

# Krause Fund Research

Fall 2022

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## Adobe Inc. (NASDAQ: ADBE)

### Technology – Application Software

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#### Investment Thesis

**We recommend a BUY rating as Adobe will see strong sales growth across its software subscription segments and maintain its reputation as an innovative leader in the application software industry.** Although Adobe will face macroeconomic turmoil in the short term and faces significant competition in the industry, we believe that Adobe's industry-leading margins and strong free cash flows, as well as the expansion of software subscriptions in an increasingly digital economy, will allow it to remain a preeminent application software player in the long term. **This investment will yield a 14-16% upside for investors.**

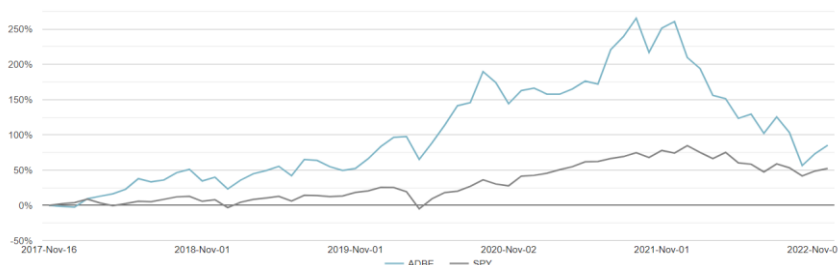
#### Drivers of Thesis

- Capitalizing off the current boom in digital media and digital innovation: Adobe will continue being the leading brand for creative content as it leverages its strong free cash flow to expand the performance and scope of their software solutions through R&D and M&A.
- Significant growth opportunities with the Software-as-a-Service (SaaS) business model: SaaS produces the highest free cash flow margins in the sector and is easily accessible by customers. We believe in Adobe's competitive advantage in the quality and breadth of its subscription offerings, retaining users in the Adobe ecosystem for years to come.
- Adobe is trading at lower PEG multiples relative to software industry peers: We forecasted Adobe to trade at a 1-year forward PEG multiple of 1.8x, lower than its peers' multiples. This, along with Adobe's industry-leading margins, suggests that Adobe may be undervalued compared to its competitors.

#### Risks of Thesis

- Macroeconomic threats such as a recession, rising interest rates, and the decreasing value of international sales from a strong USD: These factors could contribute to Adobe seeing slower total growth from 2023 to 2024, as well as more expensive financing from a higher cost of capital.
- Possible slowdown in digital subscription revenue growth in a post-pandemic world: As people return to in-person work and life, the explosive growth of the digital economy could cool down and significantly decrease Adobe's subscription sales growth.
- Heightened competition from rising competitors: The application software industry is frequently threatened by upcoming competitors in SaaS, so Adobe will have to pay large premiums to acquire companies like Figma or pay large costs to compete and improve their offerings.

#### Stock Performance vs. S&P 500



Stock Rating:

**BUY**

Current Price: **\$334.94**

Target Price: **\$381-\$389**

#### Company Description

Adobe Inc. (NASDAQ: ADBE) is an industry leader in the application software space. Founded in 1982 by Charles Geschke and John Warnock, Adobe functions as a key player in the Software-as-a-Service (SaaS) market and the cloud-based arena by offering term subscriptions and pay-per-use service models for consumers and businesses. Adobe provides a diverse portfolio of products and services commonly used by content creators, students, marketers and knowledge workers, businesses, and consumers. Adobe is headquartered in San Jose, California.

#### At a Glance

DCF: **\$381**

DDM: **\$380**

Relative Valuation: **\$389-\$421**

#### Price Data

Current Price: **\$334.94**

52-Week Range: **\$274.73-\$699.54**

Analyst Mean Target Price: **\$367**

#### Key Metrics

Market Capitalization: **\$159.2B**

Shares Outstanding: **464.9MM**

Beta: **1.25**

1Y Forward P/E: **31.3x**

#### Financial Profile

2021 ROE: **43.8%**

2021 ROA: **17.7%**

2021 Revenue: **\$15,785MM**

2022E Revenue: **\$17,731MM**

2021 Operating Margin: **27.3%**

2022E Operating Margin: **24.3%**

#### Earnings Estimates

Year	2021A	2022E	2023E
EPS	\$10.02	\$10.86	\$12.55
Growth	-7.5%	8.4%	15.6%

## Executive Summary

Adobe Inc. (NASDAQ: ADBE), based in San Jose, CA, is a world leader in the technology space. Adobe is a key player in the application software industry, providing an expansive portfolio of tools within the digital economy that is transforming how individuals, teams, businesses, and governments can interact with various forms of media to tell their own stories, transform their own businesses, and enhance collaboration. Adobe operates under three segments: Subscription, Product (excluding subscriptions), and Services & Other. Adobe's Subscription segment is their most important, and it consists of three business lines: Digital Media, Digital Experience, and Publishing/Advertising.

We believe in Adobe's dominance as a top player in application software driven by its ability to deliver modernized software solutions with a breadth and depth of offerings, create an integrated user interface, introduce new products on a timely and cost-effective basis, and offer top information security against cyber-attacks to maintain a trusted brand. Even with macroeconomic threats tied to rising rates and high inflation, as well as competitive offerings from other industry players, Adobe's proven track record and the rise of the digital age will enable the company to continue its dominance for years to come.

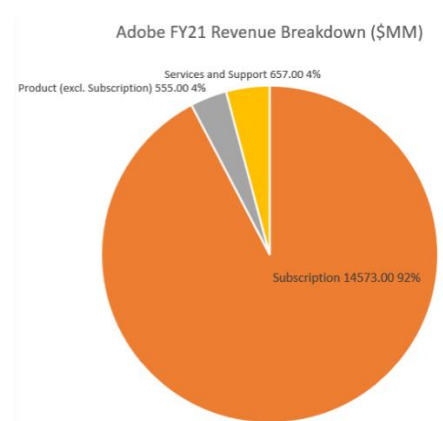
## Company Analysis

Adobe Incorporated (NASDAQ: ADBE), headquartered in San Jose, CA, is an American computer software company specializing in the design and distribution of digital content tools and programs. Adobe maintains a global presence, reporting geographic segments in the United States, Other Americas, Europe, the Middle East, & Africa (EMEA), and Asia-Pacific (APAC) regions. As a company within the application software industry, Adobe generates most of its revenue by serving businesses of all sizes with tools and solutions to enhance their digital content capabilities, including their

famous Adobe Photoshop and Adobe Acrobat PDF applications.<sup>1</sup>

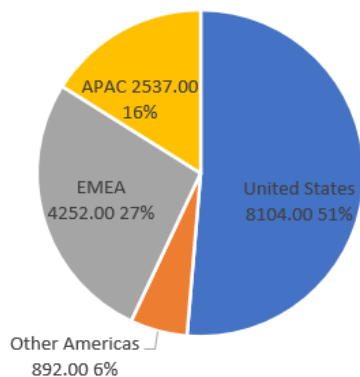
Adobe's mission is to change the world through digital experiences by being a leading company in creative content and digital solutions. Adobe aims to be a widely trusted brand that can consistently provide the breadth and depth of software services that their customers need, and ultimately retain their users in the Adobe product ecosystem. The company operates under a cloud-based Software-as-a-Service business model, selling their products online under a subscription plan, which it believes will unlock more potential for growth in its offerings and customers.<sup>1</sup>

Adobe's reported revenue segments are Subscription, Product (excluding subscription), and Services & Other. The company's reported Subscription segments are Digital Media, Digital Experience, and Publishing/Advertising, and it is strategically focusing its investments in the first two. Adobe has been a market leader in the application software industry, historically being a dominant player and now pioneering the industry's recent evolution towards a subscription-based SaaS model, shown in its Subscription segment's growing share of its revenue over time. Adobe's fiscal 2021 revenue breakdown across business lines and geographic segments can be highlighted in the charts below.



Source: Adobe 10-K<sup>1</sup>

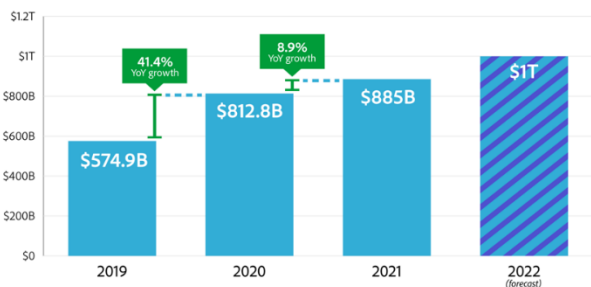
## Adobe FY21 Revenue by Region (\$MM)



Source: Adobe 10-K<sup>1</sup>

Adobe is highly leveraged on the growth of the digital economy, the economic activity that uses the internet (online connections between people, businesses, data, and devices) to create and consume goods and services. Their Digital Media and Digital Experience segments, which account for over 90% of their total revenue, stand to benefit as more economic activity turns digital. Below is a chart that illustrates the growth of the digital economy over time by tracking annual online spending. Adobe projects a 13% Y/Y growth in online spending in 2022, and we expect this trend to continue over our 10 year forecast period.

Adobe Digital Economy Index: Annual Online Spend (U.S.)  
Source: Adobe Analytics

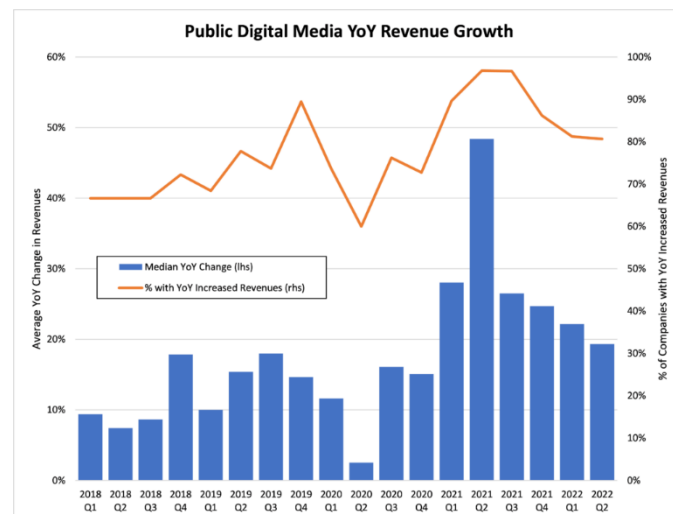


Source: Adobe Analytics<sup>3</sup>

## Digital Media

The Digital Media segment contains Adobe's line of applications that enables customers to create, publish, and promote digital content, as well as improve productivity by modernizing customer interactions with digital documents and creative content. The Digital

Media segment is built around the Adobe Creative Cloud (Creative Cloud Express, Photoshop, Illustrator, Lightroom, etc.) and the Adobe Document Cloud (Acrobat, Adobe Sign, etc.), providing solutions to creative professionals, businesses, and other consumers. In the past 5 years, the Digital Media segment has grown at a 19.8% CAGR, showing rapid growth. In fiscal 2021, sales grew by 25.4% due to strong Creative Cloud performance and the acquisition of new customers.<sup>5</sup> This segment accounts for 75.8% of Adobe's subscription revenues.<sup>1</sup> The chart below shows the historically strong growth of the digital media market.



Source: Oarex<sup>4</sup>

When forecasting Adobe's 2022E and 2023E Digital Media revenue, we expected a significant slowdown in sales growth due to unfavorable market conditions for the digital economy's growth, reducing demand for Adobe's software. We assumed 12.8% sales growth in 2022E and 13.9% sales growth in 2023E, in line with management and analyst estimates. Towards the high end of estimates, we expect a recovery of the digital economy and forecasted 20.0% Digital Media sales growth from Adobe in 2024E, and we expected a slow decline in sales growth until the end of our forecast period in 2031E. We expect this to be driven by Adobe continuing to capitalize on market opportunities such as its forward-looking acquisition of Figma and strong research & development capabilities.

## **Digital Experience**

The Digital Experience segment contains the Adobe Experience Cloud, a platform of applications and services that provides businesses with marketing solutions to manage and customize customer experiences, ranging from analytics to commerce. The offering is centered around the Adobe Experience Platform, which provides businesses with a customer experience management solution that uses customer data and artificial intelligence (AI) to deliver instant personalized digital experiences. In the past 5 years, the Digital Experience segment has grown at a 16.8% CAGR. In fiscal 2021, the Digital Experience segment grew 27.0%, driven by similar factors as the Digital Media segment: strong performance in the Adobe Experience Cloud and customer acquisition. This segment accounts for 23.2% of Adobe's subscription revenues.<sup>1</sup>

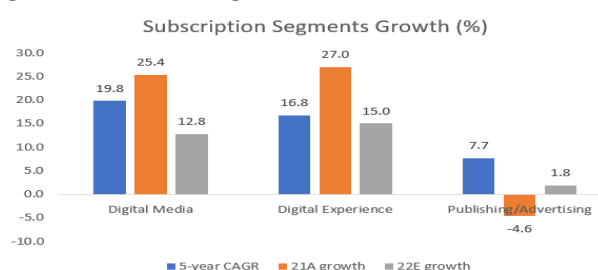
Because the Digital Experience segment relies on similar sales growth factors as the Digital Media segment, we expect the slower growth of the digital economy to also hurt Adobe's sales growth, forecasting 15.0% growth in 2022E and 14.0% growth in 2023E. We think that the Digital Experience segment is also positioned to rebound in 2024E as the technology sector recovers, and we expect longevity with a slowly decreasing sales growth rate throughout the rest of the forecast period. This will be due to the research & development of new technologies such as machine learning, which will improve the effectiveness of its Adobe Experience Platform and profitability for Adobe's customers.

## **Publishing/Advertising**

Adobe's publishing/advertising line sells licenses to legacy products and services that address diverse opportunities including the Adobe Advertising Cloud (advertising solutions), eLearning solutions, technical document publishing, web conferencing, a document and forms platform, web application development, and high-end printing. Adobe faces strong competition from other large-cap publishing companies, leaving little room for opportunity. As these are the company's oldest products, Adobe strategically does not have a focus on this segment which accounts for only 1.0% of Adobe's

subscription revenues. This segment saw Adobe's slowest subscription growth at a 7.65% CAGR over the past 5 years, and in fiscal 2021 Publishing/Advertising sales decreased 4.6%. We do not think there will be any drivers for this segment in our forecast period. We forecasted this segment to see sales growth of 1.8% in 2022E and 1.4% in 2023E, in line with estimates. This sales growth slowly decreases to 0.2% in 2031E, showing that this will not be a significant segment for Adobe in the future.<sup>1</sup>

Following is a chart that illustrates the historical growth of each subscription segment as well as our projected growth for each segment.



Source: Adobe 10-K<sup>1</sup>

## **Product (excluding Subscription)**

Adobe sells other products outside of its subscription offerings, falling under the Product segment. The company collects fees related to perpetual licenses for on-premise software, as opposed to subscriptions. The segment accounts for only 3.5% of Adobe's total revenues. This segment sees negative growth for Adobe at a -4.72% CAGR over the past 5 years, and in fiscal 2021 Product segment sales increased 9.5%. We do not think there will be any drivers for this segment in our forecast period as Adobe's focus is on its subscription revenues. We forecasted this segment to see a sales decline of 0.4% in 2022E and a decline of 28.0% in 2023E, in line with estimates. In 2024E and beyond, the Product segment's sales growth begins at the economic growth rate of 3.0% and we slowly decrease it to 2.0% sales growth in 2031E. This will not be a significant segment for Adobe in the future.<sup>1</sup>

## **Services and Other**

Adobe's Services and Other segment consists of fees related to consulting, training, maintenance, and support

for certain on-premise licenses. The segment accounts for only 4.2% of Adobe's total revenues. This segment saw growth for Adobe at a 7.35% CAGR over the past 5 years, and in fiscal 2021 Services and Other segment sales decreased by 10.6%. We do not think there will be any drivers for this segment in our forecast period as Adobe's focus is on its subscription revenues. We forecasted this segment to see sales growth of 3.7% in 2022E and 4.6% in 2023E, in line with estimates. The segment's sales growth slowly decreases to 0.5% in 2031E, showing that this will not be a significant segment for Adobe in the future.<sup>1</sup>

### **Figma Acquisition**

Adobe is planning to close its acquisition of Figma, a graphics editing and user interface design startup, in 2023 for \$20 billion in cash and stock. Figma adds to the Digital Media segment, specifically the Creative Cloud suite. Due to a lack of specific details regarding the transaction, and the fact that it has not closed yet, we have not adjusted our model for this acquisition. The transaction is projected to be paid for 50x revenue in 2023. Adobe paying for the acquisition with \$10 billion in stock possibly indicates that they think their stock is valued relatively highly and that they would rather use stock instead of 100% cash. We believe that this acquisition will be dilutive to earnings per share over the next few years. Figma is only estimated to have \$400 million in revenue in FY23 and paying \$10 billion in cash means that Adobe cannot buy back as many shares to increase its earnings per share.<sup>6</sup>

Overall, Adobe's strategy in this situation is to make their Creative Cloud suite a long-term market leader, and by buying an upcoming leader they are investing in their future. Fundamentally, this should be a great acquisition down the road because Adobe has a lot of excess cash that they pour into stock repurchases instead of investing in growth – so although acquiring Figma will be dilutive to EPS, this will help catalyze sustainable growth in free cash flow and maintain their Creative Cloud as the market leader in the long run.

## **SWOT Analysis**

### **Strengths**

Adobe's presence as a top brand in the digital content tool space is one of the company's biggest strengths. From creative professionals to companies of all sizes, Adobe has a large user base that benefits from its products. Adobe states that 90% of creative professionals use their Photoshop application, their most popular product.<sup>7</sup> Users will typically find the solutions to their problems when using Adobe, boasting nearly 30 applications in its Creative Cloud collection and nearly 20 in its Experience Cloud collection.<sup>8</sup> Adobe's decision to transition into a subscription-based/SaaS business model years ago has paid off and Adobe will benefit from this strategy going forward. Not only does a subscription-based business model offer more predictable revenues, but it also works perfectly with what Adobe is offering. Adobe's applications often functionally intersect. For example, Photoshop and Illustrator often work together because they share the same functional purpose – digital content design. A subscription-based model allows Adobe to package different products into one offering. The strategy helps Adobe maintain market share and helps them gain more exposure to potential customers. Furthermore, customers will view Adobe's software packages as more "bang-for-your-buck" when a subscription gives them access to many different applications.<sup>1</sup>

Adobe's subscription-based revenue growth is still growing at fast rates, which means Adobe still has a lot of unrealized revenue potential. Adobe also has strategic partnerships with major tech firms like IBM and Microsoft.<sup>9</sup> These partnerships create relationships and promote collaboration that all parties can benefit from. Adobe's strategic partnerships with IBM and Microsoft are centered around artificial intelligence that could provide for more innovation in Adobe's Experience Cloud.<sup>10</sup> In 2022, Fortune ranked Adobe #32 in their "Best Companies to Work For" list, showing strong employee satisfaction.<sup>11</sup> Finally, as the popularity of

content creation grows, people will want to be able to share their content with others. Adobe owns Behance, an online social platform centered around sharing creative content. In 2020, Behance had over 24 million community members. The platform allows people to discover Adobe's products and feel like they are part of the Adobe community, which helps promote Adobe's brand.<sup>8</sup>

### **Weaknesses**

Adobe's products are well-known and liked by its users, but its level of customer service is not up to that standard. Adobe relies on third party support for their customer service operations. These third-party systems do not provide the level of customer support that users have come to expect from a top brand. Community feedback has been negative, detailing Adobe customer supports' lack of help solving their issues and even inconveniencing them further. For a company that operates at a massive scale globally, this is a glaring weakness.<sup>12</sup>

Another weakness for Adobe is that the Application Software industry is constantly finding new ways to innovate products, which leads to relatively short product life cycles. Products do not become obsolete, but they do need to be continually improved upon. As an industry leader, Adobe has a lot of pressure to innovate and improve on their current offerings. If they do not, competitors will begin to take market share.<sup>13</sup>

The price of Adobe's most popular software packages, such as the Creative Cloud, are expensive. This may turn away creative users that want to find an affordable option. Further, users that are not creative professionals, but are rather using digital content for a one-time purpose, will find Adobe's pricing model expensive. Users can purchase individual applications separately, but Adobe prices standalone applications much more expensively than if they were part of Adobe's main software packages. For example, Adobe's Creative Cloud All Apps package is priced at \$54.99/month, which includes Photoshop. Buying Photoshop as a standalone product, however, will cost people \$20.99/month.<sup>8</sup>

One last source of weakness for Adobe is with their least used products. Adobe offers a whole suite of applications in their software packages. The most popular applications out of the bunch get the most attention and command the highest margins, but this does not align well with the least popular applications. Margins may further contract due to the development of these unpopular applications, and they may require further investment in updates to increase their popularity.<sup>8</sup>

### **Opportunities**

Adobe may see additional opportunities in mergers and acquisitions as it continues to diversify and improve the current offerings they have. For example, Adobe acquired Figma which provides businesses with collaborative user-interface design software, showing that it is actively looking for new products to expand their portfolio of enterprise software solutions and build loyalty to be the go-to brand for businesses. Adobe could also capitalize on the growth of artificial intelligence technology by implementing these innovations into its Adobe Experience Cloud, which can provide even more valuable data insights to businesses to improve marketing, customer relationships, and operational efficiency.<sup>13</sup> As Adobe's Digital Experience solutions become even more valuable to businesses, it could see strong long-term growth in its enterprise software sales. Along with the expansion and improvement of their offerings, increased compatibility with mobile users by increasing accessibility and functionality could also drive sales growth in a newer market for subscription software.

The economy has seen a growing amount of people who want to be entrepreneurs, presenting an opportunity for Adobe to market themselves towards an entrepreneurial demographic. By aiming to become the most trusted brand by new businesses with their Creative Cloud and Document Cloud solutions, Adobe could strengthen loyalty to its brand. Adobe's latest product release, the Creative Cloud Express (a free Creative Cloud), could boost its software presence across weaker markets such as K-12 education due to its inexpensive cost, ease of



use, and ability to access basic Creative Cloud features that are commonly needed by students.<sup>8</sup>

### **Threats**

Adobe still faces significant threats across its business segments, and these are important to consider when analyzing Adobe's performance going forward. DocuSign continues to be a top competitor with the Adobe Document Cloud, competing for market share in the document solutions market. Adobe's Experience Cloud suite faces expanding competition as well in the enterprise software market, which holds other rapidly growing companies such as Salesforce, Oracle, and ServiceNow. Adobe has a strategic focus in their Digital Media and Digital Experience segments as they will have to fight to retain their market share. Outside of competitors, Adobe also faces regulatory risk as the United States government increases its scrutiny on data collection and privacy, which could affect how Adobe operates its business and make the Adobe Experience Cloud less valuable to businesses due to restricted data insights.<sup>1</sup>

Adobe also faces threats outside of its products and services. The company may face compromised software infrastructure in its data and data centers as they face security concerns from increasing and intensifying cyberattacks. Adobe also has significant international currency risk as nearly half of its revenues come from outside the United States. As the dollar continues to rise, Adobe may see a decrease in the realized value of its international sales. Another recent development for Adobe is with its new strategic partnerships. While they can reap the benefits of collaboration and innovation from these partnerships, the downside is also significant as the partnerships could see failure or disagreements which would be expensive disruptions to Adobe's business. The trend of increasing natural disasters could also pose a risk to Adobe's infrastructure, as their physical locations and data centers are largely located in California and surrounding regions which are prone to earthquakes, wildfires, and other destructive natural events.<sup>13</sup>

## **Industry Analysis**

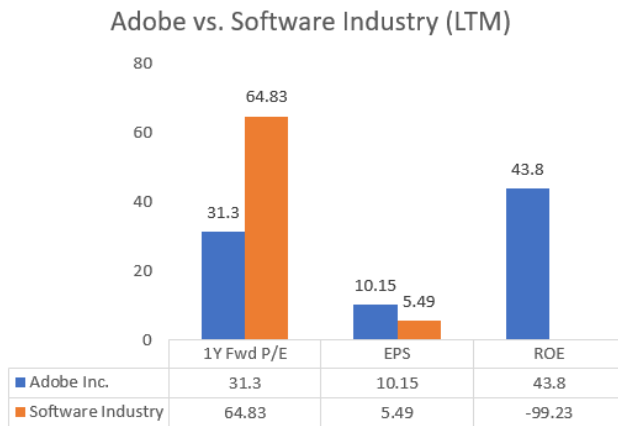
### **Overview**

The Information Technology sector includes manufacturers and service providers of tech software and hardware. The major industries in Information Technology are tech software and services, tech hardware and equipment, and semiconductors and semiconductor equipment. On the software side of the sector, companies develop software applications, internet tools, databases, data processing, and entertainment, among other services. On the hardware side of the sector, companies develop and manufacture smartphones, computers, wearables (headphones/earphones, smart speakers, etc.), communications equipment, semiconductors, and semiconductor equipment. Adobe competes in the Application Software sub-industry which includes companies that develop and produce software designed for specialized applications in the business or consumer markets, including enterprise, technical, and cloud-based software.<sup>4</sup> Recently, the Application Software sub-industry has extremely benefited from the economy's migration to cloud-based and digital solutions, a result of the flexibility required to navigate the COVID-19 pandemic.<sup>13</sup>

### **Comparison to Industry and Competition**

Adobe's top competitors in the Application Software industry include Salesforce, Oracle, and ServiceNow. Salesforce is Adobe's top Digital Experience segment competitor, excelling in customer relationship and experience management. Oracle and ServiceNow are other enterprise software leaders in the application software industry. Adobe is a leader in the industry across various financial metrics. Adobe generates \$15,785 million in revenue, similar in size to its large-cap peers. Oracle is the largest at \$42,440 million in revenue as of its latest fiscal year, and we believe that it is the most similar company to Adobe in the industry as they are both established competitors in enterprise software.

Adobe leads its peers with a 43.6% free cash flow margin according to FactSet, compared to Salesforce and ServiceNow's below 31% margins and Oracle with an 11.8% margin. It has a current assets to current liabilities ratio of 1.2x, greater than Salesforce and ServiceNow's 1.0x and only second to Oracle's 1.6x, showing relatively strong liquidity. Adobe is trading at 35.98x earnings whereas the only comparable company is Oracle at 31.54x earnings, suggesting Adobe is expected to have a stronger growth trajectory than Oracle. Because Adobe generates by far the highest free cash flow margin and has more room for growth than its closest comparable, Oracle, we believe that Adobe has established itself as the best player in the industry and will lead the software market in innovation for years to come.<sup>1, 13, 15</sup> The chart below shows Adobe's dominance in the software industry.



Source: Fidelity<sup>16</sup>

## **Porter's Five Forces**

### **Threat of New Entrants**

The threat of new entrants in the Application Software industry is high, so firms must react fast to emerging competitors. The top firms in the industry, such as Adobe, are well-established and control most of the market share, but their products are constantly threatened by both smaller software developers and bigger, established companies who can produce a similar product. Despite the high threat of new entrants, the established firms have the recognition, resources, and capital to deal with these new entrants and they can invest in further innovation or acquire a potentially

threatening company. The latter was seen when Adobe opted to acquire Figma to complement its Digital Media segment rather than compete with it in the future.

While the new entrants can directly compete with the product, it is hard to compete with the brand presence and loyal customer relationships of a trusted company like Adobe. Therefore, it is more common for smaller new entrants to integrate into an existing company's portfolio of offerings. When a bigger firm tries to break into the industry, they must invest lots of capital up front and create a track record of successful software to be able to compete, which makes this a less common but more serious threat.<sup>13</sup>

### **Threat of Substitute Products**

The threat of substitute products in the industry is low. There are no substitute products from other industries that replace the solutions that application software provides. However, as the economy becomes increasingly driven by digital solutions and subscriptions, it is possible that the industry expands its software products in new areas to try and replace other industries' products.<sup>13</sup>

### **Bargaining Power of Suppliers**

The bargaining power of suppliers in the industry is low. The Application Software industry relies on software developers instead of traditional suppliers to supply its software products, meaning its supply chains are fully digital and not physical. In general, these highly-skilled labor teams do not bear a huge cost to the firms but are very valuable, shown by the industry's high gross margins. Therefore, firms in the industry are open to compensating their developers based on performance, regardless of if there is no bargaining power from suppliers.<sup>1</sup>

### **Bargaining Power of Buyers**

The bargaining power of buyers in the industry is moderate. Buyers have multiple options when it comes to digital content and customer management software, although most market share is concentrated in the top players in each space. The major players in the digital



media space (Microsoft, Alphabet, Adobe, etc.) and the major players in the digital experience space (Adobe, Salesforce, etc.) offer similar software solutions that buyers can easily exchange for one another. In addition, the replication of software products makes entering the market easier for larger, more established firms who are willing to invest significant capital. These factors come together to make the top firms compete for customer loyalty, meaning that customers hold a moderate amount of bargaining power.<sup>13</sup>

**Competition Among Existing Players**

The competition among existing players in the industry is high. With the number of large-cap software companies increasing annually due to investment in growth, there is high competition over the market share for similar products. A prime example of this is in the customer management enterprise software market, where Adobe, Salesforce, and other enterprise software companies offer businesses comparable solutions and try to beat each other out in innovation, quality, and customer loyalty. This creates a hypercompetitive environment with short product life cycles – each company wants to sell the best software first to maintain their market share.<sup>13</sup>

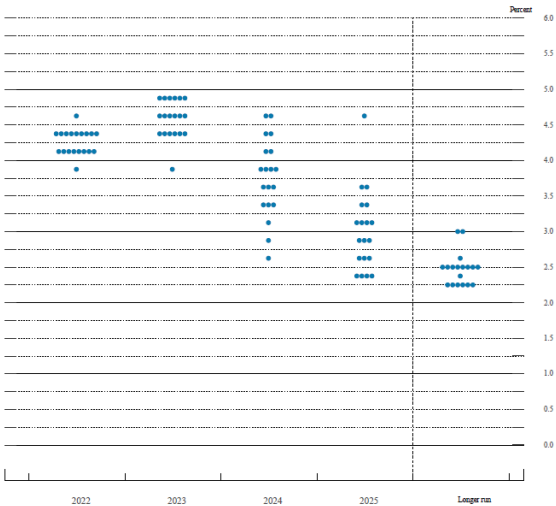
**Economic Analysis**

**Interest Rates**

Interest rates are a particularly important economic gauge for the technology sector. Interest rates are guided by the federal funds rate, which is set by the U.S. Federal Reserve. The federal funds rate sets the interest rate that banks borrow from each other at in the overnight lending market, and it trickles down to influence the borrowing, saving, and treasury bond rates. In response to inflation, the Fed raised the federal funds rate to a range of 3.75% to 4.00% as of the latest FOMC meeting held in November. Interest rates affect the sector because it impacts consumer demand and firm investment in growth. When looking at interest rate levels, we look specifically at the relationship that interest rates have on the 10-year treasury bond yield. We look at this relationship because the 10-year yield is

the rate at which companies typically base their borrowing costs at. As interest rates increase, the 10-year yield will follow suit, decreasing a company's intrinsic value.

We highlight the impact of interest rates because increases to the federal funds rate do two things that hinder growth in the tech sector. First, rising interest rates decrease consumer demand for discretionary products and services. As interest rates rise, the cost of financing for households increases. From mortgages to credit cards, people will face higher interest payments. The tech sector is adversely affected because it is overwhelmingly discretionary based. Consumers are going to dedicate more of their spending to ensuring they have consumer staples products, and as a result, the overall tech sector will be negatively impacted. Second, rising interest rates increase the discount rate used in valuation models. Higher discount rates equate to a lower present value of cash flows. The tech sector is growth-oriented and achieves growth primarily through investment in future cash flow generating projects. As a result, tech companies tend to invest a lot of capital up front in projects and realize value in the form of higher present values of future cash flows once new products make it to the market. Therefore, we are seeing that a rise in rates results in a higher opportunity cost and expense to firms for investing in projects and thus less firm growth and profitability on its long-term cash flows to investors across the technology sector.



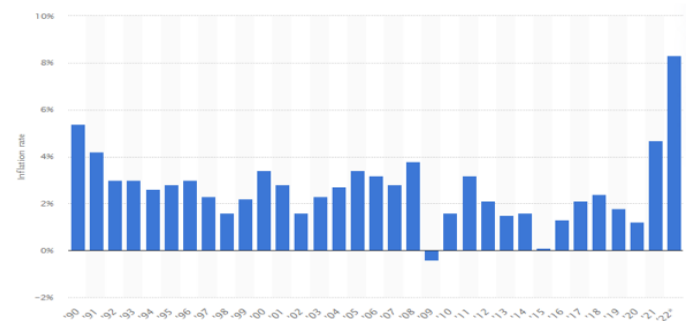
Source: FinancialExpress<sup>17</sup>

The chart above shows notes from the Fed's FOMC policy meeting in September 2022. The blue dots show each members' estimates for where rates will be in the coming years, and we looked to the median to create our forecasts. Following these insider estimates, we expect rates in the next 12 months to peg at roughly 4.75%, driven by the continued fight against inflation and aggressive contractionary policy. In the longer term (3+ years), we expect rates to loosen up and peg at 2.50% after inflation is relatively calmer, either because of a short recession or because the Fed's tightening policy worked as intended. Our forecast shows that in the short-term, the technology sector will hurt by a gloomy economic outlook resulting in risk-off behaviors. In the longer term, the technology sector will be comparable to the 2018-2019 period: higher growth levels and lower interest rates. In our model, we forecasted lower revenue growth in 2022E and 2023E due to lower demand. In the rest of our forecast period, as important interest rates for consumers and businesses return to normal rates, we expect relatively high and stable growth across the firm. We discounted our projected free cash flows by a 9.42% Weighted Average Cost of Capital, which represents Adobe's opportunity cost of financing today.

### **Inflation**

The rate at which inflation has increased in 2022 has made it a very crucial economic indicator in every industry, but especially technology. The latest CPI report showcases 7.7% Y/Y inflation, which is the highest CPI print since the late 1970s. The level of inflation impacts the tech sector by decreasing consumer purchasing power and confidence. Consumer confidence and spending are critical to the technology sector because consumer demand drives total profit. Many tech companies rely on economies of scale - they need profits to keep the company running while they reinvest into expansion and maintain high profit margins. Historically, the technology sector outperforms after input prices sharply decline (during periods of low inflation).

The tech sector is highly dependent on consumer confidence because it is the consumer's confidence that dictates how much they are willing to consume. A less confident consumer will want to consume less. Two popular measures of consumer confidence are The Conference Board's Consumer Confidence Index and University of Michigan's Consumer Sentiment Survey. Both of these indices are down M/M as of their latest reports.<sup>18-19</sup> Inflation is a big driver of consumer sentiment. When inflation is high, consumers have less purchasing power for their everyday expenses. This creates uncertainty and forces consumers to cut down on spending and allocate more of it to essentials. The impact is negative for the sector as sales growth slows when consumers slow down on spending.



Source: Statista<sup>20</sup>

The chart above shows the overall inflation rate (CPI) from 1990 to 2022. Since 1990, annual inflation rates have been low relative to 2022, providing an ideal environment for the growth of the technology sector. Since the beginning of 2022, inflation has been reaching historical levels with September 2022's numbers reading 7.7% year-over-year – the NASDAQ 100 Technology Sector Index is correspondingly down 36.0%.

We believe inflation rates in the future will be a function of the Fed's monetary policy against inflation. With Fed estimates in 2023 showing even higher interest rates, we expect inflation to stay this high in the short-term at 7.7% annualized going into early 2023. In the longer term, Fed estimates indicate lower rates, meaning they expect inflation to be calmer in 3+ years; we expect annual inflation to be 4.0% in 2026. For the tech sector, this means consumer spending and confidence will be down in 2023, but by 2026, we expect normal consumer

behaviors to return. In our Adobe model, we forecasted revenue growth across the Subscription and Product segments to be dramatically lower in 2022E and 2023E. We excluded the Services and Other segment as its sales have already been declining. For the rest of our forecast period, we expect a return to higher, stable growth rates as consumer confidence returns to higher levels over time.

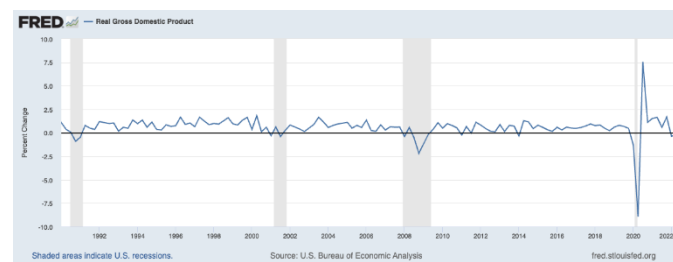
### Real GDP

Real GDP is a measure of economic output adjusted for inflation. Economic output increases when the productivity of an economy increases. The tech sector historically outperforms during periods of increasing economic output and vice versa. In 2022, real GDP decreased in the first two quarters and increased by 2.6% in Q3. The tech-heavy NASDAQ during the same time is down nearly 30%, maintaining the historically positive correlation between Real GDP and tech sector performance. In addition, real GDP is used as a key warning sign for a recession when there are two consecutive quarters of falling real GDP. The U.S. would therefore be in a technical recession. Real GDP impacts the tech sector by affecting consumer demand and firm investment in growth.

When Real GDP decreases, economic output decreases. Decreases in economic output indicate stagnant job growth, stagnant wages, less spending, less investment, and a worse environment overall for companies. It is important to note that GDP actually grew in 2022 without adjusting for inflation, which means economic output did grow. However, the effects of inflation are what contribute to falling real GDP. Even as inflation begins to gradually subside, we believe real GDP growth will remain depressed in the near-term primarily due to interest rate hikes. The tech sector's growth is driven by consumer demand. When real GDP falls, consumers are less likely to consume as much. The problem is further exacerbated during periods of recessions. Consumers will adopt a "save first" strategy, which is detrimental to the sector because firms rely on continued consumer spending to drive growth.

Tech firms have fewer opportunities to invest in growth during periods of falling Real GDP. First, tech firms will have less profits to reinvest as a result of decreased consumer spending. Second, the investment opportunities available when the economy contracts are significantly less. This means tech firms will be less focused on growing and will instead look at reducing costs instead. The current layoffs being observed in big tech currently is an example of this.

We forecast Real GDP growth to be stagnant in the short term. The U.S. is currently in the late stages of the business cycle, which is characterized by slowing or negative real GDP growth. We believe the U.S. is or will be in a recession by the end of 2022, but we do not expect the recession to last long. Our short-term real GDP growth estimates are at 0.2%. We are much more optimistic about real GDP growth in the long run. Historically, recessions have not lasted more than a couple years and we believe the current period will reflect just that. The business cycle will enter its expansion period again and we expect annual real GDP growth to return to historic averages of around 2% by 2024. These estimates are in line with the IMF's estimates of global GDP growth. The tech sector will struggle in 2023 as the economy slowly recovers from a recession. After 2023, the tech sector will return to growth as real GDP growth should increase again. To adjust for this in our forecast period, we projected slower revenue growth in 2022E and 2023E driven by minimal GDP growth. We projected stronger revenue growth in 2024E and beyond as real GDP will start growing towards normal levels again.



Source: FRED<sup>21</sup>

The chart above shows the U.S.'s Real GDP levels from 1990 – 2022. Notice how during periods of falling real

GDP, such as in 2001, 2008, 2012, that tech stocks (NASDAQ as proxy) underperformed.

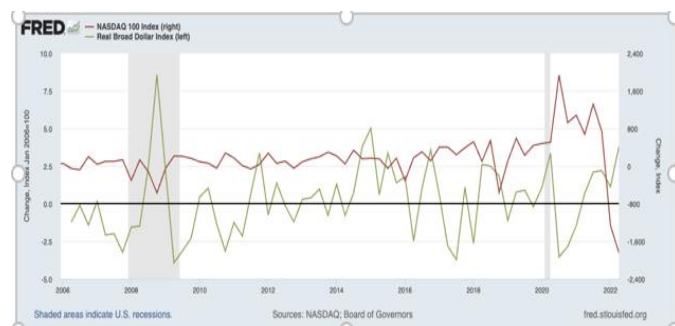
### **Foreign Exchange Rates**

Foreign exchange rates are a very important measure for the technology sector in 2022 due to the strong rise of the USD. The U.S. Dollar Index (DXY) reached a 52-week high of 114.78 in September. This is the highest level of the DXY since 2002. Foreign exchange rates impact the tech sector by affecting the global demand for U.S. exports, affecting how tech firms view their foreign operations, and ultimately affecting the profit realized from foreign sales.

Tech firms are disproportionately impacted by foreign exchange rates because a majority of the tech sector's sales are outside the U.S. It is estimated that around 59% of tech revenues are non-U.S. based. These foreign revenues will eventually be translated into USD. When the dollar's strength relative to other currencies is high, foreign currency translation effects become increasingly detrimental to tech firms.

A stronger USD will hurt overall demand in the tech sector. A stronger USD means it becomes relatively more expensive for other countries to import U.S. products and services. As a result, foreign consumers may consider non-U.S. based alternatives or decrease their consumption of U.S. exports. The tech sector realizes more profit from foreign consumers than any other sector.

Foreign exchange rates also impact how tech firms operate. During periods of a stronger USD, tech firms will more likely consider outsourcing labor and capital investment into foreign countries. This, however, may lead to more domestic unemployment within the tech sector.



Source: FRED<sup>22</sup>

The chart above shows the USD Real Broad Dollar Index (measuring dollar strength against foreign currencies) against the NASDAQ 100 Market Index (which has significant tech exposure) from 2006 to 2022. This trend has continued since the 2008 recession, with the strong dollar coinciding with weak tech-heavy market performance.<sup>22, 23</sup>

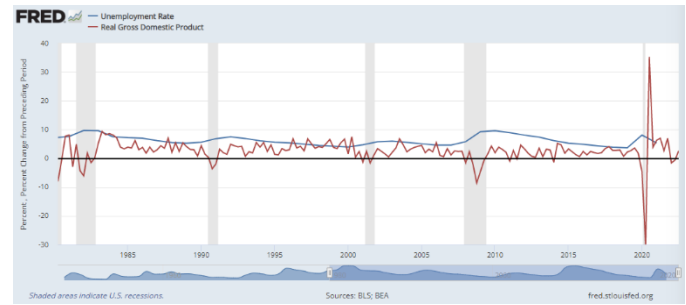
We can confirm that this strong correlation exists not only by historical data, but by looking at today: the technology sector has been sharply underperforming, while the U.S. dollar has been greatly appreciating against other currencies, notably overtaking the Euro for the first time in two decades. In the short term, we expect this trend of a stronger USD to continue with the Real Broad Dollar Index reaching 127 in 2023 (from 121 today). In the long term, the technology sector will return from its economic downturn as forecasted with other macroeconomic variables, so we expect a Real Broad Dollar Index of 110 and a weaker USD by 2026. This means that in the short term, the technology sector will continue its downwards trend, but in the long term the technology sector's growth and the value of the USD will return to pre-pandemic levels. Because Adobe has significant international exposure, we forecasted lower revenue growth for all geographic segments, with international regions' growth rates being hurt significantly in 2022E and 2023E. We expect the dollar to weaken in 2024 and the rest of our forecast period, so we forecasted a similar growth across all regions beyond 2023E.

## Unemployment Rate

The unemployment rate historically has had a relationship with economic growth in the U.S. The growth of the U.S. economy is important to the technology sector, and as such, the unemployment rate is a key gauge the tech sector should look at. As of the latest Jobs Report released in October, the unemployment rate was reported at 3.7%. This rate is historically low, with normal unemployment rates ranging from 3% to 6%. We believe there is a negative relationship between the unemployment rate and the performance of the technology sector. When considering the economic environment currently, this relationship seems to hold true. It is also important to note that unemployment is a lagging indicator, so economic conditions will have already worsened when a higher unemployment report comes out.

Furthermore, the massive jump in demand after the effects of the Fed's quantitative easing program during COVID and the subsequent reopening of the economy led to a sudden influx of job re-openings that have made the unemployment rate low. We think these effects will normalize as the Fed's current contractionary monetary policy will slow economic growth and increase unemployment. As such, the unemployment rate is still a good guide for our forecast.

The unemployment rate impacts the technology sector through its relationship with economic growth and consumer demand. An unemployment rate trending upwards indicates slower economic growth. The tech sector historically underperforms during periods of slowing economic growth. Further, when unemployment is higher, consumers will have less propensity to spend. Higher rates of unemployment indicate more job volatility and consumers will be looking to save money over purchasing discretionary items. This is bad for the tech sector overall because the tech sector is cyclical, and periods of high unemployment indicate less consumer spending. This leads to decreased revenues and profits for the tech sector.



Source: FRED<sup>21</sup>

The chart above shows the relationship between unemployment and Real GDP. The chart shows an inverse relationship between the two. Furthermore, notice how 2001, 2008-9, and briefly in 2020 are similar between this chart and the one above. This means during periods of slowing GDP, unemployment rises, and this also coincides with a falling NASDAQ during the same time period.

We forecast the unemployment rate to rise in the next year as slowing economic output makes its way into the Jobs Report and other economic data. We forecast the unemployment rate to be around 4.5% in 2023. This indicates a meager 2023 for the tech sector because a rise in unemployment indicates slowing economic growth.

We forecast the unemployment rate to normalize to historical levels by 2026. We think the U.S. will have largely recovered economically and unemployment should follow too. As mentioned, current unemployment levels are at the low end historically, so we forecast unemployment to be around this range and fluctuate between 3.0% to 5.0%. The tech sector should recover in the long term and begin another period of growth. As the unemployment rate fluctuates up to 4.5% towards the end of 2022E and in 2023E, we expect relatively slower total revenue growth than in previous years. The unemployment rate will start to fluctuate downwards in 2024E and beyond, so we forecasted total revenue growth to become stable and relatively strong in 2024E and then slowly decrease throughout the rest of our forecast period.



## Valuation Analysis

### Revenue Decomposition

While forecasting our revenue, we found that Adobe's business will be negatively impacted in fiscal years 2022 and 2023 due to current unfavorable market conditions, and that Adobe's sales will have significantly lower growth across all of its business segments, falling in line with analyst estimates.

With company-specific factors, we think that Adobe's big investment in the digital economy through its Digital Media and Digital Experience segments will result in high growth in the long term but will be hurt by riskier economic conditions and decreased demand for the digital economy in the short term. We believe that publishing/advertising subscription segment growth will remain stagnant in the short term due to these same factors as well as strong competition. Adobe's other operating segments, Product (excluding subscription) and Services & Other, will also see low growth throughout our forecast period as Adobe shifts its focus solely towards Subscription segment revenues.

In terms of industry factors, Adobe faces significant competition from established large-cap players in the Application Software industry including Salesforce, Oracle, and ServiceNow. Despite this, we believe Adobe will lead the industry going forward because it has free cash flow margins far above its peers and significant room for growth. While we forecast revenue to decline in 2022E and 2023E due to macroeconomic forces, we expect a strong rebound in 2024E and consistent revenue growth in line with industry peers for the rest of our forecast period.

Considering macroeconomic factors, we predict that a looming recession, slower Real GDP growth, rising interest rates, and a stronger dollar will lead to lower revenue growth and a higher Weighted Average Cost of Capital, which caps the company's upside in the short term. However, we expect these macroeconomic issues to be eased in 2024E and beyond as inflation decreases,

interest rates drop, and the downward pressures on sales are relieved.

Overall, we forecasted subscriptions to remain the strongest source of revenue growth in 2022E and beyond driven by a significant boom in subscription models and the rise of the Software-as-a-Service market, accounting for 93.0% of Adobe's 2022E revenue. Additionally, the Digital Experience and Digital Media subscription segments will drive subscription growth in 2022E, as these segments are a newer, growth-stage segment capitalizing on a rise in demand for digital solutions. We expect the Product (excluding subscriptions) segment to decline in 2022E and 2023E as this remains the weakest segment for Adobe as the company increasingly moves towards subscriptions. For the Services and Other segment, we forecasted sales growth of 3.7% in 2022E and 4.6% in 2023E as we do not see any significant drivers going forward.

Our final revenue decomposition showed 12.3% total revenue growth Y/Y in 2022E, driven by high growth in the Digital Media (12.8%) and Digital Experience (15.0%) segments. Relatively lower growth was seen in the Publishing/Advertising (1.8%), Product (-0.4%), and Service and Other (3.7%) segments. 2023E also saw similar revenue growth rates for Adobe's Subscription segment, with overall revenues growing at 12.2%. In 2024E, we saw Digital Experience revenues stand out by rapidly growing at 20% and saw overall revenue growth at 17.6% with each segment slowly decreasing sales growth for the rest of the 10 year forecast period.

### Cost of Revenue

Management indicated that cost of revenue increased in 2021 by \$143 million, or 8%, which was tied to increases in hosting services and data center costs. Cost of revenues, which was broken down by Adobe's operating segments of subscription, product, and services & other, was forecasted as a percentage of sales. Because Adobe's product costs are frequently changing, we believe a more recent 2-year historical average of cost of revenue as a percentage of revenue would be the most accurate estimate going forward. Our cost of subscriptions was straight-lined at 9.5% of sales, our cost



of products was straight-lined at 7.2% of sales, and our cost of services & other was straight-lined at 73.6% of sales for our entire forecast period.

### **Operating Expenses**

Management highlights in Adobe's most recent 10-K that its operating expenses are segmented by research & development, sales & marketing, general & administrative, and amortization of intangibles. Research & development and sales & marketing make up a major component of the company's cost structure, accounting for 16% and 27% of total revenue respectively in 2021. Adobe's investment in R&D is critical to the success of their operations for recruiting and hiring software developers, which helps the firm to remain competitive in the marketplace and develop new and innovative solutions for its customers. Sales and marketing are also large expenses for the company, allocated significantly toward compensation costs and amortization of contract acquisition costs, as well as public relations, advertising expenses, and supply chain related costs.

We found that within the past 5 years, operating expenses have stayed relatively stable as a percentage of sales. We used a 5-year historical average percentage of sales for research & development, sales & marketing, general & administrative, and amortization of purchased intangibles, straight-lining the first three at 16.8%, 28.7%, and 7.8% respectively for our entire forecast period and used Adobe's 10-K amortization schedule for purchased intangibles.

### **Capital Expenditures**

As technology companies have changed since the pandemic, we saw that Adobe's capital expenditures changed as well. In FY21 and FY22, the company made significant investments in capital expenditures compared to years past in order to scale its business in the long run. We forecasted Adobe to spend \$500 million to maintain PP&E in 2022E and grew it by 20% until 2025 as we expect high investment in growth to continue over these years. We then increased capital expenditures by 10% for the rest of our forecast horizon.

### **WACC**

To calculate Adobe's Weighted Average Cost of Capital (WACC), we took the weighted average of our calculated cost of equity and after-tax cost of debt.

To calculate the cost of equity, we used the Capital Asset Pricing Model (CAPM).

For our assumptions, we used the 10-year U.S. treasury bond as our risk-free rate at 3.85%; Damodaran's trailing 12-month implied equity risk premium, which was 4.59% as of November 2022; and Adobe's 5-year monthly beta of 1.25. We multiplied the equity risk premium by the beta and then added the risk-free rate to find a CAPM cost of equity of 9.59%.

For our pre-tax cost of debt, we took the Yield-to-Maturity of Adobe's 10-year corporate bond which was 4.69%. We then found Adobe's marginal tax rate of 29.84% and multiplied our pre-tax cost of debt by (1 - the marginal tax rate) to find a final after-tax cost of debt of 3.29%. We weighed the cost of equity and the cost of debt by the market value of each form of financing, and then added them together to find Adobe's WACC of 9.42%.

### **Cost of Equity**

We calculated the 9.59% cost of equity by using the Capital Asset Pricing Model. In the CAPM calculation we used the risk-free rate of the 10-year treasury, Adobe's 5-year monthly beta, and the market's equity risk premium to identify the company's cost of equity. We chose the 10-year treasury risk-free rate of 3.85%, which matched our model's forecast horizon into fiscal year 2031. Identifying Adobe's beta, we took the company's 5-year monthly beta of 1.25 over other similar betas as we believe it best represents Adobe's volatility and risk compared to the current market. Our equity risk premium of 4.59% was taken from Damodaran's trailing 12-month implied equity risk premium as of November 2022. By utilizing these metrics, we multiplied Adobe's beta by the Damodaran implied equity risk premium and

added the 10-year risk-free rate to arrive at our cost of equity at 9.59%.

### **Cost of Debt**

To arrive at the pre-tax cost of debt of 4.69%, we assumed a 10-year maturity on an Adobe corporate bond which matched our forecast horizon. We subtracted the risk-free rate on the 10-year of 3.85% from the company's pre-tax cost of debt to get our implied default premium of 0.84%. Finally, multiplying Adobe's estimated pre-tax cost of debt by (1 - Adobe's marginal tax rate of 29.84%) resulted in an after-tax cost of debt of 3.29%.

### **Valuation Models**

#### **Discounted Cash Flow & Economic Profit ("DCF"/"EP")**

For Adobe's discounted cash flow model, we forecasted the company's free cash flow to the firm out 10 years into the future and arrived at a continued value using a steady-state NOPLAT growth rate of 3.99%. Adding these future cash flows together, we discounted all of Adobe's cash flows to present value using Adobe's WACC of 9.42%, resulting in our value of operating assets. After adjusting for non-operating adjustments and dividing by shares outstanding, we arrived at an intrinsic equity value price of \$381 per share after making year-end adjustments. For the economic profit (EP) model, we followed the same process except we used Adobe's present value of economic profits and added our last fiscal year's invested capital. After adjustments and dividing by shares outstanding, we found the same intrinsic share price of \$381.

We believe that the DCF and EP models are the most accurate representation of the true value of Adobe's equity because its historically strong cash flow generation is what has made it a leader in the Application Software industry. A slowdown in consumer demand and the overall state of the economy both pose risks to the company's operations, and we acknowledged this as indicated by our cost of equity using a trailing 12-month implied equity risk premium, which represents the challenges that the market has been facing in 2022.

### **Dividend Discount Model ("DDM")**

For Adobe's Dividend Discount Model, we projected Adobe's earnings per share (EPS) into 2031E. To calculate Adobe's earnings per share, we divided our forecasted net income by Adobe's 2-year weighted average shares outstanding. An assumption we made is that Adobe would continue its aggressive share repurchase program, growing the annual value of share repurchases by 23% a year for the next 10 years and resulting in a similar amount of shares being repurchased each year. This will be Adobe's biggest driver of EPS growth. Using a 74.58% CV ROE and 4.00% CV growth of EPS, we found the continuing value and discounted that by cost of equity as well. Adding the present value of these cash flows together and making year-end adjustments, we found an intrinsic price of \$380.33 per Adobe share. We believe that the Dividend Discount Model is not an accurate representation of Adobe's intrinsic share value. The continued value of the Dividend Discount Model assumes a dividend, but we do not expect Adobe to pay a dividend as they have historically found other ways to drive shareholder value.

### **Relative Price-to-Earnings Growth ("P/E")**

For our relative price-to-earnings models, we took Adobe's biggest competitors in its biggest business segments as detailed in our industry analysis, and we felt that they represented appropriate comparable companies given their similar business, financial, and growth profiles. When comparing multiples, we excluded companies that felt like outliers to the rest of the comparable companies set and found the average multiple of the remaining companies. We applied these multiples to Adobe's financial metrics to find a relative valuation. Our comparable companies were priced as of 11/11/2022 and their implied earnings estimates for the next two years were taken from FactSet consensus analyst estimates. The average P/E multiples of Adobe's comparable companies were 30.65x and 24.67x for 2022E and 2023E respectively. Meanwhile, Adobe's P/E traded at 31.3x and 27.1x on a 1-year forward and 2-year forward basis relative to its peers. With a P/E multiple unadjusted for growth, we see Adobe trading in line or slightly above its peers.

The 5-year estimated earnings-per-share (EPS) growth was also taken from FactSet, and we divided the comparable P/E multiples by their estimated growth rates, standardizing the multiple. This resulted in an average PEG multiple of 2.24x and 1.79x for 2022E and 2023E respectively. Adobe's PEG ratios are lower at 1.8x and 1.6x on a 1-year forward and 2-year forward basis, which further demonstrates that the company is trading at cheaper levels than its competitors even when considering growth.

When deciding which valuation metric to use for our relative valuation, we chose a PEG multiple which substantially increased Adobe's intrinsic share price to \$389-\$421 at peer multiples. This metric plays to Adobe's greatest strength of providing returns to shareholders and includes adjustments for earnings growth. We think that Adobe's relative PEG share price is a strong indicator of where Adobe should be trading today.

## Sensitivity Analysis

To test the impact of our assumptions, we created five sensitivity tables based off our DCF valuations (noted in the top left of each table). Numbers typed in green represent values that are above Adobe's current share price; numbers typed in black represent anything below that price. Relatively higher intrinsic share values will have darker green shading of cells.

### Cost of Equity vs. Pre-Tax Cost of Debt

The cost of equity and pre-tax cost of debt are the two factors in determining Adobe's cash flow discount rate, which has a huge impact on our final valuation in the DCF and Dividend Discount Model. We sensitivity tested these two variables against our discounted cash flow valuation to see how much our price moves if we were to assume a higher or lower discount rate. As we move the cost of equity down to 8.99%, we see Adobe's intrinsic share price go towards the \$430 range; when cost of equity increases to 10.19%, assuming a riskier market, we see it move down towards the \$342 range. As we move the pre-tax cost of debt upwards and downwards, resembling Adobe's corporate bond, we see

that this barely affects Adobe's intrinsic share price, with differences being in the cents.

		Cost of Equity						
DCF	\$ 381.19	10.19%	9.99%	9.79%	9.59%	9.39%	9.19%	8.99%
Pre-Tax Cost of Debt	4.39%	341.94	354.26	367.44	381.61	396.78	413.17	430.89
	4.49%	341.83	354.14	367.31	381.47	396.63	413.01	430.71
	4.59%	341.72	354.02	367.18	381.34	396.48	412.85	430.54
	4.69%	341.60	353.89	367.05	381.19	396.33	412.68	430.36
	4.79%	341.49	353.78	366.93	381.06	396.18	412.53	430.19
	4.89%	341.38	353.66	366.80	380.92	396.04	412.37	430.02
	4.99%	341.27	353.54	366.67	380.79	395.89	412.21	429.84

### CV Growth of NOPLAT vs. WACC

Adobe's CV growth of NOPLAT and its Weighted Average Cost of Capital are the two main drivers of the discounted cash flow valuation. Adobe's continuing value makes up 70% of its total intrinsic valuation, which is common for discounted cash flow models. Adobe's projection period free cash flows and this continuing value are discounted by the WACC, meaning the valuation should be very sensitive to our discount rate.

As we increase the CV growth of NOPLAT towards 4.74%, we see Adobe's intrinsic share price increase to the range of \$424; when we decrease the CV growth towards 3.24%, we see the share price drop to the range of \$349. As we decrease our WACC to 8.82%, we see an upside in the range of \$434. Towards the higher rate of 10.02%, we see an intrinsic downside near \$339. The final valuation of Adobe's share price has very high sensitivity to both our CV growth and WACC assumptions.

		CV Growth of NOPLAT						
DCF	\$ 381.19	3.24%	3.49%	3.74%	3.99%	4.24%	4.49%	4.74%
WACC	8.82%	391.57	404.37	418.43	433.95	451.17	470.37	491.92
	9.02%	376.25	387.95	400.76	414.85	430.41	447.69	466.99
	9.22%	361.97	372.70	384.40	397.23	411.34	426.95	444.29
	9.42%	348.86	358.73	369.47	381.19	394.05	408.22	423.90
	9.62%	336.16	345.23	355.07	365.79	377.51	390.37	404.54
	9.82%	324.45	332.82	341.88	351.72	362.44	374.16	387.04
	10.02%	313.45	321.19	329.55	338.59	348.43	359.15	370.88

### Beta vs. Equity Risk Premium

Adobe's beta and the equity risk premium are crucial metrics for calculating WACC in the discounted cash flow analysis model and dividend discount model. We sensitivity tested variables against our discounted cash flow valuation to gain insight into the volatility of Adobe's intrinsic share price when reacting to these cost of equity assumptions. As we decrease the Beta to 1.10, Adobe's intrinsic value rises to around \$439 given less risk relative to the overall market; when we increase it to

1.40, we see a downside near \$336. As we decrease the equity risk premium to 4.29%, this implies less risk to Adobe's cash flows and investors are more willing to hold equities in their portfolio, and we see Adobe's intrinsic share value increase to the range of \$411. When this increases to 4.89%, Adobe's price decreases to nearly \$356. The discounted cash flow model is very sensitive to both the beta and equity risk premium assumptions.

		Beta						
DCF	\$ 381.19	1.40	1.35	1.30	1.25	1.20	1.15	1.10
Equity Risk Premium	4.29%	362.47	377.28	393.28	410.61	429.44	449.98	472.47
	4.39%	353.39	367.83	383.44	400.34	418.71	438.74	460.68
	4.49%	344.72	358.82	374.05	390.54	408.47	428.03	449.43
	4.59%	336.44	350.21	365.08	381.19	398.70	417.79	438.70
	4.69%	328.53	341.99	356.52	372.26	389.36	408.01	428.44
	4.79%	320.97	334.12	348.32	363.71	380.43	398.66	418.62
	4.89%	313.72	326.58	340.47	355.52	371.87	389.70	409.22

### Digital Media Annual Growth % Decrease vs. Digital Experience Annual Growth % Decrease

To test the growth of Adobe's two biggest subscription revenue drivers and analyze the impact of these assumptions on its intrinsic share price, we created a sensitivity analysis testing the Digital Media segment's revenue growth over time against the Digital Experience segment's revenue growth over time. As we decrease the annual revenue taper of the Digital Media segment, we see that intrinsic share price increases up to \$34 in the range of \$415; when this increases, it sees an intrinsic downside of around \$350. As we decrease the annual revenue taper of the Digital Experience segment, we see a similar story, with share price increasing up to near \$390; when this increases, it falls towards \$374. Based off this, we see that these small growth changes of 0.25% have a moderate-to-high effect on our final valuation and that the Digital Media segment plays a particularly large role in determining Adobe's intrinsic share value, as well as the Digital Experience segment to a lesser extent.

		Digital Media Annual % Decrease						
DCF	\$ 381.19	-3.25%	-3.00%	-2.75%	-2.50%	-2.25%	-2.00%	-1.75%
Digital Exp. Decrease	-1.00%	358.86	368.77	379.02	389.63	400.61	411.95	423.68
	-1.25%	355.94	365.85	376.11	386.72	397.69	409.04	420.76
	-1.50%	353.13	363.04	373.30	383.91	394.88	406.22	417.95
	-1.75%	350.41	360.33	370.58	381.19	392.17	403.51	415.23
	-2.00%	347.80	357.71	367.97	378.58	389.55	400.89	412.62
	-2.25%	345.27	355.19	365.44	376.05	387.02	398.37	410.09
	-2.50%	342.84	352.75	363.01	373.62	384.59	395.94	407.66

### Cost of Rev. (Subscription) vs. Cost of Rev. (Services)

Cost of subscriptions and cost of services are crucial performance metrics for determining the gross margins of products and services. We sensitivity tested both variables against our discounted cash flow valuation model to determine how differing cost structures related to the sales of products and services can affect Adobe's intrinsic share price. As we decrease cost of subscriptions to 8.73%, Adobe's intrinsic price rises to \$389 given less risk to its cost structure; however, with an increase in cost of subscriptions to 10.23%, we see the intrinsic price's downside approaching \$373 given greater risk to the company's operations.

Additionally, when we decrease the cost of services, we see an upside with Adobe's intrinsic share price slowly approaching \$382; meanwhile, as we increase the cost of services, it results in an intrinsic downside of below \$381. Given this data, we see greater deviations in Adobe's intrinsic share price as we increase cost of subscriptions, but smaller deviation when we increase cost of services.

		Cost of Rev. (Subscription)						
DCF	\$ 381.19	-10.23%	-9.98%	-9.73%	-9.48%	-9.23%	-8.98%	-8.73%
Cost of Rev. (Services)	-72.00%	373.45	376.15	378.84	381.54	384.23	386.92	389.62
	-72.50%	373.34	376.03	378.73	381.43	384.12	386.81	389.50
	-73.00%	373.23	375.92	378.62	381.32	384.01	386.70	389.39
	-73.57%	373.10	375.80	378.49	381.19	383.88	386.57	389.27
	-74.00%	373.01	375.70	378.40	381.10	383.78	386.48	389.17
	-74.50%	372.90	375.59	378.29	380.99	383.67	386.37	389.06
	-75.00%	372.79	375.48	378.18	380.88	383.56	386.26	388.95

## **Important Disclaimer**

This report was created by students enrolled in the Applied Equity Valuation class at the University of Iowa. The report was originally created to offer an internal investment recommendation for the University of Iowa Krause Fund and its advisory board. The report also provides potential employers and other interested parties an example of the students' skills, knowledge and abilities. Members of the Krause Fund are not registered investment advisors, brokers or officially licensed financial professionals. The investment advice contained in this report does not represent an offer or solicitation to buy or sell any of the securities mentioned. Unless otherwise noted, facts and figures included in this report are from publicly available sources. This report is not a complete compilation of data, and its accuracy is not guaranteed. From time to time, the University of Iowa, its faculty, staff, students, or the Krause Fund may hold a financial interest in the companies mentioned in this report.

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**Adobe Incorporated**  
**Revenue Decomposition**

All figures in millions of USD

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>	<b>2030E</b>	<b>2031E</b>
<b>Total Revenue Breakdown</b>															
<b>Subscription</b>	6,133.87	7,604.00	9,634.00	11,626.00	14,573.00	16,496.55	18,774.81	22,227.92	26,179.05	30,546.46	35,161.83	39,751.04	43,928.08	47,213.02	49,084.16
% of total revenue	84.0%	84.2%	86.2%	90.3%	92.3%	93.0%	94.4%	95.1%	95.6%	96.1%	96.5%	96.8%	97.1%	97.2%	97.3%
Segment Growth (YOY)	33.8%	24.0%	26.7%	20.7%	25.3%	13.2%	13.8%	18.4%	17.8%	16.7%	15.1%	13.1%	10.5%	7.5%	4.0%
<b>Product (excl. Subscription)</b>	706.77	622.00	648.00	507.00	555.00	553.00	398.00	409.94	421.62	433.01	444.05	454.71	464.94	474.70	484.19
% of total revenue	9.7%	6.9%	5.8%	3.9%	3.5%	3.1%	2.0%	1.8%	1.5%	1.4%	1.2%	1.1%	1.0%	1.0%	1.0%
Segment Growth (YOY)	-11.7%	-12.0%	4.2%	-21.8%	9.5%	-0.4%	-28.0%	3.0%	2.9%	2.7%	2.6%	2.4%	2.3%	2.1%	2.0%
<b>Services and Other</b>	460.87	804.00	889.00	735.00	657.00	681.00	712.00	747.60	779.75	807.82	831.24	849.53	862.27	869.17	873.52
% of total revenue	6.3%	8.9%	8.0%	5.7%	4.2%	3.8%	3.6%	3.2%	2.8%	2.5%	2.3%	2.1%	1.9%	1.8%	1.7%
Segment Growth (YOY)	-1.8%	74.5%	10.6%	-17.3%	-10.6%	3.7%	4.6%	5.0%	4.3%	3.6%	2.9%	2.2%	1.5%	0.8%	0.5%
<b>Total Revenue</b>	7,301.50	9,030.00	11,171.00	12,868.00	15,785.00	17,730.55	19,884.81	23,385.46	27,380.42	31,787.28	36,437.12	41,055.28	45,255.29	48,556.89	50,441.87
<b>Total Revenue Growth (YOY)</b>	24.7%	23.7%	23.7%	15.2%	22.7%	12.3%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%
<b>Subscription Revenue Breakdown</b>															
<b>Digital Media</b>	4,481.00	5,858.00	7,208.00	8,813.00	11,048.00	12,462.14	14,194.38	17,033.26	20,312.16	23,968.35	27,863.21	31,764.06	35,337.51	38,164.51	39,786.50
% of total subscription revenue	73.1%	77.0%	74.8%	75.8%	75.8%	75.5%	75.6%	76.6%	77.6%	78.5%	79.2%	79.9%	80.4%	80.8%	81.1%
Segment Growth (YOY)	32.9%	30.7%	23.0%	22.3%	25.4%	12.8%	13.9%	20.0%	19.3%	18.0%	16.3%	14.0%	11.3%	8.0%	4.3%
<b>Digital Experience</b>	1,553.00	1,949.00	2,280.00	2,660.00	3,379.00	3,885.85	4,429.87	5,042.30	5,712.92	6,422.75	7,142.10	7,829.53	8,432.40	8,889.86	9,138.78
% of total subscription revenue	25.3%	25.6%	23.7%	22.9%	23.2%	23.6%	23.6%	22.7%	21.8%	21.0%	20.3%	19.7%	19.2%	18.8%	18.6%
Segment Growth (YOY)	38.3%	25.5%	17.0%	16.7%	27.0%	15.0%	14.0%	13.8%	13.3%	12.4%	11.2%	9.6%	7.7%	5.4%	2.8%
<b>Publishing/Advertising</b>	101.00	115.00	146.00	153.00	146.00	148.56	150.56	152.37	153.97	155.35	156.52	157.46	158.17	158.64	158.88
% of total subscription revenue	1.6%	1.5%	1.5%	1.3%	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.4%	0.4%	0.3%	0.3%
Segment Growth (YOY)	11.0%	13.9%	27.0%	4.8%	-4.6%	1.8%	1.4%	1.2%	1.1%	0.9%	0.8%	0.6%	0.5%	0.3%	0.2%
<b>Total Subscription Revenue</b>	6,133.87	7,604.00	9,634.00	11,626.00	14,573.00	16,496.55	18,774.81	22,227.92	26,179.05	30,546.46	35,161.83	39,751.04	43,928.08	47,213.02	49,084.16
<b>Total Subscription Revenue Growth (YOY)</b>	33.8%	24.0%	26.7%	20.7%	25.3%	13.2%	13.8%	18.4%	17.8%	16.7%	15.1%	13.1%	10.5%	7.5%	4.0%
<b>Geographic Revenue Breakdown</b>															
<b>United States</b>	3,831.00	4,632.00	5,903.00	6,745.00	8,104.00	8,865.27	9,942.41	11,692.73	13,690.21	15,893.64	18,218.56	20,527.64	22,627.65	24,278.44	25,220.94
% of total revenue	52.5%	51.3%	52.8%	52.4%	51.3%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Segment Growth (YOY)	24.1%	20.9%	27.4%	14.3%	20.1%	9.4%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%
<b>Other Americas</b>	386.00	484.00	603.00	709.00	892.00	1,063.83	1,193.09	1,403.13	1,642.83	1,907.24	2,186.23	2,463.32	2,715.32	2,913.41	3,026.51
% of total revenue	5.3%	5.4%	5.4%	5.5%	5.7%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Segment Growth (YOY)	23.7%	25.4%	24.6%	17.6%	25.8%	19.3%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%
<b>Europe, the Middle East, Africa (EMEA)</b>	1,985.00	2,550.00	2,975.00	3,400.00	4,252.00	4,787.25	5,368.90	6,314.08	7,392.71	8,582.57	9,838.02	11,084.93	12,218.93	13,110.36	13,619.31
% of total revenue	27.2%	28.2%	26.6%	26.4%	26.9%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%
Segment Growth (YOY)	22.6%	28.5%	16.7%	14.3%	25.1%	12.6%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%
<b>Asia-Pacific (APAC)</b>	1,100.00	1,363.00	1,690.00	2,014.00	2,537.00	3,014.19	3,380.42	3,975.53	4,654.67	5,403.84	6,194.31	6,979.40	7,693.40	8,254.67	8,575.12
% of total revenue	15.1%	15.1%	15.1%	15.7%	16.1%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
Segment Growth (YOY)	31.7%	23.9%	24.0%	19.2%	26.0%	18.8%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%
<b>Total Revenue</b>	7,302.00	9,030.00	11,171.00	12,868.00	15,785.00	17,730.55	19,884.81	23,385.46	27,380.42	31,787.28	36,437.12	41,055.28	45,255.29	48,556.89	50,441.87
<b>Total Revenue Growth (YOY)</b>	24.7%	23.7%	23.7%	15.2%	22.7%	12.3%	12.2%	17.6%	17.1%	16.1%	14.6%	12.7%	10.2%	7.3%	3.9%

**Adobe Incorporated**
*Income Statement*

All figures in millions of USD except p/share or labeled

<i>Fiscal Years Ending Nov. 30</i>	2017	2018	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
<b>Revenue:</b>															
Subscription	6,133.87	7,604.00	9,634.00	11,626.00	14,573.00	16,496.55	18,774.81	22,227.92	26,179.05	30,546.46	35,161.83	39,751.04	43,928.08	47,213.02	49,084.16
Product excluding subscription	706.77	622.00	648.00	507.00	555.00	553.00	398.00	409.94	421.62	433.01	444.05	454.71	464.94	474.70	484.19
Services and other	460.87	804.00	889.00	735.00	657.00	681.00	712.00	747.60	779.75	807.82	831.24	849.53	862.27	869.17	873.52
<b>Total revenue</b>	<b>7,301.50</b>	<b>9,030.00</b>	<b>11,171.00</b>	<b>12,868.00</b>	<b>15,785.00</b>	<b>17,730.55</b>	<b>19,884.81</b>	<b>23,385.46</b>	<b>27,380.42</b>	<b>31,787.28</b>	<b>36,437.12</b>	<b>41,055.28</b>	<b>45,255.29</b>	<b>48,556.89</b>	<b>50,441.87</b>
<b>Cost of Revenue:</b>															
<b>Total cost of revenue (excluding D&amp;A&amp;A)</b>	<b>(684.49)</b>	<b>(849.00)</b>	<b>(916.00)</b>	<b>(965.00)</b>	<b>(1,077.00)</b>	<b>(1,242.32)</b>	<b>(1,451.56)</b>	<b>(1,761.51)</b>	<b>(2,100.35)</b>	<b>(2,450.99)</b>	<b>(2,895.12)</b>	<b>(3,333.57)</b>	<b>(3,680.52)</b>	<b>(3,909.76)</b>	<b>(3,983.20)</b>
<b>Less Depreciation, Amortization, and Accretion</b>	<b>(326.00)</b>	<b>(346.00)</b>	<b>(757.00)</b>	<b>(757.00)</b>	<b>(788.00)</b>	<b>(862.50)</b>	<b>(880.80)</b>	<b>(925.24)</b>	<b>(985.43)</b>	<b>(1,070.27)</b>	<b>(1,081.68)</b>	<b>(1,092.49)</b>	<b>(1,151.62)</b>	<b>(1,239.55)</b>	<b>(1,347.37)</b>
Subscription	(623.05)	(574.00)	(926.00)	(1,108.00)	(1,374.00)	(1,563.77)	(1,779.74)	(2,107.07)	(2,481.61)	(2,895.61)	(3,333.12)	(3,768.15)	(4,164.11)	(4,475.50)	(4,652.87)
Products excluding subscription	(57.08)	(46.00)	(40.00)	(36.00)	(41.00)	(40.06)	(28.83)	(29.70)	(30.54)	(31.37)	(32.17)	(32.94)	(33.68)	(34.39)	(35.08)
Services and other	(330.36)	(575.00)	(707.00)	(578.00)	(450.00)	(500.99)	(523.79)	(549.98)	(573.63)	(594.28)	(611.52)	(624.97)	(634.34)	(639.42)	(642.62)
<b>Gross profit</b>	<b>6,291.01</b>	<b>7,835.00</b>	<b>9,498.00</b>	<b>11,146.00</b>	<b>13,920.00</b>	<b>15,625.73</b>	<b>17,552.45</b>	<b>20,698.72</b>	<b>24,294.64</b>	<b>28,266.02</b>	<b>32,460.32</b>	<b>36,629.22</b>	<b>40,423.16</b>	<b>43,407.58</b>	<b>45,111.31</b>
<b>Operating Expenses:</b>															
Research and development	(1,224.06)	(1,538.00)	(1,930.00)	(2,188.00)	(2,540.00)	(2,984.69)	(3,347.33)	(3,936.62)	(4,609.12)	(5,350.95)	(6,133.69)	(6,911.09)	(7,618.11)	(8,173.88)	(8,491.19)
Sales and marketing	(2,197.59)	(2,621.00)	(3,244.00)	(3,591.00)	(4,321.00)	(5,086.66)	(5,704.68)	(6,708.97)	(7,855.07)	(9,119.34)	(10,453.32)	(11,778.21)	(12,983.13)	(13,930.32)	(14,471.09)
General and administrative	(624.71)	(745.00)	(881.00)	(968.00)	(1,085.00)	(1,386.13)	(1,554.55)	(1,828.22)	(2,140.53)	(2,485.05)	(2,848.56)	(3,209.60)	(3,537.95)	(3,796.06)	(3,943.42)
Amortization of purchased intangibles	(76.56)	(91.00)	(175.00)	(162.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)	(172.00)
<b>Total operating expenses</b>	<b>(4,122.92)</b>	<b>(4,995.00)</b>	<b>(6,230.00)</b>	<b>(6,909.00)</b>	<b>(8,118.00)</b>	<b>(9,457.48)</b>	<b>(10,606.56)</b>	<b>(12,473.81)</b>	<b>(14,604.73)</b>	<b>(16,955.35)</b>	<b>(19,435.57)</b>	<b>(21,898.90)</b>	<b>(24,139.19)</b>	<b>(25,900.26)</b>	<b>(26,905.71)</b>
<b>Operating income</b>	<b>2,168.09</b>	<b>2,840.00</b>	<b>3,268.00</b>	<b>4,237.00</b>	<b>5,802.00</b>	<b>6,168.25</b>	<b>6,945.89</b>	<b>8,224.90</b>	<b>9,689.91</b>	<b>11,310.67</b>	<b>13,024.74</b>	<b>14,730.32</b>	<b>16,283.97</b>	<b>17,507.32</b>	<b>18,205.60</b>
<b>Non-operating income (expense):</b>															
Interest and other income, net	(38.01)	(49.00)	(115.00)	(74.00)	(113.00)	(131.41)	(119.74)	(140.82)	(164.87)	(191.41)	(219.41)	(247.22)	(272.51)	(292.39)	(303.74)
Interest expense	(74.40)	(89.00)	(157.00)	(116.00)	(113.00)	(143.38)	(160.80)	(189.11)	(221.42)	(257.05)	(294.65)	(332.00)	(365.96)	(392.66)	(407.91)
Interest and other income / expense, net excluding interest expense	36.40	40.00	42.00	42.00	0.00	11.97	41.06	48.29	56.54	65.64	75.25	84.78	93.46	100.27	104.17
Investment gains / losses, net	7.55	3.00	52.00	13.00	16.00	7.13	9.16	12.16	12.35	15.39	18.43	21.08	22.81	22.88	20.21
<b>Total non-operating income, (expense) net</b>	<b>(30.45)</b>	<b>(46.00)</b>	<b>(63.00)</b>	<b>(61.00)</b>	<b>(97.00)</b>	<b>(124.28)</b>	<b>(110.58)</b>	<b>(128.66)</b>	<b>(152.53)</b>	<b>(176.02)</b>	<b>(200.98)</b>	<b>(226.14)</b>	<b>(249.70)</b>	<b>(269.51)</b>	<b>(283.53)</b>
Income before income taxes	<b>2,137.64</b>	<b>2,794.00</b>	<b>3,205.00</b>	<b>4,176.00</b>	<b>5,705.00</b>	<b>6,043.98</b>	<b>6,835.31</b>	<b>8,096.25</b>	<b>9,537.38</b>	<b>11,134.66</b>	<b>12,823.77</b>	<b>14,504.18</b>	<b>16,034.27</b>	<b>17,237.82</b>	<b>17,922.07</b>
Provision for income taxes	(443.69)	(203.00)	(254.00)	1,084.00	(883.00)	(935.47)	(1,057.95)	(1,253.11)	(1,476.16)	(1,723.38)	(1,984.82)	(2,244.91)	(2,481.73)	(2,668.01)	(2,773.92)
Net income / loss	1,693.95	2,591.00	2,951.00	5,260.00	4,822.00	<b>5,108.51</b>	<b>5,777.37</b>	<b>6,843.14</b>	<b>8,061.22</b>	<b>9,411.27</b>	<b>10,838.95</b>	<b>12,259.28</b>	<b>13,552.55</b>	<b>14,569.81</b>	<b>15,148.15</b>
<b>Other Equity Information</b>															
Basic Earnings Per Share	3.38	5.20	6.00	10.83	10.02	\$10.86	\$12.55	\$15.23	\$18.45	\$22.25	\$26.62	\$31.47	\$36.65	\$41.92	\$46.95
Annual Dividends Per Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basic Total Shares Outstanding	491.26	487.66	482.34	479.00	475.00	465.68	455.21	443.47	430.29	415.49	398.88	380.25	359.33	335.85	309.50
Basic Weighted Average Shares Outstanding	493.63	490.60	486.00	481.00	477.00	470.34	460.44	449.34	436.88	422.89	407.19	389.57	369.79	347.59	322.68

**Adobe Incorporated**
**Balance Sheet**

All figures in millions of USD except p/share or labeled

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>	<b>2030E</b>	<b>2031E</b>
<b>Current Assets:</b>															
Cash and cash equivalents	2,306.07	1,642.78	2,650.00	4,478.00	3,844.00	5,483.65	7,879.56	7,982.99	10,404.21	12,809.45	14,884.75	16,208.22	16,174.76	13,900.89	8,199.76
Short-term investments	3,513.70	1,586.19	1,527.00	1,514.00	1,954.00	1,965.97	2,007.04	2,055.33	2,111.87	2,177.52	2,252.76	2,337.55	2,431.00	2,531.28	2,635.45
Trade receivables, net of allowances for doubtful accounts	1,217.97	1,315.58	1,535.00	1,398.00	1,878.00	2,017.87	2,263.04	2,193.74	2,568.49	2,981.89	3,418.08	3,851.30	4,245.29	4,555.01	4,731.83
Prepaid expenses and other current assets	210.07	312.50	783.00	756.00	993.00	1,078.53	1,209.58	1,422.52	1,665.53	1,933.59	2,216.44	2,497.36	2,752.84	2,953.67	3,068.33
<b>Total Current Assets</b>	<b>7,247.81</b>	<b>4,857.04</b>	<b>6,495.00</b>	<b>8,146.00</b>	<b>8,669.00</b>	<b>10,546.03</b>	<b>13,359.22</b>	<b>13,654.57</b>	<b>16,750.10</b>	<b>19,902.45</b>	<b>22,772.04</b>	<b>24,894.42</b>	<b>25,603.90</b>	<b>23,940.85</b>	<b>18,635.37</b>
Property and equipment, net	936.98	1,075.07	1,293.00	1,517.00	1,673.00	1,708.50	1,794.70	1,911.46	2,076.03	2,098.16	2,119.11	2,233.81	2,404.38	2,613.51	2,853.97
Operating lease right-of-use assets, net	421.38	558.43	585.62	487.00	443.00	452.40	475.23	506.14	549.72	555.58	561.13	591.50	636.66	692.04	755.71
Goodwill	5,821.56	10,581.05	10,691.00	10,742.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00	12,668.00
Other intangibles, net	385.66	2,069.00	1,721.00	1,359.00	1,820.00	1,422.00	1,055.00	733.00	447.00	305.00	247.80	190.60	133.40	76.20	19.00
Deferred income taxes	0.00	0.00	0.00	1,370.00	1,085.00	1,246.61	1,429.39	1,645.88	1,900.91	2,198.64	2,541.55	2,929.39	3,358.14	3,819.07	4,298.30
Other assets	143.55	186.52	562.00	663.00	883.00	952.68	1,068.43	1,256.53	1,471.18	1,707.97	1,957.81	2,205.95	2,431.62	2,609.02	2,710.30
<b>Total Assets</b>	<b>14,956.94</b>	<b>19,327.11</b>	<b>21,347.62</b>	<b>24,284.00</b>	<b>27,241.00</b>	<b>28,996.23</b>	<b>31,849.97</b>	<b>32,375.59</b>	<b>35,862.94</b>	<b>39,435.79</b>	<b>42,867.44</b>	<b>45,713.67</b>	<b>47,236.10</b>	<b>46,418.69</b>	<b>41,940.66</b>
<b>Current Liabilities:</b>															
Trade payables	113.54	186.26	209.00	306.00	312.00	341.72	383.24	450.70	527.70	612.63	702.24	791.25	872.19	935.83	972.15
Accrued expenses	993.77	1,163.19	1,399.00	1,422.00	1,736.00	1,954.66	2,192.15	2,578.07	3,018.48	3,504.30	4,016.91	4,526.03	4,989.05	5,353.02	5,560.83
Deferred revenue	2,405.95	2,915.97	3,378.00	3,629.00	4,733.00	4,271.81	4,790.84	2,594.14	3,037.30	3,526.15	4,041.95	4,554.24	5,020.15	5,386.39	5,595.49
Income taxes payable	14.20	35.71	56.00	63.00	54.00	73.73	82.69	97.25	113.86	132.18	151.52	170.72	188.19	201.92	209.76
Debt and capital lease obligations	0.00	0.00	3,149.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating lease liabilities	0.00	0.00	0.00	92.00	97.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total current liabilities</b>	<b>3,527.46</b>	<b>4,301.13</b>	<b>8,191.00</b>	<b>5,512.00</b>	<b>6,932.00</b>	<b>6,641.92</b>	<b>7,448.91</b>	<b>5,720.15</b>	<b>6,697.33</b>	<b>7,775.26</b>	<b>8,912.63</b>	<b>10,042.24</b>	<b>11,069.58</b>	<b>11,877.16</b>	<b>12,338.23</b>
<b>Long-term liabilities:</b>															
Debt	1,881.42	4,124.80	989.00	4,117.00	4,123.00	4,143.37	4,224.05	4,298.44	4,486.32	4,692.07	4,931.09	5,199.43	5,473.60	5,730.26	5,945.79
Deferred revenue	88.59	137.63	123.00	130.00	145.00	171.00	191.77	225.54	264.06	306.56	351.41	395.95	436.45	468.30	486.47
Income taxes payable	173.09	644.10	616.00	529.00	534.00	539.30	545.29	552.38	560.74	570.50	581.74	594.45	608.50	623.61	639.32
Deferred income taxes	279.94	46.70	140.00	10.00	5.00	10.30	16.29	23.38	31.74	41.50	52.74	65.45	79.50	94.61	110.32
Operating lease liabilities	421.38	558.43	585.62	499.00	453.00	463.08	486.44	518.09	562.70	568.69	574.37	605.46	651.69	708.38	773.55
Other liabilities	125.19	152.21	173.00	223.00	252.00	295.16	331.03	389.30	455.81	529.17	606.57	683.45	753.37	808.33	839.71
<b>Total liabilities</b>	<b>6,497.07</b>	<b>9,964.99</b>	<b>10,817.62</b>	<b>11,020.00</b>	<b>12,444.00</b>	<b>12,264.12</b>	<b>13,243.77</b>	<b>11,727.29</b>	<b>13,058.70</b>	<b>14,483.76</b>	<b>16,010.55</b>	<b>17,586.44</b>	<b>19,072.71</b>	<b>20,310.65</b>	<b>21,133.41</b>
Common equity	5,082.26	5,685.40	6,504.00	7,357.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00	8,428.00
Retained earnings	9,573.87	11,815.60	14,829.00	19,611.00	23,905.00	29,013.51	34,790.88	41,634.01	49,695.24	59,106.51	69,945.46	82,204.73	95,757.28	110,327.09	125,475.24
Accumulated other comprehensive income (loss)	(111.82)	(148.13)	(188.00)	(158.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)	(137.00)
Treasury stock, at cost	(6,084.44)	(7,990.75)	(10,615.00)	(13,546.00)	(17,399.00)	(20,572.40)	(24,475.68)	(29,276.72)	(35,181.99)	(42,445.48)	(51,379.57)	(62,368.51)	(75,884.89)	(92,510.05)	(112,958.99)
<b>Total stockholders' equity</b>	<b>8,459.87</b>	<b>9,362.11</b>	<b>10,530.00</b>	<b>13,264.00</b>	<b>14,797.00</b>	<b>16,732.11</b>	<b>18,606.20</b>	<b>20,648.30</b>	<b>22,804.24</b>	<b>24,952.03</b>	<b>26,856.89</b>	<b>28,127.23</b>	<b>28,163.39</b>	<b>26,108.04</b>	<b>20,807.25</b>
<b>Total liabilities and stockholders' equity</b>	<b>14,956.94</b>	<b>19,327.11</b>	<b>21,347.62</b>	<b>24,284.00</b>	<b>27,241.00</b>	<b>28,996.23</b>	<b>31,849.97</b>	<b>32,375.59</b>	<b>35,862.94</b>	<b>39,435.79</b>	<b>42,867.44</b>	<b>45,713.67</b>	<b>47,236.10</b>	<b>46,418.69</b>	<b>41,940.66</b>

**Adobe Incorporated**
**Historical Cash Flow Statement**

All figures in millions of USD except p/share or labeled

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Adjustments to reconcile net income / loss to net cash provided by operating ac</b>	1,219	1,438	1,471	467	2,408
Depreciation, amortization and accretion	326	346	757	757	788
Stock-based compensation expense	454	610	788	909	1,069
Gain on the sale of property					
Provision for estimated returns					
Write down of assets held for sale					
Excess tax benefits from stock-based compensation					
<b>Other non-cash adjustments</b>	56	(462)	17	(1,374)	263
Increase / decrease in operating lease right-of-use assets		0	0	87	73
Deferred income taxes	52	(469)	3	(1,501)	183
<b>Other non-cash items</b>	5	7	14	40	7
Tax benefit / shortfall from stock-based compensation					
<b>Other non-cash items excluding tax benefit / shortfall from stock-based compensation</b>					
Retirements and disposals of property and equipment					
Provision for / recovery of losses on trade receivables					
Other non-cash items excluding retirements and disposals of property and equipment and provision for / recovery of losses					
Unrealized losses / gains on investments, net	(5)	1	(48)	(11)	(4)
<b>Changes in operating assets and liabilities, net of acquired assets and liabilities</b>	388	943	(43)	186	292
Trade receivables, net	(187)	(2)	(188)	106	(430)
Prepaid expenses and other current assets	28	(77)	(551)	(288)	(475)
Trade payables	(45)	55	23	96	(20)
<b>Accrued expenses and other liabilities</b>	151	44	172	86	162
Accrued expenses					
Accrued restructuring					
Income taxes payable	(34)	479	4	(72)	2
Changes in deferred revenue	475	444	497	258	1,053
Changes in other operating assets and liabilities					
<b>Net cash used for / provided by investing activities</b>	(443)	(4,685)	(456)	(414)	(3,537)
<b>Purchases, sales and maturities of short-term investments, net</b>	223	1,909	86	11	(465)
Purchases of short-term investments	(1,931)	(566)	(700)	(1,071)	(1,533)
Maturities of short-term investments	760	766	700	915	877
Proceeds from sales of short-term investments	1,394	1,709	86	167	191
<b>Acquisitions, net of cash acquired</b>	(460)	(6,314)	(101)	0	(2,682)
Cash received from acquisitions					
Cash paid for acquisitions					
Purchases of property and equipment	(178)	(267)	(395)	(419)	(348)
Proceeds from sale of property					
<b>Purchases and sales of long-term investments, intangibles and other assets, net</b>	(28)	(13)	(46)	(6)	(42)
Purchases of long-term investments and other assets	(30)	(18)	(49)	(15)	(42)
<b>Proceeds from sale of long-term investments</b>	2	5	3	9	0
Proceeds from sale of long-term investments excluding other					
Other					
Investment in lease receivable					
Issuance costs for credit facility					
<b>Net cash provided by / used for financing activities</b>	(1,184)	(5)	(2,946)	(3,488)	(4,301)
Purchases of treasury stock	(1,100)	(2,050)	(2,750)	(3,050)	(3,950)
<b>Proceeds from / cost of issuance of treasury stock, net</b>	(82)	(202)	(207)	(411)	(428)
Proceeds from issuance of treasury stock	158	191	233	270	291
Cost of issuance of treasury stock	(240)	(393)	(440)	(681)	(719)
Excess tax benefits from stock-based compensation					
Proceeds from debt issuance	0	2,248	0	3,144	0
Payment of dividends					
Repayment of acquired debt		0	0	(3,150)	0
Debt issuance costs					
Other financing activities, net	(2)	(1)	11	(21)	77
Effect of foreign currency exchange rates on cash and cash equivalents	9	(2)	(13)	3	(26)
<b>Net decrease / increase in cash and cash equivalents</b>	1,295	(663)	1,007	1,828	(634)
Cash and cash equivalents at beginning of period	1,011	2,306	1,643	2,650	4,478
Cash and cash equivalents at end of period	2,306	1,643	2,650	4,478	3,844

**Adobe Incorporated**
**Forecasted Cash Flow Statement**

All figures in millions of USD except p/share or labeled

**Fiscal Years Ending Nov. 30**

	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
<b>Cash, cash equivalents, and restricted cash (beginning balances)</b>	3,844.00	5,483.65	7,879.56	7,982.99	10,404.21	12,809.45	14,884.75	16,208.22	16,174.76	13,900.89
Net income (loss)	5,108.51	5,777.37	6,843.14	8,061.22	9,411.27	10,838.95	12,259.28	13,552.55	14,569.81	15,148.15
<u>Adjustments to reconcile net income to cash generated by operating activities:</u>										
Depreciation & amortization	862.50	880.80	925.24	985.43	1,070.27	1,081.68	1,092.49	1,151.62	1,239.55	1,347.37
<u>Changes in operating assets and liabilities:</u>										
Changes in trades receivable, net of allowance for doubtful accounts	(139.87)	(245.17)	69.31	(374.76)	(413.40)	(436.19)	(433.22)	(393.99)	(309.71)	(176.83)
Changes in prepaid expenses and other current assets	(85.53)	(131.04)	(212.94)	(243.01)	(268.07)	(282.85)	(280.92)	(255.48)	(200.83)	(114.66)
Changes in trades payable	29.72	41.52	67.47	76.99	84.93	89.62	89.00	80.95	63.63	36.33
Changes in accrued compensation and other liabilities	218.66	237.49	385.92	440.41	485.82	512.61	509.12	463.02	363.98	207.81
Changes in income taxes payable	25.03	14.95	21.65	24.97	28.08	30.58	31.92	31.52	28.84	23.55
Changes in deferred revenue	(435.19)	539.80	(2,162.94)	481.69	531.35	560.65	556.83	506.41	398.09	227.28
Changes in deferred taxes	(156.32)	(176.78)	(209.40)	(246.67)	(287.98)	(331.66)	(375.13)	(414.70)	(445.83)	(463.52)
Changes in other non-current liabilities	43.16	35.86	58.28	66.50	73.36	77.41	76.88	69.92	54.96	31.38
<b>Net cash flows from operating activities</b>	5,470.66	6,974.79	5,785.73	9,272.79	10,715.66	12,140.78	13,526.24	14,791.80	15,762.48	16,266.85
Changes in short-term investments	(11.97)	(41.06)	(48.29)	(56.54)	(65.64)	(75.25)	(84.78)	(93.46)	(100.27)	(104.17)
Capital expenditures	(500.00)	(600.00)	(720.00)	(864.00)	(950.40)	(1,045.44)	(1,149.98)	(1,264.98)	(1,391.48)	(1,530.63)
Changes in operating lease assets	(9.40)	(22.83)	(30.92)	(43.58)	(5.86)	(5.55)	(30.37)	(45.16)	(55.38)	(63.67)
Changes in other assets	(69.68)	(115.75)	(188.09)	(214.65)	(236.79)	(249.84)	(248.14)	(225.67)	(177.40)	(101.28)
<b>Net cash flows from investing activities</b>	(591.06)	(779.64)	(987.30)	(1,178.77)	(1,258.69)	(1,376.08)	(1,513.28)	(1,629.28)	(1,724.53)	(1,799.75)
Changes in debt	20.37	80.68	74.40	187.87	205.76	239.01	268.34	274.18	256.66	215.53
Changes in operating lease liabilities	(86.92)	23.36	31.65	44.60	6.00	5.68	31.09	46.23	56.68	65.18
Repurchases of common stock	(3,173.40)	(3,903.28)	(4,801.04)	(5,905.28)	(7,263.49)	(8,934.09)	(10,988.93)	(13,516.39)	(16,625.16)	(20,448.94)
<b>Net cash flows from financing activities</b>	(3,239.95)	(3,799.24)	(4,694.99)	(5,672.80)	(7,051.74)	(8,689.40)	(10,689.50)	(13,195.98)	(16,311.81)	(20,168.23)
<b>Net increase (decrease) in cash, cash equivalents, and restricted cash</b>	<b>1,639.65</b>	<b>2,395.91</b>	<b>103.43</b>	<b>2,421.22</b>	<b>2,405.24</b>	<b>2,075.31</b>	<b>1,323.46</b>	<b>(33.45)</b>	<b>(2,273.87)</b>	<b>(5,701.13)</b>
<b>Cash, cash equivalents, and restricted cash (ending balances)</b>	<b>5,483.65</b>	<b>7,879.56</b>	<b>7,982.99</b>	<b>10,404.21</b>	<b>12,809.45</b>	<b>14,884.75</b>	<b>16,208.22</b>	<b>16,174.76</b>	<b>13,900.89</b>	<b>8,199.76</b>

**Adobe Incorporated**  
**Common Size Income Statement**  
(% of sales)

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>	<b>2030E</b>	<b>2031E</b>
<b>Revenue:</b>															
Subscription	84.01%	84.21%	86.24%	90.35%	92.32%	93.04%	94.42%	95.05%	95.61%	96.10%	96.50%	96.82%	97.07%	97.23%	97.31%
Products excluding subscription	9.68%	6.89%	5.80%	3.94%	3.52%	3.12%	2.00%	1.75%	1.54%	1.36%	1.22%	1.11%	1.03%	0.98%	0.96%
Services and support	6.31%	8.90%	7.96%	5.71%	4.16%	3.84%	3.58%	3.20%	2.85%	2.54%	2.28%	2.07%	1.91%	1.79%	1.73%
<b>Total revenue</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Cost of Revenue:</b>															
<b>Total cost of revenue (exc</b>	<b>-9.37%</b>	<b>-9.40%</b>	<b>-8.20%</b>	<b>-7.50%</b>	<b>-6.82%</b>	<b>-7.01%</b>	<b>-7.30%</b>	<b>-7.53%</b>	<b>-7.67%</b>	<b>-7.71%</b>	<b>-7.95%</b>	<b>-8.12%</b>	<b>-8.13%</b>	<b>-8.05%</b>	<b>-7.90%</b>
<b>Less Depreciation, Amorti</b>	<b>-4.46%</b>	<b>-3.83%</b>	<b>-6.78%</b>	<b>-5.88%</b>	<b>-4.99%</b>	<b>-4.86%</b>	<b>-4.43%</b>	<b>-3.96%</b>	<b>-3.60%</b>	<b>-3.37%</b>	<b>-2.97%</b>	<b>-2.66%</b>	<b>-2.54%</b>	<b>-2.55%</b>	<b>-2.67%</b>
Products	-9.31%	-6.87%	-8.65%	-8.89%	-8.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Subscription	-8.53%	-6.36%	-8.29%	-8.61%	-8.70%	-8.82%	-8.95%	-9.01%	-9.06%	-9.11%	-9.15%	-9.18%	-9.20%	-9.22%	-9.22%
Product excluding subscription	-0.78%	-0.51%	-0.36%	-0.28%	-0.26%	-0.23%	-0.14%	-0.13%	-0.11%	-0.10%	-0.09%	-0.08%	-0.07%	-0.07%	-0.07%
Services and support	-4.52%	-6.37%	-6.33%	-4.49%	-2.85%	-2.83%	-2.63%	-2.35%	-2.10%	-1.87%	-1.68%	-1.52%	-1.40%	-1.32%	-1.27%
<b>Gross profit</b>	<b>86.16%</b>	<b>86.77%</b>	<b>85.02%</b>	<b>86.62%</b>	<b>88.18%</b>	<b>88.13%</b>	<b>88.27%</b>	<b>88.51%</b>	<b>88.73%</b>	<b>88.92%</b>	<b>89.09%</b>	<b>89.22%</b>	<b>89.32%</b>	<b>89.40%</b>	<b>89.43%</b>
<b>Operating Expenses:</b>															
Research and development	-16.76%	-17.03%	-17.28%	-17.00%	-16.09%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%	-16.83%
Sales and marketing	-30.10%	-29.03%	-29.04%	-27.91%	-27.37%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%	-28.69%
General and administrative	-8.56%	-8.25%	-7.89%	-7.52%	-6.87%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%	-7.82%
General and administrative excluc	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Restructuring and other charges /	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Amortization of purchased intangil	-1.05%	-1.01%	-1.57%	-1.26%	-1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total operating expenses</b>	<b>-56.47%</b>	<b>-55.32%</b>	<b>-55.77%</b>	<b>-53.69%</b>	<b>-51.43%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>	<b>-53.34%</b>
<b>Operating income</b>	<b>29.69%</b>	<b>31.45%</b>	<b>29.25%</b>	<b>32.93%</b>	<b>36.76%</b>	<b>34.79%</b>	<b>34.93%</b>	<b>35.17%</b>	<b>35.39%</b>	<b>35.58%</b>	<b>35.75%</b>	<b>35.88%</b>	<b>35.98%</b>	<b>36.06%</b>	<b>36.09%</b>
<b>Non-operating income (expense):</b>															
Interest and other income, net	-0.52%	-0.54%	-1.03%	-0.58%	-0.72%	-0.74%	-0.60%	-0.60%	-0.60%	-0.60%	-0.60%	-0.60%	-0.60%	-0.60%	-0.60%
Interest expense	-1.02%	-0.99%	-1.41%	-0.90%	-0.72%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%	-0.81%
Interest and other income / expen:	0.50%	0.44%	0.38%	0.33%	0.00%	0.07%	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%
Investment gains / losses, net	0.10%	0.03%	0.47%	0.10%	0.10%	0.04%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%
<b>Total non-operating incom</b>	<b>-0.42%</b>	<b>-0.51%</b>	<b>-0.56%</b>	<b>-0.47%</b>	<b>-0.61%</b>	<b>-0.70%</b>	<b>-0.56%</b>	<b>-0.55%</b>	<b>-0.56%</b>	<b>-0.55%</b>	<b>-0.55%</b>	<b>-0.55%</b>	<b>-0.55%</b>	<b>-0.56%</b>	<b>-0.56%</b>
Income before income taxes	29.28%	30.94%	28.69%	32.45%	36.14%	34.09%	34.37%	34.62%	34.83%	35.03%	35.19%	35.33%	35.43%	35.50%	35.53%
Provision for income taxes	-6.08%	-2.25%	-2.27%	8.42%	-5.59%	-5.28%	-5.32%	-5.36%	-5.39%	-5.42%	-5.45%	-5.47%	-5.48%	-5.49%	-5.50%
<b>Net income / loss</b>	<b>23.20%</b>	<b>28.69%</b>	<b>26.42%</b>	<b>40.88%</b>	<b>30.55%</b>	<b>28.81%</b>	<b>29.05%</b>	<b>29.26%</b>	<b>29.44%</b>	<b>29.61%</b>	<b>29.75%</b>	<b>29.86%</b>	<b>29.95%</b>	<b>30.01%</b>	<b>30.03%</b>



**Adobe Incorporated**
**Common Size Balance Sheet**

(% of sales)

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>	<b>2030E</b>	<b>2031E</b>
<b>Current Assets:</b>															
Cash and cash equivalents	31.58%	18.19%	23.72%	34.80%	24.35%	30.93%	39.63%	34.14%	38.00%	40.30%	40.85%	39.48%	35.74%	28.63%	16.26%
Short-term investments	48.12%	17.57%	13.67%	11.77%	12.38%	11.09%	10.09%	8.79%	7.71%	6.85%	6.18%	5.69%	5.37%	5.21%	5.22%
Trade receivables, net of allowances for doubtful accounts	16.68%	14.57%	13.74%	10.86%	11.90%	11.38%	11.38%	9.38%	9.38%	9.38%	9.38%	9.38%	9.38%	9.38%	9.38%
Prepaid expenses and other current assets	2.88%	3.46%	7.01%	5.88%	6.29%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%
<b>Total Current Assets</b>	<b>99.26%</b>	<b>53.79%</b>	<b>58.14%</b>	<b>63.30%</b>	<b>54.92%</b>	<b>59.48%</b>	<b>67.18%</b>	<b>58.39%</b>	<b>61.18%</b>	<b>62.61%</b>	<b>62.50%</b>	<b>60.64%</b>	<b>56.58%</b>	<b>49.30%</b>	<b>36.94%</b>
Property and equipment, net	12.83%	11.91%	11.57%	11.79%	10.60%	9.64%	9.03%	8.17%	7.58%	6.60%	5.82%	5.44%	5.31%	5.38%	5.66%
Operating lease right-of-use assets, net	5.77%	6.18%	5.24%	3.78%	2.81%	2.55%	2.39%	2.16%	2.01%	1.75%	1.54%	1.44%	1.41%	1.43%	1.50%
Goodwill	79.73%	117.18%	95.70%	83.48%	80.25%	71.45%	63.71%	54.17%	46.27%	39.85%	34.77%	30.86%	27.99%	26.09%	25.11%
Other intangibles, net	5.28%	22.91%	15.41%	10.56%	11.53%	8.02%	5.31%	3.13%	1.63%	0.96%	0.68%	0.46%	0.29%	0.16%	0.04%
Deferred income taxes	0.00%	0.00%	0.00%	10.65%	6.87%	7.03%	7.19%	7.04%	6.94%	6.92%	6.98%	7.14%	7.42%	7.87%	8.52%
Other assets	1.97%	2.07%	5.03%	5.15%	5.59%	5.37%	5.37%	5.37%	5.37%	5.37%	5.37%	5.37%	5.37%	5.37%	5.37%
<b>Total Assets</b>	<b>204.85%</b>	<b>214.03%</b>	<b>191.10%</b>	<b>188.72%</b>	<b>172.58%</b>	<b>163.54%</b>	<b>160.17%</b>	<b>138.44%</b>	<b>130.98%</b>	<b>124.06%</b>	<b>117.65%</b>	<b>111.35%</b>	<b>104.38%</b>	<b>95.60%</b>	<b>83.15%</b>
<b>Current Liabilities:</b>															
Trade payables	1.55%	2.06%	1.87%	2.38%	1.98%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%
Accrued expenses	13.61%	12.88%	12.52%	11.05%	11.00%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%	11.02%
Deferred revenue	32.95%	32.29%	30.24%	28.20%	29.98%	24.09%	24.09%	11.09%	11.09%	11.09%	11.09%	11.09%	11.09%	11.09%	11.09%
Income taxes payable	0.19%	0.40%	0.50%	0.49%	0.34%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%
Debt and capital lease obligations	0.00%	0.00%	28.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total current liabilities</b>	<b>48.31%</b>	<b>47.63%</b>	<b>73.32%</b>	<b>42.83%</b>	<b>43.92%</b>	<b>37.46%</b>	<b>37.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>	<b>24.46%</b>
<b>Long-term liabilities:</b>															
Debt	25.77%	45.68%	8.85%	31.99%	26.12%	23.37%	21.24%	18.38%	16.39%	14.76%	13.53%	12.66%	12.09%	11.80%	11.79%
Deferred revenue	1.21%	1.52%	1.10%	1.01%	0.92%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%
Income taxes payable	2.37%	7.13%	5.51%	4.11%	3.38%	3.04%	2.74%	2.36%	2.05%	1.79%	1.60%	1.45%	1.34%	1.28%	1.27%
Deferred income taxes	3.83%	0.52%	1.25%	0.08%	0.03%	0.06%	0.08%	0.10%	0.12%	0.13%	0.14%	0.16%	0.18%	0.19%	0.22%
Operating lease liabilities	5.77%	6.18%	5.24%	3.88%	2.87%	2.61%	2.45%	2.22%	2.06%	1.79%	1.58%	1.47%	1.44%	1.46%	1.53%
Other liabilities	1.71%	1.69%	1.55%	1.73%	1.60%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%	1.66%
<b>Total liabilities</b>	<b>88.98%</b>	<b>110.35%</b>	<b>96.84%</b>	<b>85.64%</b>	<b>78.83%</b>	<b>69.17%</b>	<b>66.60%</b>	<b>50.15%</b>	<b>47.69%</b>	<b>45.56%</b>	<b>43.94%</b>	<b>42.84%</b>	<b>42.14%</b>	<b>41.83%</b>	<b>41.90%</b>
<b>Stockholders' equity:</b>															
Preferred stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Common stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Additional paid-in-capital	69.61%	62.96%	58.22%	57.17%	53.39%	47.53%	42.38%	36.04%	30.78%	26.51%	23.13%	20.53%	18.62%	17.36%	16.71%
Retained earnings	131.12%	130.85%	132.75%	152.40%	151.44%	163.64%	174.96%	178.03%	181.50%	185.94%	191.96%	200.23%	211.59%	227.21%	248.75%
Accumulated other comprehensive income (loss)	-1.53%	-1.64%	-1.68%	-1.23%	-0.87%	-0.77%	-0.69%	-0.59%	-0.50%	-0.43%	-0.38%	-0.33%	-0.30%	-0.28%	-0.27%
Treasury stock, at cost	-83.33%	-88.49%	-95.02%	-105.27%	-110.22%	-116.03%	-123.09%	-125.19%	-128.49%	-133.53%	-141.01%	-151.91%	-167.68%	-190.52%	-223.94%
<b>Total stockholders' equity</b>	<b>115.86%</b>	<b>103.68%</b>	<b>94.26%</b>	<b>103.08%</b>	<b>93.74%</b>	<b>94.37%</b>	<b>93.57%</b>	<b>88.30%</b>	<b>83.29%</b>	<b>78.50%</b>	<b>73.71%</b>	<b>68.51%</b>	<b>62.23%</b>	<b>53.77%</b>	<b>41.25%</b>
<b>Total liabilities and stockholders' equity</b>	<b>204.85%</b>	<b>214.03%</b>	<b>191.10%</b>	<b>188.72%</b>	<b>172.58%</b>	<b>163.54%</b>	<b>160.17%</b>	<b>138.44%</b>	<b>130.98%</b>	<b>124.06%</b>	<b>117.65%</b>	<b>111.35%</b>	<b>104.38%</b>	<b>95.60%</b>	<b>83.15%</b>

### Common Size Balance Sheet

Common Size Balance Sheet  
(% of assets)

**Final Market**

Fiscal Years Ending Nov. 30	2017	2018	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Current Assets:															
Cash and cash equivalents	15.42%	8.50%	12.41%	18.44%	14.11%	18.91%	24.74%	24.66%	29.01%	32.48%	34.72%	35.46%	34.24%	29.95%	19.55%
Short-term investments	23.49%	8.21%	7.15%	6.23%	7.17%	6.78%	6.30%	6.35%	5.89%	5.52%	5.26%	5.11%	5.15%	5.45%	6.28%
Trade receivables, net of allowances for doubtful accounts	8.14%	6.81%	7.19%	5.76%	6.89%	6.96%	7.11%	6.78%	7.16%	7.56%	7.97%	8.42%	8.99%	9.81%	11.28%
Prepaid expenses and other current assets	1.40%	1.62%	3.67%	3.11%	3.65%	3.72%	3.80%	4.39%	4.64%	4.90%	5.17%	5.46%	5.83%	6.36%	7.32%
Total Current Assets	48.46%	25.13%	30.42%	33.54%	31.82%	36.37%	41.94%	42.18%	46.71%	50.47%	53.12%	54.46%	54.20%	51.58%	44.43%
Property and equipment, net	6.26%	5.56%	6.06%	6.25%	6.14%	5.89%	5.63%	5.90%	5.79%	5.32%	4.94%	4.89%	5.09%	5.63%	6.80%
Operating lease right-of-use assets, net	2.82%	2.89%	2.74%	2.01%	1.63%	1.56%	1.49%	1.56%	1.53%	1.41%	1.31%	1.29%	1.35%	1.49%	1.80%
Goodwill	38.92%	54.75%	50.08%	44.23%	46.50%	43.69%	39.77%	39.13%	35.32%	32.12%	29.55%	27.71%	26.82%	27.29%	30.20%
Other intangibles, net	2.58%	10.71%	8.06%	5.60%	6.68%	4.90%	3.31%	2.26%	1.25%	0.77%	0.58%	0.42%	0.28%	0.16%	0.05%
Deferred income taxes	0.00%	0.00%	0.00%	5.64%	3.98%	4.30%	4.49%	5.08%	5.30%	5.58%	5.93%	6.41%	7.11%	8.23%	10.25%
Other assets	0.96%	0.97%	2.63%	2.73%	3.24%	3.29%	3.35%	3.88%	4.10%	4.33%	4.57%	4.83%	5.15%	5.62%	6.46%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Current Liabilities:															
Trade payables	0.76%	0.96%	0.98%	1.26%	1.15%	1.18%	1.20%	1.39%	1.47%	1.55%	1.64%	1.73%	1.85%	2.02%	2.32%
Accrued expenses	6.64%	6.02%	6.55%	5.86%	6.37%	6.74%	6.88%	7.96%	8.42%	8.89%	9.37%	9.90%	10.56%	11.53%	13.26%
Deferred revenue	16.09%	15.09%	15.82%	14.94%	17.37%	14.73%	15.04%	8.01%	8.47%	8.94%	9.43%	9.96%	10.63%	11.60%	13.34%
Income taxes payable	0.09%	0.18%	0.26%	0.26%	0.20%	0.25%	0.26%	0.30%	0.32%	0.34%	0.35%	0.37%	0.40%	0.43%	0.50%
Debt and capital lease obligations	0.00%	0.00%	14.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current liabilities	23.58%	22.25%	38.37%	22.70%	25.45%	22.91%	23.39%	17.67%	18.67%	19.72%	20.79%	21.97%	23.43%	25.59%	29.42%
Long-term liabilities:															
Debt	12.58%	21.34%	4.63%	16.95%	15.14%	14.29%	13.26%	13.28%	12.51%	11.90%	11.50%	11.37%	11.59%	12.34%	14.18%
Deferred revenue	0.59%	0.71%	0.58%	0.54%	0.53%	0.59%	0.60%	0.70%	0.74%	0.78%	0.82%	0.87%	0.92%	1.01%	1.16%
Income taxes payable	1.16%	3.33%	2.89%	2.18%	1.96%	1.86%	1.71%	1.71%	1.56%	1.45%	1.36%	1.30%	1.29%	1.34%	1.52%
Deferred income taxes	1.87%	0.24%	0.66%	0.04%	0.02%	0.04%	0.05%	0.07%	0.09%	0.11%	0.12%	0.14%	0.17%	0.20%	0.26%
Operating lease liabilities	2.82%	2.89%	2.74%	2.05%	1.66%	1.60%	1.53%	1.60%	1.57%	1.44%	1.34%	1.32%	1.38%	1.53%	1.84%
Other liabilities	0.84%	0.79%	0.81%	0.92%	0.93%	1.02%	1.04%	1.20%	1.27%	1.34%	1.42%	1.50%	1.59%	1.74%	2.00%
Total liabilities	43.44%	51.56%	50.67%	45.38%	45.68%	42.30%	41.58%	36.22%	36.41%	36.73%	37.35%	38.47%	40.38%	43.76%	50.39%
Stockholders' equity:															
Preferred stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Common stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Additional paid-in-capital	33.98%	29.42%	30.47%	30.30%	30.94%	29.07%	26.46%	26.03%	23.50%	21.37%	19.66%	18.44%	17.84%	18.16%	20.10%
Retained earnings	64.01%	61.13%	69.46%	80.76%	87.75%	100.06%	109.23%	128.60%	138.57%	149.88%	163.17%	179.83%	202.72%	237.68%	299.17%
Accumulated other comprehensive income (loss)	-0.75%	-0.77%	-0.88%	-0.65%	-0.50%	-0.47%	-0.43%	-0.42%	-0.38%	-0.35%	-0.32%	-0.30%	-0.29%	-0.30%	-0.33%
Treasury stock, at cost	-40.68%	-41.34%	-49.72%	-55.78%	-63.87%	-70.95%	-76.85%	-90.43%	-98.10%	-107.63%	-119.86%	-136.43%	-160.65%	-199.29%	-269.33%
Total stockholders' equity	56.56%	48.44%	49.33%	54.62%	54.32%	57.70%	58.42%	63.78%	63.59%	63.27%	62.65%	61.53%	59.62%	56.24%	49.61%
Total liabilities and stockholders' equity	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Adobe Incorporated***Weighted Average Cost of Capital (WACC) Estimation***Cost of Equity:**

Risk-Free Rate	3.85%
Beta	1.25
Equity Risk Premium	4.59%
<b>Cost of Equity</b>	<b>9.59%</b>

**ASSUMPTIONS:***10-yr treasury bond (Yahoo), matches forecast horizon**5-yr monthly raw beta (FactSet)**Damodaran Implied ERP, trailing 12-month adj payout, 11/22***Cost of Debt:**

Risk-Free Rate	3.85%
Implied Default Premium	0.84%
Pre-Tax Cost of Debt	4.69%
Marginal Tax Rate	30%
<b>After-Tax Cost of Debt</b>	<b>3.29%</b>

*10-yr treasury bond (Yahoo), matches forecast horizon**YTM on Adobe's 10-year corporate bond (FINRA)***Market Value of Common Equity:**

Total Shares Outstanding	475
Current Stock Price	\$340.37
<b>MV of Equity</b>	<b>161,675.75</b>

**MV Weights**

97.25%

**Market Value of Debt:**

Short-Term Debt	0.00
Current Portion of LTD	0
Long-Term Debt	4,123.00
PV of Operating Leases	443
<b>MV of Total Debt</b>	<b>4,566.00</b>

2.75%

**Market Value of the Firm**

166,242

100.00%

**Estimated WACC**

9.42%

## Adobe Incorporated

### Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

#### Key Inputs:

CV Growth of NOPLAT	3.99%
CV Year ROIC	183.85%
WACC	9.42%
Cost of Equity	9.59%

Fiscal Years Ending Nov. 30	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
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#### DCF Model:

Free Cash Flow (FCF)	4657.4	5956.7	4348.1	7584.3	8903.1	10196.2	11477.3	12725.3	13778.1	14467.4
Continuing Value (CV)										268730.5
PV of FCF	4256.5	4975.5	3319.3	5291.6	5677.1	5942.1	6113.1	6194.5	6129.7	119555.4

**Value of Operating Assets:** 167454.8

#### Non-Operating Adjustments

Excess Cash	1117.9
Other Liabilities	0.0
Value of Debt	-4123.0
PV Leases	-443.0
Investments (Short & Long-term)	1966.0

**Value of Equity** 165972.7

**Shares Outstanding** 475.0

Intrinsic Value of Last FYE \$ 349.42

**Implied Price as of Today** \$ 381.19

#### EP Model:

Economic Profit (EP)	4804.4	5406.2	6477.6	7451.0	8744.3	10111.9	11462.3	12678.6	13622.9	14142.9
Continuing Value (CV)										260622.7
PV of EP	4391.0	4515.7	4945.0	5198.5	5575.8	5893.0	6105.1	6171.7	6060.7	115948.3

Total PV of EP 164804.7

Invested Capital (last FYE) 2650.1

**Value of Operating Assets:** 167454.8

#### Non-Operating Adjustments

Excess Cash	1117.9
Other Liabilities	0.0
Value of Debt	-4123.0
PV Leases	-443.0
Investments (Short & Long-term)	1966.0

**Value of Equity** 165972.7

**Shares Outstanding** 475.0

Intrinsic Value of Last FYE \$ 349.42

**Implied Price as of Today** \$ 381.19

## Adobe Incorporated

### Relative Valuation Models

Ticker	Company	Price	EPS 2022E	EPS 2023E	1Y Fwd P/E 22	2Y Fwd P/E 23	Est. 5yr EPS gr.	1Y Fwd PEG 22	2Y Fwd PEG 23
CRM	Salesforce, Inc.	\$163.02	\$0.40	\$1.15	<del>407.55</del>	<del>141.76</del>	15.1	<del>26.99</del>	<del>9.39</del>
INTU	Intuit Inc.	\$431.79	\$7.28	\$7.09	<del>59.31</del>	<del>60.90</del>	18.3	<del>3.24</del>	<del>3.33</del>
ORCL	Oracle Corporation	\$77.36	\$2.41	\$3.24	32.10	23.88	11.4	2.82	2.09
NOW	ServiceNow, Inc.	\$420.40	\$1.31	\$2.16	<del>320.92</del>	<del>194.63</del>	31.4	<del>10.22</del>	<del>6.20</del>
VMW	VMware, Inc.	\$113.76	\$3.28	\$3.96	34.68	28.73	21.0	1.65	1.37
MSFT	Microsoft Corporation	\$239.75	\$9.53	\$11.20	25.16	21.41	11.2	2.25	1.91
Average					<b>30.65</b>	<b>24.67</b>		<b>2.24</b>	<b>1.79</b>

ADBE	Adobe Incorporated	\$340.37	\$10.86	\$12.55	31.3	27.1	17.3	1.8	1.6
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<b>P/E (EPS22)</b>	<b>\$</b>	<b>332.86</b>
<b>P/E (EPS23)</b>	<b>\$</b>	<b>309.54</b>
<b>PEG (EPS22)</b>	<b>\$</b>	<b>420.58</b>
<b>PEG (EPS23)</b>	<b>\$</b>	<b>388.90</b>





**Adobe Incorporated***Value Driver Estimation*

All figures in millions of USD unless p/share or labeled

<i>Fiscal Years Ending Nov. 30</i>	2017	2018	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
<b>NOPLAT:</b>															
Sales	7301.50	9030.00	11171.00	12868.00	15785.00	17730.55	19884.81	23385.46	27380.42	31787.28	36437.12	41055.28	45255.29	48556.89	50441.87
Cost of Revenue	(684.49)	(849.00)	(916.00)	(965.00)	(1077.00)	(1242.32)	(1451.56)	(1761.51)	(2100.35)	(2450.99)	(2895.12)	(3333.57)	(3680.52)	(3909.76)	(3983.20)
Depreciation, Amortization, and Accretion	(326.00)	(346.00)	(757.00)	(757.00)	(788.00)	(862.50)	(880.80)	(925.24)	(985.43)	(1070.27)	(1081.68)	(1092.49)	(1151.62)	(1239.55)	(1347.37)
Selling, General and Administrative	(2822.30)	(3366.00)	(4125.00)	(4559.00)	(5406.00)	(6472.79)	(7259.23)	(8537.19)	(9995.61)	(11604.39)	(13301.88)	(14987.81)	(16521.08)	(17726.38)	(18414.52)
Research and Development	(1224.06)	(1538.00)	(1930.00)	(2188.00)	(2540.00)	(2984.69)	(3347.33)	(3936.62)	(4609.12)	(5350.95)	(6133.69)	(6911.09)	(7618.11)	(8173.88)	(8491.19)
Interest on Operating Leases	13.73	19.78	26.21	27.49	22.86	20.79	21.24	22.31	23.76	25.80	26.08	26.34	27.76	29.89	32.48
<b>EBITA</b>	<b>2258.38</b>	<b>2950.78</b>	<b>3469.21</b>	<b>4426.49</b>	<b>5996.86</b>	<b>6189.05</b>	<b>6967.12</b>	<b>8247.21</b>	<b>9713.67</b>	<b>11336.48</b>	<b>13050.82</b>	<b>14756.66</b>	<b>16311.74</b>	<b>17537.21</b>	<b>18238.08</b>
Provision for Income Tax	443.69	203.00	254.00	(1084.00)	883.00	935.47	1057.95	1253.11	1476.16	1723.38	1984.82	2244.91	2481.73	2668.01	2773.92
Plus Tax Shield on Lease Interest	4.10	5.90	7.82	8.20	7.45	6.21	6.34	6.66	7.09	7.70	7.78	7.86	8.29	8.92	9.69
Tax Shield on Interest Expense, Net	11.34	14.62	34.32	22.08	33.72	39.21	35.73	42.02	49.20	57.12	65.47	73.77	81.32	87.25	90.64
Less Tax on Investment Gains	(2.25)	(0.90)	(15.52)	(3.88)	(4.77)	(2.13)	(2.73)	(3.63)	(3.68)	(4.59)	(5.50)	(6.29)	(6.81)	(6.83)	(6.03)
<b>Adjusted Taxes</b>	<b>456.87</b>	<b>222.63</b>	<b>280.62</b>	<b>(1057.59)</b>	<b>919.39</b>	<b>978.75</b>	<b>1097.28</b>	<b>1298.16</b>	<b>1528.77</b>	<b>1783.61</b>	<b>2052.57</b>	<b>2320.25</b>	<b>2564.52</b>	<b>2757.35</b>	<b>2868.21</b>
<b>Change in Deferred Taxes</b>	<b>51.61</b>	<b>(469.00)</b>	<b>3.00</b>	<b>(1501.00)</b>	<b>183.00</b>	<b>(156.32)</b>	<b>(176.78)</b>	<b>(209.40)</b>	<b>(246.67)</b>	<b>(287.98)</b>	<b>(331.66)</b>	<b>(375.13)</b>	<b>(414.70)</b>	<b>(445.83)</b>	<b>(463.52)</b>
<b>NOPLAT</b>	<b>1853.12</b>	<b>2259.15</b>	<b>3191.59</b>	<b>3983.08</b>	<b>5260.47</b>	<b>5053.98</b>	<b>5693.06</b>	<b>6739.66</b>	<b>7938.24</b>	<b>9264.89</b>	<b>10666.59</b>	<b>12061.29</b>	<b>13332.52</b>	<b>14334.03</b>	<b>14906.35</b>
<b>Invested Capital:</b>															
<i>Net Operating Working Capital</i>															
<u>Operating Current Assets</u>															
Normal Cash	1260.97	1559.48	1929.23	2222.30	2726.07	3062.07	3434.11	4038.67	4728.60	5489.66	6292.69	7090.25	7815.59	8385.77	8711.31
Accounts Receivable, net	1217.97	1315.58	1535.00	1398.00	1878.00	2017.87	2263.04	2193.74	2568.49	2981.89	3418.08	3851.30	4245.29	4555.01	4731.83
Prepaid Expenses + Other Current Operating Assets	210.07	312.50	783.00	756.00	993.00	1078.53	1209.58	1422.52	1665.53	1933.59	2216.44	2497.36	2752.84	2953.67	3068.33
<b>Total Operating Current Assets</b>	<b>2689.01</b>	<b>3187.56</b>	<b>4247.23</b>	<b>4376.30</b>	<b>5597.07</b>	<b>6158.47</b>	<b>6906.73</b>	<b>7654.92</b>	<b>8962.62</b>	<b>10405.15</b>	<b>11927.21</b>	<b>13438.90</b>	<b>14813.72</b>	<b>15894.45</b>	<b>16511.48</b>
<u>Operating Current Liabilities</u>															
Trades Payable	113.54	186.26	209.00	306.00	312.00	341.72	383.24	450.70	527.70	612.63	702.24	791.25	872.19	935.83	972.15
Accrued Expenses	993.77	1163.19	1399.00	1422.00	1736.00	1954.66	2192.15	2578.07	3018.48	3504.30	4016.91	4526.03	4989.05	5353.02	5560.83
Income Taxes Payable	14.20	35.71	56.00	63.00	54.00	73.73	82.69	97.25	113.86	132.18	151.52	170.72	188.19	201.92	209.76
Deferred Revenue	2405.95	2915.97	3378.00	3629.00	4733.00	4271.81	4790.84	2594.14	3037.30	3526.15	4041.95	4554.24	5020.15	5386.39	5595.49
<b>Total Operating Current Liabilities</b>	<b>3527.46</b>	<b>4301.13</b>	<b>5042.00</b>	<b>5420.00</b>	<b>6835.00</b>	<b>6641.92</b>	<b>7448.91</b>	<b>5720.15</b>	<b>6697.33</b>	<b>7775.26</b>	<b>8912.63</b>	<b>10042.24</b>	<b>11069.58</b>	<b>11877.16</b>	<b>12338.23</b>
<b>Total Net Operating Working Capital</b>	<b>(838.45)</b>	<b>(1113.57)</b>	<b>(794.77)</b>	<b>(1043.70)</b>	<b>(1237.93)</b>	<b>(483.44)</b>	<b>(542.18)</b>	<b>1934.77</b>	<b>2265.29</b>	<b>2629.88</b>	<b>3014.58</b>	<b>3396.66</b>	<b>3744.14</b>	<b>4017.30</b>	<b>4173.25</b>
<b>Net PPE</b>	<b>936.98</b>	<b>1075.07</b>	<b>1293.00</b>	<b>1517.00</b>	<b>1673.00</b>	<b>1708.50</b>	<b>1794.70</b>	<b>1911.46</b>	<b>2076.03</b>	<b>2098.16</b>	<b>2119.11</b>	<b>2233.81</b>	<b>2404.38</b>	<b>2613.51</b>	<b>2853.97</b>
<u>Long-term Operating Assets</u>															
Operating Lease Right of Use Assets, net	421.38	558.43	585.62	487.00	443.00	452.40	475.23	506.14	549.72	555.58	561.13	591.50	636.66	692.04	755.71
Other Intangibles, net	385.66	2069.00	1721.00	1359.00	1820.00	1422.00	1055.00	733.00	447.00	305.00	247.80	190.60	133.40	76.20	19.00
Other Long-term Operating Assets	143.55	186.52	562.00	663.00	883.00	952.68	1068.43	1256.53	1471.18	1707.97	1957.81	2205.95	2431.62	2609.02	2710.30
<b>Total Long-term Operating Assets</b>	<b>950.59</b>	<b>2813.95</b>	<b>2868.62</b>	<b>2509.00</b>	<b>3146.00</b>	<b>2827.08</b>	<b>2598.66</b>	<b>2495.67</b>	<b>2467.90</b>	<b>2568.55</b>	<b>2766.74</b>	<b>2988.05</b>	<b>3201.68</b>	<b>3377.26</b>	<b>3485.01</b>
<u>Less Long-term Operating Liabilities</u>															
Deferred Revenues, non-current	88.59	137.63	123.00	130.00	145.00	171.00	191.77	225.54	264.06	306.56	351.41	395.95	436.45	468.30	486.47
Income Taxes Payable	173.09	644.10	616.00	529.00	534.00	539.30	545.29	552.38	560.74	570.50	581.74	594.45	608.50	623.61	639.32
Other Long-term Operating Liabilities	125.19	152.21	173.00	223.00	252.00	295.16	331.03	389.30	455.81	529.17	606.57	683.45	753.37	808.33	839.71
<b>Total Long-term Operating Liabilities</b>	<b>386.87</b>	<b>933.94</b>	<b>912.00</b>	<b>882.00</b>	<b>931.00</b>	<b>1005.46</b>	<b>1068.09</b>	<b>1167.22</b>	<b>1280.61</b>	<b>1406.23</b>	<b>1539.72</b>	<b>1673.85</b>	<b>1798.33</b>	<b>1900.24</b>	<b>1965.51</b>
<b>Invested Capital</b>	<b>662.25</b>	<b>1841.51</b>	<b>2454.85</b>	<b>2100.30</b>	<b>2650.07</b>	<b>3046.68</b>	<b>2783.09</b>	<b>5174.68</b>	<b>5528.61</b>	<b>5890.35</b>	<b>6360.71</b>	<b>6944.67</b>	<b>7551.87</b>	<b>8107.82</b>	<b>8546.73</b>
<b>Free Cash Flow (FCF):</b>															
NOPLAT	1853.12	2259.15	3191.59	3983.08	5260.47	5053.98	5693.06	6739.66	7938.24	9264.89	10666.59	12061.29	13332.52	14334.03	14906.35
Change in IC	(8.19)	1179.26	613.33	(354.54)	549.77	396.61	(263.59)	2391.59	353.92	361.75	470.36	583.96	607.21	555.95	438.91
<b>FCF</b>	<b>1861.31</b>	<b>1079.89</b>	<b>2578.26</b>	<b>4337.63</b>	<b>4710.70</b>	<b>4657.36</b>	<b>5956.65</b>	<b>4348.07</b>	<b>7584.31</b>	<b>8903.15</b>	<b>10196.23</b>	<b>11477.33</b>	<b>12725.31</b>	<b>13778.09</b>	<b>14467.44</b>
<b>Return on Invested Capital (ROIC):</b>															
NOPLAT	1853.12	2259.15	3191.59	3983.08	5260.47	5053.98	5693.06	6739.66	7938.24	9264.89	10666.59	12061.29	13332.52	14334.03	14906.35
Beginning IC	670.44	662.25	1841.51	2454.85	2100.30	2650.07	3046.68	2783.09	5174.68	5528.61	5890.35	6360.71	6944.67	7551.87	8107.82
<b>ROIC</b>	<b>276.40%</b>	<b>341.13%</b>	<b>173.31%</b>	<b>162.25%</b>	<b>250.46%</b>	<b>190.71%</b>	<b>186.86%</b>	<b>242.16%</b>	<b>153.41%</b>	<b>167.58%</b>	<b>181.09%</b>	<b>189.62%</b>	<b>191.98%</b>	<b>189.81%</b>	<b>183.85%</b>
<b>Economic Profit (EP):</b>															
Beginning IC	670.44	662.25	1841.51	2454.85	2100.30	2650.07	3046.68	2783.09	5174.68	5528.61	5890.35	6360.71	6944.67	7551.87	8107.82
x (ROIC - WACC)	2.67	3.32	1.64	1.53	2.41	1.81	1.77	2.33	1.44	1.58	1.72	1.80	1.83	1.80	1.74
<b>EP</b>	<b>1789.99</b>	<b>2196.79</b>	<b>3018.18</b>	<b>3751.92</b>	<b>5062.69</b>	<b>4804.43</b>	<b>5406.17</b>	<b>6477.59</b>	<b>7450.96</b>	<b>8744.29</b>	<b>10111.92</b>	<b>11462.33</b>	<b>12678.57</b>	<b>13622.91</b>	<b>14142.87</b>

**Adobe Incorporated**  
Key Management Ratios

Fiscal Years Ending Nov. 30	2017	2018	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
<b>Liquidity Ratios:</b>															
Current Ratio (Cur. Assets/Cur. Liabilities)	2.05	1.13	0.79	1.48	1.25	1.59	1.79	2.39	2.50	2.56	2.56	2.48	2.31	2.02	1.51
Quick Ratio (Liquid Assets/Cur. Liabilities)	1.65	0.75	0.51	1.09	0.84	1.12	1.33	1.75	1.87	1.93	1.92	1.85	1.68	1.38	0.88
Cash Ratio (Cash & Cash Equivs/Cur. Liabilities)	0.65	0.38	0.32	0.81	0.55	0.83	1.06	1.40	1.55	1.65	1.67	1.61	1.46	1.17	0.66
<b>Asset-Management Ratios:</b>															
Receivables Turnover (Sales/Avg Accounts Receival	7.12	7.13	7.84	8.77	9.64	9.10	9.29	10.49	11.50	11.45	11.39	11.30	11.18	11.04	10.86
Days in Receivables (365/Receivables Turnover)	51.26	51.20	46.57	41.60	37.88	40.10	39.29	34.78	31.74	31.87	32.06	32.31	32.65	33.08	33.60
Total Asset Turnover (Total Revenue/Avg Total Ass	1.12	1.49	1.97	1.76	1.88	1.85	1.66	1.73	1.80	1.73	1.71	1.72	1.79	1.96	2.37
<b>Financial Leverage Ratios:</b>															
Debt-to-Equity (Total Debt/Total Equity)	0.22	0.44	0.09	0.31	0.28	0.25	0.23	0.21	0.20	0.19	0.18	0.18	0.19	0.22	0.29
Debt-to-Assets (Total Debt/Total Assets)	0.13	0.21	0.05	0.17	0.15	0.14	0.13	0.13	0.13	0.12	0.12	0.11	0.12	0.12	0.14
<b>Profitability Ratios:</b>															
Return on Equity (Net Income/Beg Equity)	30.44%	39.88%	29.61%	48.62%	43.76%	41.05%	47.11%	51.67%	68.74%	72.07%	74.84%	76.57%	77.06%	76.39%	74.58%
Return on Assets (Net Income/Total Assets)	11.33%	13.41%	13.82%	21.66%	17.70%	17.62%	18.14%	21.14%	22.48%	23.86%	25.28%	26.82%	28.69%	31.39%	36.12%
Gross Profit Margin ((Rev-COGS)/Rev)*100	86.16%	86.77%	85.02%	86.62%	88.18%	88.13%	88.27%	88.51%	88.73%	88.92%	89.09%	89.22%	89.32%	89.40%	89.43%
<b>Payout Policy Ratios:</b>															
Total Payout Ratio ((Divs + Repur)/Net Income)	64.94%	79.12%	93.19%	57.98%	81.92%	62.12%	67.56%	70.16%	73.26%	77.18%	82.43%	89.64%	99.73%	114.11%	134.99%

Adobe Incorporated  
Sensitivity Tables

		Cost of Equity						
DCF	\$ 381.19	10.19%	9.99%	9.79%	9.59%	9.39%	9.19%	8.99%
Pre-Tax Cost of Debt	4.39%	341.94	354.26	367.44	381.61	396.78	413.17	430.89
	4.49%	341.83	354.14	367.31	381.47	396.63	413.01	430.71
	4.59%	341.72	354.02	367.18	381.34	396.48	412.85	430.54
	4.69%	341.60	353.89	367.05	381.19	396.33	412.68	430.36
	4.79%	341.49	353.78	366.93	381.06	396.18	412.53	430.19
	4.89%	341.38	353.66	366.80	380.92	396.04	412.37	430.02
	4.99%	341.27	353.54	366.67	380.79	395.89	412.21	429.84

		Beta							
DCF		\$ 381.19	1.40	1.35	1.30	1.25	1.20	1.15	1.10
Equity Risk Premium	4.29%	362.47	377.28	393.28	410.61	429.44	449.98	472.47	
	4.39%	353.39	367.83	383.44	400.34	418.71	438.74	460.68	
	4.49%	344.72	358.82	374.05	390.54	408.47	428.03	449.43	
	4.59%	336.44	350.21	365.08	381.19	398.70	417.79	438.70	
	4.69%	328.53	341.99	356.52	372.26	389.36	408.01	428.44	
	4.79%	320.97	334.12	348.32	363.71	380.43	398.66	418.62	
	4.89%	313.72	326.58	340.47	355.52	371.87	389.70	409.22	

		CV Growth of NOPLAT							
DCF		\$ 381.19	3.24%	3.49%	3.74%	3.99%	4.24%	4.49%	4.74%
WACC	8.82%	391.57	404.37	418.43	433.95	451.17	470.37	491.92	
	9.02%	376.25	387.95	400.76	414.85	430.41	447.69	466.99	
	9.22%	361.97	372.70	384.40	397.23	411.34	426.95	444.29	
	9.42%	348.86	358.73	369.47	381.19	394.05	408.22	423.90	
	9.62%	336.16	345.23	355.07	365.79	377.51	390.37	404.54	
	9.82%	324.45	332.82	341.88	351.72	362.44	374.16	387.04	
	10.02%	313.45	321.19	329.55	338.59	348.43	359.15	370.88	

		Digital Media Annual % Decrease							
DCF		\$ 381.19	-3.25%	-3.00%	-2.75%	-2.50%	-2.25%	-2.00%	-1.75%
Digital Exp. Decrease	-1.00%	358.86	368.77	379.02	389.63	400.61	411.95	423.68	
	-1.25%	355.94	365.85	376.11	386.72	397.69	409.04	420.76	
	-1.50%	353.13	363.04	373.30	383.91	394.88	406.22	417.95	
	-1.75%	350.41	360.33	370.58	381.19	392.17	403.51	415.23	
	-2.00%	347.80	357.71	367.97	378.58	389.55	400.89	412.62	
	-2.25%	345.27	355.19	365.44	376.05	387.02	398.37	410.09	
	-2.50%	342.84	352.75	363.01	373.62	384.59	395.94	407.66	

		CV Growth of EPS							
<i>DDM</i>		\$ 380.33	3.25%	3.50%	3.75%	4.00%	4.25%	4.50%	4.75%
Cost of Equity	8.99%	396.55	413.15	431.34	451.35	473.48	498.06	525.55	
	9.19%	375.84	390.98	407.51	425.63	445.59	467.67	492.24	
	9.39%	356.66	370.50	385.56	402.02	420.08	439.99	462.04	
	9.59%	338.90	351.58	365.34	380.33	396.73	414.74	434.61	
	9.79%	322.30	333.93	346.53	360.22	375.14	391.47	409.42	
	9.99%	306.86	317.57	329.13	341.65	355.27	370.13	386.41	
	10.19%	292.46	302.32	312.95	324.44	336.90	350.45	365.25	

		Cost of Rev. (Subscription)							
DCF		\$ 381.19	-10.23%	-9.98%	-9.73%	-9.48%	-9.23%	-8.98%	-8.73%
Cost of Rev. (Service)	-72.00%	373.45	376.15	378.84	381.54	384.23	386.92	389.62	
	-72.50%	373.34	376.03	378.73	381.43	384.12	386.81	389.50	
	-73.00%	373.23	375.92	378.62	381.32	384.01	386.70	389.39	
	-73.57%	373.10	375.80	378.49	381.19	383.88	386.57	389.27	
	-74.00%	373.01	375.70	378.40	381.10	383.78	386.48	389.17	
	-74.50%	372.90	375.59	378.29	380.99	383.67	386.37	389.06	
	-75.00%	372.79	375.48	378.18	380.88	383.56	386.26	388.95	

**Adobe Incorporated**
*Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding*

Number of Options Outstanding (shares): 0  
Average Time to Maturity (years): 0.00  
Expected Annual Number of Options Exercised: 0

Current Average Strike Price: \$ -  
Cost of Equity: 9.59%  
Current Stock Price: \$340.37

<b>Fiscal Years Ending Nov. 30</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>	<b>2030E</b>	<b>2031E</b>
Increase in Shares Outstanding:	0	0	0	0	0	0	0	0	0	0
Average Strike Price:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Increase in Common Stock Account:</b>	-	-	-	-	-	-	-	-	-	-
Share Repurchases (\$M)	3,173	3,903	4,801	5,905	7,263	8,934	10,989	13,516	16,625	20,449
Expected Price of Repurchased Shares:	\$ 340.37	\$ 373.01	\$ 408.78	\$ 447.98	\$ 490.94	\$ 538.02	\$ 589.61	\$ 646.15	\$ 708.11	\$ 776.02
<b>Number of Shares Repurchased:</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>23</b>	<b>26</b>
Shares Outstanding (beginning of the year)	475	466	455	443	430	415	399	380	359	336
Plus: Shares Issued Through ESOP	0	0	0	0	0	0	0	0	0	0
Less: Shares Repurchased in Treasury	9	10	12	13	15	17	19	21	23	26
<b>Shares Outstanding (end of the year)</b>	<b>466</b>	<b>455</b>	<b>443</b>	<b>430</b>	<b>415</b>	<b>399</b>	<b>380</b>	<b>359</b>	<b>336</b>	<b>309</b>

**23% Repur Growth**

**Adobe Incorporated***Present Value of Operating Lease Obligations*

(millions of USD)

<b>Fiscal Years Ending Nov. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Year 1	60.5	88.6	98.2	104.0	108.0
Year 2	62.3	93.5	91.9	90.0	87.0
Year 3	63.3	80.4	81.5	72.0	68.0
Year 4	53.7	71.4	68.5	59.0	65.0
Year 5	44.0	56.5	60.7	60.0	60.0
Thereafter	251.5	311.9	337.9	272.0	216.0
Total Minimum Payments	535.3	702.3	738.7	657.0	604.0
Less: Cumulative Interest	114.0	143.9	153.1	125.2	105.7
<b>PV of Minimum Payments</b>	<b>421.4</b>	<b>558.4</b>	<b>585.6</b>	<b>531.8</b>	<b>498.3</b>

<b>Implied Interest in Year 1 Payment</b>	<b>13.7</b>	<b>19.8</b>	<b>26.2</b>	<b>27.5</b>	<b>25.0</b>
Pre-Tax Cost of Debt	4.69%	4.69%	4.69%	4.69%	4.69%
Years Implied by Year 6 Payment	5.7	5.5	5.6	4.5	3.6
Expected Obligation in Year 6 & Beyond	44.02	56.49	60.69	60	60

## Present Value of Lease Payments

PV of Year 1	57.7	84.6	93.8	99.3	103.2
PV of Year 2	56.8	85.3	83.8	82.1	79.4
PV of Year 3	55.2	70.1	71.0	62.7	59.3
PV of Year 4	44.7	59.4	57.1	49.1	54.1
PV of Year 5	35.0	44.9	48.3	47.7	47.7
PV of 6 & beyond	171.9	214.1	231.7	190.8	154.7
Capitalized PV of Payments	421.4	558.4	585.6	531.8	498.3

**Adobe Incorporated***Valuation of Options Granted under ESOP*

Current Stock Price	\$340.37
Risk Free Rate	0.00%
Current Dividend Yield	0.00%
Annualized St. Dev. of Stock Returns	0.00%

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Range 1	0	0	0	#DIV/0!	#DIV/0!
Range 2	0	0	0	#DIV/0!	#DIV/0!
Range 3	0	0	0	#DIV/0!	#DIV/0!
Range 4	0	0	0	#DIV/0!	#DIV/0!
Range 5	0	0	0	#DIV/0!	#DIV/0!
Range 6				\$	-
Range 7				\$	-
Range 8				\$	-
Range 9				\$	-
Total	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!