Krause Fund Research | Industrials Sector | Fall 2022

FedEx Corporation
NYSE: FDX

Current Stock Price: $176

Target Stock Price: $190 - $220

Rating: **BUY**

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Analysts

Isabella Smillie | isabella-smillie@uiowa.edu

Benjamin Cook | benjamin-cook@uiowa.edu

FedEx Corporation Overview

An American multinational logistics and transportation company in the courier services industry. Founded in 1971, FedEx has seen steady growth and strong established with both its individual and corporate customers, generating $93.5B in revenue (2022). Operations are segmented by FedEx Express, Ground, Freight, Services, Logistics, Office, and DataWorks.

Investment Thesis

We recommend a BUY rating on FedEx with a target price for FDX at $190-$220.

Our decisions, primarily based off the DCF valuation model and relative valuation, are driven by a forecasted growth rate of 20%. Our model predicts consistent growth in future total payout ratio and earnings per share, along with a continuing value (2029) EPS growth of 3%.

Growth Drivers:

Technological Innovation & Acquisitions: FedEx's outlook is composed of increasing operational efficiencies and cutting costs through technological developments in supply chain information technology and automation, while also expanding its international presence through acquisition deals. These initiatives are key value drivers for future growth and reflect such in our models.

Global Network: FedEx's global logistics network comprised of 696 aircraft, 13 air hubs, and 1,950 express stations allow the firm to financially benefit around the world. This global reach allows FedEx to compete in diverse markets around the clock.

Threats of Thesis:

Economic Uncertainty: As performance is closely aligned with the global supply chain and economic factors such as GDP & inflation, an investment could prove risky with the current environment. However, we forecast economic improvements and recessionary fears to reside by 2024.

As our strong model forecast reflects consistent future earnings growth, along with current financial KPI's reflecting stability and minimal risk; we rate FDX as a BUY.

Key Financial Information

DCF:	**$222**
DDM:	**$138**
Relative Valuation:	**$191**

Pricing & Shares:

Current Price:	176
52 Week Low/High:	141.92 /266.79
YTD Performance:	-33.97%
Shares Outstanding:	260.22 million
Earnings Per Share:	13.57
Price to Earnings:	12.94
Dividend Yield:	2.98%

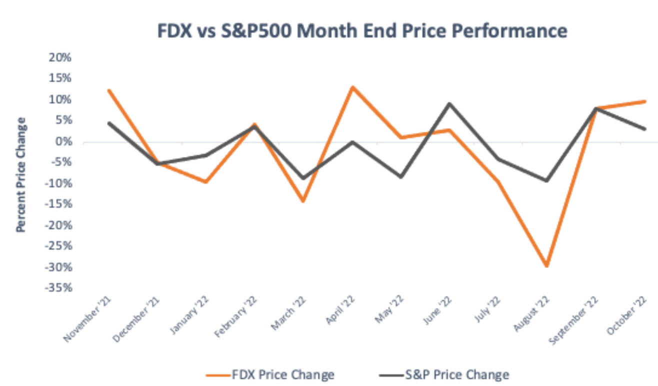
Statistics:

Market Capitalization:	45.48 billion
Beta:	0.976
ERP:	5.17%
WACC:	7.79%

Financial Ratios:

Profit Margin:	7%
ROE:	15%
ROA:	4%
Debt/Equity:	81%
Debt/Asset:	23%
Total Asset Turnover:	1.09
Current Ratio:	1.43

12 Month Performance

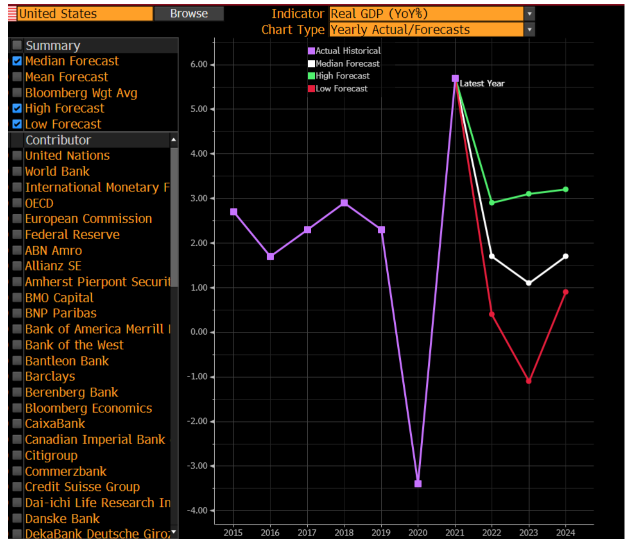


Economic Analysis:

In 2022 the economy felt the effects of rising inflation and a looming recession. Gross Domestic Product (GDP) has slowed its year over year growth and the unemployment rate has been forecasted to grow over the next few years. The economy is in a poor position overall primarily because of rising inflation rates in 2022, which has caused the Federal Reserve to sharply increase interest rates. These economic variables show a poor economic market for FedEx in the short term, with conditions set to improve steadily a few years down the line.

Real Gross Domestic Product (GDP)

Real GDP is an important factor in judging the strength and health of the economy in each period. It is the inflation-adjusted value of all goods and services in an economy each year. A growing Real GDP allows for a strong economy that helps companies like FedEx perform well. Based on data from Bloomberg, the U.S. Real GDP will increase around 1.3% this year and will continue to increase around 1.5%-2% over the next couple of years. This is a decrease in growth in year over year percentage of Real GDP. This slow in growth could be a sign of future economic trouble for the U.S. and will most likely lead to a decrease in growth for the Industrials sector. Real GDP growth percentage can be tied directly to corporate revenue and earnings growth over time. A slow in Real GDP growth can easily lead to a slow in revenue growth for companies in the Industrials sector.

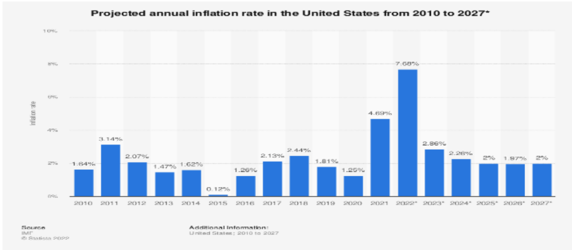


Source: Bloomberg

Inflation Rate

The inflation rate is a key factor in judging the strength of the economy. When inflation is growing at the targeted rate of 1-2%, the economy is working efficiently, which allows for companies in the Industrial sector to purchase and sell goods at an optimal level. In 2022, the inflation rate has been increasing extremely fast, at rates much greater than the target rate of 1-2%.

The Consumer Price Index (CPI) is a measure of the change in prices paid by U.S. consumers. It is the primary measure of inflation. Bloomberg forecasts the CPI year over year percentage change for 2022 to be around 8%. In the coming years inflation rates are expected to slowly decline to under 2%. We expect the Fed's increase in the Fed Funds Rate to curb inflation growth in the next year or so, allowing the inflation rate decrease.

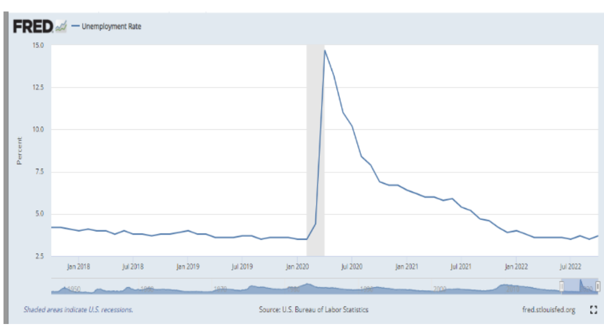


Source: Statista

The large increase in the inflation rate during 2022 will cause problems for the Industrials sector. The sharp increase in the cost of goods will cause basic materials to be more expensive which can lead to a higher cost of goods sold and a lower profit margin for firms in the Industrials sector. An increase in the inflation rate could be a problem for FedEx in the short term as it will erode their ability to pay for their various expenses.

Unemployment

The unemployment rate is the percentage of the labor force without a job. When the economy is performing poorly, the unemployment rate is typically high. Historically, the unemployment rate in the United States has hovered around 5%. At the start of 2022 it was 4% and decreased to 3.5% in July of 2022.



Source: St. Louis Fed

Bloomberg forecasts anticipate that the unemployment rate will increase from 3.5% to around 4-4.5% over the next 1-2 years. This increase in unemployment is thought to be a result of increased inflation and slowing of the economy.

United States	Browse	Unemployment Rate (%)	Yearly / Quarterly
2021 Actual 5.4		2021 Forecast	5.4
	2022	2023	2024
Median	3.6	4.0	4.1
Mean	3.7	4.1	4.2
Bloomberg Weighted Average	3.7	4.1	4.3
High	3.9	5.4	6.0
Low	3.5	3.2	3.0

Source: Bloomberg

The unemployment rate is an important indicator to FedEx and in the Industrials, sector considering both are dependent on labor. Much of FedEx's labor is skilled, made up of airline pilots, engineers, and logistics technicians. An increase in the unemployment rate in these skill positions could alleviate some wage pressure that FedEx has been feeling. Skilled positions such as cargo pilots have been in high demand causing companies to drastically increase salaries to retain staff. The gradual increase in the unemployment rate should benefit FedEx for this reason.

Industry Analysis:

Industry Overview

FedEx is a major player in the integrated freight & logistics industry. Within this industry there are two primary types of players:[1,2]

1) Business Service Centers & Postal Shipping
2) Freight Packing & Logistics Services

Examples of the first sub-industry include FedEx, UPS, and the US Postal Service. These firms create revenue from transportation and delivery of goods for commercial and consumer customers. Both UPS and FedEx have a global logistical network to support worldwide operations.

Firms in the second sub-industry consist of Deutsche Post (DHL) and DSV. These firms focus on large scale freight operations such as arranging freight into various containers and optimizing shipments and load capacities.

All the players in the greater integrated freight & logistics industry have a great deal of overlap with each other, creating a competitive industry.

Peer Comparison:

Financial Metrics:

FedEx's greatest competitors in the industry are UPS, USPS, DHL, and DSV. We can compare the firms by looking at a few different financial metrics. These metrics will all be at the most recent year end for each firm.

Return on Equity (ROE):[3]

- FedEx: 15.6%
- UPS: 77.04%
- DHL: 28.66%
- DSV: 22.14%

The most recent year end shows that UPS had a tremendous ROE mostly due to the Covid pandemic boom in online shopping. FedEx lagged slightly behind competitors in ROE in this period.

Current Ratio:[3]

- FedEx: 1.43
- UPS: 1.39
- DHL: 1.03
- DSV: 1.21

FedEx beats its peer group with the highest current ratio. This shows that FedEx has the superior ability to pay its short-term obligations.

Profit Margin:[3]

- FedEx: 3.79%
- UPS: 11.07%
- DHL: 5.85%
- DSV: 6.92%

FedEx is lagging behind its competitors when it comes to profit margin. A low profit margin is something that has been forecasted into our model. Our model has projected the tight margins into the future. It is certainly a negative aspect of FedEx's profit structure and could become a problem if costs were to rise drastically outpace revenue in the future.

Current Market Capitalization (billions):[3]

- FedEx: 45.48
- UPS: 169.45
- DHL: 48.46
- DSV: 33.21

FedEx's market cap is down substantially this year from 58.36B at its year end in May of 2022. Their stock price has gone down with the general market and took a steep drop in September of 2022 after the release of unfavorable earnings projections for the rest of the year. This lower market cap can be seen as a benefit for investors, as we suspect the value of the firm to increase as it recovers from this turbulent economic year.

Operating Metrics:

Number of Cargo Aircraft:[4,5]

- FedEx: 696
- UPS: 582

Global Air Hubs:[4,5]

- FedEx: 13
- UPS: 11

Global Facilities:[4,5]

- FedEx: 1,950
- UPS: 1,800

FedEx has a greater number of aircraft, aircraft hubs, and global facilities which gives the firm a significant advantage in the global market compared to its largest competitor, UPS.

Porter's 5-Forces Analysis:

Competitive Intensity: High

FedEx and UPS dominate the integrated freight & logistics industry. Along with USPS, DHL, DSV, and other cargo logistical firms, there is very intense competition. The firms in this industry are well known and have been around for a significant amount of time. This causes the firms to compete intensely with each other for the market share of customers available.

Threat of New Entrants: Low

The barriers to entry in this industry make it very difficult for new firms to come into the market and to be successful. Firms like FedEx and UPS have a global logistical network along with thousands of transportation vehicles. The investment needed to start a successful global logistics and transportation firm prevents many from doing so. The only real possibility of changes in the industry would be from large firms like FedEx, UPS, and DHL acquiring smaller logistical firms to increase their own size and reach.

Threat of Substitutes: Medium

The industry has been through changes in the past 10 years. Digitalization of the world has decreased the need for some products like mail and letters to be shipped. Lots of businesses that would have previously shipped small packages and envelopes in the mail, now are sent digitally. This has caused a decrease in some volume for the industry. Amazon has been building up their own logistics network allowing for most of their package traffic to be delivered internally and not given to FedEx or UPS. On the other hand, demand for this industry is still high with much of the domestic online shopping delivery going through FedEx, UPS, or USPS.

Power of Consumers: Medium

The integrated freight & logistics industry is price sensitive with its consumers. The personal consumer will often look for the best price when it comes to shipping a package and tend to not be brand loyal. When ordering a product online, personal consumers will often not get the choice to choose a specific firm to ship their goods but will just be given one option.

When it comes to commercial customers it can be a different story. Commercial operations will often sign contracts with one of the firms to be their designated carrier of their products. This creates some brand loyalty because manufacturers of products what the best service to be delivering their goods so that their own customers get what they ordered on time and in good condition.

Power of Suppliers: Medium

Suppliers for this industry often provide the transportation capital for firms. The largest and most important suppliers in the industry supply the firms with trucks, vans, aircraft, and fuel. Contractual agreements are often made between FedEx and suppliers for several trucks/vans/aircraft at a time. FedEx and others in the industry have some bargaining power because there are multiple suppliers for these products. Fuel is another large expense in the industry and firms are at the mercy of the market when it comes to prices they are paying. This is an industry wide fluctuation, so it has a low effect on competition.

Company Analysis:

Operational Profile:

FedEx holds business in over 220 countries/territories which can be broken down into five operational segments. FedEx Express, the company's largest segment providing fast and reliable delivery routes by air, sea, and ground, by package and by freight. FedEx Ground provides day to day deliveries to homes and businesses, utilizing third party contract workers. FedEx Freight handles LTL or Less-Than-Truckload deliveries, which is critical for today's e-commerce market. FedEx Services which support e-commerce, data management, information technology, networks & solutions design. The FedEx Corporate & Other Segment is composed of: Logistics, which provides trade networks, brokerage, third parties, and supply chain solutions, Office which provides print and packaging services, and lastly DataWorks which optimizes operations through digitalization.

Understanding these business segments is critical to understanding our forecasts and investment thesis. Each segment is grown differently throughout their own initiatives, along with each being impacted differently by various economic & industry forces and as well as specific events.

Company Initiatives:

FedEx's future outlook is composed of optimization, increasing efficiencies, minimizing costs, and expanding their global presence.

FedEx Express has had an acquisition deal with TNT Express; a European courier services company operating in 200 territories, delivering an average daily package volume of 1 million, and owns around 30,000 vehicles. Initiated in 2016, the operational aspects of this deal are set to be completed by 2022's year end, and by 2023 a workforce reduction by 5,000 employees. This acquisition is a major global growth initiative by FedEx as it will increase their European presence to better their customer base and optimize operations with a larger network of routes, equipment, and warehousing/hubs. As the acquisition's direct expenses will incur into 2023, the financial benefits of this deal are expected by 2024 with a savings forecast ranging from $275-$350 million.

The company overall is investing heavily in technological advancements to optimize operations. These initiatives will better each segment individually and collaboration between segments by streamlining processes in supply chains. In the industry & market, this will create a stronger competitive advantage by bettering reliability, speed, and accuracy of deliveries. Financially, this will cut costs and create more accurate, profitable pricing models.

Investments include:

- Advanced Safety Systems & Prevention
- Information Technology & Supply Chain Insights
- DIM Dimension-In-Motion Technology
- Automated Sorting, Handling, and Deliveries
- Autonomous Driving Tests
- Alternative Fuel Vehicles

In addition, for 2023, FedEx plans to allocate $6.8 billion dollars towards vehicle & aircraft fleet expansions, facilities, and equipment that will minimize costs and strengthen operations.

Such investments will not only better current systems but will also help prevent and diminish future roadblocks.

Antithetical Events:

A part of FedEx's initiatives is being better able to adapt to unforeseen circumstances. In the past few years, there has been many economic trends that have hindered growth and driven this future outlook such as Covid-19, inflation, staffing shortages and supply chain issues. FedEx has also combatted more centralized issues which hindered growth.

In August of 2022, FedEx cut relations with a key contractor 'Spencer Patton' due to compensation disagreements which was driven from inflation and higher fuel costs. The contractor operated 225 routes over 10 states throughout the Midwest. FedEx claims that although they were a major contractor, the ground segment's deliveries will not be affected and there are backup plans in place for such an event. FedEx is now taking S. Patton to federal court over their public allegations of compensation problems. In summary this event is worth noting as it could foreshadow future disputes with more contractors.

While recently FedEx has seen setbacks, they have also provided opportunities and pushed those initiatives for growth.

Capital Structure

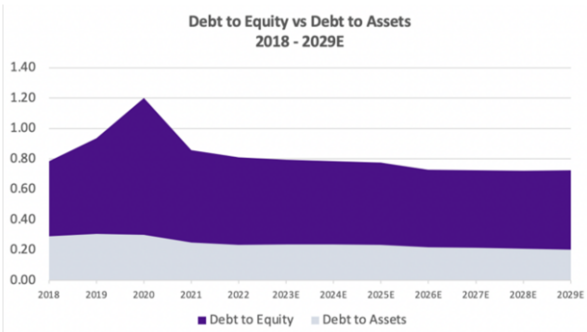
FedEx maintains a balanced capital structure; showing a healthy level of risk while still indicating new capital is being used to invest in new assets and grow.

A Debt-to-Asset ratio of 0.23 shows the company's financing and how much debt carry assets. A value indicating low risk, financial health, and sustainability.

A Debt-to-Equity ratio of 0.81 shows the company is more levered with debt while still in a balanced manner. The company sees a 5.22% cost of debt versus a 9.25% cost of equity; based on our WACC calculations.

*Note Debt to Asset ratio & Debt to Equity ratio excludes 'Current' & 'Other Long-Term' Liabilities.

We expect these ratios to remain relatively steady in our projections with a slight decrease in allocations to debt financing.



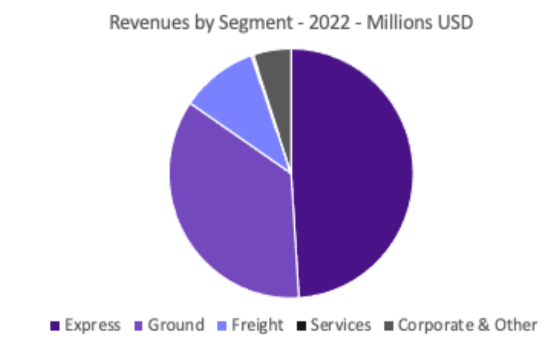
This capital structure forecast can be supported by the following details on the share repurchase program and recent debt issuance.

Since 2016, FedEx exercised a stock repurchasing program, where repurchases to be held as treasury shares. In 2022, 8.9 million shares were repurchased totaling $2.2 billion. $4.1 billion of shares remain available under the program and rights to repurchase are of managements discretion and are based on market conditions and company performance; there is no obligation to complete the program. This program hints at both future growth for the company as they can be used to raise capital, and hints at greater profitability for shareholders as historically, buybacks deliver higher future share prices.

In 2021, the company issued $3.25 billion of debt due in increments from 2029 to 2041. Standard & Poor's rated the corporate bonds at BBB. The debt issuance is to finance repayments of outstanding notes due from 2023 to 2027, and to fund environmentally efficient transportation & facilities, boost energy efficiency, prevent & control pollution, research & implement renewable energy, along with various other socioeconomic initiatives. These initiatives indicate growth along with the overall debt issuance, as FedEx and ratings are confident on their growth and capabilities to payback.

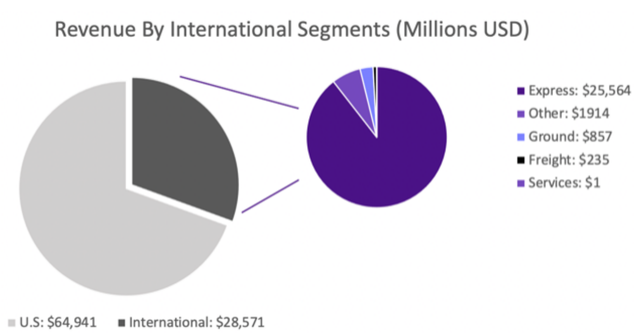
Revenue Structure:

Revenues streams are broken down by operating segment, ranking from high to low as FedEx Express, Ground, Freight, Corporate & other, and Services.



Revenues by Segment - 2022 - Millions USD		
Express	$	45,814
Ground	$	33,232
Freight	$	9,532
Services	$	253
Corporate & Other	$	4,681

From an international perspective, segments' revenue generation rank differently, as detailed below.



To make our forecasts, we decomposed each segment's subdivision to both average yearly volume and revenue per package or revenue per shipment. Utilizing historic moving averages and the application of economic & industry trends along with company factors & future plans for adjustments we were able to create our revenue growth model.

Expense Structure

FedEx's cost structure is mainly composed from operations, leases, pensions, and capital expenditures.

Significant Operating Expenses:

- Transportations
- Fuel
- Rentals
- Maintenance & Repairs
- Depreciation & Amortization

Significant Lease Expenses:

- Equipment
- Vehicles & Aircrafts
- Facilities & Real Estate
- Financial Leases

Significant, out of ordinary expenses in 2022 consisted of business realignments, capital expenditures and fuel costs. Business realignment activities are from employee severance agreements due to the TNT Express integration. Although this plan initially totaled $278 million, it will provide future savings and exhibits FedEx's focus on minimizing unnecessary costs. Capital Expenditures in vehicles, aircrafts, machinery, and fleets, totaling $6.7 Billion, are geared around modernization and optimization. FedEx notes that these long-term investments will be monitored versus economic conditions to ensure costs are balanced with high returns. High oil & gas prices caused a 77% increase in fuel expenses for the company. With strategic planning and timing of fuel surcharges these costs were significantly offset, as a net value. As higher fuel prices effected companies across the transportation industry, there was a larger impact to FedEx's due to demand and transportation expenses that are not seen in operating income. While oil prices cannot be controlled by the company, FedEx has surcharge plans in place and is investing heavily in electrical & automated transportation which would hedge against such an event in the future.

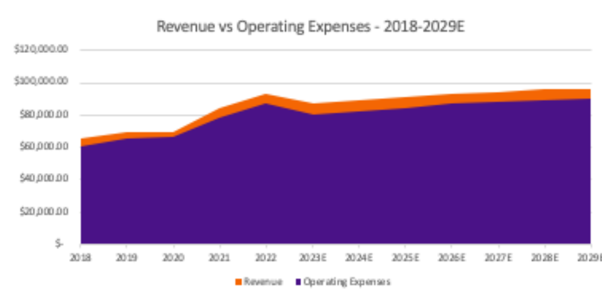
Profitability:

Profitability for the company is dependent on many factors, such as primarily:

- Macroeconomic based demand
- Service Mix Purchased
- Pricing per Package, Pound, Shipment, Hundredweight
- Volumes of Transportation Networks Available
- Cost Structure Management Relative to Volumes
- Timing & Extent of Oil Price Volatility & Surcharge Management

FedEx currently maintains a gross profit margin of 7%. The Total Asset Turnover, which indicates the productivity of assets to generate sales sits at 1.09. These metrics sit at a strong level for the industry and prove operations are running efficiently.

With FedEx's growth initiatives to be more efficient and cut back on costs through technology and business realignments, we forecast minimum profit margin growth at least 1%.



Overall, profitability in this industry remains relatively stable as fluctuations in operating expenses strongly correlate with revenues and demand.

SWOT Analysis

Strengths:

FedEx has vast logistical and technical capabilities networks that allow it to routinely handle thousands of shipments every day. It also has a large international presence with global shipment centers and other global logistical infrastructure. FedEx operates 1,950 express stations, 13 air hubs, 600+ group hubs, and 2,200 offices globally[4]. The size and global reach of FedEx allows it to benefit from economies of scale and to have an impact in 200+ countries. This gives it an advantage over many of its competitors.

Weaknesses:

FedEx currently has a large dependence on Chinese exports that leaves them over reliant on one country. In September of 2022, FedEx released that they would be cutting their sales forecast due to deteriorating economic conditions and a lack of demand to export goods out of China[6]. This led to a 24% decline in the value of FedEx's stock price. This displays that FedEx's reliance on exporting goods from China and other international countries is problematic.

Opportunities:

FedEx's greatest opportunities are in finding new markets to expand into. FedEx is actively working on expanding into new markets including drone delivery, e-commerce solutions, and cloud-based computing logistics upgrades[7]. FedEx has recently been partnering with Elroy Air, a company building the first autonomous VTOL cargo system to explore and adopt emerging technologies[7].These programs allow for FedEx to take advantage of new ways to expand their business through emerging technologies.

Threats:

One of the largest threats to FedEx is Amazon Delivery Service. Starting 2022 Amazon has started shipping cargo for outside customers in a direct bid to compete with FedEx. In the past seven years, Amazon has built a cargo network of 40,000 semi-trucks, 30,000 vans, and 70+ cargo planes[8]. Amazon plans to compete directly with large cargo transporting companies like FedEx and UPS. This could be a major threat to FedEx's business in the next decade considering Amazon is one of the most successful and powerful companies in the world.

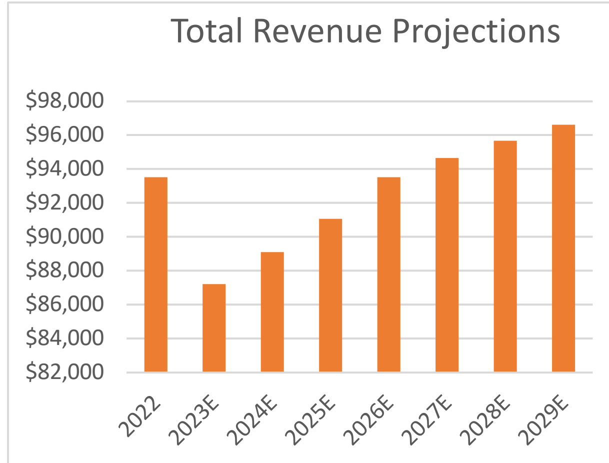
Valuation Discussion:

When valuing FedEx, we explored ten years of historical performance to understand the important aspects of the firm and to judge how the firm will look in the future. We also considered historical economic conditions and key industry events that could have influenced historical performance and that could impact future performance. With this information we forecasted FedEx's Income Statement, Balance Sheet, and Statement of Cash Flows seven years into the future. In 2029E we believe that FedEx will have reached a steady state of growth and will begin to grow at the rate of the overall market. This information was used to value the firm with discounted cash flow, economic profit, dividend discount model, and relative valuation analysis.

Revenue Decomposition

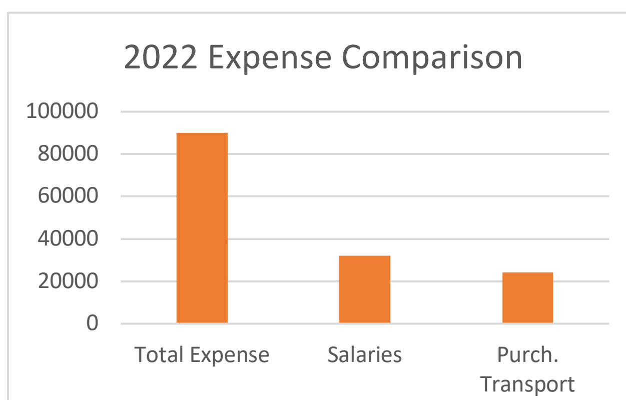
Revenue is the primary driver of our forecast and flows through our entire model, greatly impacting our valuations. To make our revenue forecast accurate, we forecasted the growth of sales per package/product and their respective volumes independently of one another, then multiplied the two values together to get our total revenue value for each product line. This allowed us to input different growth rates for revenue per package and volume amounts, to independently reflect historical, economic, and industry trends on both.

Due to the struggling economy and industry wide problems, we forecasted growth in total revenue to decrease by 7% in 2023E. We also considered FedEx's own projections for a slowdown in revenue for 2023E to make this forecast. We believe 2023E to be a year of recovery for FedEx and needed total revenue to reflect that. In the following years FedEx's total revenue is forecasted to grow steadily at a rate of 1-3%. We expect this steady growth in total revenue due to forecasted economic stability and the continued demand for FedEx's Express and Ground Segments.



Expense Analysis

FedEx's largest expenses are composed of salaries/employee benefits and purchased transportation such as their cargo trucks, delivery vans, and aircraft. These two-line items made up roughly 60% of the firm's total expenses on the income statement in 2022. Both salaries/employee benefits and purchased transportation were forecasted as a percentage of revenue. This was done by taking the average historical percentage of revenue for the line item and multiplying it with our projected revenue for that year. This allowed these projections to be influenced by historical and forecasted data.



Weighted Average Cost of Capital (WACC):

Our calculations produced a weighted average cost of capital of 7.92% for FedEx. Our cost of equity was calculated to be 9.25% with a weight of equity to be 66.85% of the firm. Our market value of equity was found by multiplying FedEx's total shares outstanding by its current stock price. Our after-tax cost of debt was determined to be 5.22% with a weight of debt equal to 33.15% of the firm. Our market value of total debt was found as the sum of short-term debt, long-term debt, and the present value of operating leases.

Cost of Equity:

The cost of equity was found using the capital asset pricing model (CAPM). The CAPM multiplies the firm's beta with its equity risk premium (ERP) and then adds the risk-free rate. The risk-free rate was determined to be 4.21%, from the 10-year treasury bond rate. Beta was found to be .976 using Bloomberg. It is an average of the 2-, 3-, 4-, and 5-year weekly beta for FedEx. Our ERP was the 1928-2020 geometric average over the 10-year treasury, found to be 5.17%. The CAPM determined FedEx's cost of equity to be 9.25%.

Cost of Debt:

FedEx's cost of debt was found by adding the risk-free rate of 4.21% together with the implied default premium and multiplying that with 1 minus the marginal tax rate of 22%. We first found the pre-tax cost of debt of 6.69% from the yield to maturity of FedEx's 30-year corporate bond. Then the implied default premium of 2.48% was computed by subtracting the risk-free rate from the pre-tax cost of debt. The cost of debt for FedEx was eventually concluded to be 5.22%.

Valuation Models

Discounted Cash Flow & Economic Profit

To create an intrinsic value FedEx's stock price, we used the discounted cash flow (DCF) and economic profit (EP) models. To find the DCF we first found the forecasted free cash flow (FCF) by taking each forecasted years' NOPLAT and subtracting change in invested capital. We then discounted the FCF for each forecasted year back to the present value using the WACC. We also found the firm's continuing value and discounted that back to the present value. The sum of these present values gave us the value of operating assets of FedEx. Adjusting for non-operating assets and debt left us with FedEx's value of equity. This was then divided by shares outstanding and adjusted for the implied price of today, to get a stock value of $222.

Our DCF model seems to be an accurate valuation of FedEx based on the FCFs and its CV. The FCFs decrease in the first few years of the forecast due to the projected drop in revenue, followed by an increasing in FCF. This shows the model is projecting FedEx to work through this turbulent economic time and recover fully by the end of our projection.

In our economic profit model, we found the EP for each forecasted year by subtracting our return on invested capital (ROIC) by the WACC and multiplying that by change in IC. Each forecasted EP and the continuing value were discounted by the WACC. The sum of the present values of EP and the continuing value provided were then added with invested capital to get the firm's value of operating assets. This value was then adjusted in the same fashion as in the DCF model to find the value of equity. Value of equity was divided by the shares outstanding and adjusted for the implied price of today to get a matching stock price with the DCF.

Dividend Discount Model

To create the dividend discount model (DDM) for FedEx, dividends per share were forecasted and then discounted to their present value with the cost of equity. The continuing value was found by multiplying the EPS and the P/E multiple of that year. The CV was then discounted to the present value with the cost of equity. Totaling the present value of the dividends and the CV created the intrinsic price of the firm. After adjusting it for the implied price of today, the DDM projected FedEx's price of $138.

We forecasted a steady increase in dividends per share for the firm. This gradual increase was determined from FedEx's historical continual increase in dividends per share. FedEx mentioned in their most recent annual report that they plan on continuing issuing a dividend for shareholders. Consequently, the dividend per share that we have forecasted and the slow growth of EPS that goes into the CV leave the DDM implied price of today lower than what we expect the actual value of FedEx to be. Considering this valuation is below FedEx's current trading price, we believe that this specific model is not as accurate as the DCF/EP and relative valuation models.

Relative Valuation

In our relative valuation we looked at five comparable firms that are within the integrated freight & logistics industry. The firms included UPS, DHL, DSV, J.B. Hunt Transportation, and Expeditors International. These firms were selected because they represent the largest players in the industry and have a similar business model to FedEx.

Our first relative valuation model was based on P/E ratios. Each comparable's forecasted P/E ratio was calculated by taking their current price per share divided by their forecasted EPS. The P/E ratios for each firm were then averaged and FedEx's forecasted EPS was multiplied by this average. This provided an intrinsic relative price for FedEx of $191. This seems to be the most accurate forecast of our relative valuation models as it falls in line with what we believe the value of FedEx should be. It is also in the ballpark of our DCF/EP model.

We then created a P/S relative model to value FedEx. To build this we divided the price of our comparables by their sales per share to find their P/S ratio. Each ratio was averaged. The average P/S ratio was then multiplied by FedEx's sales per share to find a relative value of $416. We believe that because the valuation is so much higher than current stock prices, the P/S ratio is not the best way to value FedEx.

Sensitivity Analysis:

Our sensitivity analysis presents the theoretical change of DCF & DDM factors by 10 basis point increments and how they affect prices, both by the type of relationship and by to what degree.

DDM: Revenue per Package Growth vs Tax Rates

		Revenue per Package Growth Rate						
	138.36	-10%	0%	10%	20%	30%	40%	50%
Marginal Tax Rate	7%	96.15	113.86	135.04	160.82	192.76	233.14	285.24
	12%	92.73	109.37	129.28	153.52	183.58	221.60	270.69
	17%	89.07	104.65	123.31	146.03	174.23	209.91	256.01
	22%	85.18	99.71	117.13	138.36	164.71	198.08	241.21
	27%	81.06	94.57	110.76	130.51	155.03	186.11	226.30
	32%	76.73	89.23	104.21	122.49	145.21	174.02	211.29
	37%	72.21	83.70	97.49	114.32	135.25	161.81	196.19

These two operational impacts have a strong impact on the expected price. If revenues were to decrease by only 10%, even with a tax cut, the expected price would drop down by approximately 40%.

DCF: Average Yearly Package Volume Growth vs Inflation

		Average Yearly Package Volume Growth Rate						
	221.63	-10%	0%	10%	20%	30%	40%	50%
Inflation	1%	218.13	224.56	231.77	239.88	249.05	259.44	271.29
	2%	212.20	218.63	225.83	233.95	243.11	253.51	265.36
	3%	206.12	212.54	219.75	227.86	237.03	247.43	259.28
	4%	199.88	206.31	213.52	221.63	230.79	241.19	253.04
	5%	193.49	199.92	207.12	215.24	224.40	234.80	246.65
	6%	186.94	193.36	200.57	208.69	217.85	228.25	240.10
	7%	180.23	186.65	193.86	201.97	211.14	221.54	233.38

FedEx's revenues are dependent on volume, which demand for is dependent on inflation. Seeing the inverse relationship of the two variables and the effect of price helps to understand the company's operations.

DDM: CV Return on Equity vs Cost of Equity

		CV ROE						
	138.36	10.33%	10.43%	10.53%	10.63%	10.73%	10.83%	10.93%
Cost of Equity	8.95%	145.79	146.29	146.78	147.26	147.73	148.20	148.65
	9.05%	142.89	143.38	143.86	144.33	144.79	145.25	145.69
	9.15%	140.09	140.57	141.04	141.50	141.95	142.40	142.83
	9.25%	137.39	137.86	138.32	138.77	139.21	139.64	140.07
	9.35%	134.77	135.23	135.68	136.12	136.56	136.98	137.40
	9.45%	132.24	132.69	133.13	133.56	133.99	134.40	134.81
	9.55%	129.79	130.23	130.66	131.09	131.50	131.91	132.31

The impact of equity on the DDM expected price is significant. As the return of and cost of are inverse to each other in respects to price, the CV ROE shows a greater degree of impact.

DCF: Cost of Equity vs Pre-Tax Cost of Debt

		Cost of Equity						
	221.63	8.95%	9.05%	9.15%	9.25%	9.35%	9.45%	9.55%
Pre-Tax Cost of Debt	6.39%	220.91	221.01	221.10	221.20	221.30	221.39	221.49
	6.49%	221.06	221.15	221.25	221.34	221.44	221.54	221.63
	6.59%	221.20	221.29	221.39	221.48	221.58	221.68	221.77
	6.69%	221.33	221.43	221.53	221.62	221.72	221.81	221.91
	6.79%	221.47	221.57	221.66	221.76	221.86	221.95	222.05
	6.89%	221.61	221.70	221.80	221.89	221.99	222.09	222.18
	6.99%	221.74	221.83	221.93	222.03	222.12	222.22	222.32

The cost of equity and cost of debt are significant to understanding capital structure of the company and in calculating weighted average cost of capital. While both values showed a positive relationship with the expected price, there is little effect.

DDM: EPS Growth vs Dividend Yield

		EPS G						
	138.36	2.70%	2.80%	2.90%	3.00%	3.10%	3.20%	3.30%
Dividend Yield	2.68%	137.29	137.60	137.92	138.25	138.58	138.93	139.29
	2.78%	137.33	137.64	137.95	138.28	138.62	138.97	139.33
	2.88%	137.37	137.67	137.99	138.32	138.66	139.01	139.37
	2.98%	137.40	137.71	138.03	138.36	138.70	139.05	139.41
	3.08%	137.44	137.75	138.07	138.40	138.74	139.09	139.45
	3.18%	137.48	137.79	138.11	138.44	138.77	139.12	139.49
	3.28%	137.52	137.83	138.15	138.48	138.81	139.16	139.53

Changes in earnings per share versus the dividend yield presents little effect on expected prices despite being key inputs to the DDM model. This is significant to note as they are both two metrics investors tend to observe.

DCF: Beta vs Equity Risk Premium

		Beta						
	221.63	0.676	0.776	0.876	0.976	1.076	1.176	1.276
ERP	4.87%	315.71	284.25	257.37	234.11	213.78	195.85	179.90
	4.97%	311.03	279.69	252.94	229.82	209.63	191.83	176.01
	5.07%	306.45	275.24	248.63	225.65	205.59	187.92	172.22
	5.17%	301.98	270.90	244.42	221.58	201.65	184.12	168.54
	5.27%	297.61	266.66	240.31	217.61	197.82	180.41	164.97
	5.37%	293.34	262.51	236.31	213.74	194.09	176.81	161.48
	5.47%	289.16	258.47	232.40	209.97	190.45	173.30	158.09

These two factors both provide a strong inverse relationship to the expected price as they both factor into the cost of equity. It's significant to note the degree of impact in cost of equity factors versus the cost of equity as a whole.

DCF: NOPLAT CV Growth vs CV ROIC

Cv Growth of NOPLAT

CV ROIC	221.63	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%
	10.33%	213.18	218.28	224.33	231.60	240.52	251.72	266.19
	10.43%	213.54	218.81	225.04	232.54	241.74	253.29	268.22
	10.53%	213.90	219.32	225.74	233.46	242.94	254.83	270.21
	10.63%	214.24	219.82	226.42	234.37	244.11	256.35	272.16
	10.73%	214.58	220.31	227.09	235.25	245.26	257.83	274.08
	10.83%	214.92	220.79	227.75	236.12	246.40	259.29	275.95
	10.93%	215.24	221.26	228.40	236.98	247.51	260.72	277.80

As these two values are core drivers in the DCF model, we can see how increasing both of these factors significantly drives up our expected price, and vice versa.

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