,499)	(400)
Selling, general and administrative	(4,532)	(5,099)	(5,368)	(1,290)
Restructuring and other charges	(362)	(132)	(275)	(291)
Acquisition-related charges	(125)	(123)	(35)	0
Amortization of intangible assets	(1)	(80)	(116)	(26)
Earnings from operations	**3,368**	**3,831**	**3,877**	**865**
Interest and other, net	(92)	(818)	(1,354)	13
Earnings before taxes	**3,276**	**3,013**	**2,523**	**878**
Benefit from (provision for) taxes	(750)	2,314	629	(200)
Net earnings	**2,526**	**5,327**	**3,152**	**678**
Net earnings per share:				
Basic	1.5	3.3	2.1	0.5
Diluted	1.5	3.3	2.1	0.5
Weighted average shares used to calculate EPS:				
Basic	1,688	1,615	1,515	1,454
Diluted	1,702	1,634	1,524	1,460

Source: HP Inc. (2020a; 2020d)

Exhibit 8: HP – Consolidated balance sheet

FYE 31-Oct; In $ mn, except par value	2017A	2018A	2019A	Q1 2020A
Current assets	**22,318**	**21,387**	**20,177**	**17,477**
Cash and cash equivalents	6,997	5,166	4,537	4,205
Accounts receivable, net	4,414	5,113	6,031	4,857
Inventory	5,786	6,062	5,734	4,946
Other current assets	5,121	5,046	3,875	3,469
Non-current assets	**10,595**	**13,235**	**13,290**	**14,179**
Property, plant and equipment, net	1,878	2,198	2,794	2,756
Goodwill	5,622	5,968	6,372	6,387
Other non-current assets	3,095	5,069	4,124	5,036
Total assets	**32,913**	**34,622**	**33,467**	**31,656**
Current liabilities	**22,412**	**25,131**	**25,293**	**23,867**
Notes payable and short-term borrowings	1,072	1,463	357	923
Accounts payable	13,279	14,816	14,793	12,808
Other current liabilities	8,061	8,852	10,143	10,136
Non-current liabilities	**13,909**	**10,130**	**9,367**	**9,423**
Long-term debt	6,747	4,524	4,780	3,932
Other non-current liabilities	7,162	5,606	4,587	5,491
Stockholders' deficit	**(3,408)**	**(639)**	**(1,193)**	**(1,634)**
Common stock, $ 0.01 par value	16	16	15	14
Additional paid-in capital	380	663	835	866
Accumulated deficit	(2,386)	(473)	(818)	(1,306)
Accumulated other comprehensive loss	(1,418)	(845)	(1,225)	(1,208)
Total liabilities and stockholders' deficit	**32,913**	**34,622**	**33,467**	**31,656**

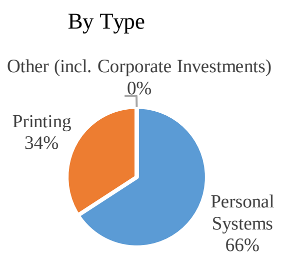
Source: HP Inc. (2019a; 2020a; 2020d)

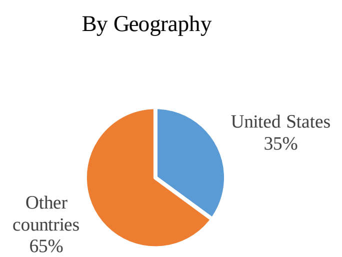
Exhibit 9: HP – Consolidated statement of cash flows

FYE 31-Oct; In $ mn	2017A	2018A	2019A	Q1 2020A
Cash flows from operating activities	**3,677**	**4,528**	**4,654**	**1,285**
Net earnings	2,526	5,327	3,152	678
Adjustments	1,151	(799)	1,502	607
Depreciation and amortization	354	528	744	198
Stock-based compensation expense	224	268	297	109
Restructuring and other charges	362	132	275	291
Deferred taxes on earnings	238	(3,653)	133	117
Other, net	134	319	254	54
Changes in operating assets and liabilities, net	(161)	1,607	(201)	(162)
Changes in accounts receivable	(453)	(491)	(761)	1,167
Changes in inventory	(1,346)	(136)	(68)	761
Changes in accounts payable	2,161	1,429	(53)	(1,919)
Changes in taxes on earnings	73	389	(851)	(27)
Changes in restructuring and other	(233)	(237)	(154)	(109)
Changes in other assets and liabilities	(363)	653	1,686	(35)
Cash flows from investing activities	**(1,717)**	**(716)**	**(438)**	**(498)**
Investment in property, plant and equipment	(402)	(546)	(671)	(198)
Proceeds from sale of property, plant and equipment	69	172	0	0
Purchases of available-for-sale securities and other investments	(1,400)	(367)	(80)	(311)
Maturities and sales of available-for-sale securities and other investments	231	847	771	11
Collateral posted for derivative instruments	(1,170)	(1,165)	(32)	0
Collateral returned for derivative instruments	955	1,379	32	0
Payments made in connection with business acquisitions, net of cash acquired	0	(1,036)	(458)	0
Cash flows from financing activities	**(1,251)**	**(5,643)**	**(4,845)**	**(1,119)**
(Payments of) Proceeds from short-term borrowings with original maturities less than 90 days, net	202	743	(856)	0
Proceeds from short-term borrowings with original maturities greater than 90 days	887	712	0	2
Proceeds from debt, net of issuance costs	5	0	127	9
Payment of short-term borrowings with original maturities greater than 90 days	(3)	(1,596)	0	0
Payment of debt	(84)	(2,098)	(680)	(67)
Settlement of cash flow hedges	(9)	0	0	0
Stock-based award activities	57	52	(61)	(116)
Repurchase of common stock	(1,412)	(2,557)	(2,405)	(691)
Cash dividends paid	(894)	(899)	(970)	(256)
(Decrease) Increase in cash and cash equivalents	**709**	**(1,831)**	**(629)**	**(332)**
Cash and cash equivalents at BoP	**6,288**	**6,997**	**5,166**	**4,537**
(Decrease) Increase in cash and cash equivalents	709	(1,831)	(629)	(332)
Cash and cash equivalents at EoP	**6,997**	**5,166**	**4,537**	**4,205**

Source: HP Inc. (2020a; 2020d)

Exhibit 10: HP – Net revenue splits 2019A





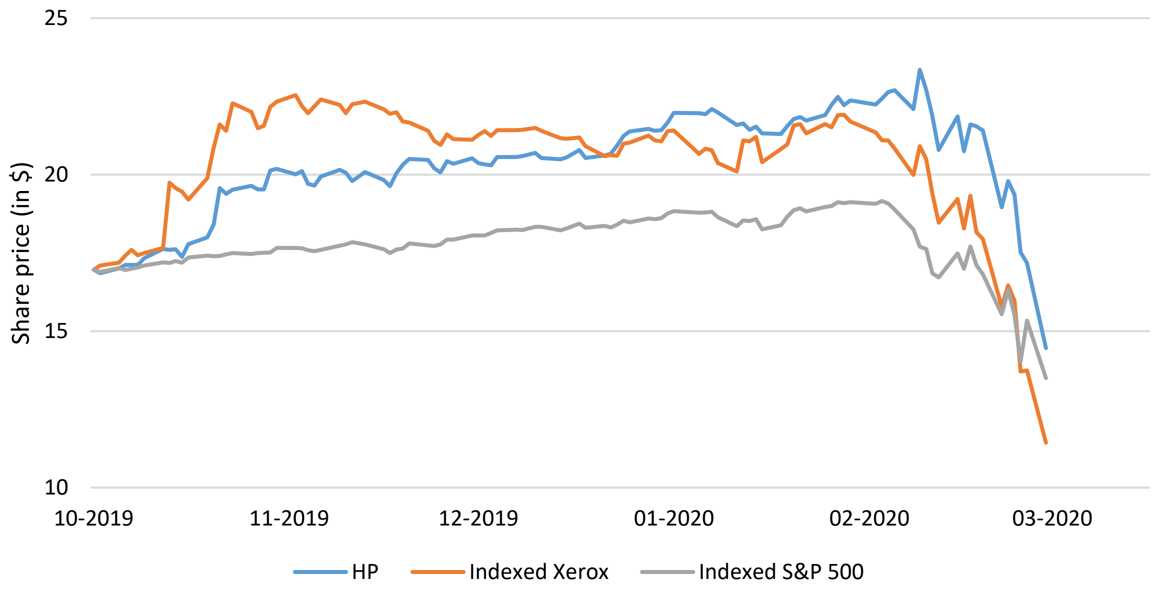
Source: HP Inc. (2020a)

Exhibit 11: Key events of the takeover attempt of HP by Xerox

05-Nov-19	The WSJ first reported that Xerox considered taking over HP
07-Nov-19	CNBC first reported details of the in the meantime confirmed takeover offer. Sources said that Xerox offers \$ 22 per HP share comprised of 77% cash and 23% stock payment
17-Nov-19	The Board of Directors of HP officially rejected the takeover offer of Xerox arguing that it is not in the best interests of HP shareholders
21-Nov-19	Xerox sent a letter threatening to address the shareholders directly if the HP management does not agree to a mutual due diligence
24-Nov-19	HP's management responded that it didn't see a basis for mutual due diligence, as they were also critical regarding Xerox's ability to raise the purchase price and the financial stability of a combined company
26-Nov-19	Xerox replied to HP, underlining that the offer is not conditional or uncertain and announcing to approach the shareholders of HP directly
04-Dec-19	Investor Carl Icahn published an open letter to the HP shareholders underlining the advantages of a combination with Xerox
09-Dec-19	Xerox published a detailed presentation addressed to the HP shareholders providing information on how the planned synergies can be achieved
06-Jan-20	Xerox received \$ 24bn in binding financing commitments
08-Jan-20	In a statement HP reiterated that they still consider the offer as too low
23-Jan-20	Xerox announced that it plans to nominate 11 candidates to replace the Board of Directors of HP at the next Annual Meeting of Stockholders
10-Feb-20	Xerox announced a tender offer at an increased price of \$ 24 per share for all outstanding HP shares not relying on financing or DD conditions
20-Feb-20	HP's management implemented a Shareholder Rights Plan (poison pill) mainly aiming to delay and hamper a hostile takeover by Xerox
24-Feb-20	HP announced Q1 2020 results as well as an extension of its share buy-back program from \$ 5bn to \$ 15bn as a further protective measure against a hostile takeover
02-Mar-20	Official launch of Xerox's tender offer for all outstanding HP shares
05-Mar-20	HP officially recommended its shareholders not to accept the tender offer of Xerox as it undervalues the company and is connected to high risks

Source: Created by the author based on the sources given in the case study

Exhibit 12: Closing price development of HP, Xerox and S&P 500 (focus takeover period)



Source: Yahoo Finance

Note: Closing prices of Xerox and S&P 500 indexed to HP's share price from 17.10.2019

<u>Share price reaction to takeover attempt milestones:</u>

Date	Event	2 trading days reaction		
		HP	**Xerox**	**S&P 500**
05-Nov-19	First takeover offer rumors	8.7%	8.6%	0.0%
17-Nov-19	Board of HP rejected takeover offer	(0.3)%	(0.6)%	0.0%
04-Dec-19	Icahn published open letter to HP shareholders	3.5%	(1.1)%	0.8%
10-Feb-20	Xerox announced tender offer at $24 per HP share	2.3%	0.9%	0.9%
20-Feb-20	HP implemented Shareholder Rights Plan (poison pill)	1.2%	(1.2)%	(1.4)%
24-Feb-20	HP reported weak Q1 results and announced significant extension of its share buy-back program	2.9%	0.3%	(6.3)%
02-Mar-20	Official launch of Xerox's tender offer for all outstanding HP shares	(0.2)%	(1.0)%	1.7%
05-Mar-20	Board of HP recommended its shareholders not to accept the offer	(0.9)%	(7.1)%	(5.0)%

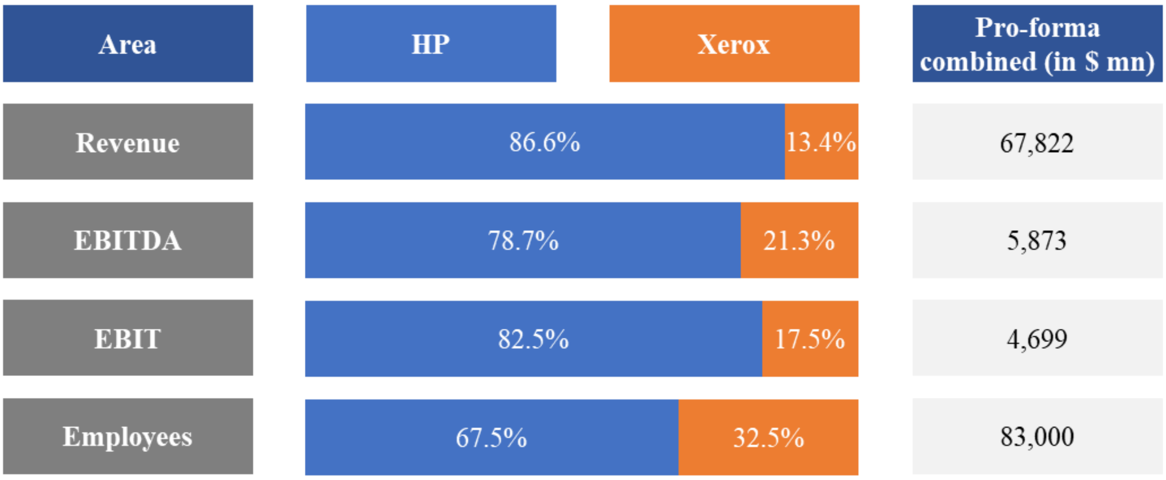
Note: Calculation by the author; 2 trading days reaction describes the price change from the last closing price before the day of the event to the closing price of the first trading day after the event

<u>Share price performance</u> (focus takeover period):

Period	Description	Period performance		
		HP	Xerox	S&P 500
05-Nov-19 – 16-Mar-20	Period from first takeover offer rumours till analysis date	(21.4)%	(45.2)%	(22.4)%
10-Feb-20 – 16-Mar-20	Period from Xerox's tender offer announcement till analysis date	(34.0)%	(47.1)%	(28.8)%
02-Mar-20 – 16-Mar-20	Period from recommendation of rejecting tender offer by the HP Board till analysis date	(33.9)%	(40.5)%	(22.8)%

Note: Calculation by the author

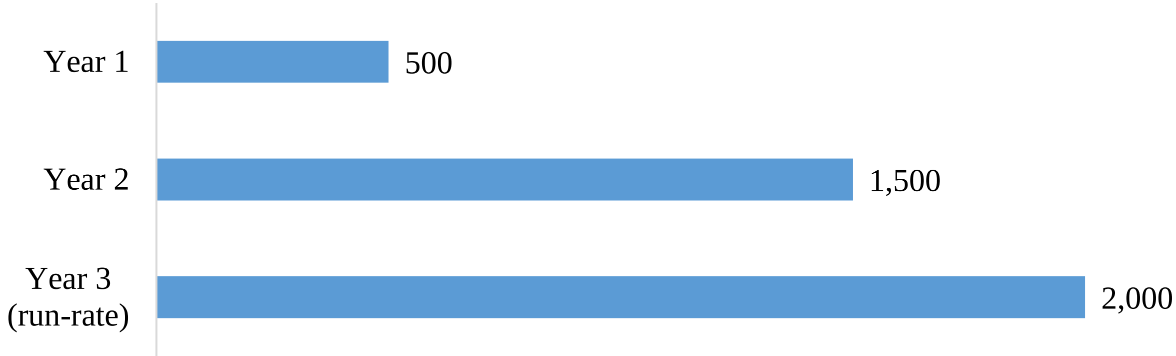
Exhibit 13: Pro-forma combination of HP and Xerox



Source: Graphical illustration created by the author using data from HP Inc. (2020a) and Xerox Corp. (2020a)
Note: Pro-forma combined values based on financials 2019A, excluding synergies

Exhibit 14: Synergies of combination of Xerox and HP

Achievable run-rate cost synergies according to Xerox (in $ mn):

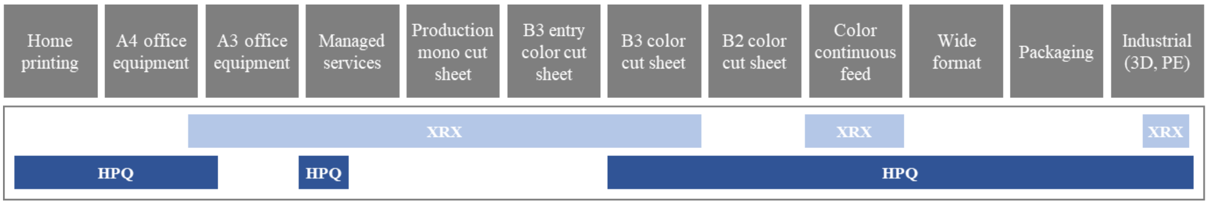


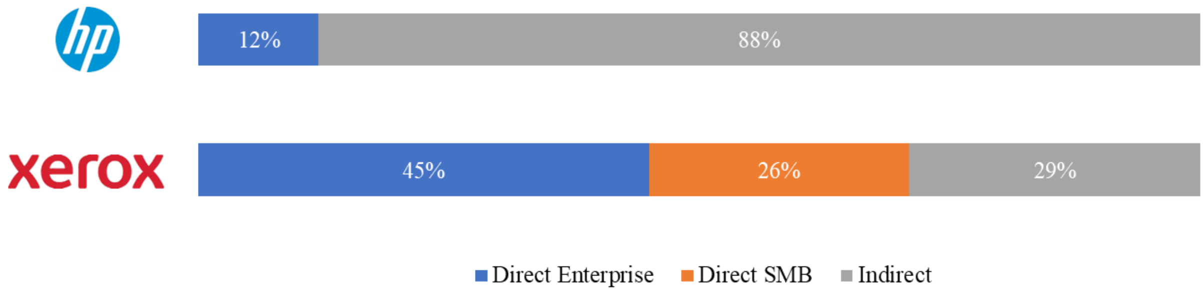
Examples of key cost synergy drivers according to Xerox:

Area	Initial situation	Objective
Procurement	>10,000 suppliers	~3,000 suppliers
IT	~2% of revenue	~1.5% of revenue
Supply chain	1000's of Sku increasing inventory cost	~20% Sku simplification
Real estate	~27 million sqft.	~20% rationalize
Organization design & benefit costs	Expensive voluntary retirements and resulting loss of talent	Strategic plan to retain key talent and address low performers
Shared services centers	Duplicative operations	~30% opportunity: leverage and optimize
Delivery	Overlapping delivery solutions	~30% reduction: coverage optimization, adoption of best practices

Achievable revenue synergies (potential growth opportunities) according to Xerox (in $ mn):

Potential for revenue synergies due to complementary offering as well as distribution according to Xerox:





Source: All graphics above within this exhibit are based on Xerox Corp. (2019c)

Broker quotes on synergies:

- "We view Xerox's synergy calculations ambitious/optimistic especially given HP's focus on driving innovation and growth as the company transitions its printing business to a more hardware centric focus" – Wells Fargo 09-Dec-2019 (Rakers et.al. 2019)
- "…our base case is $1.5bn of cost synergies achieved over three years and no revenue synergies." – Credit Suisse 10-Feb-2020 (Cabral, Knauff and Allen 2020)

Exhibit 15: Details of tender offer for all outstanding HP shares by Xerox

Launch	02-Mar-2020
Expire date	21-Apr-2020 (related to offer and the withdrawal right)
Scope	All outstanding shares
Price	$ 24.00 per HP share
Composition	$ 18.40 in cash and 0.149 shares of Xerox per HP share (based on the closing price from 06-Feb-2020 of $ 37.68)
Financing	$ 24bn in binding debt financing commitments (not based on any due diligence condition) from a bank consortium comprising: Citi, Mizuho, Bank of America, UFG, PNC, Credit Agricole, Truist and Sun Trust Robinson Humphrey. The debt financing commitments comprised a $ 19.5bn senior unsecured 364-day term loan (Capital Markets Bridge Facility) and a $ 4.5bn senior unsecured 60-day term loan facility (Cash Flow Bridge Facility)
Rights of Xerox	The offer is conditional (e.g., approval by the HP Board) and if not all conditions are satisfied, Xerox has the right to extend, delay or terminate the offer

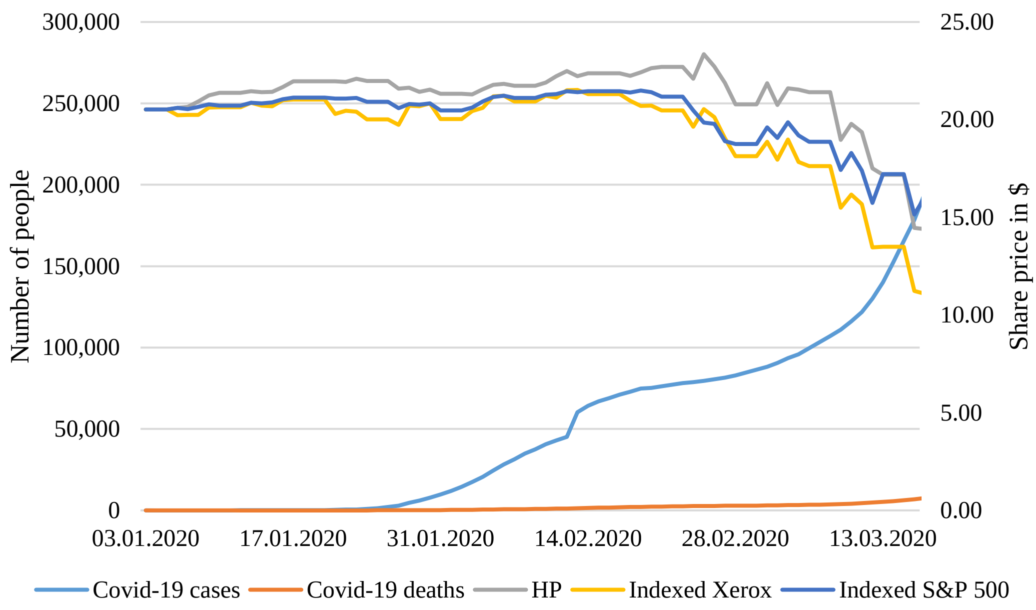
Source: HP Inc. (2020g); Xerox Corp. (2020c)

Exhibit 16: Key events of the beginning of the Covid-19 pandemic

31-Dec-19	Reporting of first cases of pneumonia observed in Wuhan, China to the WHO
07-Jan-20	Confirmation of the identification of the virus as a new coronavirus by the Chinese authorities
11-Jan-20	Announcement of the first death due to the virus by the Wuhan Municipal Health Commission
21-Jan-20	Communication of the first case in the USA
31-Jan-20	Announcement of travel restrictions by the US government that prohibit the entry to foreigners that were in China within the last 14 days
11-Feb-20	The WHO officially names the virus “Covid-19”
25-Feb-20	Italy introduced a complete lockdown in numerous regions in Lombardy to stop the rapid spread of the disease
03-Mar-20	The FED reduced the interest rate by 0.5% to support the US economy in the uncertain market environment (first unscheduled rate cut since 2008)
09-Mar-20	Italy announces a lockdown for the whole country
11-Mar-20	The WHO officially classifies Covid-19 as a pandemic
13-Mar-20	The US government declares national emergency

Source: CNN Editorial Research (2021)

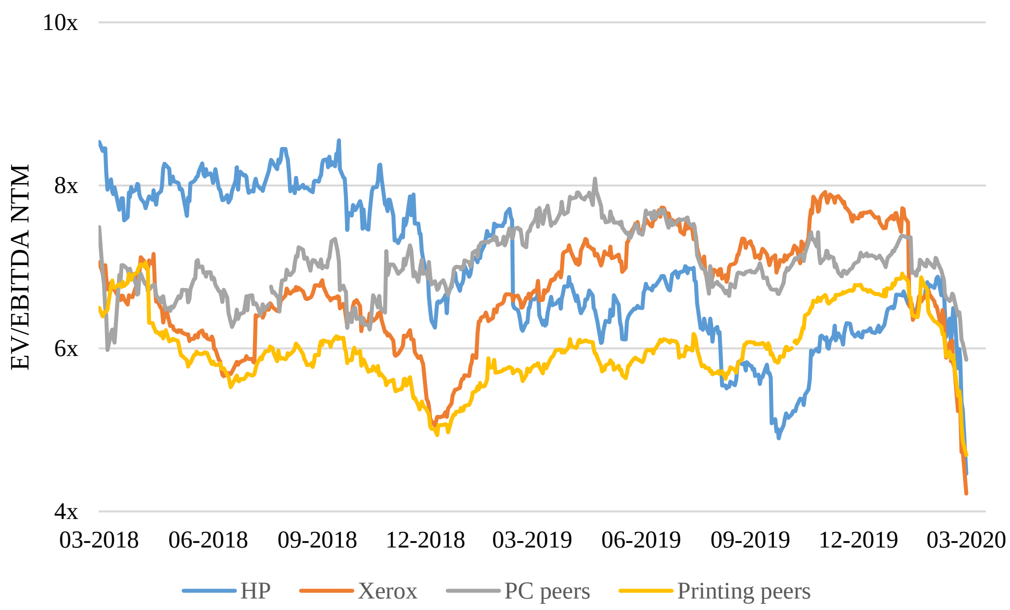
Exhibit 17: Closing price development vs. Covid-19 cases / deaths



Source: Graphical illustration created by the author using data from Our World in Data (2019–2020) and Yahoo Finance

Note: Closing prices of Xerox and S&P 500 indexed to HP's share price from 03.01.2020

Exhibit 18: Development of EV/EBITDA NTM multiples of HP vs. benchmarks (last 2 years)



Source: Graphical illustration created by the author using data from Capital IQ (2013–2020)

Note: PC peers is a manually built index including Acer, ASUSTeK, Compal, Dell, Lenovo and Quanta; Printing peers is a manually built index including Brother, Canon, Konica Minolta, Ricoh, Seiko Epson and Xero

Exhibit 19: DCF assumptions

FYE 31-Oct; In $ mn except tax rate	Q2-Q4 2020E	2021E	2022E	2023E	2024E
Income statement items					
Revenue	43,057	56,818	55,847	55,207	54,575
Gross profit	8,433	11,130	11,252	11,141	11,032
EBITDA	4,026	4,975	5,203	5,711	5,667
Depreciation & amortization	559	715	703	1,244	1,234
EBIT	3,467	4,260	4,500	4,467	4,434
Additional items					
Tax rate	16%	16%	16%	16%	16%
Change in net working capital	81	107	105	104	103
Capex	(457)	(635)	(625)	(618)	(611)
WACC	12.3%	12.3%	12.3%	12.3%	12.3%
Terminal growth rate					(0.4)%

Source: UBS Equity Research (Roy 2019; Shah 2020) slightly modified by author using publications of HP Inc. (2020a; 2020d)

Exhibit 20: Trading multiples of HP's peers

As per 16-Mar-20	Ticker	EV/Revenue '20E	EV/Revenue '21E	EV/EBITDA '20E	EV/EBITDA '21E	EV/EBIT '20E	EV/EBIT '21E
Acer Inc.	2353.TW	0.1x	0.1x	5.0x	4.2x	7.4x	5.9x
ASUSTeK Computer Inc.	2357.TW	0.2x	0.2x	6.1x	5.4x	6.9x	5.7x
Brother Industries Ltd.	6448.T	0.5x	0.5x	3.5x	3.4x	5.3x	5.1x
Canon Inc.	7751.T	0.7x	0.7x	5.8x	5.7x	11.4x	11.2x
Compal Electronics Inc.	2324.TW	0.1x	0.1x	7.2x	7.0x	11.3x	10.7x
Dell Technologies Inc.	DELL	0.8x	0.8x	6.4x	6.0x	7.8x	7.2x
Konica Minolta Inc.	4902.T	0.5x	0.5x	6.7x	5.0x	27.8x	11.7x
Lenovo Group Ltd.	0992.HK	0.2x	0.2x	4.3x	4.1x	6.9x	6.4x
Quanta Computer Inc.	2382.TW	0.2x	0.3x	9.6x	9.2x	14.0x	13.3x
Ricoh Company Ltd.	7752.T	0.6x	0.6x	6.0x	5.9x	11.3x	10.9x
Seiko Epson Corp.	6724.T	0.4x	0.4x	3.6x	3.4x	9.4x	8.4x
Xerox Holdings Corp.	XRX	0.7x	0.8x	4.2x	4.2x	5.6x	5.6x
Mean		*0.4x*	*0.4x*	*5.7x*	*5.3x*	*10.4x*	*8.5x*
Median		*0.4x*	*0.4x*	*5.9x*	*5.2x*	*8.6x*	*7.8x*
30%-Percentile		*0.2x*	*0.2x*	*4.5x*	*4.2x*	*7.0x*	*6.0x*
70%-Percentile		*0.6x*	*0.6x*	*6.3x*	*5.8x*	*11.3x*	*10.8x*

Source: Capital IQ (2013–2020)
Note: The peer companies are based on the author's analysis of equity research reports (Cabral, Knauff and Allen 2019; Roy 2019; Suva, Merchant and Cadiz 2020) and a company publication (HP Inc. 2020a)

Exhibit 21: Comparable transaction multiples

Date	Target	Description	Acquirer	EV ($ mn)	EV/Sales	EV/EBITDA	EV/EBIT
11-2018	Miraclon	US-based provider of flexo printing solutions	Montagu Private Equity	390	2.6x	11.8x	n.a.
08-2018	Apogee	UK-based company offering print, document and process technology service solutions	HP	499	1.8x	12.7x	n.m.
07-2018	Inmac Wstore	France-based provider of computers and peripherals	Bechtle	246	0.5x	n.a.	n.a.
07-2018	Caseking	Germany-based manufacturer and distributor of gaming PCs and computer hardware	Rivean Capital	220	0.8x	11.8x	n.a.
09-2016	Samsung Electronics - Printing Business	Printing Business of Samsung Electronics with a production base in China	HP	1,050	0.6x	n.a.	n.a.
04-2016	Leykam Let's Print Holding	Austria-based company that provides web offset printing services	Walstead CE	199	0.8x	8.3x	n.a.
04-2016	MGI Digital Technology (30.21%)	France-based company engaged in producing digital printing equipment	Konica Minolta	229	4.4x	15.9x	19.7x
07-2015	Reggiani Macchine	Italy-based producer of printing machines	Electronics for Imaging	84	1.0x	9.2x	18.3x
03-2015	Domino Printing Sciences	UK-based company producing inkjet and laser printers	Brother Industries	1,489	2.8x	15.8x	18.4x
12-2014	Xerox Corporation (ITO Business)	US-based information technology outsourcing business of Xerox Corporation	Atos	1,000	0.7x	n.a.	8.3x
06-2014	SPGPrints	Netherlands-based company engaged in manufacturing screens and printing systems	Print II	327	1.1x	7.0x	8.4x
04-2014	Flint Group	Luxembourg-based manufacturer of printing inks, digital printing presses and other equipment	Goldman Sachs; Koch Equity	3,055	1.0x	6.3x	n.a.
Mean					*1.5x*	*11.0x*	*14.6x*
Median					*1.0x*	*11.8x*	*18.3x*
30%-Percentile					*0.8x*	*8.7x*	*10.4x*
70%-Percentile					*1.6x*	*12.3x*	*18.4x*

Source: Comparable transaction screening conducted by author using data from Capital IQ (2012–2020) and Mergermarket (2012–2020)
Note: Date refers to the announcement date of the transaction

Exhibit 22: Leverage comparison assumptions for combined entity

In $ mn, except share amounts	HP	Xerox
General assumptions on financials (latest available if not otherwise stated)		
Cash and cash equivalents	4,205	2,740
Total debt	4,855	4,282
Net debt	**650**	**1,542**
EBITDA 2020E	5,089	1,480
Net debt/EBITDA	**0.1x**	**1.0x**
Number of shares outstanding (16-Mar-20)	1,429,830,919	212,789,123
Assumptions scenario 1: Xerox buys HP		
- Use assumptions given in tender offer (exhibit 15)		
- Total fees of 2% of the EV		
- Payment of the existing debt on the balance sheet of the target		
- Additional debt is used for remaining funding needs		
Assumptions scenario 2: HP buys Xerox		
- Financing solely using existing cash and new debt, no usage of own shares		
- Consider a 30% premium on the share price of Xerox from 06-Feb-20 ($ 37.68) as the offer price		
- Total fees of 2% of the EV		
- Payment of the existing debt on the balance sheet of the target		

Source: Created by the author using data from HP Inc. (2020a), Xerox Corp. (2020a; 2020b), Credit Suisse Equity Research (Cabral, Knauff and Allen 2020), Deutsche Bank Equity Research (Ong and Seymore 2020), J.P. Morgan Equity Research (Coster, Chung and Strouse 2020) and Capital IQ (2013–2020)

Part B – Teaching notes

TN-1: Suggested teaching plan

5 min	**Introduction:** Welcome students and ask 1-2 volunteers to briefly summarize the case study. Afterwards, ask students to form groups of 3-4 people to discuss the solutions of the assignment questions.
15 min	**Is HP an attractive target and role of Carl Icahn:** Give students ca. 5 minutes to discuss their results of assignment question 1 in groups and then ask 1-2 volunteers to share their solutions. Then, ask in-class question 1 and conduct a vote. Ask 1 person per voting group to explain his / her position.
15 min	**Covid-19 impact:** Enable students to talk ca. 5 minutes about their solutions of assignment question 2 and afterwards ask 1-2 volunteers to share their results. Then, ask in-class question 2 and let 2-3 volunteers present their thoughts.
20 min	**Valuation:** Give students ca. 5 minutes time to discuss their results of assignment question 3 and then ask 1-2 volunteers to present their results. After this, share the in-class questions 3 and 4 with the students one by one and ask 2-3 students each to express their opinions.
15 min	**Combination scenarios and leverage:** Provide students ca. 5 minutes of time to discuss their solutions of assignment question 4 and afterwards ask 1-2 volunteers to share their results. Then, share in-class question 5 and collect 2-3 opinions of volunteers.
15 min	**What would you do in John Visentin's situation?:** Construct a board picture with arguments for the two options given in in-class question 6 with the help of the students (TN-8). Afterwards, conduct a vote and ask 1-2 volunteers per voting group to explain his / her opinion.
5 min	**Closing:** Shortly summarize the key takeaways for the students and show a short video about what happened in reality (see provided recommendation)

Note: Created by the author

TN-2: DCF calculation

Assumptions (FYE 31-Oct; in $ mn if not stated otherwise)						
Operational	**Q1 20A**	**Q2-Q4 20E**	**FY21E**	**FY22E**	**FY23E**	**FY24E**
Revenue	14,618	43,057	56,818	55,847	55,207	54,575
EBITDA	1,063	4,026	4,975	5,203	5,711	5,667
Depreciation & amortization	198	559	715	703	1,244	1,234
Capex	(198)	(457)	(635)	(625)	(618)	(611)
Change in net working capital	9	81	107	105	104	103

DCF	
Valuation date	31.01.2020
Tax rate	16.0%
Long term growth rate	(0.4%)
WACC	12.3%
Include synergies	Yes

Synergies	Q1 20A	Q2-Q4 20E	FY21E	FY22E	FY23E	FY24E
Revenue synergies	0	0	0	0	0	0
Cost synergies	0	375	1,125	1,500	1,500	1,500
Restructuring expenses	0	(263)	(788)	(1,050)	0	0

Free cash flow calculation (FYE 31-Oct; in $ mn if not stated otherwi	Q1 20A	Q2-Q4 20E	FY21E	FY22E	FY23E	FY24E
Revenue	**14,618**	**43,057**	**56,818**	**55,847**	**55,207**	**54,575**
Revenue growth	*n.a.*	*n.a.*	*(1.5)%*	*(1.7)%*	*(1.1)%*	*(1.1)%*
Revenue synergies	0	0	0	0	0	0
Cost synergies	0	375	1,125	1,500	1,500	1,500
Restructuring expenses	0	(263)	(788)	(1,050)	0	0
EBITDA (incl. synergies)	**1,063**	**4,139**	**5,313**	**5,653**	**7,211**	**7,167**
EBITDA margin	*7.3%*	*9.6%*	*9.4%*	*10.1%*	*13.1%*	*13.1%*
Depreciation and amortization	(198)	(559)	(715)	(703)	(1,244)	(1,234)
EBIT	**865**	**3,580**	**4,598**	**4,950**	**5,967**	**5,933**
Taxes	(138)	(573)	(736)	(792)	(955)	(949)
NOPLAT	**727**	**3,007**	**3,862**	**4,158**	**5,012**	**4,984**
Depreciation and amortization	198	559	715	703	1,244	1,234
Capex	(198)	(457)	(635)	(625)	(618)	(611)
Delta NWC	9	81	107	105	104	103
Unlevered free cash flow	**736**	**3,190**	**4,049**	**4,341**	**5,742**	**5,710**

Discounted cash flow calculation (In $ mn if not stated otherwise)	Q1 20A	Q2-Q4 20E	FY21E	FY22E	FY23E	FY24E
Planning period						
Year factor		*0.8*	*1.8*	*2.8*	*3.8*	*4.8*
Discount factor		0.92	0.82	0.73	0.65	0.58
Unlevered free cash flow		3,190	4,049	4,341	5,742	5,710
PV of unlevered free cash flow		**2,924**	**3,305**	**3,156**	**3,717**	**3,291**
Terminal value period						
Year factor		*0.8*	*1.8*	*2.8*	*3.8*	*4.8*
Discount factor		0.92	0.82	0.73	0.65	0.58
Terminal value						44,778
PV of terminal value						**25,808**

Enterprise value	**42,201**
Share of terminal value	*61.2%*
Share of planning period	*38.8%*
(+) Cash and cash equivalents	4,205
(-) Notes payable and short-term borrowings	923
(-) Long-term debt	3,932
Equity value	**41,551**
Total number of shares (in mn)	1,460
Equity value per share (in $)	**28.46**

Source: Author's calculations using assumptions and data from UBS Equity Research (Roy 2019; Shah 2020), Credit Suisse Equity Research (Cabral, Knauff and Allen 2020), HP Inc. (2020a) and Xerox Corp. (2019c)

TN-3: DCF – Sensitivity analysis

Enterprise value in $ mn (WACC vs. long term growth rate)

		WACC				
		11.3%	11.8%	12.3%	12.8%	13.3%
LT growth rate	(0.8)%	44,963	43,064	41,313	39,691	38,187
	(0.6)%	45,494	43,545	41,750	40,090	38,552
	(0.4)%	46,043	44,042	42,201	40,501	38,927
	(0.2)%	46,611	44,556	42,667	40,925	39,314
	0.0%	47,199	45,086	43,147	41,362	39,712

Equity value per share in $ (WACC vs. long term growth rate)

		WACC				
		11.3%	11.8%	12.3%	12.8%	13.3%
LT growth rate	(0.8)%	30.4	29.1	27.9	26.7	25.7
	(0.6)%	30.7	29.4	28.2	27.0	26.0
	(0.4)%	31.1	29.7	28.5	27.3	26.2
	(0.2)%	31.5	30.1	28.8	27.6	26.5
	0.0%	31.9	30.4	29.1	27.9	26.8

Source: Calculation by the author

TN-4: DCF – Implied price range

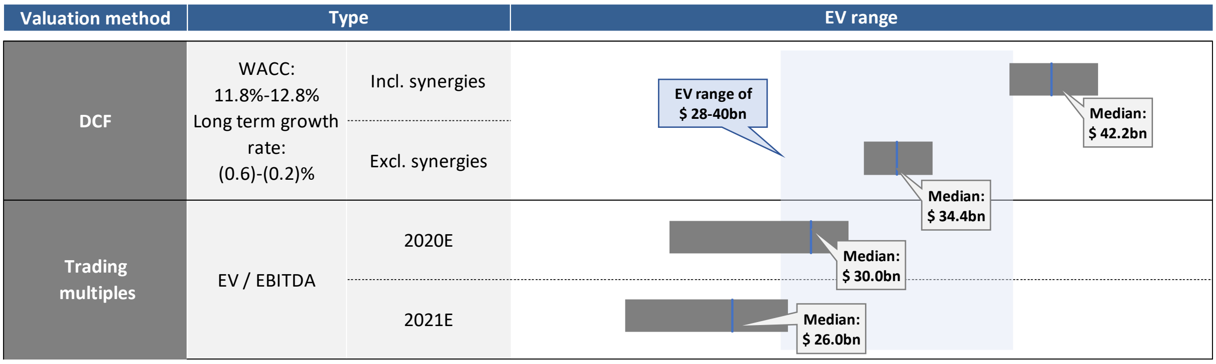
Input (in $ mn if not stated otherwise)	
Total number of shares	1,460
Equity value (without synergies)	33,721
Value of synergies	7,830

Range of prices (in $ mn if not stated otherwise)

	% of synergy shared (α)	$ value of synergies shared	Value of target + synergies	Offer price (in $)
Minimum price (pay only value of target)	0%	0	33,721	23.1
Range of offer prices	10%	783	34,504	23.6
	20%	1,566	35,287	24.2
	30%	2,349	36,070	24.7
	40%	3,132	36,853	25.2
	50%	3,915	37,636	25.8
	60%	4,698	38,419	26.3
	70%	5,481	39,202	26.9
	80%	6,264	39,985	27.4
	90%	7,047	40,768	27.9
Maximum price (pay all synergies)	100%	7,830	41,551	28.5

Source: Calculation by author
Note: Value of synergies equals difference of enterprise value in synergies case vs. in no synergies case

TN-5: Football field & analysis at various prices



		EV ($ mn)	15,000	20,000	25,000	30,000	35,000	40,000	45,000	50,000
Analysis at various prices	Implied EV / EBITDA	2019A	3.2x	4.3x	5.4x	6.5x	7.6x	8.7x	9.7x	10.8x
		2020E	2.9x	3.9x	4.9x	5.9x	6.9x	7.9x	8.8x	9.8x
		2021E	3.0x	4.0x	5.0x	6.0x	7.0x	8.0x	9.0x	10.1x

Source: Graphical illustration created by the author based on results of previous analysis

TN-6: Football field – Pro-forma equity value per share

Football field – Pro-forma equity value per share (in $ mn except per share amounts)						
Minimum value (considering no synergies)						
	Median EV	Considering synergies	Median EV + synergies	EV-EQ adjustments	Equity value	Value per share
DCF	34,371	0	34,371	(650)	33,721	23.10
CCA: EV/EBITDA (2020E)	30,025	0	30,025	(650)	29,375	20.54
CCA: EV/EBITDA (2021E)	26,044	0	26,044	(650)	25,394	17.76
Average						*20.47*
Maximum value (considering synergies)						
	Median EV	Considering synergies	Median EV + synergies	EV-EQ adjustments	Equity value	Value per share
DCF	34,371	7,830	42,201	(650)	41,551	28.46
CCA: EV/EBITDA (2020E)	30,025	7,830	37,855	(650)	37,205	26.02
CCA: EV/EBITDA (2021E)	26,044	7,830	33,874	(650)	33,224	23.24
Average						*25.91*

Source: Calculation by the author based on results of previous analysis

TN-7: Leverage comparison

In $ mn, except share amounts	HP	Xerox	Explanation
General assumptions on financials (latest available if not otherwise stated)			
Cash and cash equivalents	4,205	2,740	Information of HP based on Q1 2020 reporting and of Xerox based on annual report 2019A
Total debt	4,855	4,282	Information of HP based on Q1 2020 reporting and of Xerox based on annual report 2019A
Net debt	**650**	**1,542**	Total debt minus cash and cash equivalents
EBITDA 2020E	5,089	1,480	HP value based on UBS (Shah 2020) and Xerox value based on J.P. Morgan (Coster, Chung and Strouse 2020)
Net debt/EBITDA	**0.1x**	**1.0x**	Net debt divided by EBITDA
Number of shares outstanding (16-Mar-20)	1,429,830,919	212,789,123	Numbers as per 16th of March 2020 from CapitalIQ
Scenario 1: Xerox buys HP			
Price composition			
	In $	**In %**	
Price per HP share	24.00	100%	Information based on tender offer (exhibit 15)
Cash portion	*18.40*	*77%*	Information based on tender offer (exhibit 15)
Xerox share portion	*5.60*	*23%*	Price per HP share minus cash portion
Total volume			
	In $ mn	**In %**	
Total volume	34,316	100%	Sum of cash portion and share portion
Cash portion	*26,309*	*77%*	Cash portion per HP share* total number of HP shares/1,000,000
Xerox share portion	*8,007*	*23%*	Xerox share portion per HP share* total number of HP shares/1,000,000
Sources of funds			
	In $ mn	**In %**	
Existing debt financing commitments	24,000	67%	Based on Xerox announcement (check exhibit 15 for details)
Additional debt requirement	905	3%	Total uses minus sum of existing financing instruments
Existing cash balance	2,740	8%	Given assumption, without considering trapped cash for simplicity
Newly issued shares	8,007	22%	Calculated result from volume analysis
Total sources	**35,652**	**100%**	Sum of all the single components
Uses of funds			
	In $ mn	**In %**	
Equity purchase price	34,316	96%	Result of total volume analysis
Net debt	650	2%	Given assumption based on author's calculation
Fees	686	2%	Assuming total transaction fees of 2% of purchase price based on CS (Cabral, Knauff and Allen 2020)
Total uses	**35,652**	**100%**	Sum of all the single components
Leverage analysis			
	In $ mn		
Combined EBITDA 2020E	6,569		Sum of the EBITDA values of Xerox and HP
Net debt of combined entity	26,447		Sum of existing net debt and new debt for financing
Existing net debt of Xerox	*1,542*		Net debt value considering the cash usage for financing the transaction
New debt for financing	*24,905*		Sum of existing debt commitments and additional debt requirements
Net debt / EBITDA	**4.0x**		
Scenario 2: HP buys Xerox			
Price composition			
	In $	**In %**	
Assumed offer price per Xerox share	48.98	100%	Sum of reference price and premium
Xerox reference share price	*37.68*	77%	Reference share price based on tender offer (exhibit 15)
Premium	*11.30*	23%	Assuming a premium of 30% on the reference price similar to DB (Ong and Seymore 2020)
Total volume			
	In $ mn	**In %**	
Total volume	10,423	100%	Equals cash portion because no own shares are used
Cash portion	10,423	100%	Assumed offer price per share* total number of HP shares/1,000,000
HP share portion	*0*	*0%*	Given assumption that no shares should be used for acquisition
Sources of funds			
	In $ mn	**In %**	
Existing cash balance	4,205	35%	Given assumption, without considering trapped cash for simplicity
Additional debt requirement	7,969	65%	Total uses minus sum of existing financing instruments
Total sources	**12,174**	**100%**	Sum of all the single components
Uses of funds			
	In $ mn	**In %**	
Equity purchase price	10,423	86%	Result of total volume analysis
Net debt	1,542	13%	Given assumption based on author's calculation
Fees	208	2%	Assuming total transaction fees of 2% of purchase price based on CS (Cabral, Knauff and Allen 2020)
Total uses	**12,174**	**100%**	Sum of all the single components
Leverage analysis			
	In $ mn		
Combined EBITDA 2020E	6,569		Sum of the EBITDA values of Xerox and HP
Net debt of combined entity	*8,619*		Sum of existing net debt and new debt for financing
Existing net debt of Xerox	*650*		Net debt value considering the cash usage for financing the transaction
New debt for financing	*7,969*		Sum of existing debt commitments and additional debt requirements
Net debt / EBITDA	**1.3x**		

Source: Author's calculations using assumptions and data from HP Inc. (2020a), Xerox Corp. (2020a; 2020b), Credit Suisse Equity Research (Cabral, Knauff and Allen 2020), Deutsche Bank Equity Research (Ong and Seymore 2020), J.P. Morgan Equity Research (Coster, Chung and Strouse 2020) and Capital IQ (2013–2020)

TN-8: Board picture – Arguments for John Visentin's options

A Continue with the takeover attempt

Alternatives

- Limited organic growth opportunities -> need for inorganic measures

Attractive offer price & synergies

- Tender offer price below maximum pro-forma value
- Upside through revenue synergies in addition to cost synergies

Partnership agreement

- Existing partnership agreement is already the first small step towards a business integration

New technologies

- More room to invest in new technology due to cash flow gains
- HP has already demonstrated success in 3D printing

APAC network

- Need for alternative after terminating the JV with Fujifilm
- Potential to benefit from HP's network in APAC

Personal reasons of CEO

- Risk of acting against the interests of Carl Icahn -> risk of replacement

B Terminating the takeover plans

Bad timing

- Strong share price drops of Xerox since first takeover rumors -> also value reduction of the share portion of the tender offer
- HP with comparatively smaller losses -> less affected by the Corona pandemic than Xerox

Potential overestimation of synergies

- Hostile character could complicate integration
- No experience of Xerox in PC space
- Already undertaken cost-cutting programs
- Lack of comprehensive DD

High leverage

- Risky especially due to uncertain market environment because of the Corona pandemic
- Risk of rating downgrade and resulting higher interest payments

Refinancing risk

- Potential problems to refinance the bridge loans that were planned to acquire HP due to the tense financial markets

Alternatives

- Takeover of an Asian competitor as an alternative after the termination of the JV with Fujifilm

Other

- Requirement of antitrust approvals
- Risk of additional takeover defense measures of HP
- Launch of new strategy by HP

Source: Graphical illustration by the author based on arguments from the case study and the answers to the assignment questions