United Parcel Service Inc., & FedEx Corporation

A Comparative Analysis Between the Doyens of the
Freight and Logistics Services Industry

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Economic State of the Freight and Logistics Services Industry

The United Parcel Services Incorporation ("UPS") and the FedEx Corporation ("FedEx") operate within the international Industrials sector, particularly the Freight and Logistics Services industry. UPS and FedEx perform in a market that rests at the intersection of crucial economic and social trends, such as exponential e-commerce growth and rapid urbanization. In 2019, the global volume of parcel deliveries surpassed 100 billion for the first time in history, reaching just over 103 billion deliveries for the year. This accomplishment accounted for a 9% increase in global year-over-year parcel revenues from 2018 to 2019, totaling $323 billion and $351 billion respectively[1]. Analysts expect the volume of parcel deliveries to increase by more than 100% by 2026, reaching anywhere from 220 billion to 262 billion deliveries. Currently, the United States is the leader in revenues from global parcel shipments, bringing in more than $130 billion in 2019 (or 37% of all parcel revenue internationally)[1]. This exposure to global markets is conducive to the success of both UPS and FedEx, giving the domestic firms access to 3.8 billion customers worldwide across a myriad of channels such as business-to-business, business-to-consumer, consumer-to-business, and consumer-cosigned shipments[1]. In the wake of the COVID-19 ("coronavirus") pandemic, parcel volumes continue to rise, and carriers must unflaggingly grapple with the new reality of consumer demand, yenning for innovative consumer experiences, and need for investment in modern technologies and infrastructure– all with the aim to not stymie revenue or market share.

United Parcel Services Inc. Background

Founded in 1907 by two teenagers, a bicycle, and a one hundred dollar loan, United Parcel Services Incorporation ("UPS") is now the world's largest package delivery company, employing nearly 500,000 individuals the world around[2]. Conceived by Jim Casey and Claude Ryan under the name *American Messenger Company*, the business found its roots in the delivery of telegrams from the telegraph office in Seattle, Washington to the intended recipients in the local area. Throughout the next decade, department stores became a staple of consumer spending and allowed for the American Messenger Company to expand its services by offering the delivery of retail packages to customers' homes. By 1919, the demand for this service grew greatly and allowed for the company to expand into California. With this expansion, the founders thought it prudent to rebrand the business as *United Parcel Services* and, over the subsequent decade, expand retail delivery to five major U.S. cities, including Chicago, Cincinnati, Milwaukee, and Philadelphia[3]. By the 1950s, the demand for retail delivery from department stores declined, posting grandiose challenges for UPS's business model. As a solution, in 1953, the company diversified its services and began accepting packages from the general public to be delivered via its common carrier service[4]. Moreover, UPS launched its first successful air delivery service, dubbed *Blue Label Air,* that same year; competition with the United States Postal Service ("USPS") was now in full effect. Regulations blocking UPS from intervening with the USPS were prevalent; however, by 1975, common carrier rights allowed UPS to be in competition with USPS and deliver packages between private and commercial clients alike in the Midwest, Southeast, and Northeast[3]. Within that same year, UPS became the first delivery company to offer services to every address in the continental 48 states as well as make its first international delivery, offering services in Toronto, Canada. In 1988, UPS retired *Blue Label Air*

and chartered its own airline, *UPS Airlines*, in the fastest major airline startup maneuver in FAA history[3]. By 1989, the company swelled its operations to include Africa, Asia, Europe, and the Middle East; today, UPS offers its services to over 220 countries across the globe. As the country was shifting towards online catering in the era of the dotcom bubble, UPS launched *UPS.com* and became the first company to offer package tracking capabilities on all parcels by 1995[3]. To the surprise of many, UPS did not go public on the New York Stock Exchange until November of 1999[3]. The years between the turn of the millennium and the following decade were filled with multiple acquisitions, funded in part by the increase of capital from the public, that expanded the company's revenue and formulated *UPS Freight*. The most notable acquisition included that of *Mail Boxes, Etc., Inc.* which would ultimately become known as *The UPS Store*[3]. Since its inception and through the development of its business model, UPS has shown its ability to create efficient multimodal networks that optimize asset efficiency and utilization, cutting-edge technology that enables customers to send, manage and track shipments, as well as a broad portfolio of services that allows clients to benefit from business solutions that go beyond package delivery[5].

Current Events

The Freight and Logistics Service industry is undergoing imperative transformations in spite of the global COVID-19 ("coronavirus") pandemic. The United Parcel Service ("UPS") is using knowledge and influence in the economic environment to greatly improve comparative efficiencies, differentiate offerings from competitors, and tap into new –yet ever-changing– growth trends. UPS is currently on track to set a record high stock evaluation, appreciating over 95% from May 2020 when the company experienced a drastic decline in stock price and investor sentiment (as did the majority of all publicly listed companies due to the hardships caused and unpredictable nature of the novel coronavirus)[6]. The effect of the coronavirus remains opaque; however, the risks that may affect UPS have been calculated and are actively being mitigated. In the long term, the coronavirus may cause a reduction in revenue, an increase in expenses, a reduction in operating margins, delays in capital projects, limited access to liquidity, large disruption in the global supply chain, and the possibility of an impairment in the fair value of assets or securities held by the company[5]. Regardless of these circumstances, the company holds nearly $6 billion in cash and cash equivalents and expects to pay down large sums of commercial paper in the coming year. Moreover, revenue increased roughly 14% in the midst of the pandemic[5]. This increase in revenue can be attributed directly –but not entirely– to the substantial rise in consumer spending via e-commerce platforms. In 2020, consumers spent 44% more with U.S. retailers online than in 2019[7], resulting in an additional need for parcel delivery. Moreover, eBay, the global e-commerce leader that connects millions of buyers and sellers online, recently announced a partnership with UPS that would give UPS a near exclusive right to ship parcels for sellers on eBay[8]. The partnership allows eBay sellers to ship parcels with UPS for a rate that is roughly 50% cheaper than the previous ground shipping rate and over 60%

cheaper than the previous air shipping rate. Analysts explicate that this deal would dramatically reduce the United States Postal Service's market share on eBay and bring countless streams of revenue to UPS[9]. What's more, UPS reports that 13.3% of all consolidated revenue is generated via Amazon.com Inc. ("Amazon") and its affiliates[5]. Amazon has seen tremendous growth in the 'new-normal' environment, due to increased online consumer spending. This directly benefits UPS, as more revenue for Amazon inadvertently guarantees more revenue for UPS. Lastly, UPS is now experimenting with alternative ways of delivering parcels. In 2019, UPS offered the United States' first drone delivery system[3]. As of April 2021, UPS plans to acquire an electric vertical takeoff and landing (eVTOL) aircraft that it can use in small- and mid-size markets[6]. This aircraft will reduce transit times in local areas of operation, decrease operational costs, and serve as a benefit to the global environment by lessening the emission footprint of UPS as a whole. These aircrafts have the ability to create operational efficiencies previously unthought of and can open the door for new services and future solutions for air and ground operations. Looking forward, it is imperative to note that UPS's revenue is contingent upon not only the e-commerce and shopping trends of delivery customers, but also the product launches of shipping customers, the overall growth of a shipping customer's underlying business, as well as any disruptions to said underlying business[5].

Financial Ratios

Financial Metric	2018	2019	2020	Industry (2019)
Current Ratio	1.15x	1.11x	1.19x	1.46x
Quick Ratio	1.12x	1.08x	1.15x	1.08x
Days Sales Outstanding	50.27 days	48.94 days	46.36 days	36.71 days
Inventory Turnover	170.69x	144.99x	136.50x	
Fixed Asset Ratio	2.70x	2.22x	2.40x	
Total Asset Turnover	1.44x	1.28x	1.36x	
Times Interest Earned	9.45x	9.66x	4.21x	24.49x
Debt to Equity Ratio	7.49%	7.69%	36.85%	5.6%
Liabilities to Assets Ratio	93.96%	94.35%	98.95%	
EBITDA Coverage	13.24x	15.68x	17.41x	
Net Profit Margin	6.67%	5.99%	1.59%	4.50%
Net Operating Margin	9.22%	8.51%	3.01%	
Gross Profit Margin	72.27%	74.21%	73.87%	54.19%
Return on Assets	9.58%	7.67%	2.15%	4.10%
Return on Equity	158.59%	135.90%	204.41%	43.02%
Earnings Per Share	$5.33	$4.97	$1.34	
Price/Earning Multiple	18.23x	23.81x	124.75x	33.69x
Price to Cash Flow	$6.65	$11.90	$13.96	$21.45
Market to Book Value	27.96x	30.96x	222.23x	
Book Value per Share	$3.49	$3.78	$0.76	

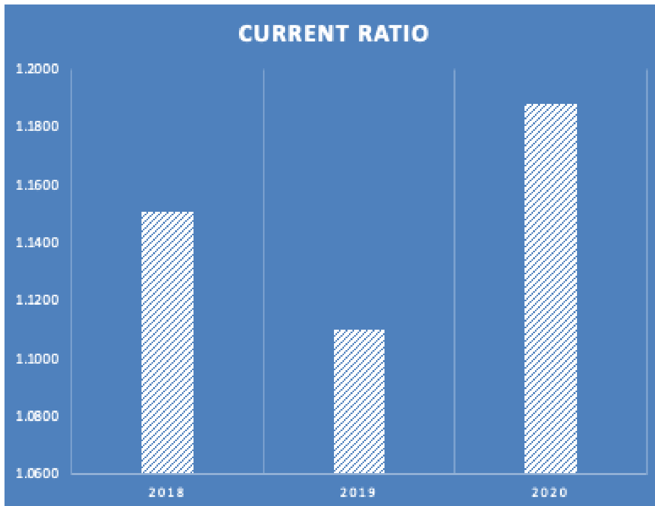
DuPont Equation

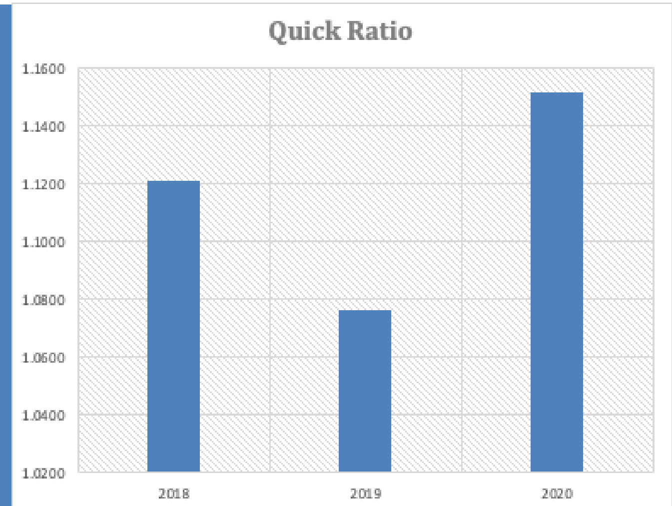
$$ROE = (Profit\ Margin) * (Total\ Asset\ Turnover) * (Equity\ Multiplier)$$

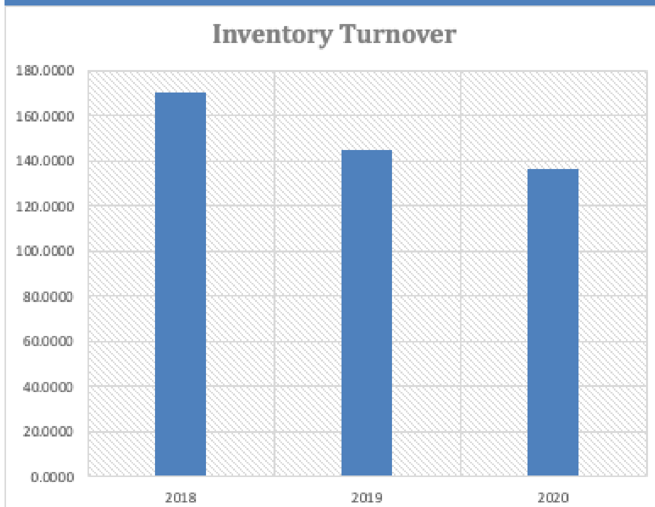
$$ROE = \left(\frac{Net\ Income}{Sales}\right) * \left(\frac{Sales}{Total\ Assets}\right) * \left(\frac{Total\ Assets}{Total\ Common\ Equity}\right)$$

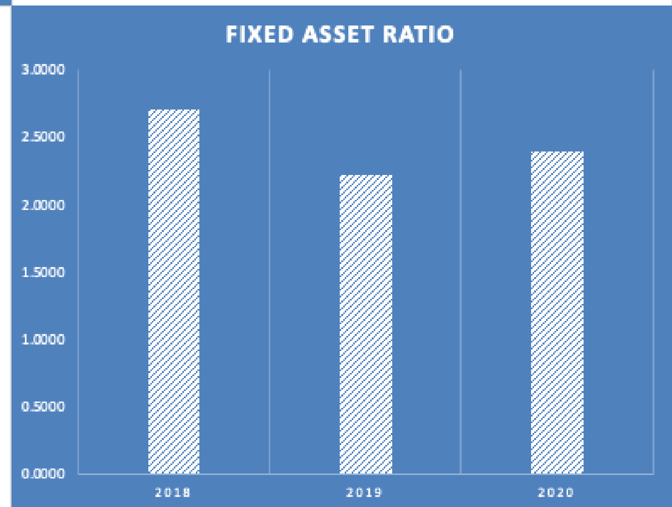
Year	Profit Margin	Asset Turnover	Equity Multiplier	ROE
2018	6.67%	1.44x	16.56x	158.59%
2019	5.99%	1.28x	17.71x	135.90%
2020	1.59%	1.36x	94.99x	204.41%

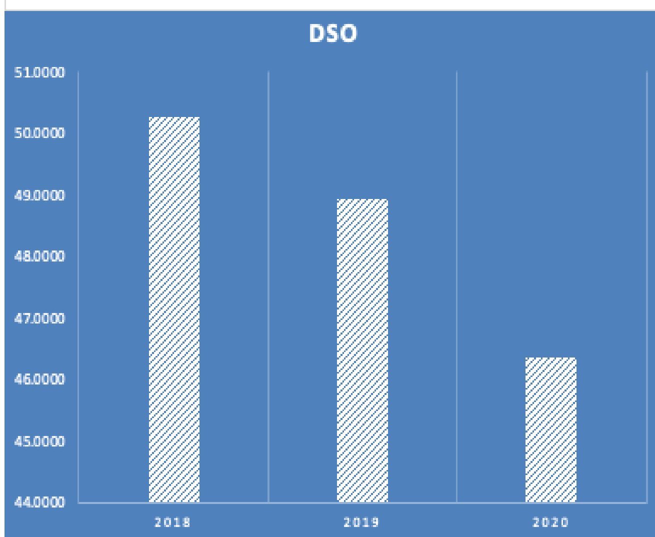
Graphical Representations

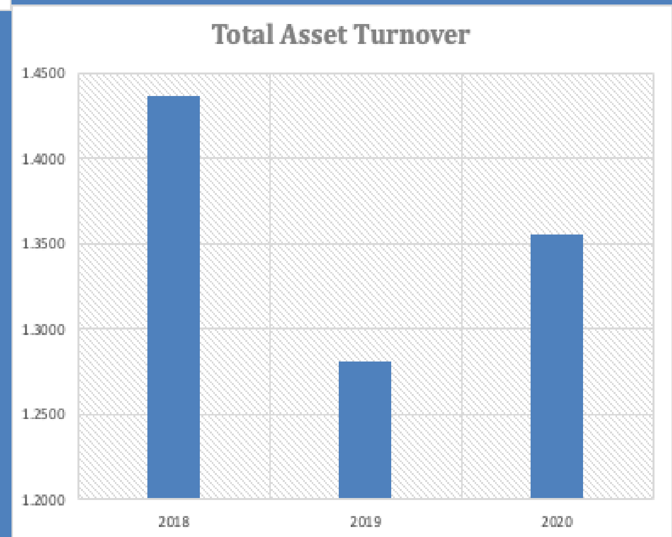


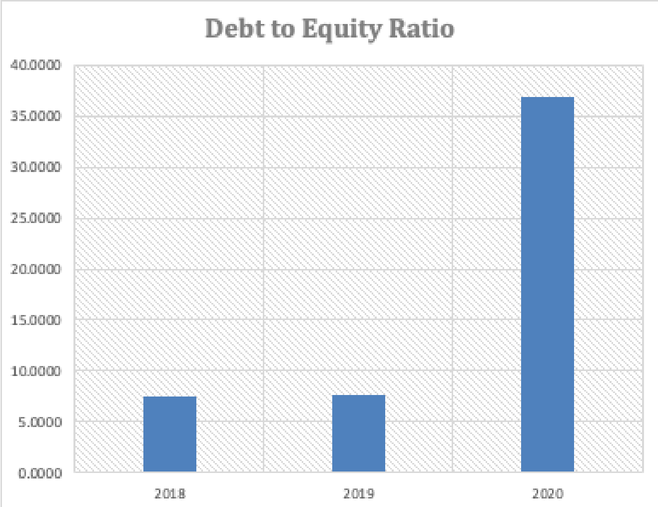


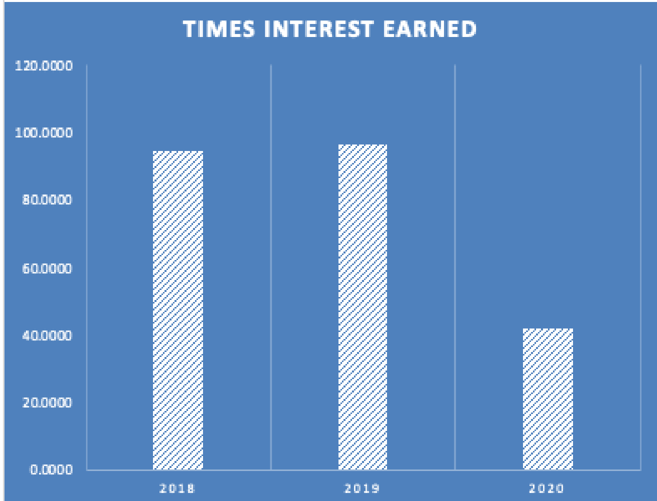


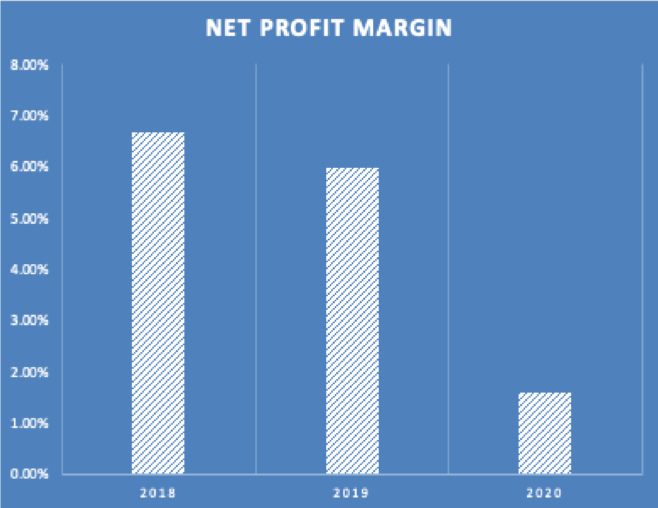


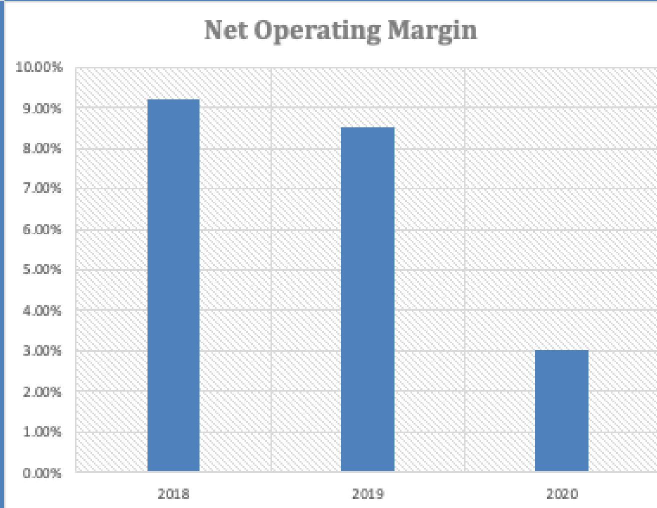


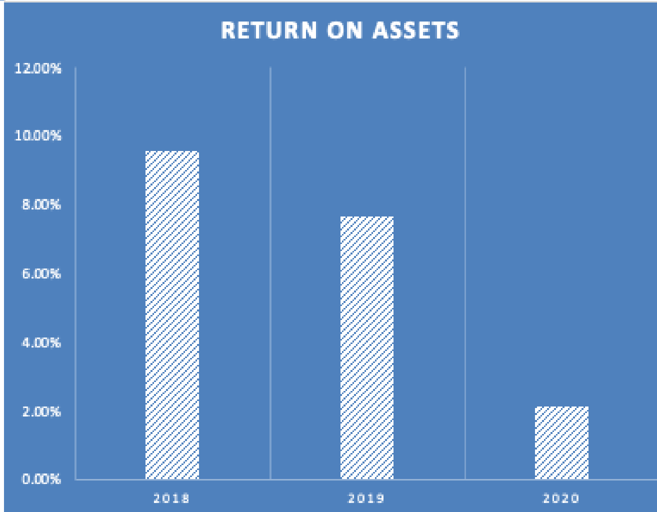



Debt to Equity Ratio
40.0000
35.0000
30.0000
25.0000
20.0000
15.0000
10.0000
5.0000
0.0000
2018
2019
2020


TIMES INTEREST EARNED
120.0000
100.0000
80.0000
60.0000
40.0000
20.0000
0.0000
2018
2019
2020


NET PROFIT MARGIN
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2018
2019
2020


Net Operating Margin
10.00%
9.00%
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2018
2019
2020


RETURN ON ASSETS
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
2018
2019
2020

Analysis of Financial Ratios (UPS)

One imperative focus for individuals looking to properly value a company for investment or to analyze current performance for managerial decision making is to look at some of the fundamental financial metrics. With these metrics, a company can be evaluated in isolation, compared to another company in specific, or compared against the industry it operates in. In any of these scenarios, an outside investor or manager within the company can make reasonable assessments regarding the best course of action moving forward, though it should be noted that comparison is a highly useful tool and allows for even more insight. The 2020 current ratio for United Parcel Service was 1.19x, increasing from the prior year's ratio of 1.11x. This increase suggests that UPS has performed greater in the scope of capital management. The industry average is 1.46x; when compared to the ratio of UPS, it indicates that UPS may be at a higher risk of distress or default of their current debt. The marginal increase of UPS shows that it is on track to meet the industry average and is better overseeing its use of current assets and cash. The quick ratio, a valuable measure of the company's short-term liquidity position, was measured to be 1.15x in 2020. This is an increase year-over-year for the last two years, measuring 1.08x in 2019 and 1.12x in 2018. The quick ratio tells of a company's liquid health; if it is low, a company may find difficulties in paying debt. UPS appears to be in a better position than others in its industry, as the industry average is 1.08x. This means that UPS had $1.15 of liquid assets for every dollar of debt, while its competitors only have $1.08 of liquid assets for every debted dollar. In 2020, UPS averaged 43.36 days as the median amount of time it took the company to collect payment for the purchase of its services. It is in a company's best interest to collect payments as soon as possible, and UPS has been showing that it is working on improving the speed in which they do so. The company's DSO has decreased 7.77% since 2018; however, it

still is an industry laggard, being nearly 20% slower in its collection than the rest of the industry. This represents a problem for UPS, as they will not have as high a percentage of available cash to debt as its competitors. Regardless of its slower payment collection, UPS has an extremely healthy inventory turnover: in 2020, UPS turned over its inventory 136.5 times. While the number is high, this financial metric has been decreasing year-over-year for the past 3 years. This represents a decrease in how quickly UPS can replace its inventory, which mainly consists of client parcels. The complications fostered by the COVID-19 pandemic could be at fault for this decrease from 2019 to 2020; however, the decrease of 25x from 2018 to 2019 tells the story of a business that is no longer performing as quickly. This could otherwise show insight to the difficulties that come with turning over more inventory, as the amount of inventory and demand for UPS's services have increased year-over-year. The fixed asset ratio of UPS for 2020 was 2.40x. This ratio has consistently decreased each year since 2018, totaling a decrease of 30 basis points. This metric is generally used for determining the operating performance of a firm, providing information about one's ability to generate sales from its fixed-asset investments. The waning nature of UPS's ratio shows that the company is losing its ability to effectively generate sales from its PP&E (property, plant, and equipment) investments. When expanding the scope of asset turnover performance to include all assets, we find that UPS has increased its ability to effectively use all of their assets –not just fixed assets– to generate sales by 8 basis points. UPS has shown that it is actively working towards generating new revenue or sales from its assets. Where UPS currently stands is close, although slightly lower than its 2018 turnover ratio of 1.44x. This indicates that UPS is not as efficiently using its assets to generate income as in years prior. Although this obstacle, UPS has shown great strength in generating income that far exceeds its cost of debt. In 2018 and 2019, UPS generated almost 100 times the amount of

interest paid on debt in current revenue (2018: 94.49x; 2019: 96.55x). This is to say that UPS is capable of covering the cost of its debt a near 100 times over with pretax earnings. This was substantially reduced in fiscal year 2020, however. Decreasing by a total of 56.4%, UPS was only able to earn 42 times the cost of its debt in revenue. Compared to the industry average of 24.49x, UPS shows its dominance as the largest player in the Freight and Logistics Services industry. Leading its competitors by near double, UPS axiomatically illustrates its freedom from debt obligations and its eleutheromaniac habits. Still, the COVID-19 pandemic had a very consequential effect in UPS's use of debt. This was largely the catalyst for why the company's TIE metric starkly decreased between fiscal year 2019 and 2020. In order to operate safely, prudently, and aptly, the firm had to increase the amount of debt utilized. In 2019, the firm's debt to equity ratio was 7.69%; in 2020, that same ratio increased to 36.85%. This sharp increase very much accounts for the inability to produce enough pretax income to outearn interest charges in 2020 by the same multiple as in years prior. The average debt to equity ratio of the two years prior was 7.59%; compared to the industry average of those two years, UPS was 20 basis points higher, depicting a slight disadvantage in its financing of debt for operations when compared to wholly-owned funds. This ratio is an accurate reflection of how the firm could potentially use shareholder equity to cover all outstanding debts in the unlikely but possible event of bankruptcy or market downturns. UPS currently is a laggard in that field when compared to its peers; however, when compared to its closest rival, FedEx Corporation, the firm is performing substantially better. UPS currently has a D/E ratio that is 70% lower than FedEx. This shows a far lower risk factor for an investment in UPS than in FedEx. Looking further into the debt and liabilities of UPS, we find that UPS has an almost equal amount of such liabilities and assets on their books. In 2018, UPS posted a near 94% ratio; in 2019, 94.35%; and in 2020, 98.95%. This

increase can be attributed to the increase in debt taken on by the firm due to the COVID-19 pandemic complications and further increases in miscellaneous expenses that were financed. This debt does come with a cost, both in the short and long term. To make sure that a firm is generating enough income pre-tax to pay off its interest expenses, an analyst should calculate the firm's EBITDA-to-interest coverage ratio. UPS posted an EBITDA coverage ratio of 17.41x in 2020, up from 15.68x in 2019 and 13.24x in 2018. A ratio of this proportion means that the firm can pay off short-term obligations with ease. While the earnings before taxes *et al* may be favorable, after such deductions, UPS profits only 1.59% in fiscal year 2020. This calculation of net profit margin has fallen a total of 73.5% from the fiscal year 2019 and 85% since 2018. A decrease of this magnitude suggests that UPS was struggling to profit after the complications brought on by the COVID-19 pandemic. While it is not shown in the chart, UPS did post an increase in net profit margin in the first quarter of fiscal year 2021[14]. The net profit margin was 77.24% in this most recent quarter of 2021; such increase can be attributed to the grandiose demand for the firm's services in the new-normal of the pandemic lifestyle and workstyle. When compared to the industry average, UPS shows that it generated 94% more revenue than its peers. The net operating margin has been steadily decreasing for the last three years, dropping from 9.22% in 2018 to only 3.01% in 2020. According to the recently released 2021 information, however, operating profit increased 158% from the same quarter of 2020[14]. Looking at gross profit margins, UPS shows that it is stable in its ability to keep the cost of its services the same. The firm has a stable average of 73.45% gross profit margins for the past three years. Compared to the industry average of 54.19%, UPS is again showing its strength and edge in the industry. The return on assets of the firm was trending lower year-over-year for the previous three years. Since 2018, UPS has posted a 77.5% decline in its return on assets. Compared to its ROA in

2020 (2.15%), UPS is lagging against its competition nearly two times over, as the industry average is 4.10%. Because this financial metric takes the firm's debt into account, it can be seen that the stark increase in capital financing via debt is a catalyst for the decrease in ROA. UPS is trying to squeeze the most out of its limited resources and services, and it is currently doing subpar. When removing debt from the picture, we can see that UPS posts fantastic returns on equity: returning a better than average ROE of 204.14% in 2020, UPS exceeds its peers by near 5 times (industry average: 43.02%). The earnings per share of UPS had been declining year-over-year, falling to a low of $1.34 per share in 2020. This EPS was down 74.8% since 2018. According to the Q1 2021 reports, however, EPS is up 393% since the same quarter in 2020, generating a total of $5.47 in earnings per share[14]. This is an impressive incline in earnings and explicates the necessity and demand of UPS's services throughout the COVID-19 pandemic turmoil. At the time of this report, UPS trades on the public markets (NYSE) for $214.78 per share. The data aggregated for this report was taken from the stock's price on the final trading day of each respective year at market close. The price-to-earnings ratio relates the share price of a security to the EPS of the security; it could suggest that investors expect high growth in the future and are willing to pay more for future earnings potential. The firm's P/E ratio has been increasing year-over-year for the previous three years and seemingly represents exponential growth. Since 2018, the P/E ratio has increased 835%, escalating from 18.23x to nearly 125x. At these levels, it is clear that share price does not accurately represent the earnings of the firm. Regardless, it does suggest that investors are willing to go long on the future earnings of the firm and expect it to substantially grow. Consequently, via the increase in EPS, the current P/E ratio has since declined to 39.27x for Q1 2021[14]. This decrease shows that the stock price is now more in line with the earnings of the firm and that the price is trending towards equilibrium. Compared

to the industry average (33.69x), UPS was far higher than its peers throughout the previous three years. To date, UPS is showing that it is more in line with its peers and trading at realistic prices. When looking at the firm's market price per share and comparing it against its per-share amount of free cash flow, we see that UPS is undervalued compared to its peers. The industry average for P/CF is $21.45; however, UPS posted a price to cash flow ratio of $13.96 in 2020, 35% lower than average. The firm's price to cash flow has been steadily increasing year-over-year for the trailing three years, indicating that the firm may be becoming priced too high. Regardless, the firm still reports fairly lower-than-average ratios, thus indicating it is undervalued. We can see if this in line with the market-to-book value of the company. We have determined that UPS did have lower market-to-book values in 2018 and 2019, averaging 29.46x for the two years. In 2020, this metric had a substantial increase, skyrocketing to 222.23%. This veritable increase could be attributed to the debt taken on via the facilitation of appropriate operations due to complications of the COVID-19 pandemic. A high market-to-book value indicates that investors value the firm's equity rather expensive compared to its book value. The two previous metrics explicated two separate camps for investors in the market: one, the stock is undervalued; two, the stock is overvalued. Their actions are based on this speculation. When comparing the book value of UPS to that of the price per share, we see a very similar trend: stable values between 2018 and 2019, and a severe drop in 2020. This may be because of the catalyst, the COVID-19 pandemic and the debt taken incurred by the firm. UPS should focus on increasing its book value in the near term in order to become a more sought after, in-demand firm. Nonetheless, the services of UPS are still very much in demand, as the firm posted a 27% increase in revenue in Q1 2021[14].

Analysis of DuPont Equation

The return on common equity (ROE) of a firm measures the rate of return on common stockholders' investments. With wide variations in this metric, one can notice the effect that leverage can have on the profitability of a firm. Simply put, ROE measures a firm's efficiency at generating profits from every unit of shareholder equity. If a firm receives an influx of shareholder capital, then it is expected to provide a higher return on said investment; however, that is not always the case. The DuPont Equation offers several ways to calculate a firm's ROE, showing the relationship amongst asset management, debt management, and other profitability ratios. The DuPont Equation calculates a firm's ROE by taking its return on assets (ROA) and multiplying it by its equity multiplier. This can be broken down further, taking the product of a firm's profit margin, total asset turnover, and equity multiplier. The profit margin equates to the quotient of net income and sales; total asset turnover equates to the quotient of sales and total assets; and a firm's equity multiplier equates to the quotient between total assets and total common equity. In 2020, UPS posted an ROE of 204.41%, a significant gain from the prior year (135.90%). In 2020, the profit margin was a measly 1.59%, a 76% decrease from the prior year. This shows that UPS is having difficulties in controlling its expenses. UPS saw less profit due to the devotion of capital to unexpected, freshly incurred expenses via the COVID-19 pandemic. The firm's asset turnover ratio was 1.36x, a gain from the prior year of 8 basis points. The stability seen in UPS's asset turnover spanning the prior three years illustrates the firm's strong asset utilization in generating income. The marginal and seemingly negligible changes in this ratio over the preceding years shows that sales are not slowing down or speeding up by irrational magnitudes. The equity multiplier of UPS in fiscal year 2020 was near 95x, posting a large increase from the prior year (17.71x). This near fivefold increase shows a tremendous swelling in

the firm's financial leverage. While it is prudent to use debt in order to fund operations and future growth, using too much leverage can pose unnecessary and undue risks. The sharp increase in the firm's use of leverage to finance operations can be attributed to the complications and Daedalian nature of the COVID-19 pandemic. UPS found it to be in the firm's best interest to incur a great sum of debt in the midst of the pandemic in order to aptly operate. When a company borrows more capital in order to purchase assets, as what UPS did, the equity multiplier will overtly increase. Year-over-year, the firm's ROE increased 70% since 2019 and roughly 40% since 2018. Because of the DuPont equation, it is easy to see whether a firm's profitability, use of assets, or financial leverage is driving its ROE. For UPS, it is clear that its use of debt is what primarily contributes to the higher ROE in fiscal year 2020.

FedEx Corporation Background

The FedEx Corporation ("FedEx") carries truly entrepreneurial and enterprising threads woven into the fabric of its founding. Conceived as an undergraduate term paper thesis, Frederick Smith derived the notion of FedEx in 1965 while studying at Yale University[10]. The report focused on the routes that airfreight shipments followed inside of the United States and potential inefficiencies within that system. Smith discovered that the majority of airfreight shippers depended on passenger routes to complete freight shipments. Through Smith's business-savvy, Yale-trained eyes, this system did not make economic sense for any shipment that needed to be delivered urgently (i.e. medicine, computer parts, electronics, etc.); thus, Smith postulated a system delineated specifically for airfreight that could accommodate time-sensitive shipments[10]. In 1971, Smith purchased a controlling interest in a small Arkansas aviation-sales company in hopes to find an easy way to deliver packages within one to two days' time. The preconceived idea of FedEx finally came to fruition in 1973 under the name *Federal Express*[10]. Although the company was not profitable until the mid-1970s, Federal Express took hold as a leading authority in the lobbying efforts for air cargo deregulation. By the end of the decade (1977), Federal Express had won over Congress and was now allowed to use larger aircrafts –such as the Boeing 727– in their operations. This meant that the company could haul more deliveries per trip, fostering rapid growth and increased revenue. Federal Express went public in April of 1978 after being listed on the New York Stock Exchange. Within five years, Federal Express had gone where no business in American history had gone before: obtaining $1 billion in revenue without a single merger or acquisition within 10 years of starting[10]. To make this financial milestone more shocking, the young corporation still had not expanded to include intercontinental operations. After a series of acquisitions, Federal Express began its international

services in Europe and Asia. At the end of the decade, the company acquired *Tiger International, Inc.*, becoming the world's largest full-service, all-cargo airline. This accretion swelled Federal Express's flight routes to a total of 25 different countries and added a fleet of Boeing 747s and 727s to its assets[10]. By 1994, Federal Express was the only U.S.-based company with aviation rights in China that operated as an all-cargo carrier. That same year, Federal Express adopted the name "FedEx" as part of its marketing strategy; however, the company officially changed its name to "FDX Corp." "FedEx Express," the name in which FedEx Corporation currently operates under, did not become prominent until after the company's acquisition of *Caliber System, Inc.* ("Caliber"). This acquisition included with it myriad business segments that became an imperative part of the FedEx brand: a small package ground service that eventually came be known as "FedEx Ground"; an expedited, exclusive-use shipping provider that became known as "FedEx Custom Critical"; and the logistics and technology departments of Caliber that were combined to be known as "FedEx Global Logistics"[10]. In the early 2000s, the company was looking for additional exposure in the railway industry and decided to acquire several freightway businesses that netted FedEx additional carrier services in 40 domestic states. Today, the company has a network of customers encompassing more than 220 countries and offers a myriad of services via their wholly-owned subsidiaries[10]. Each subsidiary accomplishes different segments of the corporation whole; FedEx Corporation simply serves as the parent holding company for their nine subsidiaries and offers strategic direction. FedEx Corporation is currently composed of the following wholly-owned subsidiaries: Federal Express Corporation ("FedEx Express"); FedEx Ground Package System, Inc. ("FedEx Ground"); FedEx Freight Corporation ("FedEx Freight"); FedEx Corporate Services, Inc. ("FedEx Services"); FedEx Office and Print Services, Inc. ("FedEx Office"); FedEx Logistics, Inc. ("FedEx Logistics"); FedEx Trade

Networks Transport & Brokerage, Inc. ("FedEx Trade Networks Transport & Brokerage"); FedEx Supply Chain Distribution System, Inc. ("FedEx Supply Chain"); and, FedEx Forward Depots, Inc. ("FedEx Forward Depots")[11]. The FedEx Corporation and its aforementioned peripheral operations provide millions of customers the world around with an array of transportation, shipping, e-commerce, and other business services via companies that compete collectively and operate independently, yet that are managed jointly by the FedEx Corporation[11] –the sound of a lovely corporate symphony.

Current Events

As mentioned in the previous *Current Events* section of this report, the Freight and Logistics Services industry is undergoing drastic alterations in spite of the global COVID-19 ("coronavirus") pandemic. The FedEx Corporation ("FedEx") experienced the effects of this pandemic as early as January of 2020 when shutdowns in Asia decreased transpacific traffic and increased the retrenchment of commercial air flights[11]. Despite these difficulties, FedEx responded quickly, aptly managing unforeseen operational costs while continuing to make investments that are expected to pan out for future success. Since February of 2020, FedEx Express has transported an estimated 36 kilotons of personal protective equipment (PPE) globally, including over 1.5 billion safety masks for both individuals and medical professionals[12]. The coronavirus pandemic inspired a sharp rise in online consumer spending, increasing from 16% of total U.S. retail spending in 2019 to nearly 30% in that of 2020[12]. In European nations, online sales increased by 31%, representing a total of 16.2% of retail sales[13]. Due to a 2016 acquisition of *TNT Express, Inc.* ("TNT Express"), FedEx was more than aptly ready for such an increase in e-commerce shipping demand. The outlay for TNT Express gave FedEx an additional 50,000 employees and over 300,000 vehicles ready for use predominantly in Europe, but also that of the Middle East, Africa, Asia-Pacific, and the Americas[10]– not including the previous fleet of FedEx Ground and other FedEx Express vehicles. Because of these resources and the sharp increase in online spending, FedEx was able to reach and maintain peek-like shipping volumes (often found during the holiday season of Quarter 4) in the midst of the coronavirus pandemic[12]. Moreover, FedEx has recently partnered with *Microsoft Corporation* ("Microsoft") in order to "transform commerce" by combining the power of FedEx's supply chain and logistics network with the intelligence of Microsoft's Azure, a cloud-based data platform[12]. The expected

result of the partnership is the product FedEx Surround which allows businesses to aggrandize their supply chain by leverage multiple data points to get real-time analytics into shipment tracking. The two companies anticipate additional products and business solutions that will offer consumers more comprehensive methods of shopping, as well as faster and more efficient delivery options, in the near future.

In the public markets, FedEx has seen epic growth in the trailing 12 months, appreciating more than 70% since April of 2020. FedEx, adapting to the boom in e-commerce and higher air freight rates, managed to increase year-over-year earnings by 20%[11]. With e-commerce numbers high, business-to-consumer volumes large, and air freight pricings resilient, FedEx has positioned itself to thrive in an area where many businesses still have their doors closed. As one may have noticed, FedEx has enlarged itself and its market cap by amassing smaller businesses that aid the services FedEx may already provide. At the current moment, there are no plans for future acquisitions. FedEx operates under a unique and prudent business strategy, allowing the company's executives to operate and manage the business as a portfolio, rather than a business. FedEx Corporation consists of multiple wholly-owned subsidiaries, which allows decisions to be made that are in the long-term best interest of the FedEx enterprise, not simply a particular market segment or operating company. Forward-looking decisions are based on predicted returns of capital investment, expansion of delivery services, growth of information technology and networks, as well as the greatest long-term outcome for the business as a whole[11].

Financial Ratios

Financial Metric	2018	2019	2020	Industry (2019)
Current Ratio	1.39x	1.45x	1.58x	1.46x
Quick Ratio	1.36x	1.42x	1.55x	1.08x
Days Sales Outstanding	47.30 days	47.74 days	53.27 days	36.71 days
Inventory Turnover	276.16x	260.05x	206.62x	
Fixed Asset Ratio	2.33x	2.29x	1.46x	
Total Asset Turnover	1.25x	1.28x	0.94x	
Times Interest Earned	8.80x	2.21x	3.48x	24.49x
Debt to Equity Ratio	85.42%	99.01%	120.27%	5.6%
Liabilities to Assets Ratio	62.90%	67.36%	75.12%	
EBITDA Coverage	14.73x	14.59x	9.63x	
Net Profit Margin	6.99%	0.77%	1.86%	4.50%
Net Operating Margin	7.50%	1.77%	3.38%	
Gross Profit Margin	71.77%	70.52%	70.21%	54.19%
Return on Assets	8.74%	0.99%	1.75%	4.10%
Return on Equity	18.39%	2.19%	5.09%	43.02%
Earnings Per Share	$17.12	$2.06	$4.93	
Price/Earning Multiple	9.04x	71.75x	54.14x	33.69x
Price to Cash Flow	$9.01	$6.98	$13.71	$21.45
Market to Book Value	1.77x	1.62x	2.69x	
Book Value per Share	$91.38	$93.13	$96.37	

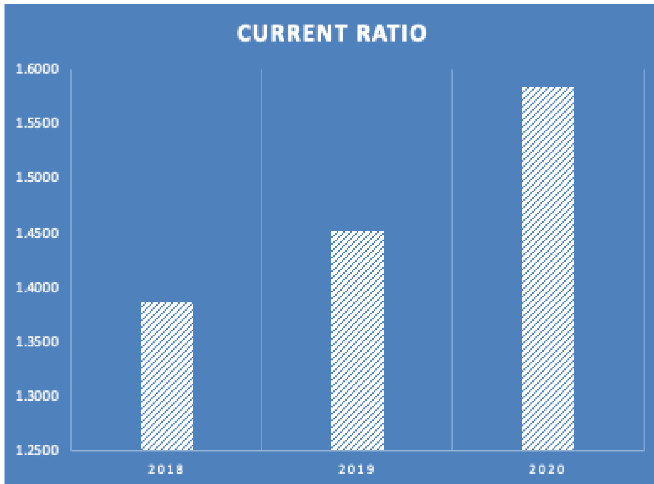
DuPont Equation

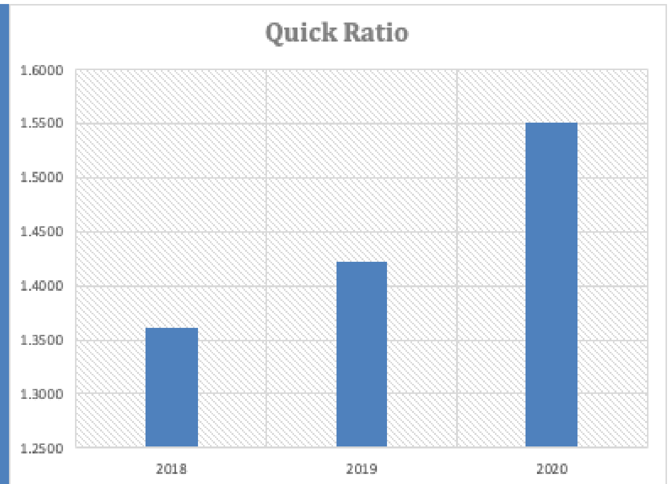
$$ROE = (Profit\ Margin) \ * \ (Total\ Asset\ Turnover) \ * \ (Equity\ Multiplier)$$

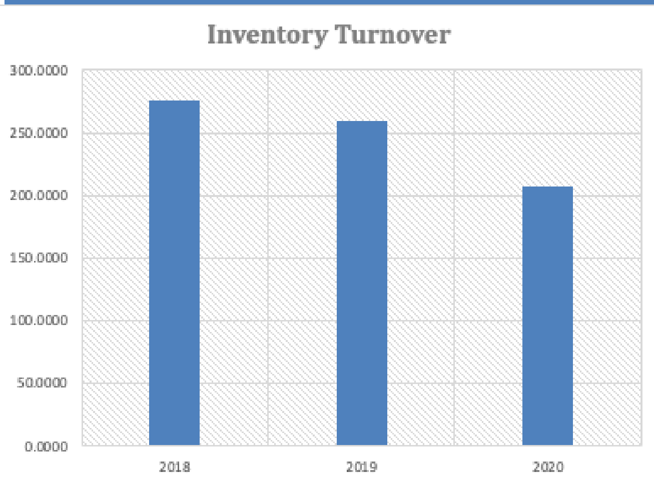
$$ROE = (\frac{Net\ Income}{Sales}) \ * \ (\frac{Sales}{Total\ Assets}) \ * \ (\frac{Total\ Assets}{Total\ Common\ Equity})$$

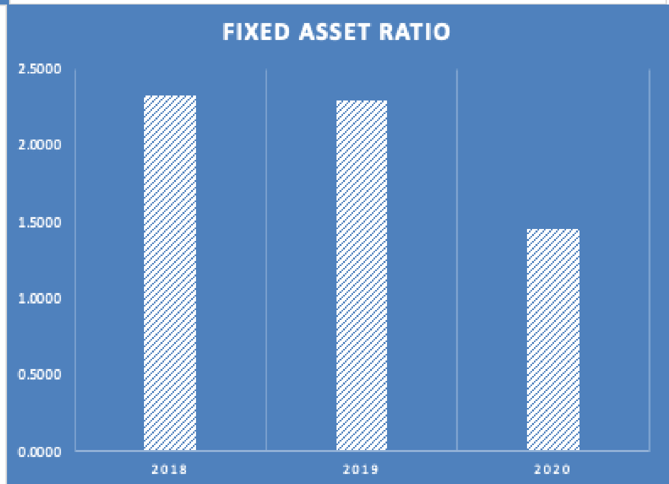
Year	Profit Margin	Asset Turnover	Equity Multiplier	ROE
2018	6.99%	1.25x	2.11x	18.39%
2019	0.77%	1.28x	2.20x	2.19%
2020	1.86%	0.94x	2.91x	5.09%

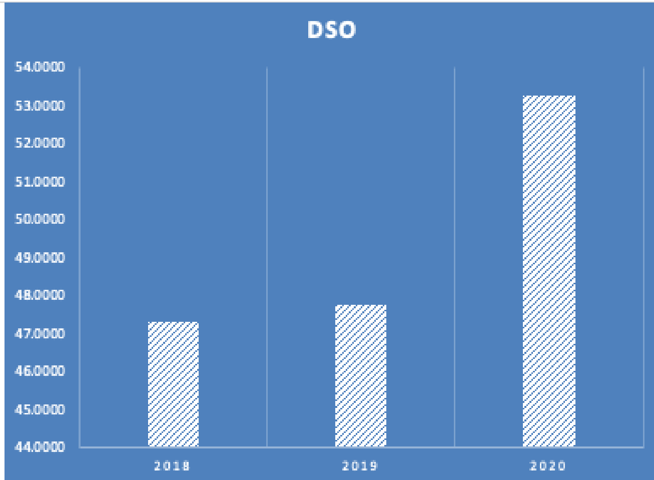
Graphical Representations

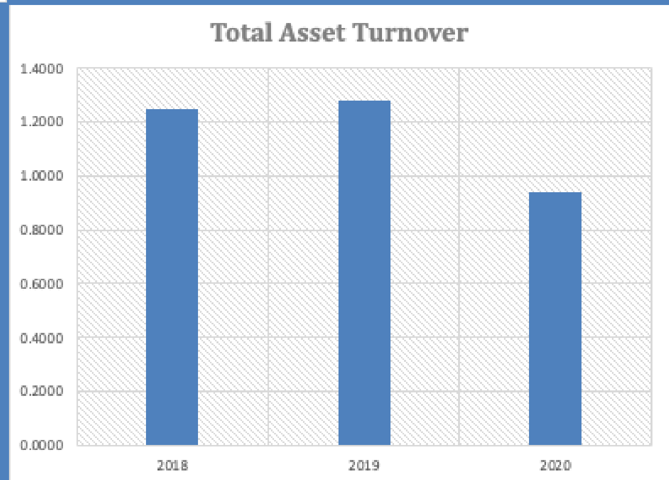


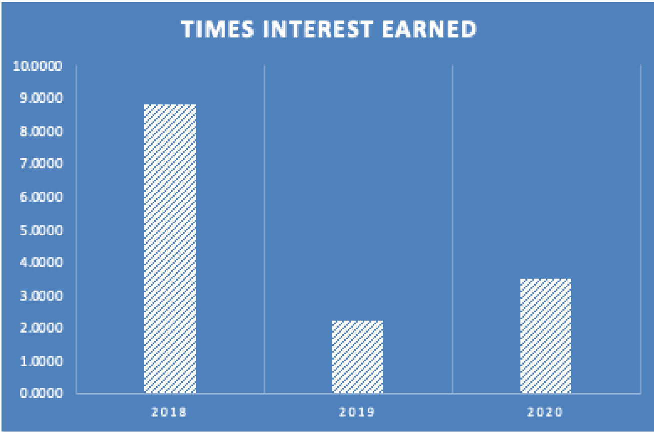


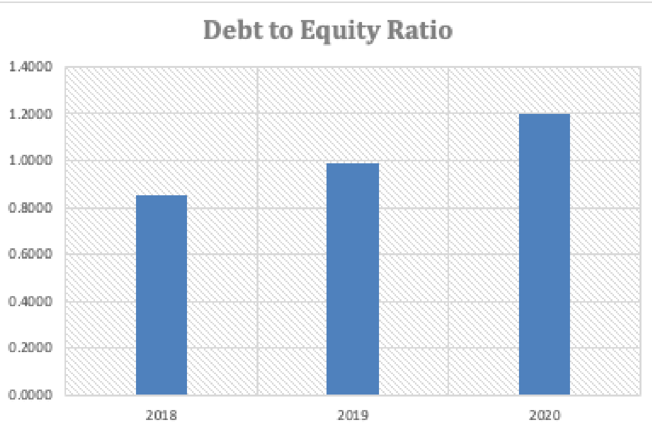


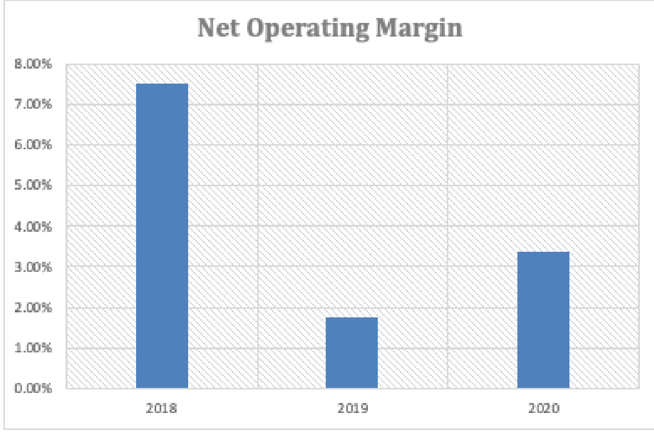


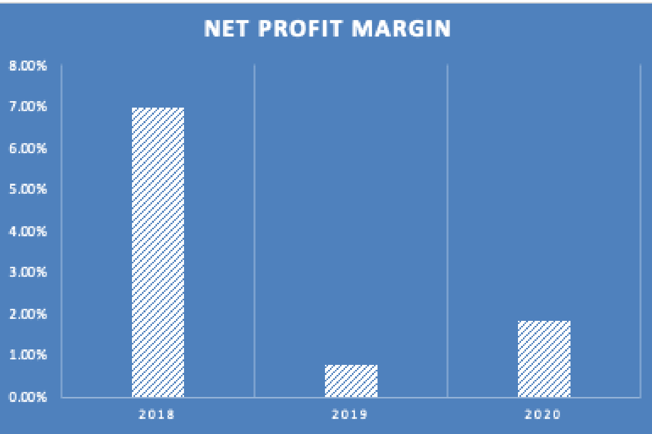


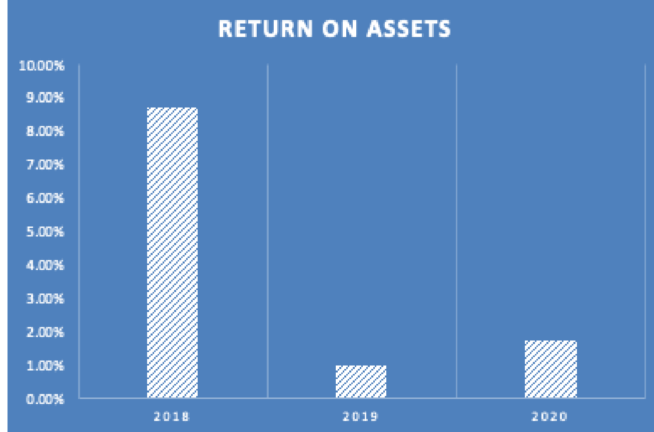


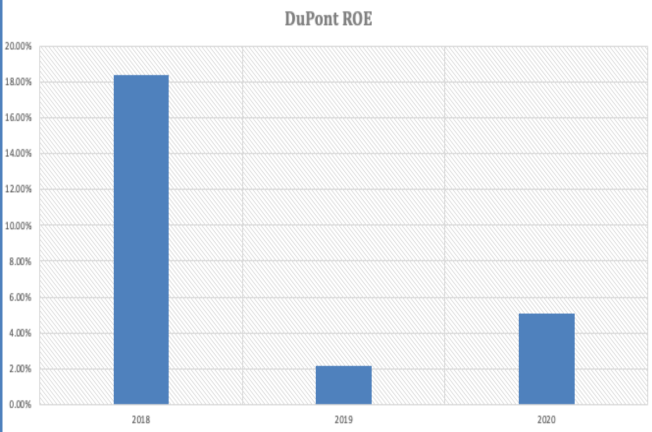

TIMES INTEREST EARNED
10.0000
9.0000
8.0000
7.0000
6.0000
5.0000
4.0000
3.0000
2.0000
1.0000
0.0000
2018
2019
2020


Debt to Equity Ratio
1.4000
1.2000
1.0000
0.8000
0.6000
0.4000
0.2000
0.0000
2018
2019
2020


Net Operating Margin
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2018
2019
2020


NET PROFIT MARGIN
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2018
2019
2020


RETURN ON ASSETS
10.00%
9.00%
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2018
2019
2020


DuPont ROE
2018
2019
2020

Analysis of Financial Ratios (FedEx)

The benefits of utilizing a company's fundamental financial metrics that were presented in the case of UPS naturally stand to be just as valuable to the analysis of FedEx. Starting with the current ratio, it can be seen over the last three years that FedEx has maintained a current ratio of over 1x. What this shows is that FedEx manages their assets in a conservative manner and is diligent in maintaining a sufficient amount of assets on hand to cover current debts if hard financial times were ahead. The current ratio of FedEx has grown by roughly 13.7% over the past three years. This growth could mean that FedEx is having difficulty in efficiently managing their assets; however, it also could be a precautionary measure due to the volatile political and economic atmosphere over the past few years. There is a similar story when observing FedEx's quick ratio, which also maintains a level steadily above 1x. In line with the current ratio, the quick ratio has seen a three-year increase of around 14% which, once again, may indicate FedEx's proclivity for playing it safe amid tumultuous economic conditions. This may work against FedEx's long-term bottom line due to the lack of additional investment into money-making endeavors, such as additional equipment or technology. However, even though FedEx may be maintaining a conservative level of liquidity, this may work in favor of FedEx if the COVID-19 pandemic causes any major shifts in FedEx's future income levels. Next, the metric of days sales outstanding (DSO). FedEx has maintained a level of nearly 50 days to collect payment for the sales of their products and services on credit. This is a reasonable timeframe and does not appear to be a major risk for the firm, especially considering their conservative liquidity position. This value has increased 12.6% over the past three years from 47.3 days to 53.27 days. Although this number has increased, as mentioned previously, FedEx's relatively safe asset allocation should keep the company protected from late payment of one or

more accounts if such an issue should arise. If this number does continue to rise, however, a closer look at FedEx's collection policies may be needed. Following DSO is FedEx's inventory turnover. FedEx has an inventory turnover rate of over 200x which shows that FedEx is quickly selling the products it has stocked. This rate has seen major changes in the past few years with a decline of 25.2% from 276.16x to 206.62x. While this is still a very high turnover rate compared to the likes of UPS, it is worrying that it has fallen so much; this could indicate consumers are starting to desire fewer of their products over time. It also could be indicative of the turnover rate previously being too high; therefore, FedEx was not able to keep its products in stock enough to meet consumer demand, resulting in this decline. Given the still adequate levels of turnover in 2020, this should be noted by management and investors alike but should not be of major concern at this point. Fixed asset ratio is the next ratio that will be looked at. FedEx over the past three years, has seen a decline in the fixed asset ratio of roughly 37.3% most of which happened between the years of 2019 and 2020. This rate has moved from around 2.3x to 1.46x which may indicate a shift in the effectiveness of management to create revenue from the investments made in FedEx's fixed assets. While this may be looked at as a major issue during normal economic conditions, it is very likely that this number has been disproportionately affected due to the events of the COVID-19 pandemic. While this may be resultant of poor economic conditions and shutdowns related to the pandemic, this is a very important metric for management and investors to keep an eye on as the world's business operations gradually return to a state of normalcy. In a similar fashion to FedEx's fixed asset ratio, FedEx has seen a decrease in the rate of total asset turnover particularly especially in 2020. This decrease has been 28.4%, which although not as extreme as the 37.3% drop in fixed asset ratio, is still a good indicator of a rough financial year for FedEx. This once again is likely to be an issue that has direct ties to the shutdowns during the

COVID-19 pandemic and is likely to rise with the return of normal business operations. At 0.94x, this should concern interested parties if 2021 does not yield sufficient increases. Times interest earned is also an important ratio to explore, as it can indicate how well FedEx is able to manage its interest expenses before tapping into asset reserves. FedEx has seen a significant reduction in this ratio over the past few years moving from 8.80x to 3.48x. Between 2019 and 2020, however, FedEx has improved this rate by 57.46% from 2019. While this does not make up for the decline from 2018 to 2020, it is a step in the right direction for FedEx. Investors and management should keep a close eye on this to make sure it continues to trend in a positive direction. It is also important to factor in the comparison to the 2019 industry average of 24.49x on this metric which shows that FedEx pays a much higher percentage in interest expense per dollar earned than that of its industry competitors. This leads into FedEx's debt to equity ratio which has seen steady increases over the previous three years. FedEx has increased this from 85.42% to 120.27% for a total percent change of nearly 40.8%. This indicates that FedEx has been expanding its debts likely through the purchase of new assets on credit or through debt financing of other business items. Large increases in this ratio can be cause for concern if companies are not able to repay the increasing amounts of debt owed. However, in the case of FedEx, repayment is not currently a major concern which indicates that this new debt may have been accrued in the pursuit of the expansion of business operations. While this type of behavior can be considered risky, record low interest rates may make this the optimal choice for businesses currently looking to finance new or existing operations. FedEx's liabilities to assets ratio is also important to consider to have a good understanding of the percentage of a company's assets that are comprised of liabilities. In the case of FedEx, this rate has been growing steadily over the past three years with an increase from being at 62.90% liabilities to 75.12% liabilities.

This may once again indicate that the company has been taking on more liabilities to grow or maintain its current level of production than in previous years. This could be a sign of declining profitability; however, at this point, it should not be overly concerning unless it continues to trend upward in coming years. EBITDA coverage is also a good figure to keep in mind for investors and managers concerned with making sure interest is capable of being paid with current earnings. This figure has declined over three years for FedEx with a decrease of roughly 34% from 2019 to 2020 from 14.59x to 9.63x which may indicate that in 2020 FedEx assumed additional interest expense in greater quantities than revenue has been increased. At this point in time, EBITDA coverage does not appear to be concerning as FedEx can meet the demands of its current interest payments, however management and investors will likely want to see this number improve in coming years. The next metric might be the most important for investors and managers to pay attention to: net profit margin. FedEx has seen a very large decrease in net profit margin over the past several years. It has dropped from 6.99% in 2018 to only 1.86% in 2020. While this is not a good sign to be sure, it is an improvement from 2019 which saw a meager 0.77% margin, which is certainly lackluster compared to the industry average of 4.50%. Below the previous year's industry average, 1.86% is not incredibly impressive and should be observed closely by management to make sure it keeps trending upwards. Following this is net operating margin which is useful to see how efficiently FedEx is operating. FedEx has seen a drop in efficiency in this area during the previous three years which can be seen from the decline of net operating margins from 7.50% in 2018 to 3.38% in 2020. This may be representative of an increase in any number of operational inefficiencies, though it should be noted that 2020 saw an increase from 2019's 1.77% margin. As with the other metrics, management should watch this closely to ensure this continues to improve in future operations. Gross profit margin is also

important to consider, as it can give managers and investors a look into how well FedEx is managing their cost of goods relative to their sales. Over the three-year period from the beginning of 2018 through 2020, FedEx has maintained an average gross profit margin of around 70.8% with fluctuations of less than 1 percentage point from the average. Compared to the industry average of 54.19%, it is very clear that FedEx is effective in maintaining a low cost of goods relative to their sales. Return on assets is another great way to determine the effectiveness of FedEx in generating revenue from the assets it has. Although FedEx had more than double the ROA of the industry average in 2018, it has fallen sharply since then. In 2018, FedEx's ROA was 8.74%, fell to 0.99% in 2019, and has come back up to 1.75% in 2020. Unfortunately for FedEx this is still below the previous year's industry average of 4.10%, which may indicate inefficient use of the company's assets. Investors should watch this closely and managers should work to improve this metric. Return on equity is an effective indicator for gauging the performance of FedEx with respect to its shareholder equity. FedEx's ROE is down significantly from 18.39% 2018 to 5.09% in 2020. This figure is well shy of the industry average ROE of 43.02%, which indicates that FedEx's profitability is much lower than previous years and in relation to its competitors. The upside to FedEx's current ROE is that it has seen an increase from 2019's ROE of 2.19%, which may be indicative of improvements made within FedEx that could result in even more increases going forward. Earnings per share is a metric that is synonymous with investors as it is one of the first metrics many see when researching the profitability of a company. It is for this reason FedEx management should look to increase in this metric as FedEx's EPS has fallen roughly 71.2% in the past 3 years from $17.12 to $4.93. It should be noted, however, that FedEx's EPS increased 139.32% from 2019 to 2020 which may indicate good things to come if this level of growth can be maintained. Closely related to EPS and the next metric of FedEx's to

look at is its price to earnings ratio. This ratio is another ratio that is often viewed by investors to help value a company's stock price, which means that management should pay close attention to this as well. FedEx's P/E ratio has seen major fluctuations in the past three years rising from 9.04x in 2018, to 71.75x in 2019, and falling back down to 54.14x in 2020. Compared to the industry average of 33.69x, FedEx's P/E ratio may indicate that its shares are currently overpriced. Investor sentiment could be inflating this number though, assuming FedEx is expected to have increased earnings in coming years. The next metric, price to cash flow, is also one of the first few ratios that investors may choose to look at when trying to value a company. FedEx's P/CF ratio has increased about 52.16% from $9.01 in 2018 to $13.71 in 2020. Even though this value has increased significantly, FedEx's P/CF ratio of $13.71 is still well below the industry average of $21.45. This metric might lead one to believe that FedEx is undervalued compared to its competitors. This contrasts what may be thought after reviewing the P/E ratio, but there may be an explanation for this discrepancy. What this could mean is that the P/CF ratio is a better indicator of performance for a company like FedEx that has a lot of fixed assets that depreciate and skew the calculations of the P/E ratio. If this is to be believed, then FedEx is likely an undervalued company based on its shares' market price. Market to book value may also provide valuable insight for someone looking to evaluate the price a company is worth. FedEx in 2020 had a market to book value of 2.96x up from 1.77x in 2018. This indicates once again that FedEx may be overpriced; however, this may not prevent investors from being interested in purchasing shares if future growth is expected despite there being differences in market and book prices per share. Finally, book value per share is a good indicator for investors and management regarding the value of a company. FedEx had a book value per share of $96.37 in 2020 and has been steadily increasing over the past three years. While this increase in book value per share is a

good sign regarding the growth of the company, it is well below the current market price which indicates that FedEx is currently overvalued and that growth of book value per share should be a key focus for management to increase investor interest. What all of this goes to show is that in a similar manner to UPS, there is a lot of speculation surrounding FedEx. Some investors are currently willing to pay a premium for FedEx shares and are betting big on post-COVID-19 shutdown rises in demand for FedEx's products and services. Others may steer clear until it appears to offer more value and consistent returns.

Analysis of DuPont Equation

DuPont analysis is a useful method to determine what factors are the key components or driving forces of a company's ROE. This can be utilized to get a more accurate picture of a company's financials than ROE can provide on its own. In the case of FedEx, ROE has not been impressive over the past three years when compared to the 2019 industry average of 43.02% with FedEx peaking at less than half of that value at 18.39% in 2018. However, there was a large decrease in the years following the peak of 2018 which is where DuPont analysis can help shed light on what changes happened between then and the following years. Broken down into the individual components that make up ROE, it is clear to see that the driving force behind the comparably high ROE for FedEx in 2018 was that FedEx attained a 6.99% profit margin. In 2019, despite both asset turnover and the equity multiplier increasing, ROE plunged due to a sharp decline in profit margin. FedEx's ROE increased in 2020 despite asset turnover falling. This increase can be attributed to sizable increases in both profit margin and the equity multiplier. What this can show for FedEx moving forward is that improvements in profit margin and asset turnover must be made in order to improve ROE and become a more desirable business for investors.

Conclusion

With the analysis of the financials for both UPS and FedEx complete, it is possible to make an educated decision regarding which business appears to be the better investment choice. It should be noted that the word "appears" is used here specifically as appearances and financial ratios do not always tell the full story, and as such, no investment can guarantee a consistent return due to outside factors and additional information that may not yet be public knowledge. Keeping this last statement in mind, it does appear from all of the available information that FedEx is the most promising investment choice of the two companies. There are several reasons for this, but one of the most glaring is the amount of debt UPS has chosen to employ to remain operational in 2020. This additional debt, along with UPS's highly inflated market to book value compared with FedEx's (222.23x to 2.69x, respectively), might lead the average value investor to choose FedEx over UPS. While the recommendation of this report is in line with this thought process and is to choose FedEx over UPS, it is worth noting that updated numbers report a lower UPS market to book value (although still very high) and that UPS does have some competitive advantages in the space of retail consumer parcels which may mean UPS is still a worthwhile investment despite FedEx appearing to be better at this time. The advantages here refer to deals UPS has with Amazon and eBay which should continue to drive profits higher in the future as consumer spending habits continue to increase in the online space, thereby increasing the need for parcel delivery services. Aside from numbers and ratios in the analysis portion, FedEx also shows a few advantages in their operational structure. FedEx operates as a series of smaller subsidiaries under one global brand that most consumers simply see as FedEx. This operational structure allows for closer management and quicker responses to changes within each division, without having to go through the time delays and bureaucracy that may present challenges in

companies with a more centralized structure. This major difference in FedEx's operational structure from UPS's is just one more reason that FedEx may be the stronger choice. With all of the uncertainty surrounding the economy, world politics, and the COVID-19 pandemic, sound financials and the ability to react quickly to unexpected changes make FedEx a solid choice for investors looking to grow their portfolio with one of the strongest and most well-known companies in the freight and logistics space.

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