

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the  
NOVA – School of Business and Economics.

ACCESSING UPS IN THE MODERN LOGISTICS  
LANDSCAPE: STRATEGIC FORECASTING,  
MARKET VALUATION AND TREND ANALYSIS

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## **Abstract**

This dissertation evaluates UPS' stock value as of December 31st, 2024, and offers a recommendation as of December 19th, 2023, amidst a transformative period for the logistics industry. Focusing on UPS' adaptation to global trade disruptions, e-commerce shifts, and labor negotiations, the study employs a Discounted Cash Flow (DCF) model alongside sensitivity analyses of key financial metrics. Comparing UPS with competitors like FedEx and DHL, the analysis concludes with a recommendation to hold UPS stock. Projected to achieve a price target of \$169.48 per share by the end of 2024, the study anticipates a total shareholder return of 9.72% over the next 12 months, reflecting UPS' strategic resilience and growth potential in a dynamic market.

**Keywords:** Logistics, Transportation, Innovation, Strike.

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This report is part of the report “Assessing ups in the modern logistics landscape: operational efficiency, market trends and strategic forecasting” (annexed), developed by Ana Leonor Alexandre Oliveira and Martim Saldanha Simões Assis Loisas and should be read has an integral part of it.

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# Introduction

The present report consists of my individual contribution, hereafter as Part 1, to the final report of the Master Thesis in Finance, which in this case is an Equity Research Report.

The company of study is United Parcel Service, hereafter as UPS. Part 1 is divided into two main chapters referring to the valuation and financial analysis of the company: Core Revenues and Expenses Forecast, Core Invested Capital, WACC Calculations, and DCF and Terminal Value Analysis. I'll be focusing on UPS' forecast of core revenues and expenses, understanding, and calculating the Weighted Average Cost of Capital (WACC), as well as performing a Discounted Cash Flow (DCF) analysis. Additionally, I will delve into the determination of UPS' terminal value, leading to the calculation of its Enterprise and Equity Value. To conclude, I will provide a relative valuation, Sensitivity Analysis, and Final Recommendations based on the findings.

The findings from this part of the report underscore several critical aspects of UPS' financial landscape. Firstly, they highlight UPS' robustness in navigating through challenging global trade conditions and labor disputes. The analysis forecasts a promising rebound in the company's core revenues by 2025, signaling a period of recovery and growth. Additionally, the results of our sensitivity analyses project a considerable degree of stability in UPS' share price, reflecting a steady market confidence. Furthermore, the report points to promising prospects for enhanced returns to shareholders, supported by a solid approach to dividends and a well-planned strategy for share repurchases.

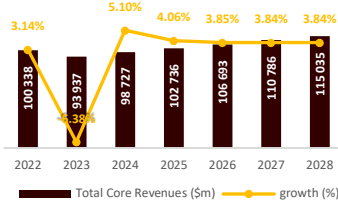
My pair's Part 1 Report consists of the Company and Industry Research and Analysis. Her report covers Company Overview, Macroeconomic Context and Main Drivers, and Market Overview and Main Drivers. This involves an analysis of the company's structure, macroeconomic influences on the industry in which UPS operates, and a detailed comparison between UPS and its main competitors FedEx and DHL.

This division was the one we found to be more efficient in support of Part 1's clarity. Nonetheless, it is important to mention that both members of the group played a crucial role in the thinking and execution processes of the final Reports, both written and excel documents.

# Valuation

## Core Revenues Forecast

Graph 1: UPS Revenues and Growth Forecast



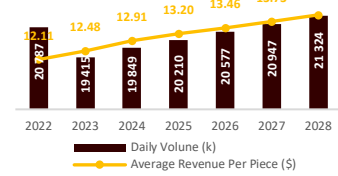
Source: UPS Annual Report and Own Estimates

In 2023, UPS faced distinct challenges in its key business segments. While the U.S. Domestic Package accounts for 66% of its total revenues, the company as a whole is bracing for a potential overall revenue decline of -6.38% to \$94 billion. However, total revenues are expected to recover and reach their 2022 value by 2025, indicating a period of adjustment and eventual rebound for the company.

- U.S. Domestic Package

The U.S. Domestic Package segment, a crucial division of UPS, is driven by three key products: Next Day Air, Deferred, and Ground. Each product's revenue is calculated by multiplying the Average Daily Package Volume, Average Revenue Per Piece, and Operating Days in the Period. In 2023, this segment faced a notable challenge.

Graph 2: U.S. Domestic Package Revenues Forecast

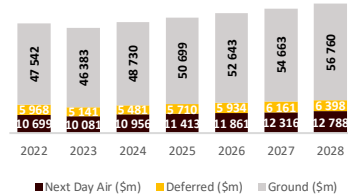


Source: UPS Annual Report and Own Estimates

The segment is expected to experience a 6.6% decline in average daily package volume to 19,415 thousand, largely attributable to the Teamsters strike's repercussions. This strike has not only disrupted deliveries but has likely eroded the confidence of consumers and businesses alike. Furthermore, there's a risk of losing sales to competitors like FedEx amidst these disruptions.

Deferred services might witness the largest decrease in volume, as the surge in e-commerce pushes consumers and businesses towards faster delivery options. Conversely, the Ground product is projected to see the least decline, appealing as a cost-effective solution during turbulent times.

Graph 3: U.S. Domestic Package Products Revenues Forecast



Source: UPS Annual Report and Own Estimates

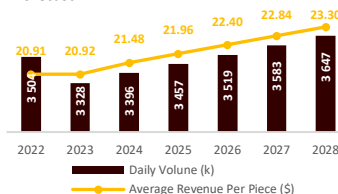
Both Next Day Air and Deferred are air-based delivery products in UPS' portfolio. From 2024 until 2026, the growth of these products is anticipated to reflect the changes in the total pounds of UPS' Aircraft fleet. The capacity and efficiency of the Aircraft fleet are crucial as they directly influence the volume handling capabilities and service efficiency of Next Day Air and Deferred. Therefore, monitoring the growth of the fleet provides a relevant indicator for forecasting the future performance of these air-based delivery products.

A rebound is anticipated by 2025, bringing volume projections closer to the pre-strike levels of 2022, assuming UPS effectively recovers from the strike's impacts. The tentative agreement with the Teamsters union, while averting an immediate strike, is poised to significantly increase labor costs. Higher wages could trigger a wage-price spiral, potentially contributing to sustained high inflation.

Over the long term, the Average Daily Package Volume is expected to grow in tandem with Real GDP Growth. Simultaneously, Average Revenue Per Piece should align closely with inflation rates.

- International Package

Graph 4: International Package Revenues Forecast



Source: UPS Annual Report and Own Estimates

The International Package segment, an integral part of UPS' global operations, encompasses three distinct products: Domestic, Export, and Cargo & Other. Similarly to the U.S. Domestic Package segment, revenue generation for the Domestic and Export products is calculated by the product of Average Daily Package Volume, Average Revenue Per Piece, and Operating Days in the Period. Recently, this segment experienced a 5.01% decrease in Average Daily Package Volume to 3,328 thousand, leading to a total revenue decrease of 5.52% to \$18,612 million.

Unlike its U.S. counterpart, the International Package segment has been less impacted by the Teamsters strike. However, it faces significant challenges, including geopolitical unrest such as the trade war between the U.S. and China and the conflict in Ukraine. These events have prompted UPS to suspend services in affected regions, impacting operations and customer services.

A notable trend in this segment is the anticipated decrease in e-commerce activity. As global e-commerce begins to stabilize after a period of rapid growth, we expect a shift in consumer behavior, leading to reduced demand for related delivery services. This trend could result in a decrease in the Average Revenue Per Piece within the international segment, reflecting changes in consumer purchasing patterns and a potential move away from the reliance on e-commerce.

In light of these changes, we predict that the Average Daily Package Volume's growth within this segment will align with Real GDP Growth, while the Average Revenue Per Piece is expected to correlate with inflation trends. Revenue from the 'Cargo & Other' product is projected to grow in line with Nominal GDP Growth.

### Supply Chain Solutions

Supply Chain Solutions covers four areas: Forwarding, Logistics, Freight, and Other. The segment is navigating through a complex global trade environment, marked by disruptions such as the Asia-U.S. Lane disruptions, weakened demand, and various international conflicts including the invasion of Ukraine.

The global trade landscape is currently facing significant challenges. Geopolitical tensions and economic uncertainties are reshaping trade patterns. The ongoing trade war between the U.S. and China, for instance, is expected to lead to a \$63B decrease in trade between these countries by 2031. Additionally, the conflict between Israel and Hamas, and the Ukraine war, are contributing to a reshuffling of global trade alliances and routes.

In terms of financial impact, the Supply Chain Solutions segment is bracing for significant changes. Revenues of the forwarding sector are projected to decrease by 30% to \$6,260 million in 2023, marking it as the most affected area within the segment. Moreover, the 'Other' category is also expected to see a substantial decline of 15% to \$ 1,816 million.

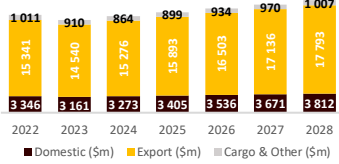
Looking into the future, despite the current challenges, the Supply Chain Solutions segment is anticipated to align with the Nominal GDP Growth in the medium to long term. This outlook suggests a gradual recovery and adaptation to the new global trade dynamics. With strategic adjustments and leveraging emerging trade opportunities, particularly in ASEAN countries, Mexico, India, and the growing Europe-U.S. trade, UPS is positioned to navigate and potentially capitalize on these evolving market conditions.

## Core Expenses Forecast

Compensation and benefits present a sensitive matter for UPS. These costs represent nearly half of the company's total revenue. The looming negotiations with the Teamsters add to the challenge. If UPS doesn't manage to expand its business, either through increased volume or higher pricing, compensation and benefits expenses could very well surpass the 50% benchmark.

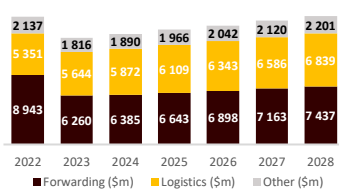
Over the past four years, on average, U.S. Domestic Package segment employees delivered 47 packaged per day, while the International Package segment employees delivered 40. Using these metrics, we can estimate the future workforce size in each region and multiply it by the

**Graph 5: International Package Products Revenues Forecast**



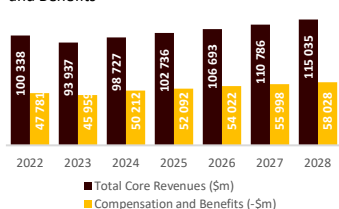
Source: UPS Annual Report and Own Estimates

**Graph 6: Supply Chain Solutions Products Revenues Forecast**



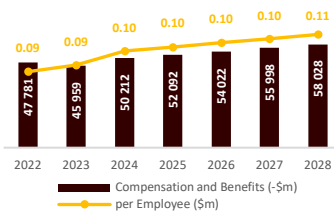
Source: UPS Annual Report and Own Estimates

**Graph 7: Total Revenues vs Compensation and Benefits**



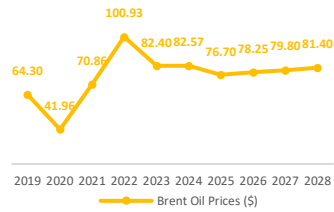
Source: UPS Annual Report and Own Estimates

Graph 8: Compensation and Benefits



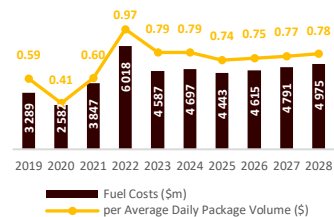
Source: UPS Annual Report and Own Estimates

Graph 9: Brent Oil Prices



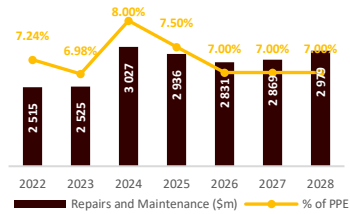
Source: EIA and Deloitte

Graph 10: Fuel Costs



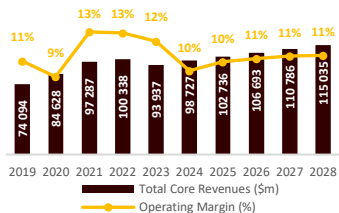
Source: UPS Annual Reports and Own Estimates

Graph 11: Repairs and Maintenance



Source: UPS Annual Reports and Own Estimates

Graph 12: Operating Margin



Source: UPS Annual Reports and Own Estimates

compensation and benefits per employee. Our projections indicate that these costs align with inflation in 2023 but will see a surge over the subsequent five years, which is attributed to the outcomes of negotiations with the Teamsters. According to the CEO, this increase would be of 17% over the 5 years<sup>1</sup>, but taking into consideration that Teamsters members represent 60% of the total number of employees, we believe that this number would be lower and around 15% (presenting a conservative approach). It's also important to note that 46% of the increase will occur in the first year, 2024<sup>2</sup>. While the recent agreement with the union succeeded in averting a strike, it will also drive a significant rise in compensation and benefits costs over the next half-decade. Beyond this period, we anticipate these expenses to increase at a steady pace, mirroring the Federal Reserve's long-term inflation rate of 2%.

Forecasting Fuel Costs for UPS requires a nuanced approach. The primary step entails dividing the overall fuel expenditure by the Average Daily Package Volume. This division provides a granular insight into the fuel cost associated with delivering each individual package. The proxy we chose to predict future fuel growth was the Brent Oil Prices. For context, during the global pandemic, Brent Oil Prices witnessed a sharp decline, dropping by almost 35%. However, geopolitical events, such as the Ukrainian War and the recent conflict in the Middle East, had the opposite effect. The first conflict led to a significant surge in Brent Oil Prices, pushing them above the \$100 threshold, while the second one has gotten the investors worried that will escalate the price even further. The fuel cost per average package delivery exhibited a parallel trend. It was at its lowest during the pandemic, owing to the dip in oil prices at \$0.41. Conversely, as tensions intensified with the onset of the war, this cost surged to a peak of \$0.97.

Looking ahead, the fuel cost forecasts for UPS are closely tied to projected Brent Oil Price trends as reported by Deloitte's analyses<sup>3</sup>. These projections suggest that fuel costs will continue to evolve in tandem with these oil price forecasts.

In 2023, UPS is projected to maintain its historical trend (average of the last four years) in Repairs and Maintenance costs as a percentage of Property, Plant, and Equipment. However, a shift is anticipated starting in 2024. We project an increase in this cost ratio to 8% in 2024, followed by a further improvement to 7.5% in 2025, and stabilizing at 7% in subsequent years. This gradual reduction is closely tied to the outcomes of UPS' negotiations and agreements with the Teamsters union, reflecting a strategic adaptation in response to workforce agreements and operational efficiencies.

Responding to the union's concerns, UPS is undertaking significant upgrades to improve the comfort and safety of its fleet. Key initiatives include installing air conditioning systems, adding new heat shields, and equipping vehicles with extra fans.

While these fleet improvements are imperative, they are likely to increase Purchased Transportation costs. This is primarily due to the initial costs and adjustments associated with the installation of new equipment and systems. However, over the longer term, these upgrades could lead to operational efficiencies, potentially reducing maintenance costs through enhanced vehicle performance and durability.

After accounting for significant upcoming expenses, including rising compensation and benefits due to Teamsters negotiations and fluctuating fuel costs linked to geopolitical events, UPS'

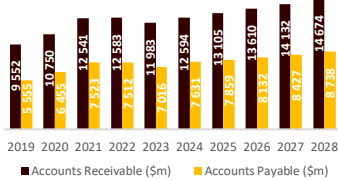
<sup>1</sup> CBS News. 2023. UPS says drivers to make \$170,000 in pay and benefits following union deal. August 15. <https://www.cbsnews.com/news/ups-drivers-170000-pay-benefits-compensation/>.  
<sup>2</sup> United Parcel Service, Inc. (UPS). 2023. "Q3 Earnings release." UPS. September 11. [https://d1io3yog0oux5.cloudfront.net/\\_cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS\\_2023\\_Labor\\_Contract\\_Presentation.mp4](https://d1io3yog0oux5.cloudfront.net/_cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS_2023_Labor_Contract_Presentation.mp4).  
<sup>3</sup> Deloitte. 2022. "Energy, oil, and gas price forecast."

Operating Margin is anticipated to decline in 2024, reaching 9.6%. Post-2024, the company's Operating Margin is projected to stabilize, consistently maintaining a rate of 12% in perpetuity. This reflects the company's resilience and ability to adapt, even amidst numerous financial pressures and challenges.

## Core Invested Capital

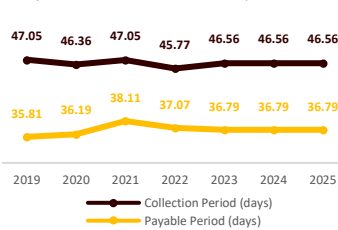
When discussing the nuances of Working Capital, one of the primary components is Operating Cash. For our projections, we've forecasted Operating Cash to be 2% of the Total Core Revenues<sup>4</sup>. Another component in this equation is Accounts Receivable, which has been calculated using the Collection Period. This method makes sense as it represents the average number of days it takes a company to receive a payment after a sale has been made. On the other hand, Accounts Payable was determined using the Payable Period, as it represents the average duration it takes for a company to settle its debts with suppliers after receiving an invoice, hence reflecting the efficiency in managing short-term liabilities.

**Graph 13:** Current Assets vs Current Liabilities



Source: UPS Annual Reports and Own Estimates

**Graph 14:** Collection Period vs Payable Period



Source: UPS Annual Reports and Own Estimates

Historical data highlights UPS's proficiency in maintaining a steady cash conversion cycle over the years. To delve deeper into the specifics: in terms of the Collection Period, UPS has, on average, taken 47 days to gather sales payments from its clients. Meanwhile, when looking at the Payable Period, it takes the company an average of 37 days to reconcile its obligations with its suppliers.

A comparative analysis of UPS' peers, FedEx and DHL, offers further insights. Both companies display similar metrics, with a collection period of 46 and 47 days respectively. As for the payable period, the figures stand at 21 days for FedEx and 46 for DHL. FedEx primarily focuses on express services, accounting for 51.3% of its operations in FY20. This means they have higher expenses such as fuel and rentals due to their reliance on sub-contractors, in contrast to UPS which largely employs its workforce. Therefore, FedEx tends to settle its bills with suppliers more quickly, and we anticipate this pattern to continue. Meanwhile, from a payable standpoint, DHL outperforms, taking more days (46) compared to UPS' 37 days to address its liabilities. This indicates a better liquidity position, as DHL enjoys extended credit terms with its suppliers.

**Table 1:** Aircrafts (Owned) and respective Total pounds of cargo

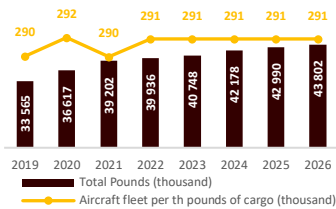
	2019	2020	2021	2022	2023E	2024F	2025F	2026F	LBS/Aircraft
Boeing 757-200	75	75	75	75	75	75	75	75	63 000
Boeing 767-300	64	69	72	72	79	86	93	100	116 000
Boeing 767-300BCF	3	4	4	5	5	5	5	5	116 800
Boeing 767-300BDSF	2	4	4	4	4	4	4	4	116 800
Airbus A300-600	52	52	52	52	52	52	52	52	106 000
Boeing MD-11	37	40	42	42	42	42	42	42	192 600
Boeing 747-400F	11	11	11	11	11	11	11	11	274 100
Boeing 747-400BCF	2	2	2	2	2	2	2	2	274 100
Boeing 747-8F	15	20	26	28	28	30	30	30	308 700
<b>Total Aircrafts (Owned)</b>	<b>261</b>	<b>277</b>	<b>288</b>	<b>291</b>	<b>298</b>	<b>307</b>	<b>314</b>	<b>321</b>	-
<b>Total pounds</b>	<b>33 565 000</b>	<b>36 616 700</b>	<b>39 202 100</b>	<b>39 936 300</b>	<b>40 748 300</b>	<b>42 177 700</b>	<b>42 989 700</b>	<b>43 801 700</b>	-

Source: UPS Annual Reports and Own Estimates

When it comes to forecasting capital expenditures for UPS, we adopted another approach that capitalizes on the transparent reporting habits of the company. Historically, UPS has been accurate in its aircraft acquisition forecasts. They detail every aircraft purchase and discontinuation, and their past reports have aligned with actual numbers in their fleet. Given this, we have confidence that the aircrafts projected for future acquisitions will indeed be integrated into the fleet.

<sup>4</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

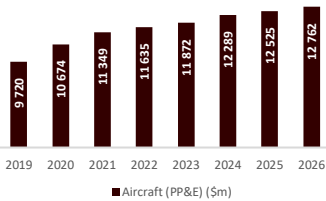
**Graph 15: Aircraft Cargo (PP&E)**



Source: UPS Annual Reports and Own Estimates

For this year, UPS' acquisition included seven Boeing 767-300 airplanes. The company's projection indicates the addition of another seven of these aircraft each year for the next three years. Additionally, two Boeing 767-300s are slated to join the fleet next year. By combining this acquisition data up to 2026 with the cargo capacity of each aircraft, we're able to calculate the total cargo weight in pounds for each year. Taking the total asset value of Aircrafts and dividing it by this annual cargo weight gives us a ratio of "Aircraft fleet per total thousand pounds of cargo." Historically, this ratio has remained steady at around 291 thousand from 2019 to 2022. We believe that this value will stay constant and so we kept it in our forecasts for subsequent years. By multiplying this ratio by the Total Pounds of cargo we forecasted the Aircraft fleet until 2026 with a value of \$12,762 at that time.

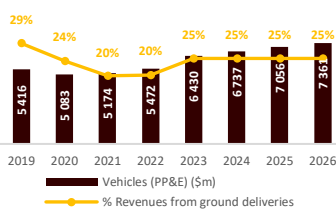
**Graph 16: Aircraft (PP&E)**



Source: UPS Annual Reports and Own Estimates

Moving on to the valuation of UPS's ground vehicles, we opted for a percentage-based approach. We calculated the value based on a percentage of the revenue from ground products, excluding Freight, since Freight ceased operations in 2021. Because of the above-mentioned enhancement of the comfort and safety of the UPS fleet, we believe that the driver will increase to 25.0% of the revenue from ground products.

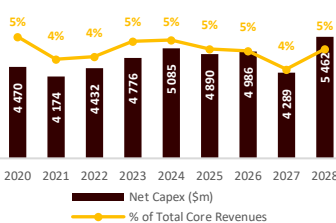
**Graph 17: Vehicles (PP&E)**



Source: UPS Annual Reports and Own Estimates

As for other PP&E items, which tend to represent more centralized services, we've pegged their values as a percentage of total core revenues.

**Graph 18: Net Capital Expenditures**



Source: UPS Annual Reports and Own Estimates

In terms of accounting for depreciation and amortization, we've based our calculations on a percentage of the combined total of Property, Plant, and Equipment (PP&E) and Intangible Assets. Our projections suggest that these values will mirror those of 2022.

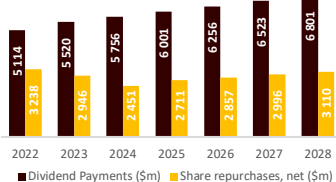
In light of UPS' strategic initiatives and recent developments, our CAPEX forecasts reflect an anticipated evolution in the company's expenditure. In 2022, the CAPEX was \$4,432 million, accounting for 4.42% of revenues. This figure is set to increase to \$4,776 million (5.08% of revenues) in 2023, driven by key factors such as the expansion of ground facilities, enhancements in fleet comfort and safety, and technological upgrades to meet the growing e-commerce demand. Furthermore, in 2024, we expect the CAPEX to rise further to \$5,085 million (5.15% of revenues), influenced by ongoing negotiations, continued investments in aircraft acquisitions, and the modernization of logistics infrastructure to accommodate evolving market trends.

In conclusion, our capital expenditure (CAPEX) estimates align with the figures shared by UPS during their Q3 call.

## WACC Calculations

- Capital Structure

**Graph 19: Dividends and Net Share Repurchases**

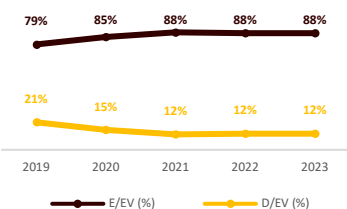


Source: UPS Reports and Own Estimates

The transactions with shareholders for UPS include both dividends and share repurchases. In 2023, the dividends paid amounted to \$6.48 per share, totaling approximately \$5.5 billion. This distribution signifies a 6.58% increase from the payout in 2022. Without counting the growth seen in 2022 as it was an exception year of strong financial performance, the growth seen in 2023 shows alignment with UPS' dividend strategy from previous years. Given this consistency, it's expected that UPS will continue to target similar dividend growth levels in the future.

As for share repurchases, an allocation of around \$2.9 billion is anticipated, which is equivalent to 28% of the net income. Combining both dividends and share repurchases, the total transactions with shareholders in 2023 amount to \$8.5 billion. This pattern of shareholder transactions, balancing dividends and share repurchases, is expected to persist in the subsequent years,

Graph 20: Capital Structure



Source: UPS Reports and Own Estimates

reflecting a strategic approach to shareholder value.

Now, when it comes to addressing debt, in recent years, UPS has demonstrated a trend of gradually reducing its leverage, achieving a stable debt level at 12% over the last two years. Based on this pattern, we project that this level of leverage will be maintained throughout 2023. By extrapolating this ratio, we derive an implied Debt-to-Equity ratio of 84% which we used to predict the future value of debt in future years.

### ▪ Cost of Equity

The process of determining the expected cost of equity for UPS involves three primary components, as delineated by the Capital Asset Pricing Model (CAPM): the Risk-free Rate ( $R_f$ ), the Equity Beta ( $\beta_e$ ), and the Market Risk Premium.

To start, our Risk-free Rate ( $R_f$ ) is benchmarked against the yield of the US Government's 10-year Bond. This approach provides a stable and generally accepted proxy for the risk-free rate. Regarding Market Risk Premium, an assumption based on the McKinsey book on valuation<sup>5</sup> was made, setting it at 5%.

Table 2: Beta Unlevered  $\beta_u$  calculation

USD (\$) in Millions except DHL	UPS	FDX	DHL	25th percentile	Median	75th percentile
$\beta_e$	1.08	1.33	1.46			
ND	\$ 18 226	\$ 15 526	\$ 19 916			
E	\$ 138 813	\$ 54 447	\$ 40 985			
D/E	13.13%	28.52%	48.59%			
US Corporate Effective Yield	5.04%	5.41%	5.04%			
Default premium	1.13%	1.50%	1.13%			
$\beta_d$	0.23	0.30	0.23			
$\beta_u$	0.98	1.10	1.06	1.02	1.06	1.08

Source: Yahoo Finance Monthly Historical Returns and Own Estimates

In our analysis of UPS's financial risk, we leveraged the historical performance data of key competitors, including FedEx and DHL. The primary objective was to ascertain the Equity Beta ( $\beta_e$ ) for each firm, which is a function of both the Unlevered Beta ( $\beta_u$ ) and the Debt Beta ( $\beta_d$ ). For a robust comparison, we used the S&P 500 index as the market reference for UPS and FedEx, while the STXE 600 was used for DHL. This approach ensured that the market benchmarks were appropriately aligned with the geographical and operational scopes of the respective companies.

Through a regression analysis of historical stock returns against these market indices, we calculated the levered beta for each company. This levered beta, reflective of the company's total risk including its capital structure, was then unlevered to isolate the business risk from the financial risk. For UPS, our analysis revealed an unlevered beta that, when compared with FedEx and DHL, indicates a more stable and less volatile risk profile at 0.98. This finding aligns with UPS's relatively lower Debt-to-Equity (D/E) ratio, suggesting a conservative approach to financial leverage. To calculate UPS' levered beta, we used its own unlevered beta of 0.98, which corresponded to a levered beta of 1.08. This approach takes into account the lower risk profile of UPS compared to its peers.

The Equity Beta we calculated, has directed us to an expected Cost of Equity of 9.33%, that accurately reflects our risk assessment. This figure represents the estimated return demanded by equity investors, considering the specific risk profile of the company.

Table 3: Expected Cost of Equity ( $R_e$ )

$R_f$	3.91%
$\beta_u$	0.98
$\beta_d$	0.23
$\beta_e$	1.08
Market Risk Premium	5.00%
<b><math>R_e</math></b>	<b>9.33%</b>

Source: Own Estimates

<sup>5</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

- Cost of Debt

UPS' creditworthiness is prominently acknowledged by industry-leading credit rating agencies. Moody's rates UPS at 'A2', while S&P Global Ratings awards it an 'A' status. These favorable credit ratings underscore the company's financial stability and guide the selection of appropriate benchmarks for expected cost assessment.

Table 4: Expected Cost of Debt (Rd)

Rf	3.91%
$\beta_d$	0.23
Market Risk Premium	5.00%
Ann. Prob. of Default	0.27%
Loss Given Default	54.60%
<b>Rd</b>	<b>5.03%</b>

Source: Own Estimates

In light of these ratings, we employed the US Corporate A Effective Yield as our benchmark for calculating UPS' expected Cost of Debt (Rd). To determine the Debt Beta ( $\beta_d$ ), we first calculated the default premium by taking the difference between the US Corporate A Effective Yield and the risk-free rate. Subsequently, we divided this default premium by the market risk premium, yielding the Debt Beta.

We then used the results from the Capital Asset Pricing Model (CAPM) to compute UPS's expected Cost of Debt. By multiplying the CAPM results with both the Annualized Probability of Default and the Loss Given Default we ended up with an Expected Cost of Debt for UPS that stands at 5.03%.

- WACC

Table 5: Weighted Average Cost of Capital

<b>Re</b>	<b>9.33%</b>
E/EV	88.39%
<b>Rd</b>	<b>5.03%</b>
D/EV	11.61%
Marginal tax rate	21.00%
<b>WACC</b>	<b>8.71%</b>

Source: Own Estimates

To compute the Weighted Average Cost of Capital (WACC), we take a weighted average of both the Expected Cost of Equity and the After-tax Cost of Debt. To calculate the after-tax cost of debt, the marginal tax rate was used at 21%.

Analyzing UPS' financials, with a net debt amounting to \$18,226 and a market capitalization of \$138,813, the derived target Equity to Enterprise value stands at 88%. With these figures in play, our computations led us to establish a Weighted Average Cost of Capital for UPS at 8.71%.

## Core Value

To compute UPS's core value, two components were analyzed: the sum of the Discounted Core Free Cash Flows and the Discounted Terminal Value.

Table 6: Discounted Cash Flow (DCF)

USD (\$) in Millions	2025	2026	2027	2028	2029	2030	..	2042	2043
Core Free Cash Flow	\$ 6 771	\$ 7 453	\$ 8 615	\$ 8 231	\$ 9 334	\$ 9 884		\$ 15 594	\$ 16 197
Discounted Core Free Cash Flow	\$ 6 228	\$ 6 307	\$ 6 707	\$ 5 895	\$ 6 149	\$ 5 990		\$ 3 471	\$ 3 316
<b>Sum of Discounted Core Free Cash Flow</b>	<b>\$ 94 751</b>								
Terminal Value	\$ 347 464								
<b>Discounted Terminal Value</b>	<b>\$ 71 143</b>								

Source: Own Estimates

To set a price target for UPS by the end of 2024, our approach involved discounting core free cash flows starting from 2025, applying the WACC derived from our earlier calculations.

Table 7: Growth and RONIC Calculation

USD (\$) in Millions	2025	2026	2027	2028	2029	2030	..	2042	2043
Core Result	\$ 8 417	\$ 8 992	\$ 9 542	\$ 10 006	\$ 11 339	\$ 11 777		\$ 18 569	\$ 19 286
Core Invested Capital	\$ 47 335	\$ 48 875	\$ 49 802	\$ 51 577	\$ 53 582	\$ 55 475		\$ 84 740	\$ 87 829
Core FCF	\$ 6 771	\$ 7 453	\$ 8 615	\$ 8 231	\$ 9 334	\$ 9 884		\$ 15 594	\$ 16 197
ROIC	18.4%	19.0%	19.5%	20.1%	22.0%	22.0%		22.7%	22.8%
<b>RONIC</b>	<b>72.1%</b>	<b>34.9%</b>	<b>35.7%</b>	<b>50.0%</b>	<b>75.1%</b>	<b>21.8%</b>		<b>24.1%</b>	<b>24.1%</b>
IR	18.0%	19.6%	17.1%	9.7%	17.7%	17.7%		16.0%	16.0%
g	13.0%	6.8%	6.1%	4.9%	13.3%	3.9%		3.9%	3.9%
Core Result g	13.0%	6.8%	6.1%	4.9%	13.3%	3.9%		3.9%	3.9%
<b>Core FCF g</b>	<b>10.8%</b>	<b>10.1%</b>	<b>15.6%</b>	<b>(4.5%)</b>	<b>13.4%</b>	<b>5.9%</b>		<b>3.9%</b>	<b>3.9%</b>

Source: Own Estimates

Regarding the Discounted Terminal Value, we leaned on the McKinsey perpetuity formula<sup>6</sup>. We used the Free cash flow growth of 3.9% which we believe it's at the steady state point as it matches the product of the investment rate (IR) and the return on new invested capital (RONIC) and the Core Result growth. In the long run, we forecast that the steady-state RONIC for UPS will rest at 24.1%. Given that Damodaran's insights<sup>7</sup> point to an industry average ROIC of 24.2%, our projection appears well-aligned. This percentage suggests that UPS, a stalwart in its domain, remains committed to progressive investment, innovation, and efficiency enhancements.

A comparison with the logistics sector illustrates the unique positioning of UPS. Thus, with a ROIC consistently surpassing the WACC, UPS not only stands out from the competition as there are high barriers to entry but also continues to deliver value to its shareholders.

Lastly, by adding the two components we reached a core valuation of \$165,893 million.

## Equity Value

To compute the Price target for the close of 2024, we calculated the enterprise value by adding to the core valuation with what we determined as the non-core value. For this non-core value, a reliable proxy is the Book Value of the Total Non-Core Invested Capital as of the end of 2024. Taking a step further towards discerning the Equity value, we subtracted the Net Debt & Other Claims (the Net Invested in Financial Activities projected for the end of 2024), from the enterprise value we had earlier calculated. With all these computations in place, and considering the estimated 852 million Shares Outstanding, our analysis points to an implied price target of \$169.48 for UPS on December 31, 2024.

## Relative Valuation

Table 9: Relative Valuation Multiples

(as of December 31st, 2022)	EV/Revenues	EV/EBITDA	EV/EBIT	P/E
<b>UPS, FDX and DHL:</b>				
25th Percentile	0.8x	6.6x	10.0x	10.3x
<b>Median</b>	<b>0.9x</b>	<b>8.4x</b>	<b>12.7x</b>	<b>12.9x</b>
75th Percentile	1.3x	9.3x	13.1x	13.9x
<b>+XPO and JBHT:</b>				
25th Percentile	0.9x	7.2x	11.3x	7.7x
<b>Median</b>	<b>0.9x</b>	<b>7.7x</b>	<b>12.4x</b>	<b>12.9x</b>
75th Percentile	1.3x	8.4x	12.7x	14.9x
<b>UPS Implied Multiple by DCF</b>	<b>1.7x</b>	<b>10.9x</b>	<b>13.9x</b>	<b>13.7x</b>

Source: Own Estimates

Note: FedEx values used as of May 31<sup>st</sup>, 2023

In our valuation analysis of UPS, we initially considered two sets of comparables: a direct comparison with FedEx and DHL, and a broader analysis including five companies in the Commerce and Logistics sector. After careful consideration, we chose the direct comparison approach with FedEx and DHL as the most appropriate for our analysis, given the close operational and market similarities.

We calculated Enterprise Value (EV) for each company by combining Net Debt and Market Capitalization. We then focused on the following multiples: EV/Revenues, EV/EBITDA, EV/EBIT, and the P/E ratio.

<sup>6</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

$$TV_t = \frac{\text{Core Result}_t (1+g)(1-\frac{g}{RONIC})}{WACC-g}$$

<sup>7</sup> Damodaran, Aswath. 2023. Margin/ROIC by Sector (US). January. [https://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/mgnroc.html](https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/mgnroc.html).

Table 8: Price target (DCF)

USD (\$) in Millions	
Core Value	\$ 165 893
Non-core Value	\$ (3 268)
Enterprise Value	\$ 162 625
Net Debt & Other Claims	\$ (18 242)
Equity Value	\$ 144 384
Shares Outstanding (in Millions)	851.93
<b>Price Target FY24</b>	<b>\$ 169.48</b>
<b>Price (as of 16-Dec-2023)</b>	<b>\$ 162.94</b>

Source: Own Estimates

After careful consideration, we selected the EV/EBIT multiple as the most appropriate for our analysis. This decision was driven by the significant capital expenditures in the Commerce and Logistics industry, which make depreciation and amortization a critical factor. Unlike EV/EBITDA, which tends to overlook these expenses, and the P/E ratio, which includes all income statement items, EV/EBIT offers a more accurate reflection of operational efficiency in this capital-intensive industry.

Our analysis of the broader peer group revealed that EV/EBIT values ranged from 10.0x to 13.1x, which translates into a UPS's share price between \$166.30 and \$224.83.

Our findings indicate that the current market valuation of UPS, particularly in light of recent labor-related challenges, might skew towards the lower end of our estimated spectrum, aligning with the DCF-implied multiple for the end of 2024.

## Sensitivity Analysis

Three sensitivity analysis were conducted for the WACC. The first one conducted was to Beta Equity,  $\beta_e$ , a measure of stock price sensitivity to changes in the market, and to Expected Cost of Equity, Re. The 95% confidence interval<sup>8</sup> of the levered beta,  $\beta_e$  was used to obtain the range of the Beta Unlevered,  $\beta_u$  from 0.96 to 1.00 that we then re-levered at the future capital structure, 2024. This led to a  $\beta_e$  ranging from 1.06 to 1.11 and consequently, a cost of equity ranging from 9.21% to 9.44%. All else equal, this translates into a WACC between 8.61% and 8.80%.

Then, the sensitivity analysis was performed on the Expected Cost of Debt, Rd. One of the key components to calculate Rd is the US Corporate A Effective Yield. To represent the best and worst-case scenarios, we adjusted this figure within the range of AA to BBB US Corporate Index Effective Yield. This adjustment aimed to capture the full spectrum of potential outcomes for the Expected Cost of Debt. Despite these variations, the ranges of Rd had a minimal impact on the WACC, altering it only slightly from 8.67% to 8.74%.

Using the intervals of the Expected cost of Equity and Debt we could conclude that WACC would assume values from 8.57% to 8.84%, which is a small interval. Prices would prowl around \$174.99 and \$164.12. For the higher price scenario, a Total Shareholder Return (TSR) of 12.87% would be an attractive proposition for investors, warranting a 'Buy' recommendation due to the potential for significant capital appreciation. Conversely, in the lower share price scenario of \$164.12, the expected TSR would be 6.62%. While this still represents a positive return, it is comparatively modest. In this case, we would advise a 'Hold' strategy, as the potential for growth and income, while present, is less pronounced than in the higher price scenario.

Additionally, we made a sensitivity analysis on Growth using both RONIC and the Investment Rate, IR. RONIC assumed a range from the value of WACC (meaning that UPS would not create nor destroy value) and our long-run RONIC. IR was adjusted to range between the steady state IR minus 2% and the steady state IR plus 2%. We obtained Growth ranging from 1.22% to 4.34% where prices would be between \$145.48 to \$176.84.

Lastly, using both the WACC and the growth rate, whose ranges have been previously defined, we were able to evaluate the sensitivity of the price per share. In extreme cases, we would obtain a Price Target between \$149.19 to \$170.93, which would imply a 'Sell' and an 'Buy' Strategy at (1.95%) and 10.56% Total Shareholder Return, respectively.

**Table 10:** Expected Cost of Equity (Re) Sensitivity Analysis

	1.06	1.07	1.08	1.09	1.11
$\beta_e$					
Re	9.21%	9.27%	9.33%	9.38%	9.44%
WACC	8.61%	8.66%	8.71%	8.76%	8.80%

Source: Own Estimates

**Table 11:** Expected Cost of Debt (Rd) Sensitivity Analysis

	0.15	0.19	0.23	0.26	0.30
$\beta_d$					
Rd	4.66%	4.85%	5.03%	5.22%	5.40%
WACC	8.67%	8.69%	8.71%	8.72%	8.74%

Source: Own Estimates

**Table 12:** WACC Sensitivity Analysis

		Re				
		9.21%	9.27%	9.33%	9.38%	9.44%
Rd	4.66%	8.57%	8.62%	8.67%	8.72%	8.77%
	4.85%	8.59%	8.64%	8.69%	8.74%	8.79%
	5.03%	8.61%	8.66%	8.71%	8.76%	8.80%
	5.22%	8.62%	8.67%	8.72%	8.77%	8.82%
	5.40%	8.64%	8.69%	8.74%	8.79%	8.84%

Source: Own Estimates

**Table 13:** Growth (g) Sensitivity Analysis

		RONIC				
		8.71%	12.55%	16.40%	20.25%	24.10%
IR	14.02%	1.22%	1.76%	2.30%	2.84%	3.38%
	15.02%	1.31%	1.89%	2.46%	3.04%	3.62%
	16.02%	1.39%	2.01%	2.63%	3.24%	3.86%
	17.02%	1.48%	2.14%	2.79%	3.45%	4.10%
	18.02%	1.57%	2.26%	2.96%	3.65%	4.34%

Source: Own Estimates

**Table 14:** Price Target (WACC and g) Sensitivity Analysis

		WACC				
		8.57%	8.64%	8.71%	8.77%	8.84%
Growth	1.22%	\$149.19	\$147.32	\$145.48	\$143.67	\$141.90
	2.54%	\$159.33	\$157.11	\$154.94	\$152.81	\$150.74
	3.86%	\$174.99	\$172.16	\$169.41	\$166.73	\$164.12
	4.10%	\$178.83	\$175.84	\$172.93	\$170.10	\$167.36
	4.34%	\$183.11	\$179.93	\$176.84	\$173.84	\$170.93

Source: Own Estimates

<sup>8</sup> Equity Beta ( $\beta_e$ ) 95% Confidence Interval = [ $\beta_e - 2 \times \text{StandardError}(\text{Stock Returns})$ ;  $\beta_e + 2 \times \text{StandardError}(\text{Stock Returns})$ ]

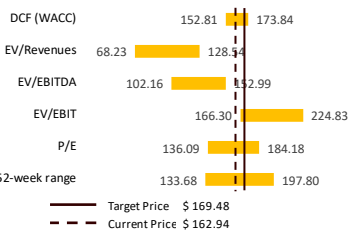
# Final Recommendation

UPS presents some solid and robust strategies to navigate the complex context of the Commerce and Logistics industry. It has been evolving and adapting to the macroeconomic context and its challenges. Nonetheless, it should pay close attention to its next steps in order to maintain its position in the very competitive landscape it operates in.

Based on our Discounted Cash Flow (DCF) analysis, we project UPS' share price to reach \$169.48 by the end of December 2024. In addition to a predicted quarterly dividend of \$1.69 per share, amounting to an annual dividend per share of \$6.76, UPS is also expected to engage in share repurchases. These repurchases, alongside dividends, contribute to an anticipated total shareholder transaction value of \$8.2 billion, equating to approximately \$9.68 per share.

Given these projections, our recommendation as of December 19<sup>th</sup>, 2023, is to maintain a holding position in UPS stock. We anticipate a total shareholder return of approximately 9.72% by December 31<sup>st</sup>, 2024, which is comprised of a 4.01% increase in share value and a 5.71% yield from shareholder transactions.

Graph 21: Football Field Chart



Source: Own Estimates

# UNITED PARCEL SERVICE, INC

COMMERCE AND LOGISTICS

STUDENTS: ANA LEONOR ALEXANDRE OLIVEIRA  
& MARTIM SALDANHA SIMÕES ASSIS LOISAS

# COMPANY REPORT

19 DECEMBER 2023

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## Assessing UPS in the Modern Logistics Landscape

*Operational efficiency, market trends and forecasting*

- Our analysis forecasts a UPS share price of \$169.48 by December 2024, underpinned by a total return of 9.72%, comprising a 4.01% price appreciation and a 5.71% yield from dividends and share repurchases. Based on these projections, we advocate a Hold position on UPS stock.
- The company has been affected by several macroeconomic events and other type of disruptions, such as the Teamsters threat to strike, Conflicts, the Covid Pandemic, among many others. Nonetheless, it has proved that it is capable of recovering with revenues growing at 35.42% since 2019 and the highest revenue per package, which in 2022 was standing at \$13.55.
- Despite a challenging 2023 with an expected 6.38% drop in total revenue to \$94 billion, UPS shows strong recovery prospects.
- Predominantly driven by the U.S. Domestic Package segment, overall revenues are forecasted to rebound, matching 2022 figures by 2025. UPS has been able to keep up with its competitors, namely FedEx and DHL. This report provides a comparative approach to the three companies financial health, efficiency, while forecasting UPS' results.

### Company description

- United Parcel Service (UPS), established in 1907, has evolved into a Fortune 500 global logistics leader, delivering 24.3 million packages daily with a fleet of 586 aircraft and 125,000 vehicles. As of 2022, UPS employed over 536,000 staff across its U.S. Domestic Package, International Package, and Supply Chain Solutions segments.

**Recommendation:** **HOLD**

Total Shareholder Return 9.72%

**Price Target FY24:** **169.48 \$**

Transactions with shareholders 5.71%

**Price (as of 28-Jan-24)** **162.94 \$**

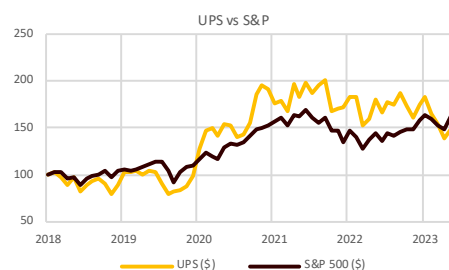
Reuters: UPS.N, Bloomberg: UPS:US

52-week range (\$) 133.68-197.80

Market Cap (\$m) 138,813

Outstanding Shares (m) 851.93

Source: Bloomberg and UPS Reports



Source: Yahoo Finance Monthly Historical Returns

(Values in \$ millions, except Op. Margin and P/E)	2022	2023E	2024F
Revenues	100,388	93,937	98,727
EBITDA	16,366	14,972	13,027
Core Result	10,173	9,105	7,450
Net Income	11,548	10,507	8,874
FCF	5,658	10,536	8,993
Operating Margin	13.05%	12.33%	9.62%
P/E	12.9x	13.2x	16.3x

Source: UPS Annual reports and Own Estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY ANA LEONOR OLIVEIRA AND MARTIM ASSIS LOISAS, MASTER IN FINANCE STUDENTS OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL.

(PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

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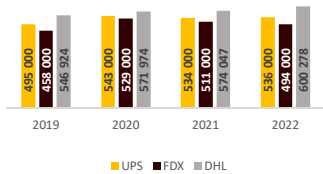
## Company Overview

United Parcel Service (UPS) is a multinational American company working in the Commerce and Logistics sector. It was founded in 1907 by Claude Ryan and Jim Casey with the name of “American Messenger Company”. It grew from a telegraph specialized company to a parcel delivery Fortune 500 company, operating globally. Today it positions itself as one of the world’s biggest shipping companies.

In 2022, UPS was fulfilling its, on average, daily 24.3 million packages delivery operations with an aircraft fleet of 586 aircrafts (291 owned and finance leased and 295 under operating leases and charters from others) and a ground fleet of approximately 125,000 vehicles across the globe, with more than half a million employees worldwide. These provide support to UPS’ three core segments: U.S. Domestic Package, International Package and Supply Chain Solutions.

When compared with its peers, FedEx (FDX) and DHL, UPS presents the second largest number of employees in 2022, amounting to 536,000 employees and a 8.30% increase since 2019. DHL is the largest of the three with 600,000 employees and is the one with the highest employee growth (9.70%). All three companies are currently operating in 220 countries and territories.

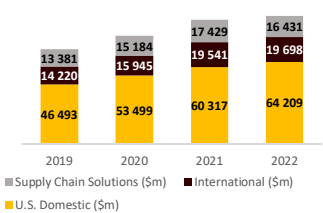
Graph 1: Number of Employees



Source: UPS, FDX and DHL Annual Reports

In terms of sales, UPS is the one with the highest number and the second largest growth, with \$100,338 million in sales in 2022, a 35.42% increase since 2019. UPS’ operating margin has been higher than its peers since 2019, reaching a 13.05% margin in 2022, which is almost the double and more than 4 percentage points of FDX’s and DHL’s margins, respectively. The evolution of leverage for all companies witnessed an increase during 2020 due to Covid-19. In the case of UPS, in 2020, the D/E was 35.84, which was due to the increase in other comprehensive loss and a decrease in retained earnings, leading to a substantial decrease in shareholders’ equity. In 2022, UPS’ ratio was 1.01, showing a balanced financing, with debt and equity contributing almost equally to the company’s assets. On the other hand, FDX had a 1.29 ratio, while DHL had a 0.88 ratio, meaning that the first one relies more on debt and the latter is using more equity. Both have advantages and disadvantages, as too much leverage can be risky, but too little leverage might lead to missed opportunities for growth.

Graph 2: UPS Revenue Growth in \$m



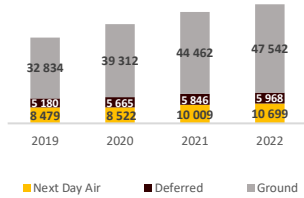
Source: UPS Annual Reports

### U.S. Domestic Package

U.S. Domestic Package covers all the small package delivery services in all businesses and residential zip codes in the U.S., in which UPS is currently a leader. Their air product includes some delivery alternatives such as same day, next day, two days and three days delivery. When it comes to ground product, UPS

delivers more than 17 million packages per day, most of them within one to three business days.

**Graph 3:** U.S. Domestic Package Revenues Breakdown in \$m

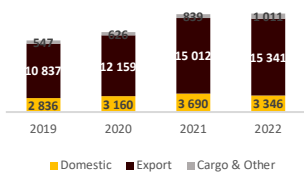


Source: UPS Annual Reports

This segment has accounted for 64% of total UPS revenues in 2022. The operating margin in 2022 is the second largest out of the three segments, amounting for 10.9%, which constitutes 190 base points increase since 2019. The General Rate Increase (GRI) is expected to increase from 4.9% to 5.9% in late December 2023 and the conclusion of some initiatives related with smart-packaging and facilities<sup>1</sup> are expected to offset the impact of the labor costs associated with the Teamsters labor contract, with some consensus on an expansion of the operating margin rather than a contraction.

### International Package

**Graph 4:** International Package Revenues Breakdown in \$m



Source: UPS Annual Reports

UPS International incorporates all day and time-definite small package operations in markets outside the U.S., namely in Europe, Asia, which includes India and the Middle East, Africa, Canada and Latin America. In those cases, in which a shipping is not express, UPS Worldwide guarantees a day-definite service option and it can be relevant to mention that UPS has more time-definite express options than its competitors. UPS Standard Delivery is also available for shipments that require crossing borders, such as within Europe, between U.S. and Mexico and U.S. and Canada. For urgent packages, there is UPS Worldwide Express Freight that allows for a premium, express delivery of packages over 150 pounds.

Outside of the U.S., Europe has become the largest region in terms of revenue and package volume. Thus, UPS is focused on meeting demand in this region, by investing in their infrastructure to improve their services and shipment times. To do so, the most recent improvements have been made in the hubs and gateways in France, Italy and Germany. This will not only make this segment more efficient in Europe for cross-border ground shipments, but it will also help with future growth prospects.

In Asia in more than 40 countries, UPS works with local delivery companies through partnerships or their owned operations.

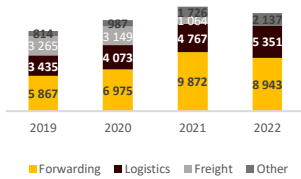
In terms of the financials of this segment, we observed a growth in revenues of 39% from 2019 to 2022, being the segment with the highest revenues growth in the mentioned period. The operating margin was the greatest among the three

<sup>1</sup> This initiative refers to the usage of Radio Frequency Identification (RFID) tags on packages and wearable devices on employees, to reduce costs in an industry with a declining demand. Garland, Max. 2023. *UPS' RFID initiative to expand to rest of US network in 2023*. February 10. Accessed September 2023. <https://www.supplychaindive.com/news/ups-rfid-tag-smart-package-initiative-expands-2023/642338/>.

UPS segments, standing at 22% in 2022 with a decrease of 180 base points from FY21.

## Supply Chain Solutions

**Graph 5: Supply Chain Solutions Revenues Breakdown in \$m**



Source: UPS Annual Reports

The demand for UPS’ Supply Chain Solutions includes all the processes that happen “behind the scenes”, such as transportation, distributions, international trade, brokerage services, among many others. Therefore, many companies prefer to outsource some or all the parts of this process. Given this, the growth opportunities and the increased competition, UPS is committed in meeting the demand by providing a wide range of services in more than 200 countries and territories. UPS Supply Chain Solutions segment is divided into four products.

Forwarding is responsible for UPS being the largest U.S. Domestic Airfreight carrier and among the top airfreight forwarders around the globe. UPS offers both guaranteed and not guaranteed services, meaning that, in the case of the first, UPS makes sure the shipment is delivered time-definitely and otherwise for the second case. By sea, UPS offers different options, from full-container load, less-than-container load to multimodal transportations between most major seaports globally. Some additional services provided include customs clearance services, consulting services, product classification, among others.

UPS’ subsidiary, Coyote, ensures that in North America and in Europe clients can take advantage of the truckload brokerage services, which also gives clients access to all UPS fleet (airfreight, customs clearance and global freight forwarding). This ultimately provides more personalized solutions for all markets and customers.

Logistics play an important role as long as fulfilling the transportation management services is concerned. The fact that UPS has facilities in over 120 countries, means that the packages sent can be time-definite, as already mentioned above. UPS facilities are tactically located near air and ground transportation hubs to speed up delivery, with constant investment on automation (for example, the RFID tags). Healthcare logistics is one of the growth areas targeted by UPS, as they have the technology, the know-how and many services to meet the industry’s needs. The strategic focus is currently on the cold-chain capabilities in the U.S. and internationally, with some acquisitions being pivotal in enriching the strategy.

Additionally, UPS offers other broader services to strengthen and deepen the relationship with the clients, such as Roadie same-day delivery, insurance solutions through UPS Capital to small and large businesses, among others.

Supply Chain Solutions is the segment generating less revenues, standing at \$16,431 million in 2022, with a 22.79% increase since 2019. When it comes to operating margin, it was also the worst performing segment, with a 7.3% margin in 2019 and a 10.8% margin in 2022.

## UPS Strategy

UPS is focusing on expanding key segments like International and diversifying into areas such as healthcare and SMBs. Their strategy hinges on three main areas: 'Customer First', which concentrates on addressing client needs and enhancing competitive edge; 'People Led', emphasizing the strengthening of corporate culture and reputation to attract and retain committed employees; and 'Innovation Driven', aimed at using technology and automation to transform operations, unlocking value and fostering business growth.<sup>2</sup> These pillars have been recognized, more specifically in 2022, where UPS has been won some awards for being one of the most innovative companies in the world, with a ROIC in 2022 of 44.14%, the biggest among its peers FDX and DHL, and a growth of 1367% in comparison with 2020. Also, it has been named a leader among logistics third-party providers around the world by Gartner.

In terms of sustainability, UPS is committed to 100% carbon neutrality by 2050 (using 2020 as the base year), with shorter-term goals, namely, to have a 50% reduction in CO2 emissions per package delivered, ensuring 100% of UPS' facilities to be powered by renewable energy and using sustainable aviation fuel for 30% of their fleet by 2035.<sup>3</sup> In 2022, it achieved 8% of their owned and leased facilities to be powered by renewable energy. UPS owns one of the world's biggest private fleets, with the goal of having 40% of their ground vehicles running on alternative fuels by 2025. As of 2022, they achieved 26.5% of their ground operations using alternative fuels, amounting to approximately 613 million liters. In 2024, UPS will receive 10 electric vertical takeoff and landing aircrafts, although it is pending regulatory approval. UPS has already driven more than 3.3 billion miles on alternative fuel since 2000.

### ▪ Acquisitions

In 2021, UPS acquired Roadie, a same-day delivery company in the U.S., to expand its delivery options.<sup>4</sup> This acquisition allowed UPS to handle shipments that are too large or unsuitable for its standard network. Roadie operates under its

<sup>2</sup> UPS. 2021. *UPS Announces Strategic Priorities, Three-Year Financial Targets And New ESG Targets*. June 9. Accessed September 2023. <https://investors.ups.com/news-events/press-releases/detail/2051/ups-announces-strategic-priorities-three-year-financial>.

<sup>3</sup> UPS. 2022. *The future of UPS sustainable urban logistics at Expo*. February 17. Accessed September 2023. <https://about.ups.com/us/en/our-stories/innovation-driven/ups-advances-in-sustainable-urban-logistics.html>.

<sup>4</sup> UPS. 2021. *UPS enters into agreement to acquire Roadie*. September 10. Accessed September 2023. <https://investors.ups.com/news-events/press-releases/detail/2056/ups-enters-into-agreement-to-acquire-roadie>.

own name, and its deliveries remain separate from the UPS network. It was acquired \$586 million and \$375 million were recognized as expected synergies for future growth, including synergies to the U.S. Domestic segment<sup>5</sup>. As July 1<sup>st</sup>, 2022, the goodwill from the acquisition had not significantly decreased and the fair value of Roadie's goodwill was still marginally higher than what the company recorded in its books.<sup>6</sup>

Healthcare logistics is one the key target areas in which UPS is expanding in the U.S. and internationally. As mentioned previously, as UPS has the technology and the know-how, the company keeps its strategic focus on the priority handling needs that the healthcare sector requires by increasing their cold-chain capabilities.

Bomi Group, a multi-national healthcare logistics provider, was acquired by UPS in November 2022.<sup>7</sup> UPS Healthcare reinforced their presence in the market by increasing the cold-chain capabilities in Europe and LATAM. Temperature-controlled facilities were added in 14 countries and around 3,000 highly qualified employees joined UPS from Bomi Group. Healthcare logistics revenues have increased by \$291 million for FY23 so far.<sup>8</sup>

Recently, on September 28<sup>th</sup>, 2023, UPS announced the acquisition of MNX Global Logistics, a global time-critical logistics provider with strong expertise on time and temperature-sensitive deliveries, which will add value to UPS and its clinical trials logistics subsidiary (*Marken*).<sup>9</sup>

More recently, UPS announced the acquisition of Happy Returns, a company specialized in no-box, no-label return solutions for e-commerce. It streamlines the return process by allowing customers to return items without packaging and shipping labels, reducing costs and improving efficiency for merchants and consumers.

The acquisition price for these last two companies will be approximately \$1.3 billion, which is not expected to surpass 10% of operating income.<sup>10</sup>

- Innovation through Technology

UPS and *Google Cloud* have extended their collaboration, which aims at increasing customers' visibility on their shipments and how UPS is giving them control over the packages.<sup>11</sup> It uses more than 1 billion data points to provide a

<sup>5</sup> UPS. 2021. *Form 10-K*. December 31. Accessed November 2023. <https://investors.ups.com/sec-filings/all-sec-filings/content/0001090727-22-000007/0001090727-22-000007.pdf#page=94&zoom=100,32,738>

<sup>6</sup> UPS. 2022. *Form 10-Q*. September 30. Accessed October 2023. <https://investors.ups.com/sec-filings/all-sec-filings/content/0001090727-22-000047/0001090727-22-000047.pdf>.

<sup>7</sup> UPS. 2022. *UPS Completes Acquisition of Bomi Group Multi-National Healthcare Logistics Provider*. November 16. <https://investors.ups.com/news-events/press-releases/detail/2084/ups-completes-acquisition-of-bomi-group-multi-national>.

<sup>8</sup> UPS. 2023. *Form 10-Q*. September 30. Accessed October 2023. <https://investors.ups.com/sec-filings/all-sec-filings/content/0001090727-23-000054/0001090727-23-000054.pdf>.

<sup>9</sup> UPS. 2023. *UPS to Acquire MNX in Strategic Move to Expand Global Healthcare and Time-Critical Capabilities*. September 28. Accessed October 2023. <https://investors.ups.com/news-events/press-releases/detail/2104/ups-to-acquire-mnx-in-strategic-move-to-expand-global>.

<sup>10</sup> UPS. 2023. *Form 10-Q*. September 30. Accessed October 2023. <https://investors.ups.com/sec-filings/all-sec-filings/content/0001090727-23-000054/0001090727-23-000054.pdf>.

<sup>11</sup>

better forecast and enhance visibility on the packages, which is particularly important, especially during holiday season since delivery volumes increase by 60%. It was and still is very relevant when it comes to the Covid-19 pandemic given that UPS has already delivered more than 1 billion vaccines and provided tracking information about them to within 10 feet of the packages anywhere in the UPS network globally. UPS is also using this enormous amount of information gathered through this collaboration to optimize delivery routes, considering events such as traffic and weather, and reduce fuel consumption. UPS Orion has also allowed for route optimization and since its initial deployment in 2012, UPS has been able to save 100 million miles and approximately 38 million liters of fuel per year. DHL launched in 2020 Greenplan, a route optimization algorithm, which allows for 20% cost savings compared to other standard route planning.

UPS Premier enables priority delivery for sensitive healthcare products, ensuring optimal temperature and humidity conditions control.<sup>12</sup>The service includes real-time tracking and a team that is 24/7 monitoring, enabling recovery actions if the contents are compromised. It provides comprehensive coverage, both within and beyond the UPS network. This represents the efforts to enhance UPS' Healthcare delivery services in a way that certain required conditions are perfectly met. UPS' peers FDX and DHL have also entered this field, nonetheless the first lacks the staff 24/7 monitoring and the latter has stricter package and weight requirements, while UPS is a robust player in tracking and customer service approach.

In 2022, UPS implemented zero-emission deliveries by *eQuads* in urban areas.<sup>13</sup> They are 4-wheeled electrical last-mile delivery vehicles produced by *Fernhay* and will allow for a reduction in the carbon footprint and traffic congestion. The vehicles can travel 60 kilometers on a single charge and can take up to 210 kilograms in the compartment. UPS has also partnered with *Arrival* back in 2020 to produce electric vans, with the first 10,000 to be delivered until 2024 and another 10,000 in standby for a further order.<sup>14</sup><sup>15</sup> FDX received 150 electric delivery vehicles from *BrightDrop* in 2022, which is part of a 2,500 vehicle-delivery multi-year agreement. Also, DHL has added 100 electric vans to its U.S. fleet and 80 new ones to the Singapore fleet. It aims at reaching 14,000 electric vehicles in Europe by 2030.

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UPS. 2022. *UPS extends use of Google Cloud data analytics technology*. March 25. <https://about.ups.com/us/en/our-stories/innovation-driven/ups-and-google-cloud.html>.

<sup>12</sup> UPS. 2022. *Game-changing UPS Healthcare service levels up*. July 13. Accessed September 2023. <https://about.ups.com/us/en/our-stories/customer-first/game-changing-healthcare-service.html>

<sup>13</sup> Tremayne-Pengelly, Alexandra. 2022. *UPS is Testing Electric Cycles in New York to Avoid Congestion and Parking Tickets*. June 15. <https://observer.com/2022/06/ups-is-testing-electric-cycles-in-new-york-to-avoid-congestion-and-parking-tickets/>

<sup>14</sup> Tomlinson, Victoria. 2020. *UPS invests in Arrival and orders 10,000 Generation 2 Electric Vehicles*. 24 de April. <https://arrival.com/news/ups-invests-in-arrival-and-orders-10000-generation-2-electric-vehicles>.

<sup>15</sup> Ramey, Jay. 2022. *Arrival Gets Ready For UPS Van Production*. 12 de August. <https://www.autoweek.com/news/green-cars/a40880333/arrival-ups-ev-van-production/>.

As mentioned before, UPS has started to implement a RFID tag system to become more smart-packaging and facilities-oriented.<sup>16</sup> This aims at eliminating daily 20 million manual scans, reducing misloads, and speeding up parcels' processing at UPS warehouses. As of the end of 1Q23, 100 U.S. facilities were involved in this initiative and an additional \$140 million is intended to spend to implement this technology in the remaining U.S. facilities. Looking at the peers, DHL makes use of the RFID tags as well, while FDX has a system, SenseAware, that allows for precision tracking. The first system targets efficiency in package handling and tracking and the latter is more focused on real-time data for critical shipments.

As of August 2023, UPS opened a new technology center in Chennai, India.<sup>17</sup> It is part of a \$15-20 million investment in the country, aiming at boosting operations in the U.S. and Europe. India was the chosen country as it is one of the world's fastest-growing economies and UPS is a big player there. It provides life-changing opportunities especially for women and people in rural areas who don't have a great representation in tech industries.

In 2023, UPS stood out in the logistics sector, with CEO Carol Tomé named among the FT's top 25 influential figures. Recognized by Fast Company for innovative solutions in healthcare and last-mile delivery, UPS also excelled in IT innovation, earning a spot in the CIO 100 Awards. Wunderman Thompson listed UPS as a top inspiring B2B company, and Gartner's Magic Quadrant acknowledged UPS as a leading third-party logistics provider globally.

Measuring innovation might be tricky, thus, we will be assessing different types of metrics. Since 2011 until 2021, UPS filled 912 patents (excluding its subsidiaries) and out of those 631 have been granted, amounting to a grant rate of 79%. In the same time span, its peer FDX filled 951 patents and got 564 granted, which corresponds to 72% of those filled. It is important to note that in the last two years of assessment both companies saw a sharp decrease in their patent filling. It can be due to the fact that patents can take up to 18 months to be published, thus some of them might not be published to the public yet. On the other hand, in the U.S., from filling to patent grant, it can take from 18 to 36 months.<sup>18</sup>

Regarding ROIC, UPS presents a ROIC of 44.14% in 2022, which is an increase of 1367% when comparing with 2020. Both FDX and DHL present lower ROIC's and lower percentual increase since 2020. FDX had a growth of 83%, amounting

<sup>16</sup> Garland, Max. 2023. *UPS' RFID initiative to expand to rest of US network in 2023*. February 10. <https://www.supplychaindive.com/news/ups-rfid-tag-smart-package-initiative-expands-2023/642338/>.

<sup>17</sup> UPS. 2023. *UPS opens new technology center in Chennai, India*. 30 de August. <https://about.ups.com/us/en/our-stories/innovation-driven/ups-opens-new-technology-center-in-chennai-india.html>.

<sup>18</sup> World Intellectual Property Organization. Accessed November 2023. <https://www.wipo.int/portal/en/index.html>.

to a ROIC of 7.88% and DHL showed better results with a ROIC of 23% and an increase of 276% since 2020.

Evaluating how the market share of each company fluctuates throughout the years can help understand how effective their strategy is. In 2019, the industry’s revenues stood at \$388.8 billion and UPS had a market share of 19.03%, while FDX and DHL had 16.46% and 16.20%, respectively. In 2022, revenues of the industry jumped to \$471 billion, with market shares of the three companies following the increasing trend. UPS’ market share increased to 21.23%, while DHL and FDX stood at 19.96% and 18.68%, respectively.

### UPS Executive Leadership Team and Board of Directors

Table 1: UPS Leadership Team

Leadership Team	Position
Carol Tomé	CEO
Norman M. Brothers, Jr.	Chief Legal and Compliance Officer
Nando Cesarone	President U.S.
Darrell Ford	Chief HR Officer and Chief DE&Inclusion Officer
Kate Gutman	President International, Healthcare and Supply Chain Solutions
Laura Lane	Chief Corporate Affairs and Sustainability Officer
Brian Newman	CFO
Bala Subramanian	Chief Digital and Technology Officer
Kevin Warren	Chief Marketing & Customer Experience Officer

Source: UPS Website

Carol Tomé is UPS’ CEO since 2020. Joining Carol in the Leadership Team are 8 executives. The board of directors is composed of 9 executives with different backgrounds and working in companies ranging from IBM to Heinz Company.<sup>19</sup>

### UPS Ownership Structure

UPS is a publicly traded company, trading in the New York Stock Exchange (NYSE) under the ticker “UPS” and has a market capitalization of \$132,508 million. As of October 19<sup>th</sup>, 2023, there were 128,669,028 class A stocks and 723,256,561 of class B stocks, making a total of 851,925,589 stocks. Class A stocks are held by current and former employees and are not publicly traded. Institutional investors account for 72.66% of UPS ownership. The Vanguard Group owns 9.30% of UPS, while Blackrock owns 8.00%. The current CEO, Carol B. Tomé, owns 0.0379% of UPS.<sup>2021</sup>

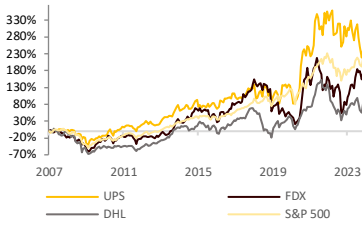
In January 2023, the board of directors approved a \$5 billion share repurchase program. For FY23, UPS paid \$6.48 per share in dividends and share repurchases of around \$3 billion. As of September 30<sup>th</sup>, UPS had repurchased 4.4 million and 12.3 million shares for \$750 million and \$2.2 billion, respectively. Thus, on June 30<sup>th</sup>, 2023, there were still \$2.8 million accessible under the repurchase program.

### UPS Stock Performance

By observing the graph, one can conclude that there were some events from 2007 to 2023 that disturbed the growth of stock returns. The first one occurred during the subprime crisis, in which there was the slowdown of the economy, leading to a

<sup>19</sup> UPS. *Executive Leadership Team*. <https://about.ups.com/us/en/our-company/leadership.html>.  
<sup>20</sup> Rego, Matt. 2023. *Top United Parcel Service, Inc. (UPS) Shareholders*. July 02. <https://www.investopedia.com/articles/insights/060816/top-4-ups-shareholders-ups.asp>.  
<sup>21</sup> Yahoo Finance. n.d. *United Parcel Service, Inc. (UPS)*. <https://finance.yahoo.com/quote/UPS/holders?p=UPS>.

Graph 6: Stock Performance



Source: Yahoo Finance

sharp decrease in stock returns from the market and the 3 companies evaluated (UPS, FDX and DHL). Again in 2011, there was a decline that was not as sharp, but still got investors worried. This was due to the European Debt Crisis and the U.S. Credit Downgrade (from AAA to AA+) by the credit rating agency Standard & Poor's.

Around 2015/2016, China's economy slowed down and, given that it is a major player in the market, shipping companies were affected to some extent by this event. Also, in late 2015, freight rates were seeing some historical low points.<sup>22</sup>

In late 2018, the U.S.-China trade war led to sharp decreases in stock returns. Additionally, the U.S. Federal Reserve kept on increasing interest rates in an attempt to normalize monetary policy and the negotiations around Brexit that carried some uncertainty.

In 2020, the Covid-19 pandemic came and brought down the whole market. Nonetheless, lockdowns meant people couldn't go out and package delivery companies found an opportunity. Not only did E-Commerce increase, but also did the parcel volumes. Healthcare became an important business for shipping companies. UPS and its competitors had to adjust to change and innovate, with UPS outperforming the other two, from the beginning of 2021 until now.

In February 2022, stocks also experienced a decrease, due to the beginning of the Ukraine War. Lastly in September 2022, there was a sharp decline due to the worsening of the inflation rate and the increase in the fear of a global recession, with the World Bank predicting 2022 to be one of the worst years since 2000 in terms of poverty, being only after the pandemic year 2020.<sup>23</sup>

## Macroeconomic Context and Main Drivers

### Covid-19 Pandemic

The Covid-19 pandemic brought a decline in the global Real GDP of 2.74% and in the U.S. Economy of 2.80%, in 2020, according to the IMF. Nonetheless, both recovered in 2021 in 13.45% and 5.90%, respectively.<sup>24,25</sup>

From 2020 to 2021, UPS experience a 15% increase in revenues and almost 60% increase in the total core result, which was boosted by the increase in e-commerce and healthcare-related deliveries. The International Package was the segment that

<sup>22</sup> Reinikainen, Kari. 2015. *Freight rates hit lowest point of year in October*. December 8. [https://www.joc.com/article/freight-rates-hit-lowest-point-year-october\\_20151208.html](https://www.joc.com/article/freight-rates-hit-lowest-point-year-october_20151208.html).

<sup>23</sup> Ellerbeck, Stefan. 2022. *The world is at a point of significant economic danger, say experts*. September 28. <https://www.weforum.org/agenda/2022/09/chief-economists-outlook-september-2022/>.

<sup>24</sup> IMF. 2023. "Global gross domestic product (GDP) at current prices from 1985 to 2028 (in billion U.S. dollars)." Chart. October 5. Statista. Accessed December 19, 2023. <https://www.statista.com/statistics/268750/global-gross-domestic-product-gdp/>

<sup>25</sup> World Bank. n.d. *United States GDP*. <https://www.worldometers.info/gdp/us-gdp/>.

experienced the major increase with a 22.55% increase, while the U.S. Domestic Package and the Supply Chain Solutions increased 12.74% and 14.79%, respectively. UPS improved its Healthcare segment by strengthening its capabilities through acquisitions, or the volume of packages delivered. During the pandemic, UPS delivered more than 1 billion vaccine doses, which not only had impact in profits since 2020 but will also benefit UPS in the long-term as a key player in the healthcare logistics.

## Trade War

The trade war began in 2018 when President Trump began to impose tariffs and various restrictions on China, while making some allegations of unfair trade practices, including theft of intellectual property, and concerns of potential espionage or cyber-security threats with the rise of Chinese tech companies.<sup>26</sup>

Therefore, it is expected that trade between these two countries decreases by \$63 billion until 2031. On the other hand, predictions say that trade between China and Europe will keep growing, even though it will happen at a slower rate than the global average. There are some countries benefiting from these disruptions, namely ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam), Mexico and India. They are not only close or sharing borders with countries conflicting, but companies are also diversifying their supply chain. Trade between Europe and the U.S. will be increasing by \$338 billion in the next 9 years, outweighing the decrease attributed to the trade war.<sup>27</sup>

## Ukraine War

Given the Ukraine war, the logistics and shipping industry faced disruptions and UPS and its two peers have suspended all operations in Ukraine, Russia and Belarus.<sup>28</sup> There has been a search for alternative trade routes, which puts a strain on transport infrastructure and entails a raise in the shipping costs, globally. According to the United Nations Conference on Trade and Development. (2022), the shipping costs were increasing before the Covid Pandemic, in which it reached \$25,000/day. Nonetheless, the war boosted this trend, reaching \$41,000/day, based on the ClarkSea Index, which measures the weighted earnings for primary

<sup>26</sup> Bown, Chad P., and Yilin Wang. 2023. *Five years into the trade war, China continues its slow decoupling from US exports*. March 16. <https://www.piie.com/blogs/realtime-economics/five-years-trade-war-china-continues-its-slow-decoupling-us-exports#:~:text=For%20varied%20reasons%2C%20China%20did,selling%20into%20the%20Chinese%20market>.

<sup>27</sup> BCG. 2023. *Protectionism, Pandemic, War, and the Future of Trade*. January 17. <https://www.bcg.com/publications/2023/protectionism-pandemic-war-and-future-of-trade>.

<sup>28</sup> UPS. *Service Alerts*. <https://www.ups.com/ua/en/service-alerts.page>.

ship categories, where the weights are determined by the number of ships in each fleet segment.<sup>2930</sup>

Russia, a key supplier of fuel and fertilizer, faces supply disruptions, impacting global food security. It's also a major oil and gas exporter, and trade restrictions have increased costs. Looking again at the above-mentioned report, one can conclude that, by May 2022, the cost, on average, of very low sulphur fuel oil, which is already generally cheaper than diesel, had increased by 64%. As western countries are making efforts to free themselves from the dependence on Russian oil and some sanctions have been implemented, trade between European countries and Russia is predicted to decline by \$262 million until 2031.<sup>31</sup>

On the other hand, the most recent predictions say that maritime trade is expected to bounce back in 2024 and grow above 2% until 2028. It is predicted that container-based trade will grow 1.2% in 2023, although it still sits below pre-pandemic levels. Additionally, global trade is expected to grow 2.3% per year, a to the forecasted 2.5% for global economic growth.

## The Teamsters

International Brotherhood of Teamsters, shortly known as Teamsters, are America's largest union. UPS is the single-largest employer of Teamsters in the U.S., working together for already over 100 years. Of the 443,000 UPS workers in the U.S., around 330,000 belong to the Teamsters, which is more than 70% of UPS U.S. workers. Nonetheless, as the previous labor agreement was reaching its expiration date on July 31, 2023, an agreement had to be settled before the expiration date. The new contract got effective from August 1st, 2023, to July 31st, 2028. By the end of it, the average top rate for full-time drivers will be \$49.00/hour, earning around \$170,000 in pay and benefits yearly. Part-time employees already part of UPS will make a minimum of \$25.75/hour by the end of the contract, receiving full healthcare and pension benefits. The costs with U.S. Teamsters will increase at a 3.3% compounded annual growth rate (CAGR), with 46% of annual increase in wages and benefits will occur in the first year.<sup>3233</sup>

A comparison between non-Teamsters workers' salaries is relevant for the analysis. On average, in the U.S., UPS delivery drivers earn \$95,000 in wages and the local semi-truck drivers earn \$112,000, while part-time employees are making, on average, \$20/hour. Additionally, full- and part-time employees are provided with

<sup>29</sup> 2022. "Maritime Trade Disrupted: The War in Ukraine and its Effects on Maritime Trade Logistics." *UNCTAD*. June 28. Accessed October 2023. [https://unctad.org/system/files/official-document/oginf2022d2\\_en.pdf](https://unctad.org/system/files/official-document/oginf2022d2_en.pdf).

<sup>30</sup> Allianz. 2022. *Impact of Ukraine war on global shipping*. May. <https://commercial.allianz.com/news-and-insights/expert-risk-articles/shipping-safety-22-ukraine-war.html>.

<sup>31</sup> BCG. 2023. *Protectionism, Pandemic, War, and the Future of Trade*. January 17. <https://www.bcg.com/publications/2023/protectionism-pandemic-war-and-future-of-trade>.

<sup>32</sup> UPS. *UPS and the Teamsters*. <https://about.ups.com/us/en/newsroom/negotiations/negotiations-basics/ups-and-the-teamsters.html>.

<sup>33</sup> Guido, PJ, and Brian Newman. 2023. "UPS Labor Contract Updates." *UPS*. September. [https://d1io3yog0oux5.cloudfront.net/\\_cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS\\_2023\\_Labor\\_Contract\\_Presentation.mp4](https://d1io3yog0oux5.cloudfront.net/_cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS_2023_Labor_Contract_Presentation.mp4).

health, welfare, and pension contributions.<sup>34</sup> The negotiations have put pressure on the other delivery companies to increase wages, being it the case of FDX. Its drivers, in the U.S., are making, on average, \$20-\$25/hour, which is similar to what part-time drivers are earning in UPS. The workers demand a raise to at least \$30/hour for their salaries to be competitive.

Ultimately, this agreement proved to be mainly beneficial for UPS, as they avoided having more than 70% of their U.S. workforce striking. Nonetheless, it increases compensation and benefits substantially and contributes to the wage-increase spiral, which can lead to sustained inflation.

### Slowing Demand

**Graph 7:** Worldwide E-Commerce Annual Retail Growth from 2017 to 2027 in %



Source: eMarketer via Statista

Ever since the pandemic, people have been spending more of their budget on travel and services and cutting their spending on clothing, consumer goods, electronic, among others. While in 2020 e-commerce sales grew 25.7%, it only grew 6.5% in 2022, proving the slowing down of demand for UPS and its peers.<sup>35</sup> According to a BCG study, e-commerce sales globally are expected to reach 9% CAGR by 2027, which is still not at the pre-pandemic level. It is anticipated to make up 41% of global retail sales by 2027, comparing with the 18% registered in 2017.<sup>36</sup>

During FY23, Maersk alerted that the demand for container shipping is expected to steeply decrease in the mentioned year. While older forecasts estimated a decrease of 2.5%, it is now expected to decrease by as much as 4%.<sup>37</sup>

UPS and FDX would increase their prices simultaneously, but the most recent trend has forced the two companies to offer discounts in this holiday season in order to retain their customers, as demand shrinks. UPS is particularly focused on regaining the 1 million parcels a day lost to its competitors during the Teamsters contract negotiations. In addition to this, there has been an increase in competition for these market players. DHL has become a great competition worldwide and OnTrac and Amazon Shipping have been increasing competition even further.

### Oil Prices

Given the current conflict in the middle east, oil supply could be further disrupted and lead to lower economic growth and inflation. On October 7<sup>th</sup>, when the recent conflict between Hamas and Israel began, 2023, the price per barrel was \$94.<sup>38</sup> As

<sup>34</sup> UPS. *Fast facts*. <https://about.ups.com/us/en/newsroom/negotiations/media-fast-facts.html>.  
<sup>35</sup> eMarketer (@eMarketer). 2023. "Annual retail e-commerce sales growth worldwide from 2017 to 2027." Chart. August 11. Statista. <https://www.statista.com/statistics/288487/forecast-of-global-b2c-e-commerce-growth/>  
<sup>36</sup> BCG. 2023. *E-Commerce Poised to Capture 41% of Global Retail Sales by 2027—Up from Just 18% in 2017*. October 31. <https://www.bcg.com/press/31october2023-ecommerce-global-retail-sales>.  
<sup>37</sup> Gronholt-pedersen, Jacob. 2023. *Maersk warns of slower demand for container shipping*. August 4. <https://www.reuters.com/business/maersk-posts-q2-profits-above-forecast-adjusts-fy-guidance-upwards-2023-08-04/>.  
<sup>38</sup> Gregg, Aaron. 2023. *Oil prices surge above \$90 a barrel after Israel orders mass evacuations*. October 13. <https://www.washingtonpost.com/business/2023/10/12/russian-oil-sanctions/>.

of December 18<sup>th</sup>, 2023, the price stood at \$72 per barrel, the highest price in two weeks, as more oil companies and tankers are avoiding the Red Sea following the increase in frequency of attacks in that region.<sup>3940</sup>

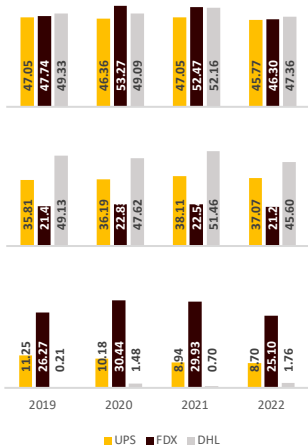
The turbulence in the Middle East makes the markets restive, as the region is responsible for one third of world maritime oil trade. Even though until now nothing very alarming has happened, the oil market still reacts to people’s emotions rather than facts and logic, with the media creating extra volatility. If crude price increases considerably, it can affect UPS’ operations profitability, as costs would increase.

It is also expected that the demand for oil worldwide slows down after 2026, as there will be an increase in the number of electric vehicles (EV) alongside the increase in biofuels usage. Most recent estimations, make it likely for the price of oil to decrease in the long run.<sup>41</sup> Nonetheless, due to the supply restrictions and the recent conflicts, it is expected that oil prices will average \$120 per barrel in 2024 and \$100 per barrel in 2025, according to FitchRating.<sup>42</sup>

## Market Overview and Main Drivers

On this final chapter, the goal is to evaluate how UPS is doing regarding different metrics and compare it with its competitors, namely FDX and DHL.

Graphs 8, 9 & 10: Average Collection Period, Average Payable Period and Cash Conversion Cycle, respectively



Source: Own Estimates

## Cash Flow Management

When it comes to the cash flow management, the average collection period (ACP) and the average payable period (APP) were calculated for UPS and FDX, since none of them has inventory and couldn’t calculate average holding period (AHP). In the case of DHL, one could identify inventory in their financial statements and thus, the three metrics were calculated. The cash conversion cycle (CCC) can be calculated by summing ACP and AHP and subtract it by APP. UPS had the lowest ACP, while DHL had the highest APP. In 2022, UPS’ CCC was 8.70 days, FDX’s was 25.10 days and DHL’s were 1.76. Clearly DHL is doing a great job in managing their cash flows and minimizing the risk for the company, while reducing pressure on liquidity. This allows for cash flows to be generated faster to help the company

<sup>39</sup> Graham, Rachel, Brendan Murray, and Alex Longley. 2023. *Houthi Attacks Start Shutting Down Red Sea Merchant Shipping*. December 18. [https://www.bloomberg.com/news/articles/2023-12-18/houthi-attacks-start-shutting-down-red-sea-merchant-shipping?cmpid=BBD121823\\_CUS&utm\\_medium=email&utm\\_source=newsletter&utm\\_term=231218&utm\\_campaign=closeamericas](https://www.bloomberg.com/news/articles/2023-12-18/houthi-attacks-start-shutting-down-red-sea-merchant-shipping?cmpid=BBD121823_CUS&utm_medium=email&utm_source=newsletter&utm_term=231218&utm_campaign=closeamericas).

<sup>40</sup> Fanzeres, Julia. 2023. *Oil Gains as BP Joins Shippers Avoiding Red Sea’s Rising Attacks*. December 18. [https://www.bloomberg.com/news/articles/2023-12-17/latest-oil-market-news-and-analysis-for-dec-18?cmpid=BBD121823\\_CUS&utm\\_medium=email&utm\\_source=newsletter&utm\\_term=231218&utm\\_campaign=closeamericas](https://www.bloomberg.com/news/articles/2023-12-17/latest-oil-market-news-and-analysis-for-dec-18?cmpid=BBD121823_CUS&utm_medium=email&utm_source=newsletter&utm_term=231218&utm_campaign=closeamericas).

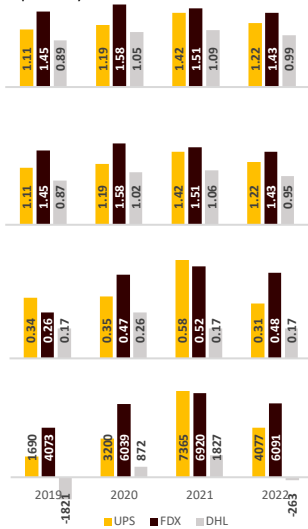
<sup>41</sup> International Energy Agency. 2023. *Growth in global oil demand is set to slow significantly by 2028*. June 14. <https://www.iea.org/news/growth-in-global-oil-demand-is-set-to-slow-significantly-by-2028>.

<sup>42</sup> FitchRatings. 2023. *Oil Price Shock Would Hit 2024 Growth and Boost Inflation*. November 10. <https://www.fitchratings.com/research/sovereigns/oil-price-shock-would-hit-2024-growth-boost-inflation-10-11-2023>.

with its needs. Nonetheless, UPS is also doing great, with some special room for improvement in the APP metric.

### Liquidity

Graphs 11, 12, 13 & 14: Current Ratio, Quick Ratio, Cash Ratio and Net Working Capital, respectively



Source: Own Estimates

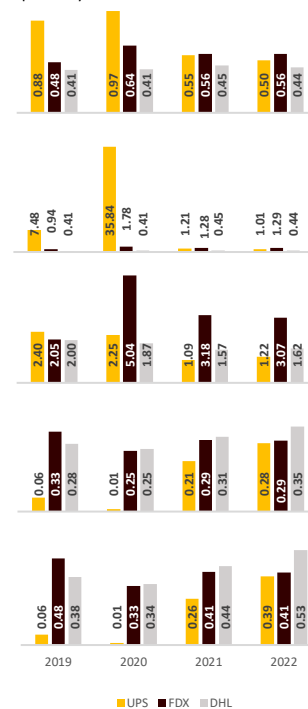
Liquidity was evaluated, and four metrics were used. The current ration evaluated the company’s capacity to meet its short-term obligations using its short-term assets. FDX performed slightly better than UPS (1.43 vs 1.22) in 2022, while DHL presented a current ratio of 0.99 in 2022 that grew from a 0.89 in 2019, showing some improvements. The industry’s current ratio was 1.31.

The quick ratio tells how well the firm is able to meet its short-term obligations assuming the firm is unable to sell any inventories. As mentioned previously both UPS and FDX don’t present any inventory in their financial statements, thus, the result of this metric will be the same as the result from the current ratio. DHL has inventories and has performed poorer than in the current ratio.

The cash ratio allows to understand the ability of the company to meet its short-term obligations using only the cash it has available. Figures below 1 mean that the company has more short-term debt than cash and a ratio below 0.5 is indeed quite risky, which is true to all three companies.

Net Working Capital (NWC) are the funds a company has to cover its daily business operations. It is the money that ends up being used in the CCC. UPS and FDX were generating cash from their working capital, whereas DHL is using capital from its working capital.

Graphs 15, 16, 17, 18 & 19: Gearing Ratio, Debt-to-Equity Ratio, Debt-to-EBITDA Ratio, Solvency Ratio and Financial Autonomy Ratio, respectively



Source: Own Estimates

### Capital Structure

The gearing ratio compares shareholders’ equity with the funds the company borrows, and all three companies have quite similar figures, circling around 0.5.

Debt-to-Equity ratio also analyses a company’s financial leverage. DHL is currently the company with the lowest figure in this metric (0.88), followed by UPS (1.01) and then FDX (1.29), nonetheless, all three are aligned with each other. In 2020, UPS presented an exceptionally high D/E ratio, but was able to recover right after.

Debt-to-EBITDA ratio provides a view on the levels of debt compared with the level of activity the firm has. UPS and DHL present similar results on this ratio (1.22 and 1.62, respectively), whereas FDX presented a result of 3.07. This means that the first have a higher probability of paying its debts and FDX has potentially a higher risk of default, in which it may be in financial distress in the future.

The solvency ratio examines the company’s ability to meet its obligations in the long-term using the capital invested or the generated by the company. All three companies might face some trouble in the future according to this ratio, given that as the solvency ratio decreases, the probability of default on a company’s debt obligations increases. The company’s results fell below 1 and only DHL was able to perform above the 0.5 mark.

The financial autonomy ratio, as it might be derived from the name, indicates the firm’s independence towards its creditors. Ideally it should be above 25% and all three companies managed to achieve this goal, with ratios prowling 30%.

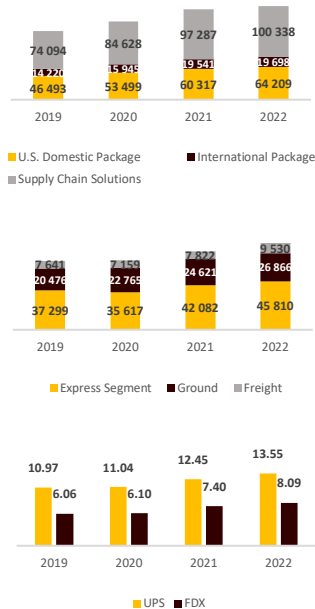
### Sales’ and Costs’ Value Drivers

In 2022, Sales grew by 3.14% from the previous year to \$100 338 million, giving UPS the first place in terms of revenue generation. DHL followed with \$94 436 million in 2022, while FDX’s revenues stood at \$93 512 million. Revenues were determined by multiplying the total average daily package volume per total average revenue per piece and per the operating days.

Taking a deeper look into the revenues, one relevant metric is revenue per package volume given that sales are dependent on demand which in turn is dependent on trade and logistics of goods. In 2022 UPS presented a revenue per package volume of \$13.55, which corresponds to a growth of 23.51% since 2019. It also witnessed a decrease in terms of YoY growth from 2021 to 2022 of around 8.79%, while the previous growth was of 12.82%. Looking at FDX, one can conclude that its revenue per package volume is lower, standing at \$9.15 in 2022, with a revenue growth of 41.92% since 2019. For the case of DHL, revenues summed up to €94 436 million, a growth of 49.39% since 2019. The biggest share of revenues was attributed to the Global Forwarding, Freight segment, with a percentage of 30.48%, amounting to €28 770 million. The Express segment followed with €26 986 million, which corresponds to a share of 28.59%.

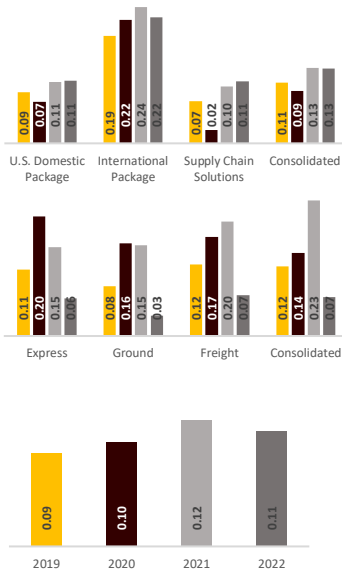
Looking at the costs side, in 2022, UPS’ total costs were 86.87% of total sales. The highest cost per employee at UPS in 2022 was unsurprisingly Compensation and Benefits standing at \$0.089 thousand, as it was also the highest share of total costs and was 47.62% of net sales. It was followed by Purchased Transportation with a cost of \$0.033 thousand per employee and corresponds to 17.59% of net sales. On average, total costs per employee were \$0.163 thousand in 2022. UPS shows a good operating margin of 13%, with the international segment being the one with the highest operating margin, 22%. In the case of FDX, in 2022, total costs were 93.32% of total sales and the higher costs were Salaries and Employee Benefits, with a cost per employee of \$0.065 thousand and was also followed by

Graphs 20, 21 & 22: UPS Revenues per Segment (\$m), FDX Revenues per Segment (\$m) and UPS and FDX revenue per Package Volume, respectively



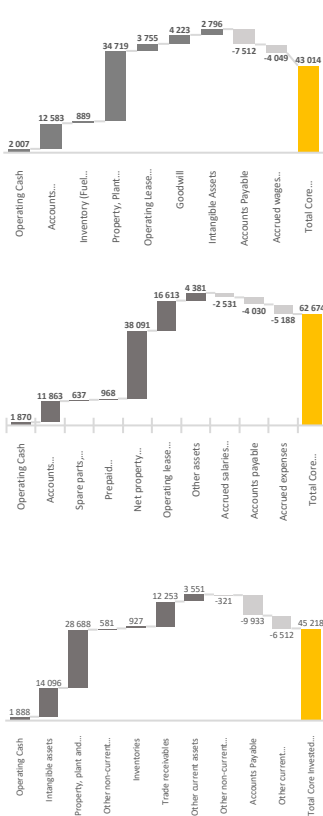
Source: Own Estimates

Graphs 23, 24 & 25: UPS Operating Margin, FDX Operating Margin and DHL Consolidated Operating Margin, respectively, in %



Source: Own Estimates

Graphs 26, 27 & 28: UPS Invested Capital Drivers, FDX Invested Capital Drivers and DHL Invested Capital Drivers, respectively, in \$m



Source: Own Estimates

Purchased Transportation, which costed, in 2022, \$0.049 thousand. On average, total costs per employee were \$0.177 thousand and FDX's operating margin is a bit more concerning, since it is only 6.7%, with Freight being the segment with the highest operating margin, 23.1%, but the one with the lowest revenues in 2022, \$9,532 millions. For DHL, in 2022, total costs were 94.70% of total sales and Material Expenses were the highest costs per employee, sitting at \$0.089 thousand per employee, followed by Staff Costs with \$0.043 thousand per employee. On average, total costs per employee were \$0.149 thousand. DHL presented an operating margin of 11.4%.

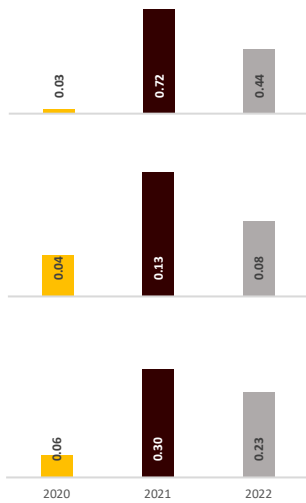
### Invested Capital

The Core Invested Capital (IC) is the core assets (needed to run its core business), net of core liabilities. All three companies presented an increase in their core IC from 2019 to 2022. UPS grew by 19.43%, when compared with the increase of 62.60% and 32.97% of FDX and DHL, respectively. This can be justified by looking at the core assets and core liabilities. In the above-mentioned period, UPS witnessed a greater increase on the core liabilities than on the core assets, with Accrued Wages and Withholdings increasing 58,66%, followed by accounts payable that increased 35.23%. PP&E, which is the core asset with the greatest percentage in the core invested capital (59.93%), only grew by 13,90%, while the second greatest account, Accounts Receivable (with a share of 18.78%), saw a 31,73% increase.

When it comes to the peers, FDX's total core assets grew by 59.73% from 2019 to 2022, while its total core liabilities grew by 45,97%. PP&E, which is also FDX's greatest share of core IC with a share of 51.18%, and its Accounts Receivable, with a share of 15.94%, increased by 25.18% and 30.13%, respectively, while Accrued Expenses, FDX's greatest expense with a share of 44.16%, increased 58.27%, followed by Accounts Payable, increasing by 33%. DHL experienced a growth in both core assets and liabilities from 2019 to 2022 of 33.29% and of 34.15%, respectively. PP&E is also DHL's greatest share of core IC and increased by 34.67%, followed by Intangible Assets and Trade Receivables that increased 17.59% and 43.13%, respectively. In what concerns total core liabilities, its main share was Accounts Payable, followed by Other Current Liabilities, with increases of 37.48% and 32.55%, respectively.

## ROIC and ROE

Graphs 29, 30 & 31: UPS ROIC, FDX ROIC and DHL ROIC, respectively in %



Source: Own Estimates

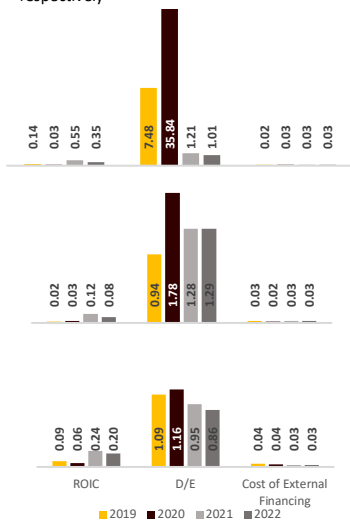
Return on Invested Capital, ROIC, is a metric to evaluate the investment made by the company or in other terms is a metric of value creation. Some people agree that ROIC should be calculated with lag, given that investments might take some time to produce any effect. Therefore, we will be using the ROIC with a lag of one fiscal year.

The total ROIC can be decomposed to highlight the positive contribution of the high asset turnover for all three companies. In 2022, UPS yielded the highest ROIC for the core business, 32.31%. UPS' core ROIC has been increasing in all analyzed years, standing at 17.24% and 27.56% in 2020 and 2021, respectively. FDX and DHL core ROIC values experienced an increased from 2020 to 2021 and then saw a decrease in 2022. In case of FDX, it experienced a core ROIC of 15.43% in 2020, increasing to 16.82% and then decreasing to 16.33%. Similarly, DHL started in 2020 with 16.04%, reaching 23.71% in 2021 and falling to 21.60% in 2022.

Return on Equity, ROE, indicates the return shareholders get from each unit of investment made in the company and to better interpret whether it is good or bad, one should analyze where the growth is coming from. If ROE is growing because ROIC is increasing, then it should be as high as possible. Nonetheless, in case it is growing because leverage is increasing, it becomes debatable and needs to be further analyzed.

UPS was creating the most value for shareholders as a result of its financial decisions. Back in 2019, it presented a ROE of 105.20% due to a high ROIC and a very high D/E, which indicates high leverage, increasing risk, but also amplifying returns. In 2020, there was a great decrease to 34.55%, mainly due to a big increase in the D/E ratio, which was justifiable by a decrease in equity. This increase in leverage is quite debatable given that, when coupled with a low ROIC, it does not contribute to an increase in ROE. In 2021, ROE spikes to 117.34%, as ROIC shows a substantial recovery, while D/E decreased drastically, following an increase in equity. Lastly, ROE decreased to 67.10% in 2022 since ROIC slightly decreased while D/E remained relatively stable.

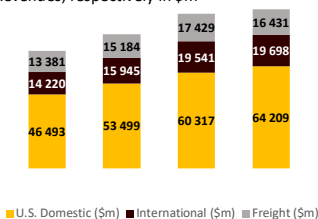
Graphs 32, 33 & 34: UPS ROE Breakdown, FDX ROE Breakdown and DHL ROE Breakdown, respectively



Source: Own Estimates

## Growth Rate of Sales

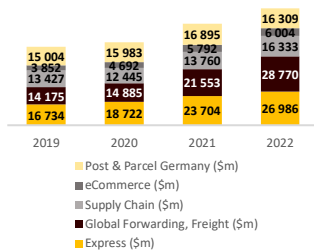
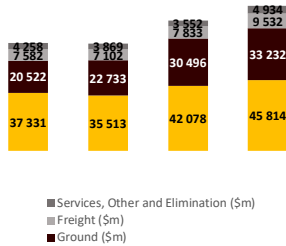
Graphs 35, 36 & 37: UPS Total Core Revenues, FDX Total Core Revenues and DHL Total Core Revenues, respectively in \$m



UPS has three segments from which U.S. Domestic Packages was the one that contributes the most to total revenues, more precisely 64% of total revenues in 2022. Within this segment, the product that accounts for the higher share of revenues is Ground, with 74.04% of this segment's revenues. International Packages is another UPS segment and accounts for 19.63% of total revenues.

Export is the product with the highest share in this segment, being responsible for 77.88% of this segment's revenues. Finally, there's supply chain solutions that accounts for 16.38% of total revenues and the product that accounts for the higher revenue is Forwarding, with 54.43% of this segment's revenues.

In 2022, from FDX four segments, the Express was the one with the highest share of revenues, of 49%, with Package product being the one with the highest share of revenues (77.91%). Within this product, U.S. Package was the one yielding the highest revenue (45.91%), followed by International Package (41.94%). The ground segment was the second one, when it comes to most revenues generated, with a share of 35.54%. Freight and Services, Other and Elimination came next with 10.19% and 5.28% of total revenues.



Source: Own Estimates

In the case of DHL in 2022, Global Forwarding, Freight was the segment with most revenues (30.47% of total revenues), closely followed by Express Segment (29% of total revenues). Supply Chain and Post & Parcel Germany had similar revenues, accounting for 17.30% and 17.27% of total revenues, respectively. eCommerce was the segment generating the least revenues, with a share of 6.36% of total revenues.

### Value Creation Analysis

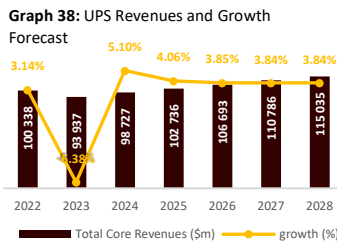
To understand if a company's investments are creating value, it is important to compare an indicator such as the ROIC to an opportunity cost like the cost of capital. The cost of capital is the required rate of return that an investor claims for an investment with the same degree of risk. Therefore, a company is creating value if  $ROIC > \text{Cost of Capital}$ . We'll be using a cost of capital of 8.71 % for UPS, which is the WACC we calculated in the Forecasting Assumptions. In the case of FDX and DHL, we'll use two different WACC values, of 8.6% and 9.4%, respectively, which were taken from the Bloomberg Terminal.

According to our scenario, only UPS and DHL are creating value from its investments, as they are the companies fulfilling the above-mentioned condition. In 2022, UPS ROIC was 44.14%, which is clearly greater than 8.71%. DHL ROIC was 23.42%, meeting the requirements. FDX ROIC was 7.88% and since it is lower than 8.6%, it is not creating value from its investments.

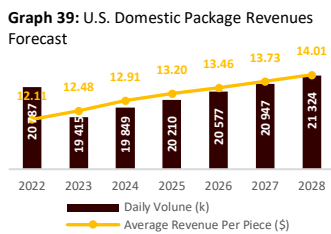
In terms of RONIC, that is the return on the newly invested capital, only UPS can generate good incremental returns for every unit of newly deployed capital, as its RONIC is 10.00%, higher than 8.71%. FDX and DHL fall short on this, with RONIC of -2.68% and 5.97%, respectively being lower than the respective WACC values.

# Valuation

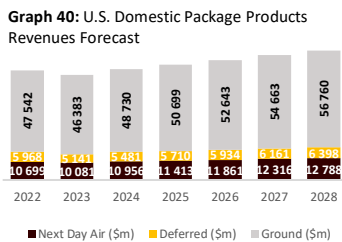
## Core Revenues Forecast



Source: UPS Annual Report and Own Estimates



Source: UPS Annual Report and Own Estimates



Source: UPS Annual Report and Own Estimates

In 2023, UPS faced distinct challenges in its key business segments. While the U.S. Domestic Package accounts for 66% of its total revenues, the company as a whole is bracing for a potential overall revenue decline of -6.38% to \$94 billion. However, total revenues are expected to recover and reach their 2022 value by 2025, indicating a period of adjustment and eventual rebound for the company.

- U.S. Domestic Package

The U.S. Domestic Package segment, a crucial division of UPS, is driven by three key products: Next Day Air, Deferred, and Ground. Each product's revenue is calculated by multiplying the Average Daily Package Volume, Average Revenue Per Piece, and Operating Days in the Period. In 2023, this segment faced a notable challenge.

The segment is expected to experience a 6.6% decline in average daily package volume to 19,415 thousand, largely attributable to the Teamsters strike's repercussions. This strike has not only disrupted deliveries but has likely eroded the confidence of consumers and businesses alike. Furthermore, there's a risk of losing sales to competitors like FedEx amidst these disruptions.

Deferred services might witness the largest decrease in volume, as the surge in e-commerce pushes consumers and businesses towards faster delivery options. Conversely, the Ground product is projected to see the least decline, appealing as a cost-effective solution during turbulent times.

Both Next Day Air and Deferred are air-based delivery products in UPS' portfolio. From 2024 until 2026, the growth of these products is anticipated to reflect the changes in the total pounds of UPS' Aircraft fleet. The capacity and efficiency of the Aircraft fleet are crucial as they directly influence the volume handling capabilities and service efficiency of Next Day Air and Deferred. Therefore, monitoring the growth of the fleet provides a relevant indicator for forecasting the future performance of these air-based delivery products.

A rebound is anticipated by 2025, bringing volume projections closer to the pre-strike levels of 2022, assuming UPS effectively recovers from the strike's impacts. The tentative agreement with the Teamsters union, while averting an immediate strike, is poised to significantly increase labor costs. Higher wages could trigger a wage-price spiral, potentially contributing to sustained high inflation.

Over the long term, the Average Daily Package Volume is expected to grow in tandem with Real GDP Growth. Simultaneously, Average Revenue Per Piece should align closely with inflation rates.

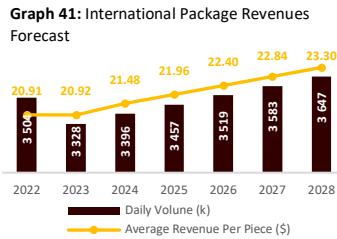
▪ International Package

The International Package segment, an integral part of UPS' global operations, encompasses three distinct products: Domestic, Export, and Cargo & Other. Similarly to the U.S. Domestic Package segment, revenue generation for the Domestic and Export products is calculated by the product of Average Daily Package Volume, Average Revenue Per Piece, and Operating Days in the Period. Recently, this segment experienced a 5.01% decrease in Average Daily Package Volume to 3,328 thousand, leading to a total revenue decrease of 5.52% to \$18,612 million.

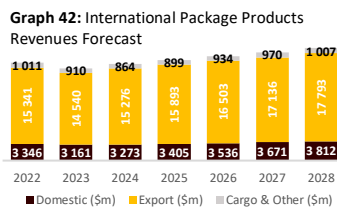
Unlike its U.S. counterpart, the International Package segment has been less impacted by the Teamsters strike. However, it faces significant challenges, including geopolitical unrest such as the trade war between the U.S. and China and the conflict in Ukraine. These events have prompted UPS to suspend services in affected regions, impacting operations and customer services.

A notable trend in this segment is the anticipated decrease in e-commerce activity. As global e-commerce begins to stabilize after a period of rapid growth, we expect a shift in consumer behavior, leading to reduced demand for related delivery services. This trend could result in a decrease in the Average Revenue Per Piece within the international segment, reflecting changes in consumer purchasing patterns and a potential move away from the reliance on e-commerce.

In light of these changes, we predict that the Average Daily Package Volume's growth within this segment will align with Real GDP Growth, while the Average Revenue Per Piece is expected to correlate with inflation trends. Revenue from the 'Cargo & Other' product is projected to grow in line with Nominal GDP Growth.



Source: UPS Annual Report and Own Estimates

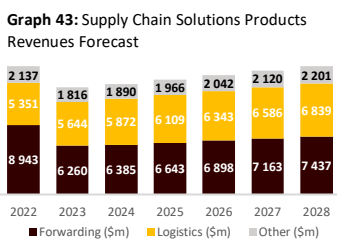


Source: UPS Annual Report and Own Estimates

▪ Supply Chain Solutions

Supply Chain Solutions covers four areas: Forwarding, Logistics, Freight, and Other. The segment is navigating through a complex global trade environment, marked by disruptions such as the Asia-U.S. Lane disruptions, weakened demand, and various international conflicts including the invasion of Ukraine.

The global trade landscape is currently facing significant challenges. Geopolitical tensions and economic uncertainties are reshaping trade patterns. The ongoing trade war between the U.S. and China, for instance, is expected to lead to a \$63B decrease in trade between these countries by 2031. Additionally, the conflict



Source: UPS Annual Report and Own Estimates

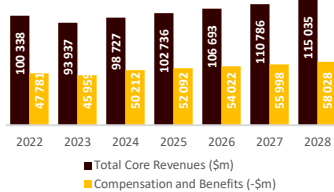
between Israel and Hamas, and the Ukraine war, are contributing to a reshuffling of global trade alliances and routes.

In terms of financial impact, the Supply Chain Solutions segment is bracing for significant changes. Revenues of the forwarding sector are projected to decrease by 30% to \$6,260 million in 2023, marking it as the most affected area within the segment. Moreover, the 'Other' category is also expected to see a substantial decline of 15% to \$ 1,816 million.

Looking into the future, despite the current challenges, the Supply Chain Solutions segment is anticipated to align with the Nominal GDP Growth in the medium to long term. This outlook suggests a gradual recovery and adaptation to the new global trade dynamics. With strategic adjustments and leveraging emerging trade opportunities, particularly in ASEAN countries, Mexico, India, and the growing Europe-U.S. trade, UPS is positioned to navigate and potentially capitalize on these evolving market conditions.

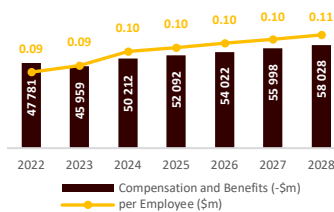
### Core Expenses Forecast

Graph 44: Total Revenues vs Compensation and Benefits



Source: UPS Annual Report and Own Estimates

Graph 45: Compensation and Benefits



Source: UPS Annual Report and Own Estimates

Compensation and benefits present a sensitive matter for UPS. These costs represent nearly half of the company's total revenue. The looming negotiations with the Teamsters add to the challenge. If UPS doesn't manage to expand its business, either through increased volume or higher pricing, compensation and benefits expenses could very well surpass the 50% benchmark.

Over the past four years, on average, U.S. Domestic Package segment employees delivered 47 packaged per day, while the International Package segment employees delivered 40. Using these metrics, we can estimate the future workforce size in each region and multiply it by the compensation and benefits per employee. Our projections indicate that these costs align with inflation in 2023 but will see a surge over the subsequent five years, which is attributed to the outcomes of negotiations with the Teamsters. According to the CEO, this increase would be of 17% over the 5 years<sup>43</sup>, but taking into consideration that Teamsters members represent 60% of the total number of employees, we believe that this number would be lower and around 15% (presenting a conservative approach). It's also important to note that 46% of the increase will occur in the first year, 2024<sup>44</sup>. While the recent agreement with the union succeeded in averting a strike, it will also drive a significant rise in compensation and benefits costs over the next half-decade.

<sup>43</sup> CBS News. 2023. UPS says drivers to make \$170,000 in pay and benefits following union deal. August 15. <https://www.cbsnews.com/news/ups-drivers-170000-pay-benefits-compensation/>.  
<sup>44</sup> United Parcel Service, Inc. (UPS). 2023. "Q3 Earnings release." UPS. September 11. [https://d1io3yog0oux5.cloudfront.net/cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS\\_2023\\_Labor\\_Contract\\_Presentation.mp4](https://d1io3yog0oux5.cloudfront.net/cdf31ee952259614bce6e77844dbc319/ups/files/videos/20230911/UPS_2023_Labor_Contract_Presentation.mp4).

Beyond this period, we anticipate these expenses to increase at a steady pace, mirroring the Federal Reserve's long-term inflation rate of 2%.

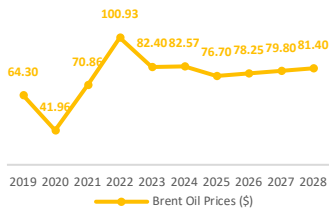
Forecasting Fuel Costs for UPS requires a nuanced approach. The primary step entails dividing the overall fuel expenditure by the Average Daily Package Volume. This division provides a granular insight into the fuel cost associated with delivering each individual package. The proxy we chose to predict future fuel growth was the Brent Oil Prices. For context, during the global pandemic, Brent Oil Prices witnessed a sharp decline, dropping by almost 35%. However, geopolitical events, such as the Ukrainian War and the recent conflict in the Middle East, had the opposite effect. The first conflict led to a significant surge in Brent Oil Prices, pushing them above the \$100 threshold, while the second one has gotten the investors worried that will escalate the price even further. The fuel cost per average package delivery exhibited a parallel trend. It was at its lowest during the pandemic, owing to the dip in oil prices at \$0.41. Conversely, as tensions intensified with the onset of the war, this cost surged to a peak of \$0.97.

Looking ahead, the fuel cost forecasts for UPS are closely tied to projected Brent Oil Price trends as reported by Deloitte's analyses<sup>45</sup>. These projections suggest that fuel costs will continue to evolve in tandem with these oil price forecasts.

In 2023, UPS is projected to maintain its historical trend (average of the last four years) in Repairs and Maintenance costs as a percentage of Property, Plant, and Equipment. However, a shift is anticipated starting in 2024. We project an increase in this cost ratio to 8% in 2024, followed by a further improvement to 7.5% in 2025, and stabilizing at 7% in subsequent years. This gradual reduction is closely tied to the outcomes of UPS' negotiations and agreements with the Teamsters union, reflecting a strategic adaptation in response to workforce agreements and operational efficiencies.

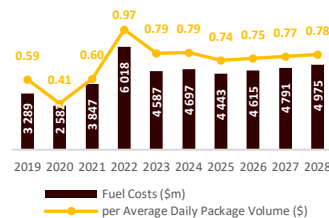
Responding to the union's concerns, UPS is undertaking significant upgrades to improve the comfort and safety of its fleet. Key initiatives include installing air conditioning systems, adding new heat shields, and equipping vehicles with extra fans. While these fleet improvements are imperative, they are likely to increase Purchased Transportation costs. This is primarily due to the initial costs and adjustments associated with the installation of new equipment and systems. However, over the longer term, these upgrades could lead to operational efficiencies, potentially reducing maintenance costs through enhanced vehicle performance and durability.

Graph 46: Brent Oil Prices



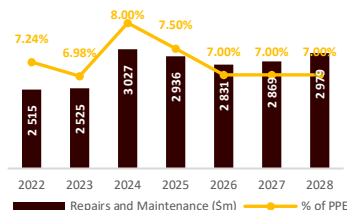
Source: EIA and Deloitte

Graph 47: Fuel Costs



Source: UPS Annual Reports and Own Estimates

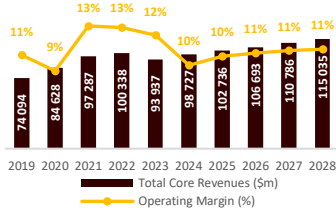
Graph 48: Repairs and Maintenance



Source: UPS Annual Reports and Own Estimates

<sup>45</sup> Deloitte. 2022. "Energy, oil, and gas price forecast."

Graph 49: Operating Margin

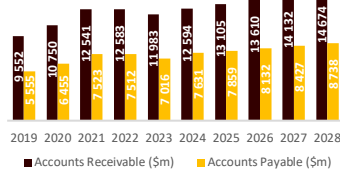


Source: UPS Annual Reports and Own Estimates

After accounting for significant upcoming expenses, including rising compensation and benefits due to Teamsters negotiations and fluctuating fuel costs linked to geopolitical events, UPS' Operating Margin is anticipated to decline in 2024, reaching 9.6%. Post-2024, the company's Operating Margin is projected to stabilize, consistently maintaining a rate of 12% in perpetuity. This reflects the company's resilience and ability to adapt, even amidst numerous financial pressures and challenges.

### Core Invested Capital

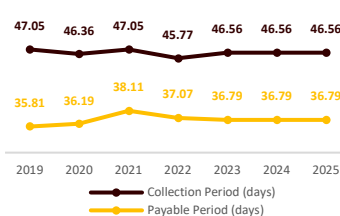
Graph 50: Current Assets vs Current Liabilities



Source: UPS Annual Reports and Own Estimates

When discussing the nuances of Working Capital, one of the primary components is Operating Cash. For our projections, we've forecasted Operating Cash to be 2% of the Total Core Revenues<sup>46</sup>. Another component in this equation is Accounts Receivable, which has been calculated using the Collection Period. This method makes sense as it represents the average number of days it takes a company to receive a payment after a sale has been made. On the other hand, Accounts Payable was determined using the Payable Period, as it represents the average duration it takes for a company to settle its debts with suppliers after receiving an invoice, hence reflecting the efficiency in managing short-term liabilities.

Graph 51: Collection Period vs Payable Period



Source: UPS Annual Reports and Own Estimates

Historical data highlights UPS' proficiency in maintaining a steady cash conversion cycle over the years. To delve deeper into the specifics: in terms of the Collection Period, UPS has, on average, taken 47 days to gather sales payments from its clients. Meanwhile, when looking at the Payable Period, it takes the company an average of 37 days to reconcile its obligations with its suppliers.

A comparative analysis of UPS' peers, FedEx and DHL, offers further insights. Both companies display similar metrics, with a collection period of 46 and 47 days respectively. As for the payable period, the figures stand at 21 days for FedEx and 46 for DHL. FedEx primarily focuses on express services, accounting for 51.3% of its operations in FY20. This means they have higher expenses such as fuel and rentals due to their reliance on sub-contractors, in contrast to UPS which largely employs its workforce. Therefore, FedEx tends to settle its bills with suppliers more quickly, and we anticipate this pattern to continue. Meanwhile, from a payable standpoint, DHL outperforms, taking more days (46) compared to UPS' 37 days to address its liabilities. This indicates a better liquidity position, as DHL enjoys extended credit terms with its suppliers.

<sup>46</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

When it comes to forecasting capital expenditures for UPS, we adopted another approach that capitalizes on the transparent reporting habits of the company. Historically, UPS has been accurate in its aircraft acquisition forecasts. They detail every aircraft purchase and discontinuation, and their past reports have aligned with actual numbers in their fleet. Given this, we have confidence that the aircrafts projected for future acquisitions will indeed be integrated into the fleet.

Table 2: Aircrafts (Owned) and respective Total pounds of cargo

	2019	2020	2021	2022	2023E	2024F	2025F	2026F	LBS/Aircraft
Boeing 757-200	75	75	75	75	75	75	75	75	63 000
Boeing 767-300	64	69	72	72	79	86	93	100	116 000
Boeing 767-300BCF	3	4	4	5	5	5	5	5	116 800
Boeing 767-300BDSF	2	4	4	4	4	4	4	4	116 800
Airbus A300-600	52	52	52	52	52	52	52	52	106 000
Boeing MD-11	37	40	42	42	42	42	42	42	192 600
Boeing 747-400F	11	11	11	11	11	11	11	11	274 100
Boeing 747-400BCF	2	2	2	2	2	2	2	2	274 100
Boeing 747-8F	15	20	26	28	28	30	30	30	308 700
<b>Total Aircrafts (Owned)</b>	<b>261</b>	<b>277</b>	<b>288</b>	<b>291</b>	<b>298</b>	<b>307</b>	<b>314</b>	<b>321</b>	-
<b>Total pounds</b>	<b>33 565 000</b>	<b>36 616 700</b>	<b>39 202 100</b>	<b>39 936 300</b>	<b>40 748 300</b>	<b>42 177 700</b>	<b>42 989 700</b>	<b>43 801 700</b>	-

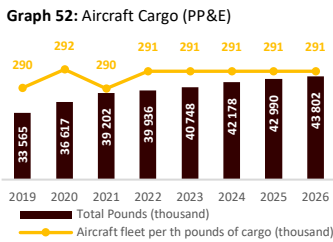
Source: UPS Annual Reports and Own Estimates

For this year, UPS' acquisition included seven Boeing 767-300 airplanes. The company's projection indicates the addition of another seven of these aircraft each year for the next three years. Additionally, two Boeing 767-300s are slated to join the fleet next year. By combining this acquisition data up to 2026 with the cargo capacity of each aircraft, we're able to calculate the total cargo weight in pounds for each year. Taking the total asset value of Aircrafts and dividing it by this annual cargo weight gives us a ratio of "Aircraft fleet per total thousand pounds of cargo." Historically, this ratio has remained steady at around 291 thousand from 2019 to 2022. We believe that this value will stay constant and so we kept it in our forecasts for subsequent years. By multiplying this ratio by the Total Pounds of cargo we forecasted the Aircraft fleet until 2026 with a value of \$12,762 at that time.

Moving on to the valuation of UPS' ground vehicles, we opted for a percentage-based approach. We calculated the value based on a percentage of the revenue from ground products, excluding Freight, since Freight ceased operations in 2021. Because of the above-mentioned enhancement of the comfort and safety of the UPS fleet, we believe that the driver will increase to 25.0% of the revenue from ground products.

As for other PP&E items, which tend to represent more centralized services, we've pegged their values as a percentage of total core revenues.

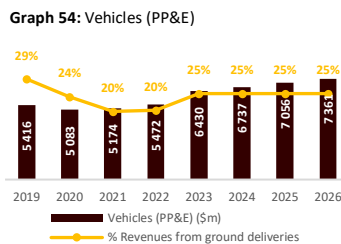
In terms of accounting for depreciation and amortization, we've based our calculations on a percentage of the combined total of Property, Plant, and Equipment (PP&E) and Intangible Assets. Our projections suggest that these values will mirror those of 2022.



Source: UPS Annual Reports and Own Estimates

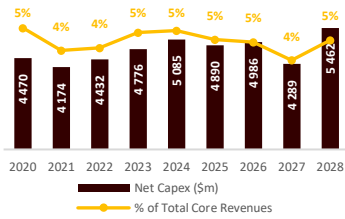


Source: UPS Annual Reports and Own Estimates



Source: UPS Annual Reports and Own Estimates

Graph 55: Net Capital Expenditures



Source: UPS Annual Reports and Own Estimates

In light of UPS' strategic initiatives and recent developments, our CAPEX forecasts reflect an anticipated evolution in the company's expenditure. In 2022, the CAPEX was \$4,432 million, accounting for 4.42% of revenues. This figure is set to increase to \$4,776 million (5.08% of revenues) in 2023, driven by key factors such as the expansion of ground facilities, enhancements in fleet comfort and safety, and technological upgrades to meet the growing e-commerce demand. Furthermore, in 2024, we expect the CAPEX to rise further to \$5,085 million (5.15% of revenues), influenced by ongoing negotiations, continued investments in aircraft acquisitions, and the modernization of logistics infrastructure to accommodate market trends.

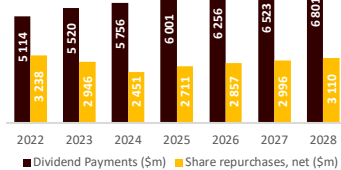
In conclusion, our capital expenditure (CAPEX) estimates align with the figures shared by UPS during their Q3 call.

## WACC Calculations

### Capital Structure

The transactions with shareholders for UPS include both dividends and share repurchase. In 2023, the dividends paid amounted to \$6.48 per share, totaling approximately \$5.5 billion. This distribution signifies a 6.58% increase from the payout in 2022. Without counting the growth seen in 2022 as it was an exception year of strong financial performance, the growth seen in 2023 shows alignment with UPS' dividend strategy from previous years. Given this consistency, it's expected that UPS will continue to target similar dividend growth levels in the future.

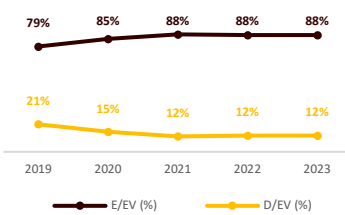
Graph 56: Dividends and Net Share Repurchases



Source: UPS Reports and Own Estimates

As for share repurchases, an allocation of around \$2.9 billion is anticipated, which is equivalent to 28% of the net income. Combining both dividends and share repurchases, the total transactions with shareholders in 2023 amount to \$8.5 billion. This pattern of shareholder transactions, balancing dividends and share repurchases, is expected to persist in the subsequent years, reflecting a strategic approach to shareholder value.

Graph 57: Capital Structure



Source: UPS Reports and Own Estimates

When it comes to addressing debt, in recent years, UPS has demonstrated a trend of gradually reducing its leverage, achieving a stable debt level at 12% over the last two years. Based on this pattern, we project that this level of leverage will be maintained throughout 2023. By extrapolating this ratio, we derive an implied Debt-to-Equity ratio of 84% which we used to predict the future value of debt in future years.

▪ Cost of Equity

The process of determining the expected cost of equity for UPS involves three primary components, as delineated by the Capital Asset Pricing Model (CAPM): the Risk-free Rate ( $R_f$ ), the Equity Beta ( $\beta_e$ ), and the Market Risk Premium.

To start, our Risk-free Rate ( $R_f$ ) is benchmarked against the yield of the US Government's 10-year Bond. This approach provides a stable and generally accepted proxy for the  $R_f$  rate. Regarding Market Risk Premium, an assumption based on the McKinsey book on valuation<sup>47</sup> was made, setting it at 5%.

Table 3: Beta Unlevered  $\beta_u$  calculation

USD (\$) in Millions except DHL	UPS	FDX	DHL	25th percentile	Median	75th percentile
$\beta_e$	1.08	1.33	1.46			
ND	\$ 18 226	\$ 15 526	\$ 19 916			
E	\$ 138 813	\$ 54 447	\$ 40 985			
D/E	13.13%	28.52%	48.59%			
US Corporate Effective Yield	5.04%	5.41%	5.04%			
Default premium	1.13%	1.50%	1.13%			
$\beta_d$	0.23	0.30	0.23			
<b><math>\beta_u</math></b>	<b>0.98</b>	<b>1.10</b>	<b>1.06</b>	<b>1.02</b>	<b>1.06</b>	<b>1.08</b>

Source: Yahoo Finance Monthly Historical Returns and Own Estimates

In our analysis of UPS' financial risk, we leveraged the historical performance data of key competitors, including FedEx and DHL. The primary objective was to ascertain the Equity Beta ( $\beta_e$ ) for each firm, which is a function of both the Unlevered Beta ( $\beta_u$ ) and the Debt Beta ( $\beta_d$ ). For a robust comparison, we used the S&P 500 index as the market reference for UPS and FedEx, while the STXE 600 was used for DHL. This approach ensured that the market benchmarks were appropriately aligned with the geographical and operational scopes of the respective companies.

Through a regression analysis of historical stock returns against these market indices, we calculated the levered beta for each company. This levered beta, reflective of the company's total risk including its capital structure, was then unlevered to isolate the business risk from the financial risk. For UPS, our analysis revealed an unlevered beta that, when compared with FedEx and DHL, indicates a more stable and less volatile risk profile at 0.98. This finding aligns with UPS' relatively lower Debt-to-Equity (D/E) ratio, suggesting a conservative approach to financial leverage. To calculate UPS' levered beta, we used its own unlevered beta of 0.98, which corresponded to a levered beta of 1.08. This approach takes into account the lower risk profile of UPS compared to its peers.

The Equity Beta we calculated, has directed us to an expected Cost of Equity of 9.33%, that accurately reflects our risk assessment. This figure represents the

Table 4: Expected Cost of Equity ( $R_e$ )

$R_f$	3.91%
$\beta_u$	0.98
$\beta_d$	0.23
$\beta_e$	1.08
Market Risk Premium	5.00%
<b><math>R_e</math></b>	<b>9.33%</b>

Source: Own Estimates

<sup>47</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

estimated return demanded by equity investors, considering the specific risk profile of the company.

▪ Cost of Debt

UPS' creditworthiness is prominently acknowledged by industry-leading credit rating agencies. Moody's rates UPS at 'A2', while S&P Global Ratings awards it an 'A' status. These favorable credit ratings underscore the company's financial stability and guide the selection of appropriate benchmarks for expected cost assessment.

In light of these ratings, we employed the US Corporate A Effective Yield as our benchmark for calculating UPS' expected Cost of Debt (Rd). To determine the Debt Beta ( $\beta_d$ ), we first calculated the default premium by taking the difference between the US Corporate A Effective Yield and the risk-free rate. Subsequently, we divided this default premium by the market risk premium, yielding the Debt Beta.

We then used the results from the Capital Asset Pricing Model (CAPM) to compute UPS' expected Cost of Debt. By multiplying the CAPM results with both the Annualized Probability of Default and the Loss Given Default we ended up with an Expected Cost of Debt for UPS that stands at 5.03%.

▪ WACC

To compute the Weighted Average Cost of Capital (WACC), we take a weighted average of both the Expected Cost of Equity and the After-tax Cost of Debt. To calculate the after-tax cost of debt, the marginal tax rate was used at 21%.

Analyzing UPS' financials, with a net debt amounting to \$18,226 and a market capitalization of \$138,813, the derived target Equity to Enterprise value stands at 88%. With these figures in play, our computations led us to establish a Weighted Average Cost of Capital for UPS at 8.71%.

## Core Value

To compute UPS' core value, two components were analyzed: the sum of the Discounted Core Free Cash Flows and the Discounted Terminal Value.

Table 7: Discounted Cash Flow (DCF)

USD (\$) in Millions	2025	2026	2027	2028	2029	2030	..	2042	2043
Core Free Cash Flow	\$ 6 771	\$ 7 453	\$ 8 615	\$ 8 231	\$ 9 334	\$ 9 884		\$ 15 594	\$ 16 197
Discounted Core Free Cash Flow	\$ 6 228	\$ 6 307	\$ 6 707	\$ 5 895	\$ 6 149	\$ 5 990		\$ 3 471	\$ 3 316
<b>Sum of Discounted Core Free Cash Flow</b>	<b>\$ 94 751</b>								
Terminal Value	\$ 347 464								
<b>Discounted Terminal Value</b>	<b>\$ 71 143</b>								

Source: Own Estimates

Table 5: Expected Cost of Debt (Rd)

Rf	3.91%
$\beta_d$	0.23
Market Risk Premium	5.00%
Ann. Prob. of Default	0.27%
Loss Given Default	54.60%
<b>Rd</b>	<b>5.03%</b>

Source: Own Estimates

Table 6: Weighted Average Cost of Capital

<b>Re</b>	<b>9.33%</b>
E/EV	88.39%
<b>Rd</b>	<b>5.03%</b>
D/EV	11.61%
Marginal tax rate	21.00%
<b>WACC</b>	<b>8.71%</b>

Source: Own Estimates

To set a price target for UPS by the end of 2024, our approach involved discounting core free cash flows starting from 2025, applying the WACC derived from our earlier calculations.

Table 8: Growth and RONIC Calculation

USD (\$) in Millions	2025	2026	2027	2028	2029	2030	..	2042	2043
Core Result	\$ 8 417	\$ 8 992	\$ 9 542	\$ 10 006	\$ 11 339	\$ 11 777		\$ 18 569	\$ 19 286
Core Invested Capital	\$ 47 335	\$ 48 875	\$ 49 802	\$ 51 577	\$ 53 582	\$ 55 475		\$ 84 740	\$ 87 829
Core FCF	\$ 6 771	\$ 7 453	\$ 8 615	\$ 8 231	\$ 9 334	\$ 9 884		\$ 15 594	\$ 16 197
ROIC	18.4%	19.0%	19.5%	20.1%	22.0%	22.0%		22.7%	22.8%
<b>RONIC</b>	<b>72.1%</b>	<b>34.9%</b>	<b>35.7%</b>	<b>50.0%</b>	<b>75.1%</b>	<b>21.8%</b>		<b>24.1%</b>	<b>24.1%</b>
IR	18.0%	19.6%	17.1%	9.7%	17.7%	17.7%		16.0%	16.0%
g	13.0%	6.8%	6.1%	4.9%	13.3%	3.9%		3.9%	3.9%
Core Result g	13.0%	6.8%	6.1%	4.9%	13.3%	3.9%		3.9%	3.9%
<b>Core FCF g</b>	<b>10.8%</b>	<b>10.1%</b>	<b>15.6%</b>	<b>(4.5%)</b>	<b>13.4%</b>	<b>5.9%</b>		<b>3.9%</b>	<b>3.9%</b>

Source: Own Estimates

Regarding the Discounted Terminal Value, we leaned on the McKinsey perpetuity formula<sup>48</sup>. We used the Free cash flow growth of 3.9% which we believe it's at the steady state point as it matches the product of the investment rate (IR) and the return on new invested capital (RONIC) and the Core Result growth. In the long run, we forecast that the steady-state RONIC for UPS will rest at 24.1%. Given that Damodaran's insights<sup>49</sup> point to an industry average ROIC of 24.2%, our projection appears well-aligned. This percentage suggests that UPS, a stalwart in its domain, remains committed to progressive investment, innovation, and efficiency enhancements.

A comparison with the logistics sector illustrates the unique positioning of UPS. Thus, with a ROIC consistently surpassing the WACC, UPS not only stands out from the competition as there are high barriers to entry but also continues to deliver value to its shareholders.

Lastly, by adding the two components we reached a core valuation of \$165,893 million.

### Equity Value

Table 9: Price target (DCF)

USD (\$) in Millions	
Core Value	\$ 165 893
Non-core Value	\$ (3 268)
Enterprise Value	\$ 162 625
Net Debt & Other Claims	\$ (18 242)
Equity Value	\$ 144 384
Shares Outstanding (in Millions)	851.93
<b>Price Target FY24</b>	<b>\$ 169.48</b>
Price (as of 16-Dec-2023)	\$ 162.94

Source: Own Estimates

To compute the Price target for the close of 2024, we calculated the enterprise value by adding to the core valuation with what we determined as the non-core value. For this non-core value, a reliable proxy is the Book Value of the Total Non-Core Invested Capital as of the end of 2024. Taking a step further towards discerning the Equity value, we subtracted the Net Debt & Other Claims (the Net Invested in Financial Activities projected for the end of 2024), from the enterprise value we had earlier calculated. With all these computations in place, and

$$TV_t = \frac{Core\ Result_t (1 + g)(1 - \frac{g}{RONIC})}{WACC - g}$$

<sup>48</sup> McKinsey & Company. 2020. Valuation: Measuring and Managing the Value of Companies. John Wiley & Sons.

<sup>49</sup> Damodaran, Aswath. 2023. Margin/ ROIC by Sector (US). January. [https://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/mgnroc.html](https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/mgnroc.html).

considering the estimated 852 million Shares Outstanding, our analysis points to an implied price target of \$169.48 for UPS on December 31, 2024.

## Relative Valuation

Table 10: Relative Valuation Multiples

(as of December 31st, 2022)	EV/Revenues	EV/EBITDA	EV/EBIT	P/E
<b>UPS, FDX and DHL:</b>				
25th Percentile	0.8x	6.6x	10.0x	10.3x
<b>Median</b>	<b>0.9x</b>	<b>8.4x</b>	<b>12.7x</b>	<b>12.9x</b>
75th Percentile	1.3x	9.3x	13.1x	13.9x
<b>+XPO and JBHT:</b>				
25th Percentile	0.9x	7.2x	11.3x	7.7x
<b>Median</b>	<b>0.9x</b>	<b>7.7x</b>	<b>12.4x</b>	<b>12.9x</b>
75th Percentile	1.3x	8.4x	12.7x	14.9x
<b>UPS Implied Multiple by DCF</b>	<b>1.7x</b>	<b>10.9x</b>	<b>13.9x</b>	<b>13.7x</b>

Source: Own Estimates

Note: FedEx values used as of May 31<sup>st</sup>, 2023

In our valuation analysis of UPS, we initially considered two sets of comparables: a direct comparison with FedEx and DHL, and a broader analysis including five companies in the Commerce and Logistics sector. After careful consideration, we chose the direct comparison approach with FedEx and DHL as the most appropriate for our analysis, given the close operational and market similarities.

We calculated Enterprise Value (EV) for each company by combining Net Debt and Market Capitalization. We then focused on the following multiples: EV/Revenues, EV/EBITDA, EV/EBIT, and the P/E ratio.

After careful consideration, we selected the EV/EBIT multiple as the most appropriate for our analysis. This decision was driven by the significant capital expenditures in the Commerce and Logistics industry, which make depreciation and amortization a critical factor. Unlike EV/EBITDA, which tends to overlook these expenses, and the P/E ratio, which includes all income statement items, EV/EBIT offers a more accurate reflection of operational efficiency in this capital-intensive industry.

Our analysis of the broader peer group revealed that EV/EBIT values ranged from 10.0x to 13.1x., translating into a UPS' share price between \$166.30 and \$224.83.

Our findings indicate that the current market valuation of UPS, particularly in light of recent labor-related challenges, might skew towards the lower end of our estimated spectrum, aligning with the DCF-implied multiple for the end of 2024.

## Sensitivity Analysis

Three sensitivity analysis were conducted for the WACC. The first one conducted was to Beta Equity,  $\beta_e$ , a measure of stock price sensitivity to changes in the

**Table 11:** Expected Cost of Equity (Re)  
Sensitivity Analysis

<b>βe</b>	1.06	1.07	<b>1.08</b>	1.09	1.11
<b>Re</b>	9.21%	9.27%	<b>9.33%</b>	9.38%	9.44%
<b>WACC</b>	8.61%	8.66%	<b>8.71%</b>	8.76%	8.80%

Source: Own Estimates

**Table 12:** Expected Cost of Debt (Rd)  
Sensitivity Analysis

<b>βd</b>	0.15	0.19	<b>0.23</b>	0.26	0.30
<b>Rd</b>	4.66%	4.85%	<b>5.03%</b>	5.22%	5.40%
<b>WACC</b>	8.67%	8.69%	<b>8.71%</b>	8.72%	8.74%

Source: Own Estimates

**Table 13:** WACC Sensitivity Analysis

		<b>Re</b>				
		9.21%	9.27%	<b>9.33%</b>	9.38%	9.44%
<b>Rd</b>	4.66%	8.57%	8.62%	8.67%	8.72%	8.77%
	4.85%	8.59%	8.64%	8.69%	8.74%	8.79%
	<b>5.03%</b>	8.61%	8.66%	<b>8.71%</b>	8.76%	8.80%
	5.22%	8.62%	8.67%	8.72%	8.77%	8.82%
	5.40%	8.64%	8.69%	8.74%	8.79%	8.84%

Source: Own Estimates

**Table 14:** Growth (g) Sensitivity Analysis

		<b>RONIC</b>				
		8.71%	12.55%	16.40%	20.25%	<b>24.10%</b>
<b>IR</b>	14.02%	1.22%	1.76%	2.30%	2.84%	3.38%
	15.02%	1.31%	1.89%	2.46%	3.04%	3.62%
	<b>16.02%</b>	1.39%	2.01%	2.63%	3.24%	<b>3.86%</b>
	17.02%	1.48%	2.14%	2.79%	3.45%	4.10%
	18.02%	1.57%	2.26%	2.96%	3.65%	4.34%

Source: Own Estimates

**Table 15:** Price Target (WACC and g)  
Sensitivity Analysis

		<b>WACC</b>				
		8.57%	8.64%	<b>8.71%</b>	8.77%	8.84%
<b>Growth</b>	1.22%	\$149.19	\$147.32	\$145.48	\$143.67	\$141.90
	2.54%	\$159.33	\$157.11	\$154.94	\$152.81	\$150.74
	<b>3.86%</b>	\$174.99	\$172.16	\$169.41	\$166.73	\$164.12
	4.10%	\$178.83	\$175.84	\$172.93	\$170.10	\$167.36
	4.34%	\$183.11	\$179.93	\$176.84	\$173.84	\$170.93

Source: Own Estimates

market, and to Expected Cost of Equity, Re. The 95% confidence interval<sup>50</sup> of the levered beta, βe was used to obtain the range of the Beta Unlevered, βu from 0.96 to 1.00 that we then re-levered at the future capital structure, 2024. This led to a βe ranging from 1.06 to 1.11 and consequently, a cost of equity ranging from 9.21% to 9.44%. All else equal, this translates into a WACC between 8.61% and 8.80%.

Then, the sensitivity analysis was performed on the Expected Cost of Debt, Rd. One of the key components to calculate Rd is the US Corporate A Effective Yield. To represent the best and worst-case scenarios, we adjusted this figure within the range of AA to BBB US Corporate Index Effective Yield. This adjustment aimed to capture the full spectrum of potential outcomes for the Expected Cost of Debt. Despite these variations, the ranges of Rd had a minimal impact on the WACC, altering it only slightly from 8.67% to 8.74%.

Using the intervals of the Expected cost of Equity and Debt we could conclude that WACC would assume values from 8.57% to 8.84%, which is a small interval. Prices would prowl around \$174.99 and \$164.12. For the higher price scenario, a Total Shareholder Return (TSR) of 12.87% would be an attractive proposition for investors, warranting a 'Buy' recommendation due to the potential for significant capital appreciation. Conversely, in the lower share price scenario of \$164.12, the expected TSR would be 6.62%. While this still represents a positive return, it is comparatively modest. In this case, we would advise a 'Hold' strategy, as the potential for growth and income, while present, is less pronounced than in the higher price scenario.

Additionally, we made a sensitivity analysis on Growth using both RONIC and the Investment Rate, IR. RONIC assumed a range from the value of WACC (meaning that UPS would not create nor destroy value) and our long-run RONIC. IR was adjusted to range between the steady state IR minus 2% and the steady state IR plus 2%. We obtained Growth ranging from 1.22% to 4.34% where prices would be between \$145.48 to \$176.84.

Lastly, using both the WACC and the growth rate, whose ranges have been previously defined, we were able to evaluate the sensitivity of the price per share. In extreme cases, we would obtain a Price Target between \$149.19 to \$170.93, which would imply a 'Sell' and an 'Buy' Strategy at (1.95%) and 10.56% Total Shareholder Return, respectively.

<sup>50</sup> Equity Beta (βe) 95% Confidence Interval = [βe - 2 x StandardError(Stock Returns); βe + 2 x StandardError(Stock Returns)]

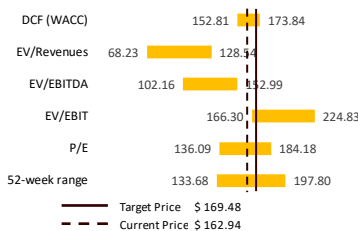
## Final Recommendation

UPS presents some solid and robust strategies to navigate the complex context of the Commerce and Logistics industry. It has been evolving and adapting to the macroeconomic context and its challenges. Nonetheless, it should pay close attention to its next steps in order to maintain its position in the very competitive landscape it operates in.

Based on our Discounted Cash Flow (DCF) analysis, we project UPS' share price to reach \$169.48 by the end of December 2024. In addition to a predicted quarterly dividend of \$1.69 per share, amounting to an annual dividend per share of \$6.76, UPS is also expected to engage in share repurchases. These repurchases, alongside dividends, contribute to an anticipated total shareholder transaction value of \$8.2 billion, equating to approximately \$9.68 per share.

Given these projections, our recommendation as of December 19th, 2023, is to maintain a holding position in UPS stock. We anticipate a total shareholder return of approximately 9.72% by December 31st, 2024, which is comprised of a 4.01% increase in share value and a 5.71% yield from shareholder transactions.

Graph 58: Football Field Chart



Source: Own Estimates

# Appendix

## Forecasted Income Statement

USD (\$) in Millions	2021	2022	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2042F	2043F
<b>Core Operations</b>												
<b>Total Core Revenues</b>	<b>\$ 97 287</b>	<b>\$ 100 338</b>	<b>\$ 93 937</b>	<b>\$ 98 727</b>	<b>\$ 102 736</b>	<b>\$ 106 693</b>	<b>\$ 110 786</b>	<b>\$ 115 035</b>	<b>\$ 119 448</b>	<b>\$ 124 030</b>	<b>\$ 194 851</b>	<b>\$ 202 325</b>
growth	14.96%	3.14%	(6.38%)	5.10%	4.06%	3.85%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
Compensation and benefits	\$ (46 707)	\$ (47 781)	\$ (45 959)	\$ (50 212)	\$ (52 092)	\$ (54 022)	\$ (55 998)	\$ (58 028)	\$ (60 254)	\$ (62 565)	\$ (98 290)	\$ (102 060)
per Employee	\$ (0.09)	\$ (0.09)	\$ (0.09)	\$ (0.10)	\$ (0.10)	\$ (0.10)	\$ (0.10)	\$ (0.11)	\$ (0.11)	\$ (0.11)	\$ (0.14)	\$ (0.14)
Repairs and Maintenance	\$ (2 443)	\$ (2 515)	\$ (2 525)	\$ (3 027)	\$ (2 936)	\$ (2 831)	\$ (2 869)	\$ (2 979)	\$ (3 094)	\$ (3 212)	\$ (5 047)	\$ (5 240)
% of Property, Plant and Equipment, net	(7.30%)	(7.24%)	(6.98%)	(8.00%)	(7.50%)	(7.00%)	(7.00%)	(7.00%)	(7.00%)	(7.00%)	(7.00%)	(7.00%)
Depreciation and amortization	\$ (2 953)	\$ (3 188)	\$ (3 298)	\$ (3 449)	\$ (3 570)	\$ (3 690)	\$ (3 746)	\$ (3 889)	\$ (4 039)	\$ (4 194)	\$ (6 588)	\$ (6 841)
% of PP&E and Intangible Assets	(8.21%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)
Purchased Transportation	\$ (19 058)	\$ (17 653)	\$ (16 527)	\$ (17 771)	\$ (18 493)	\$ (19 205)	\$ (19 941)	\$ (20 706)	\$ (20 306)	\$ (21 085)	\$ (33 125)	\$ (34 395)
% of Total Core Revenues	(19.59%)	(17.59%)	(17.59%)	(18.00%)	(18.00%)	(18.00%)	(18.00%)	(18.00%)	(17.00%)	(17.00%)	(17.00%)	(17.00%)
Fuel	\$ (3 847)	\$ (6 018)	\$ (4 587)	\$ (4 697)	\$ (4 443)	\$ (4 615)	\$ (4 791)	\$ (4 975)	\$ (5 164)	\$ (5 365)	\$ (8 426)	\$ (8 749)
per Average Daily Package Volume	\$ (0.60)	\$ (0.97)	\$ (0.79)	\$ (0.79)	\$ (0.74)	\$ (0.75)	\$ (0.77)	\$ (0.78)	\$ (0.80)	\$ (0.82)	\$ (1.03)	\$ (1.05)
Other occupancy	\$ (1 638)	\$ (1 734)	\$ (1 624)	\$ (1 855)	\$ (1 930)	\$ (2 004)	\$ (2 081)	\$ (2 161)	\$ (2 244)	\$ (2 330)	\$ (3 661)	\$ (3 801)
% of Total Core Revenues	(1.68%)	(1.73%)	(1.73%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)	(1.88%)
Other expenses	\$ (7 771)	\$ (8 271)	\$ (7 743)	\$ (8 138)	\$ (8 469)	\$ (8 795)	\$ (9 132)	\$ (9 483)	\$ (9 846)	\$ (10 224)	\$ (16 062)	\$ (16 678)
% of Total Core Revenues	(7.99%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)	(8.24%)
<b>Total Core Expenses</b>	<b>\$ (84 417)</b>	<b>\$ (87 160)</b>	<b>\$ (82 263)</b>	<b>\$ (89 148)</b>	<b>\$ (91 933)</b>	<b>\$ (95 162)</b>	<b>\$ (98 559)</b>	<b>\$ (102 222)</b>	<b>\$ (104 947)</b>	<b>\$ (108 975)</b>	<b>\$ (171 198)</b>	<b>\$ (177 765)</b>
Operating Margin	13.2%	13.0%	12.3%	9.6%	10.4%	10.7%	11.0%	11.1%	12.1%	12.1%	12.1%	12.1%
<b>Core Result Before Taxes</b>												
<b>Core Result Before Taxes</b>	<b>\$ 12 870</b>	<b>\$ 13 178</b>	<b>\$ 11 674</b>	<b>\$ 9 579</b>	<b>\$ 10 803</b>	<b>\$ 11 531</b>	<b>\$ 12 227</b>	<b>\$ 12 814</b>	<b>\$ 14 501</b>	<b>\$ 15 055</b>	<b>\$ 23 653</b>	<b>\$ 24 561</b>
Statutory Taxes	\$ (2 703)	\$ (2 767)	\$ (2 451)	\$ (2 012)	\$ (2 269)	\$ (2 421)	\$ (2 568)	\$ (2 691)	\$ (3 045)	\$ (3 162)	\$ (4 967)	\$ (5 158)
% Statutory Tax rate	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)
Tax Adjustments	\$ (299)	\$ (237)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)	\$ (117)
<b>Total Core Result</b>	<b>\$ 9 869</b>	<b>\$ 10 173</b>	<b>\$ 9 105</b>	<b>\$ 7 450</b>	<b>\$ 8 417</b>	<b>\$ 8 992</b>	<b>\$ 9 542</b>	<b>\$ 10 006</b>	<b>\$ 11 339</b>	<b>\$ 11 777</b>	<b>\$ 18 569</b>	<b>\$ 19 286</b>
growth	58.97%	3.09%	(10.50%)	(18.18%)	12.98%	6.83%	6.11%	4.86%	13.33%	3.86%	3.86%	3.86%
<b>Non-Core Operations</b>												
Investment income (expense) and other	\$ 4 479	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435
% of Marketable Securities, Pension and Postre	53.42%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%	35.81%
<b>Non-core Result Before Taxes</b>	<b>\$ 4 479</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>	<b>\$ 2 435</b>
Statutory Taxes	\$ (941)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)
% Statutory Tax rate	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)
Tax Adjustments	\$ 79	\$ 73	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48
Other comprehensive income	\$ 3 835	\$ 1 729	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861
<b>Total Non-core Result</b>	<b>\$ 7 452</b>	<b>\$ 3 726</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>	<b>\$ 2 833</b>
<b>Financial Operations</b>												
Interest expense, debt	\$ (694)	\$ (704)	\$ (632)	\$ (610)	\$ (650)	\$ (701)	\$ (756)	\$ (814)	\$ (872)	\$ (947)	\$ (1 779)	\$ (1 842)
% Debt t-1	2.81%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%	3.21%
Interest expense, lease liabilities	\$ (60)	\$ (84)	\$ (90)	\$ (84)	\$ (88)	\$ (92)	\$ (95)	\$ (99)	\$ (103)	\$ (107)	\$ (167)	\$ (174)
discount rate for operating leases	1.94%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%	2.32%
<b>Financial Result Before Taxes</b>	<b>\$ (754)</b>	<b>\$ (788)</b>	<b>\$ (721)</b>	<b>\$ (693)</b>	<b>\$ (738)</b>	<b>\$ (793)</b>	<b>\$ (851)</b>	<b>\$ (912)</b>	<b>\$ (974)</b>	<b>\$ (1 053)</b>	<b>\$ (1 947)</b>	<b>\$ (2 016)</b>
Statutory Taxes	\$ 158	\$ 165	\$ 151	\$ 146	\$ 155	\$ 166	\$ 179	\$ 192	\$ 205	\$ 221	\$ 409	\$ 423
% Statutory Tax rate	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)	(21.00%)
<b>Total Financial Result</b>	<b>\$ (596)</b>	<b>\$ (622)</b>	<b>\$ (570)</b>	<b>\$ (548)</b>	<b>\$ (583)</b>	<b>\$ (626)</b>	<b>\$ (672)</b>	<b>\$ (721)</b>	<b>\$ (770)</b>	<b>\$ (832)</b>	<b>\$ (1 538)</b>	<b>\$ (1 593)</b>
<b>Total Comprehensive Income</b>	<b>\$ 16 725</b>	<b>\$ 13 277</b>	<b>\$ 11 368</b>	<b>\$ 9 735</b>	<b>\$ 10 668</b>	<b>\$ 11 199</b>	<b>\$ 11 702</b>	<b>\$ 12 118</b>	<b>\$ 13 402</b>	<b>\$ 13 777</b>	<b>\$ 19 864</b>	<b>\$ 20 526</b>
<b>Net Income</b>	<b>\$ 12 890</b>	<b>\$ 11 548</b>	<b>\$ 10 507</b>	<b>\$ 8 874</b>	<b>\$ 9 806</b>	<b>\$ 10 338</b>	<b>\$ 10 841</b>	<b>\$ 11 257</b>	<b>\$ 12 541</b>	<b>\$ 12 916</b>	<b>\$ 19 003</b>	<b>\$ 19 665</b>
Shares Outstanding	842.40	841.12	851.93	851.93	851.93	851.93	851.93	851.93	851.93	851.93	851.93	851.93
Earnings per Share	14.75	13.26	12.33	10.42	11.51	12.13	12.73	13.21	14.72	15.16	22.31	23.08
Dividend Payments	\$ (3 437)	\$ (5 114)	\$ (5 520)	\$ (5 756)	\$ (6 001)	\$ (6 256)	\$ (6 523)	\$ (6 801)	\$ (7 090)	\$ (7 392)	\$ (12 194)	\$ (12 713)
Share repurchases, net	\$ (249)	\$ (3 238)	\$ (2 946)	\$ (2 488)	\$ (2 750)	\$ (2 899)	\$ (3 040)	\$ (3 156)	\$ (3 516)	\$ (3 622)	\$ (5 328)	\$ (5 514)
% of Net Income	(1.93%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)	(28.04%)
<b>Transactions with Shareholders</b>	<b>€ (3 686.00)</b>	<b>€ (8 352.00)</b>	<b>€ (8 466.65)</b>	<b>€ (8 243.84)</b>	<b>€ (8 750.39)</b>	<b>€ (9 154.97)</b>	<b>€ (9 562.59)</b>	<b>€ (9 956.91)</b>	<b>€ (10 606.71)</b>	<b>€ (11 013.85)</b>	<b>€ (17 522.26)</b>	<b>€ (18 227.24)</b>
<b>Dividends</b>	<b>€ 4.08</b>	<b>€ 6.08</b>	<b>€ 6.48</b>	<b>€ 6.76</b>	<b>€ 7.04</b>	<b>€ 7.34</b>	<b>€ 7.66</b>	<b>€ 7.98</b>	<b>€ 8.32</b>	<b>€ 8.68</b>	<b>€ 14.31</b>	<b>€ 14.92</b>
% growth	0.99%	49.02%	6.58%	4.26%	4.26%	4.26%	4.26%	4.26%	4.26%	4.26%	4.26%	4.26%
<b>Transactions with Shareholders</b>	<b>€ 4.38</b>	<b>€ 9.93</b>	<b>€ 9.94</b>	<b>€ 9.68</b>	<b>€ 10.27</b>	<b>€ 10.75</b>	<b>€ 11.22</b>	<b>€ 11.69</b>	<b>€ 12.45</b>	<b>€ 12.93</b>	<b>€ 20.57</b>	<b>€ 21.40</b>

# Forecasted Balance Sheet

USD (\$) in Millions	2021	2022	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2042F	2043F
<b>Core Operations</b>												
Operating Cash	\$ 1946	\$ 2007	\$ 1879	\$ 1975	\$ 2055	\$ 2134	\$ 2216	\$ 2301	\$ 2389	\$ 2481	\$ 3897	\$ 4047
<i>% of Total Core Revenues</i>	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Accounts Receivable, net	\$ 12541	\$ 12583	\$ 11983	\$ 12594	\$ 13105	\$ 13610	\$ 14132	\$ 14674	\$ 15237	\$ 15822	\$ 24856	\$ 25810
<i>Collection Period</i>	47	46	47	47	47	47	47	47	47	47	47	47
Inventory (Fuel and other materials - not for sale)	\$ 717	\$ 889	\$ 832	\$ 875	\$ 910	\$ 945	\$ 982	\$ 1019	\$ 1058	\$ 1099	\$ 1726	\$ 1793
<i>% of Total Core Revenues</i>	0.74%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%
Other current assets (less Inventory)	\$ 1083	\$ 1150	\$ 1312	\$ 1379	\$ 1435	\$ 1490	\$ 1548	\$ 1607	\$ 1669	\$ 1733	\$ 2722	\$ 2826
<i>% of Total Core Revenues</i>	1.11%	1.15%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
Property, Plant and Equipment, net	\$ 33475	\$ 34719	\$ 36197	\$ 37832	\$ 39152	\$ 40448	\$ 40991	\$ 42563	\$ 44196	\$ 45891	\$ 72095	\$ 74860
<i>% of Total Core Revenues</i>	34.41%	34.60%	38.53%	38.32%	38.11%	37.91%	37.00%	37.00%	37.00%	37.00%	37.00%	37.00%
Operating Lease Right-Of-Use Assets	\$ 3562	\$ 3755	\$ 3515	\$ 3695	\$ 3845	\$ 3993	\$ 4146	\$ 4305	\$ 4470	\$ 4642	\$ 7292	\$ 7572
<i>% of Total Core Revenues</i>	3.66%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%	3.74%
Goodwill	\$ 3692	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223	\$ 4223
Intangible Assets	\$ 2486	\$ 2796	\$ 2618	\$ 2751	\$ 2863	\$ 2973	\$ 3087	\$ 3206	\$ 3329	\$ 3456	\$ 5430	\$ 5638
<i>% of Total Core Revenues</i>	2.56%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%
Other Non-Current Assets	\$ 1080	\$ 3275	\$ 3066	\$ 3222	\$ 3353	\$ 3482	\$ 3616	\$ 3755	\$ 3899	\$ 4048	\$ 6360	\$ 6604
<i>% of Total Core Revenues</i>	1.11%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%
<b>Total Core Assets</b>	<b>\$ 60582</b>	<b>\$ 65397</b>	<b>\$ 65625</b>	<b>\$ 68546</b>	<b>\$ 70941</b>	<b>\$ 73299</b>	<b>\$ 74940</b>	<b>\$ 77653</b>	<b>\$ 80469</b>	<b>\$ 83394</b>	<b>\$ 128601</b>	<b>\$ 133372</b>
Accounts Payable	\$ (7523)	\$ (7512)	\$ (7016)	\$ (7631)	\$ (7859)	\$ (8132)	\$ (8427)	\$ (8738)	\$ (9053)	\$ (9297)	\$ (14605)	\$ (15165)
<i>Payable Period</i>	38	37	37	37	37	37	37	37	37	37	37	37
Accrued wages and withholdings	\$ (3819)	\$ (4049)	\$ (3588)	\$ (3920)	\$ (4066)	\$ (4217)	\$ (4371)	\$ (4530)	\$ (4704)	\$ (4884)	\$ (7673)	\$ (7967)
<i>% of Compensation and benefits</i>	8.18%	8.47%	7.81%	7.81%	7.81%	7.81%	7.81%	7.81%	7.81%	7.81%	7.81%	7.81%
Other current liabilities	\$ (1430)	\$ (1472)	\$ (1389)	\$ (1506)	\$ (1553)	\$ (1607)	\$ (1665)	\$ (1726)	\$ (1772)	\$ (1840)	\$ (2891)	\$ (3002)
<i>% of Total Expenses</i>	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%
Core Deferred Income Tax Liabilities	\$ (5595)	\$ (5837)	\$ (5969)	\$ (6208)	\$ (6422)	\$ (6632)	\$ (6703)	\$ (6961)	\$ (7228)	\$ (7506)	\$ (11791)	\$ (12244)
<i>% of Accrued employee compensation, Operating le</i>	(18.90%)	(19.10%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)	(18.36%)
Other Non-Current Liabilities	\$ (3578)	\$ (3513)	\$ (3316)	\$ (3593)	\$ (3705)	\$ (3836)	\$ (3972)	\$ (4120)	\$ (4230)	\$ (4392)	\$ (6900)	\$ (7165)
<i>% of Total Expenses</i>	4.24%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%	4.03%
<b>Total Core Liabilities</b>	<b>\$ (21945)</b>	<b>\$ (22383)</b>	<b>\$ (21278)</b>	<b>\$ (22858)</b>	<b>\$ (23606)</b>	<b>\$ (24424)</b>	<b>\$ (25138)</b>	<b>\$ (26076)</b>	<b>\$ (26887)</b>	<b>\$ (27919)</b>	<b>\$ (43860)</b>	<b>\$ (45543)</b>
<b>Total Core Invested Capital</b>	<b>\$ 38637</b>	<b>\$ 43014</b>	<b>\$ 44347</b>	<b>\$ 45689</b>	<b>\$ 47335</b>	<b>\$ 48875</b>	<b>\$ 49802</b>	<b>\$ 51577</b>	<b>\$ 53582</b>	<b>\$ 55475</b>	<b>\$ 84740</b>	<b>\$ 87829</b>
<b>Non-Core Operations</b>												
Marketable securities	\$ 338	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993	\$ 1993
Assets held for sale	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Investments and Restricted Cash	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Non-core Deferred Income Tax Assets	\$ 2646	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674	\$ 1674
<i>% of Pension and Postretirement Benefits and Insur</i>	(29.09%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)	(28.49%)
<b>Total Non-Core Assets</b>	<b>\$ 2984</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>	<b>\$ 3667</b>
Self-insurance reserves	\$ (1048)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)	\$ (1069)
Accrued group welfare and retirement plan contributi	\$ (1038)	\$ (1076)	\$ (1007)	\$ (1059)	\$ (1102)	\$ (1144)	\$ (1188)	\$ (1234)	\$ (1281)	\$ (1330)	\$ (2090)	\$ (2170)
<i>% of Total Core Revenues</i>	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)	(1.07%)
Liabilities to be disposed of	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Pension and Postretirement Benefit Obligations	\$ (8047)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)	\$ (4807)
<b>Total Non-Core Liabilities</b>	<b>\$ (10133)</b>	<b>\$ (6952)</b>	<b>\$ (6883)</b>	<b>\$ (6935)</b>	<b>\$ (6978)</b>	<b>\$ (7020)</b>	<b>\$ (7064)</b>	<b>\$ (7110)</b>	<b>\$ (7157)</b>	<b>\$ (7206)</b>	<b>\$ (7966)</b>	<b>\$ (8046)</b>
<b>Total Non-Core Invested Capital</b>	<b>\$ (7149)</b>	<b>\$ (3285)</b>	<b>\$ (3216)</b>	<b>\$ (3268)</b>	<b>\$ (3311)</b>	<b>\$ (3353)</b>	<b>\$ (3397)</b>	<b>\$ (3443)</b>	<b>\$ (3490)</b>	<b>\$ (3539)</b>	<b>\$ (4299)</b>	<b>\$ (4379)</b>
<b>Total Invested Capital</b>	<b>\$ 31488</b>	<b>\$ 39729</b>	<b>\$ 41131</b>	<b>\$ 42421</b>	<b>\$ 44025</b>	<b>\$ 45522</b>	<b>\$ 46405</b>	<b>\$ 48134</b>	<b>\$ 50092</b>	<b>\$ 51936</b>	<b>\$ 80442</b>	<b>\$ 83450</b>
<b>Financial Operations</b>												
Excess of Cash	\$ 8309	\$ 3595	\$ 4159	\$ 5793	\$ 7863	\$ 10272	\$ 13476	\$ 15878	\$ 19224	\$ 22631	\$ 52973	\$ 54474
Debt	\$ (21915)	\$ (19662)	\$ (18974)	\$ (20222)	\$ (21825)	\$ (23535)	\$ (25324)	\$ (27132)	\$ (29470)	\$ (31781)	\$ (57342)	\$ (59264)
Lease Liabilities	\$ (3613)	\$ (3859)	\$ (3613)	\$ (3797)	\$ (3951)	\$ (4103)	\$ (4261)	\$ (4424)	\$ (4594)	\$ (4770)	\$ (7494)	\$ (7781)
<i>% of Operating Lease Right-Of-Use Assets</i>	(101.43%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)	(102.77%)
Noncontrolling Interests	\$ (16)	\$ (17)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)	\$ (15)
<b>Net Invested in Financial Activities</b>	<b>\$ (17235)</b>	<b>\$ (19943)</b>	<b>\$ (18443)</b>	<b>\$ (18242)</b>	<b>\$ (17928)</b>	<b>\$ (17381)</b>	<b>\$ (16125)</b>	<b>\$ (15693)</b>	<b>\$ (14855)</b>	<b>\$ (13936)</b>	<b>\$ (11878)</b>	<b>\$ (12588)</b>
<b>Equity</b>	<b>\$ 14253</b>	<b>\$ 19786</b>	<b>\$ 22688</b>	<b>\$ 24179</b>	<b>\$ 26096</b>	<b>\$ 28141</b>	<b>\$ 30280</b>	<b>\$ 32441</b>	<b>\$ 35237</b>	<b>\$ 38001</b>	<b>\$ 68564</b>	<b>\$ 70863</b>
<b>Total Sources of Fund</b>	<b>\$ 31488</b>	<b>\$ 39729</b>	<b>\$ 41131</b>	<b>\$ 42421</b>	<b>\$ 44025</b>	<b>\$ 45522</b>	<b>\$ 46405</b>	<b>\$ 48134</b>	<b>\$ 50092</b>	<b>\$ 51936</b>	<b>\$ 80442</b>	<b>\$ 83450</b>
<b>Transactions with Shareholders</b>	<b>\$ (3686)</b>	<b>\$ (8352)</b>	<b>\$ (8467)</b>	<b>\$ (8244)</b>	<b>\$ (8750)</b>	<b>\$ (9155)</b>	<b>\$ (9563)</b>	<b>\$ (9957)</b>	<b>\$ (10607)</b>	<b>\$ (11014)</b>	<b>\$ (17522)</b>	<b>\$ (18227)</b>
<b>Debt/ Equity</b>	153.76%	99.37%	83.63%	83.63%	83.63%	83.63%	83.63%	83.63%	83.63%	83.63%	83.63%	83.63%
<b>Market cap</b>	\$ 171606	\$ 143562	\$ 138813									
<b>Enterprise value</b>	\$ 188840	\$ 163505	\$ 157787									
<b>D/ EV</b>	11.61%	12.03%	12.03%									

## Forecasted Revenues (Decomposition)

USD (\$) in Millions	2021	2022	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2042F	2043F
<b>U.S. Domestic Package</b>												
<b>Average Daily Package Volume (in thousands):</b>												
Next Day Air	2 093	1 992	1 793	1 856	1 891	1 927	1 962	1 997	2 033	2 070	2 564	2 610
growth	5.33%	(4.83%)	(10.00%)	3.51%	1.93%	1.89%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
Deferred	1 723	1 553	1 242	1 286	1 311	1 335	1 360	1 384	1 409	1 434	1 777	1 809
growth	(3.37%)	(9.87%)	(20.00%)	3.51%	1.93%	1.89%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
Ground	17 646	17 242	16 380	16 707	17 008	17 314	17 626	17 943	18 266	18 595	23 034	23 449
growth	1.58%	(2.29%)	(5.00%)	2.00%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
<b>Total Average Daily Package Volume</b>	<b>21 462</b>	<b>20 787</b>	<b>19 415</b>	<b>19 849</b>	<b>20 210</b>	<b>20 577</b>	<b>20 947</b>	<b>21 324</b>	<b>21 708</b>	<b>22 099</b>	<b>27 375</b>	<b>27 867</b>
growth	1.52%	(3.15%)	(6.60%)	2.24%	1.82%	1.81%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
<b>Average Revenue Per Piece:</b>												
Next Day Air	\$ 18.83	\$ 21.06	\$ 22.12	\$ 23.22	\$ 23.73	\$ 24.21	\$ 24.69	\$ 25.19	\$ 25.69	\$ 26.20	\$ 33.23	\$ 33.90
growth	11.94%	11.87%	5.00%	5.00%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Deferred	\$ 13.36	\$ 15.07	\$ 16.28	\$ 16.76	\$ 17.13	\$ 17.48	\$ 17.82	\$ 18.18	\$ 18.55	\$ 18.92	\$ 23.99	\$ 24.47
growth	7.21%	12.82%	8.00%	3.00%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Ground	\$ 9.92	\$ 10.81	\$ 11.14	\$ 11.47	\$ 11.72	\$ 11.96	\$ 12.20	\$ 12.44	\$ 12.69	\$ 12.94	\$ 16.42	\$ 16.74
growth	11.78%	9.00%	3.00%	3.00%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Total Average Revenue Per Piece</b>	<b>\$ 11.06</b>	<b>\$ 12.11</b>	<b>\$ 12.48</b>	<b>\$ 12.91</b>	<b>\$ 13.20</b>	<b>\$ 13.46</b>	<b>\$ 13.73</b>	<b>\$ 14.01</b>	<b>\$ 14.29</b>	<b>\$ 14.57</b>	<b>\$ 18.48</b>	<b>\$ 18.85</b>
growth	11.50%	9.48%	3.03%	3.47%	2.21%	2.01%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Operating Days in Period</b>	<b>254</b>	<b>255</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>
<b>Revenue (in millions):</b>												
Next Day Air	\$ 10 009	\$ 10 699	\$ 10 081	\$ 10 956	\$ 11 413	\$ 11 861	\$ 12 316	\$ 12 788	\$ 13 279	\$ 13 788	\$ 21 661	\$ 22 492
Deferred	\$ 5 846	\$ 5 968	\$ 5 141	\$ 5 481	\$ 5 710	\$ 5 934	\$ 6 161	\$ 6 398	\$ 6 643	\$ 6 898	\$ 10 837	\$ 11 252
Ground	\$ 44 462	\$ 47 542	\$ 46 383	\$ 48 730	\$ 50 699	\$ 52 643	\$ 54 663	\$ 56 760	\$ 58 937	\$ 61 198	\$ 96 141	\$ 99 829
<b>Total Revenues</b>	<b>\$ 60 317</b>	<b>\$ 64 209</b>	<b>\$ 61 605</b>	<b>\$ 65 167</b>	<b>\$ 67 821</b>	<b>\$ 70 438</b>	<b>\$ 73 140</b>	<b>\$ 75 946</b>	<b>\$ 78 859</b>	<b>\$ 81 884</b>	<b>\$ 128 639</b>	<b>\$ 133 574</b>
growth	12.74%	6.45%	(4.06%)	5.78%	4.07%	3.86%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
<b>International Package</b>												
<b>Average Daily Package Volume (in thousands):</b>												
Domestic	1 988	1 759	1 618	1 634	1 664	1 694	1 724	1 755	1 787	1 819	2 253	2 294
growth	6.71%	(11.52%)	(8.00%)	1.00%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
Export	1 800	1 745	1 710	1 761	1 793	1 825	1 858	1 892	1 926	1 960	2 428	2 472
growth	7.66%	(3.06%)	(2.00%)	3.00%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
<b>Total Average Daily Package Volume</b>	<b>3 788</b>	<b>3 504</b>	<b>3 328</b>	<b>3 396</b>	<b>3 457</b>	<b>3 519</b>	<b>3 583</b>	<b>3 647</b>	<b>3 713</b>	<b>3 780</b>	<b>4 682</b>	<b>4 766</b>
growth	7.16%	(7.50%)	(5.01%)	2.03%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
<b>Average Revenue Per Piece:</b>												
Domestic	\$ 7.31	\$ 7.46	\$ 7.68	\$ 7.88	\$ 8.05	\$ 8.21	\$ 8.37	\$ 8.54	\$ 8.71	\$ 8.89	\$ 11.27	\$ 11.50
growth	9.86%	2.08%	3.00%	2.50%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Export	\$ 32.83	\$ 34.48	\$ 33.44	\$ 34.11	\$ 34.86	\$ 35.56	\$ 36.27	\$ 36.99	\$ 37.73	\$ 38.49	\$ 48.81	\$ 49.79
growth	15.14%	5.00%	(3.00%)	2.00%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Total Average Revenue Per Piece</b>	<b>\$ 19.44</b>	<b>\$ 20.91</b>	<b>\$ 20.92</b>	<b>\$ 21.48</b>	<b>\$ 21.96</b>	<b>\$ 22.40</b>	<b>\$ 22.84</b>	<b>\$ 23.30</b>	<b>\$ 23.77</b>	<b>\$ 24.24</b>	<b>\$ 30.74</b>	<b>\$ 31.36</b>
growth	14.38%	7.59%	0.02%	2.70%	2.20%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Operating Days in Period</b>	<b>254</b>	<b>255</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>	<b>254</b>
<b>Revenue (in millions):</b>												
Domestic	\$ 3 690	\$ 3 346	\$ 3 161	\$ 3 273	\$ 3 405	\$ 3 536	\$ 3 671	\$ 3 812	\$ 3 958	\$ 4 110	\$ 6 457	\$ 6 705
Export	\$ 15 012	\$ 15 341	\$ 14 540	\$ 15 276	\$ 15 893	\$ 16 503	\$ 17 136	\$ 17 793	\$ 18 476	\$ 19 184	\$ 30 139	\$ 31 295
Cargo & Other	\$ 839	\$ 1 011	\$ 910	\$ 864	\$ 899	\$ 934	\$ 970	\$ 1 007	\$ 1 045	\$ 1 086	\$ 1 705	\$ 1 771
growth	34.03%	20.50%	(10.00%)	(5.00%)	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
<b>Total Revenues</b>	<b>\$ 19 541</b>	<b>\$ 19 698</b>	<b>\$ 18 612</b>	<b>\$ 19 413</b>	<b>\$ 20 197</b>	<b>\$ 20 972</b>	<b>\$ 21 777</b>	<b>\$ 22 612</b>	<b>\$ 23 479</b>	<b>\$ 24 380</b>	<b>\$ 38 301</b>	<b>\$ 39 770</b>
growth	22.55%	0.80%	(5.52%)	4.31%	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
<b>Supply Chain Solutions</b>												
<b>Revenue (in millions):</b>												
Forwarding	\$ 9 872	\$ 8 943	\$ 6 260	\$ 6 385	\$ 6 643	\$ 6 898	\$ 7 163	\$ 7 437	\$ 7 723	\$ 8 019	\$ 12 598	\$ 13 081
growth	41.53%	(9.41%)	(30.00%)	2.00%	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
Logistics	\$ 4 767	\$ 5 351	\$ 5 644	\$ 5 872	\$ 6 109	\$ 6 343	\$ 6 586	\$ 6 839	\$ 7 101	\$ 7 374	\$ 11 584	\$ 12 029
growth	17.04%	12.25%	5.47%	4.04%	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
Freight	\$ 1 064	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
growth	(66.21%)	(100.00%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	\$ 1 726	\$ 2 137	\$ 1 816	\$ 1 890	\$ 1 966	\$ 2 042	\$ 2 120	\$ 2 201	\$ 2 286	\$ 2 373	\$ 3 728	\$ 3 871
growth	74.87%	23.81%	(15.00%)	4.04%	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
<b>Total Revenues</b>	<b>\$ 17 429</b>	<b>\$ 16 431</b>	<b>\$ 13 720</b>	<b>\$ 14 147</b>	<b>\$ 14 718</b>	<b>\$ 15 283</b>	<b>\$ 15 869</b>	<b>\$ 16 478</b>	<b>\$ 17 110</b>	<b>\$ 17 766</b>	<b>\$ 27 910</b>	<b>\$ 28 981</b>
growth	14.79%	(5.73%)	(16.50%)	3.11%	4.04%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%
<b>Total Core Revenues</b>	<b>\$ 97 287</b>	<b>\$ 100 338</b>	<b>\$ 93 937</b>	<b>\$ 98 727</b>	<b>\$ 102 736</b>	<b>\$ 106 693</b>	<b>\$ 110 786</b>	<b>\$ 115 035</b>	<b>\$ 119 448</b>	<b>\$ 124 030</b>	<b>\$ 194 851</b>	<b>\$ 202 325</b>
growth	14.96%	3.14%	(6.38%)	5.10%	4.06%	3.85%	3.84%	3.84%	3.84%	3.84%	3.84%	3.84%

## Forecasted Free Cash Flows

USD (\$) \$ in Millions	2021	2022	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2042F	2043F
<b>Core Operations</b>												
Core Result	\$ 9869	\$ 10 173	\$ 9 105	\$ 7 450	\$ 8 417	\$ 8 992	\$ 9 542	\$ 10 006	\$ 11 339	\$ 11 777	\$ 18 569	\$ 19 286
Depreciation and amortization	\$ 2 953	\$ 3 188	\$ 3 298	\$ 3 449	\$ 3 570	\$ 3 690	\$ 3 746	\$ 3 889	\$ 4 039	\$ 4 194	\$ 6 588	\$ 6 841
<b>Gross Cash Flows</b>	<b>\$ 12 822</b>	<b>\$ 13 361</b>	<b>\$ 12 404</b>	<b>\$ 10 899</b>	<b>\$ 11 988</b>	<b>\$ 12 682</b>	<b>\$ 13 288</b>	<b>\$ 13 895</b>	<b>\$ 15 378</b>	<b>\$ 15 970</b>	<b>\$ 25 157</b>	<b>\$ 26 127</b>
- Δ Working capital	\$ (976)	\$ (114)	\$ 232	\$ (91)	\$ (364)	\$ (311)	\$ (309)	\$ (316)	\$ (437)	\$ (332)	\$ (523)	\$ (543)
- Capex	\$ (4 174)	\$ (4 432)	\$ (4 776)	\$ (5 085)	\$ (4 890)	\$ (4 986)	\$ (4 289)	\$ (5 462)	\$ (5 671)	\$ (5 889)	\$ (9 251)	\$ (9 606)
- Δ Intangible Assets	\$ (212)	\$ (310)	\$ 178	\$ (133)	\$ (112)	\$ (110)	\$ (114)	\$ (118)	\$ (123)	\$ (128)	\$ (201)	\$ (208)
- Δ Operating Lease Right-Of-Use Assets	\$ (489)	\$ (193)	\$ 240	\$ (179)	\$ (150)	\$ (148)	\$ (153)	\$ (159)	\$ (165)	\$ (171)	\$ (269)	\$ (280)
- Δ Goodwill	\$ (325)	\$ (531)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
+ Δ Accrued wages and withholdings	\$ 250	\$ 230	\$ (461)	\$ 332	\$ 147	\$ 151	\$ 154	\$ 158	\$ 174	\$ 180	\$ 283	\$ 294
+ Δ Core Deferred Income Tax Liabilities	\$ 685	\$ 242	\$ 132	\$ 239	\$ 215	\$ 210	\$ 71	\$ 259	\$ 267	\$ 277	\$ 436	\$ 452
- Δ Other assets, net of liabilities	\$ (544)	\$ (2 457)	\$ (177)	\$ 128	\$ (63)	\$ (35)	\$ (33)	\$ (26)	\$ (89)	\$ (24)	\$ (38)	\$ (39)
<b>Core Free Cash Flow</b>	<b>\$ 7 037</b>	<b>\$ 5 796</b>	<b>\$ 7 772</b>	<b>\$ 6 109</b>	<b>\$ 6 771</b>	<b>\$ 7 453</b>	<b>\$ 8 615</b>	<b>\$ 8 231</b>	<b>\$ 9 334</b>	<b>\$ 9 884</b>	<b>\$ 15 594</b>	<b>\$ 16 197</b>
<b>Non-Core Operations</b>												
Investment income (expense) and other	\$ 4 479	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435	\$ 2 435
Statutory Taxes	\$ (941)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)	\$ (511)
Tax Adjustments	\$ 79	\$ 73	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48	\$ 48
Other comprehensive income	\$ 3 835	\$ 1 729	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861	\$ 861
- Δ Marketable securities	\$ 68	\$ (1 655)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
- Δ Assets held for sale	\$ 1 197	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
- Δ Investments and Restricted Cash	\$ 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
- Δ Non-core Deferred Income Tax Assets	\$ 2 303	\$ 972	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
+ Δ Self-insurance reserves	\$ (37)	\$ 21	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
+ Δ Accrued group welfare and retirement plan contr	\$ 111	\$ 38	\$ (69)	\$ 51	\$ 43	\$ 42	\$ 44	\$ 46	\$ 47	\$ 49	\$ 77	\$ 80
+ Δ Liabilities to be disposed of	\$ (347)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
+ Δ Pension and Postretirement Benefit Obligations	\$ (7 770)	\$ (3 240)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>Non-Core Free Cash Flow</b>	<b>\$ 3 002</b>	<b>\$ (138)</b>	<b>\$ 2 764</b>	<b>\$ 2 884</b>	<b>\$ 2 876</b>	<b>\$ 2 875</b>	<b>\$ 2 877</b>	<b>\$ 2 878</b>	<b>\$ 2 880</b>	<b>\$ 2 882</b>	<b>\$ 2 910</b>	<b>\$ 2 913</b>
<b>Free Cash Flow</b>	<b>\$ 10 039</b>	<b>\$ 5 658</b>	<b>\$ 10 536</b>	<b>\$ 8 993</b>	<b>\$ 9 646</b>	<b>\$ 10 328</b>	<b>\$ 11 492</b>	<b>\$ 11 110</b>	<b>\$ 12 214</b>	<b>\$ 12 766</b>	<b>\$ 18 505</b>	<b>\$ 19 110</b>
<b>Financial Operations</b>												
Interest expense, debt	\$ (694)	\$ (704)	\$ (632)	\$ (610)	\$ (650)	\$ (701)	\$ (756)	\$ (814)	\$ (872)	\$ (947)	\$ (1 779)	\$ (1 842)
Interest expense, lease liabilities	\$ (60)	\$ (84)	\$ (90)	\$ (84)	\$ (88)	\$ (92)	\$ (95)	\$ (99)	\$ (103)	\$ (107)	\$ (167)	\$ (174)
Statutory Taxes	\$ 158	\$ 165	\$ 151	\$ 146	\$ 155	\$ 166	\$ 179	\$ 192	\$ 205	\$ 221	\$ 409	\$ 423
- Δ Debt and Lease liabilities	\$ (2 226)	\$ (2 007)	\$ (934)	\$ 1 432	\$ 1 758	\$ 1 862	\$ 1 947	\$ 1 971	\$ 2 508	\$ 2 487	\$ 2 235	\$ 2 210
- Δ Excess of Cash	\$ (4 092)	\$ 4 714	\$ (564)	\$ (1 633)	\$ (2 071)	\$ (2 409)	\$ (3 204)	\$ (2 403)	\$ (3 345)	\$ (3 407)	\$ (1 680)	\$ (1 501)
<b>Cash flow to debt and debt equivalents</b>	<b>\$ (6 914)</b>	<b>\$ 2 085</b>	<b>\$ (2 068)</b>	<b>\$ (749)</b>	<b>\$ (896)</b>	<b>\$ (1 173)</b>	<b>\$ (1 929)</b>	<b>\$ (1 153)</b>	<b>\$ (1 607)</b>	<b>\$ (1 752)</b>	<b>\$ (982)</b>	<b>\$ (883)</b>
Net Changes in Equity	\$ (3 129)	\$ (7 744)	\$ (8 467)	\$ (8 244)	\$ (8 750)	\$ (9 155)	\$ (9 563)	\$ (9 957)	\$ (10 607)	\$ (11 014)	\$ (17 522)	\$ (18 227)
- Δ Noncontrolling Interests	\$ 4	\$ 1	\$ (2)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>Cash flow to equity and equity equivalents</b>	<b>\$ (3 125)</b>	<b>\$ (7 743)</b>	<b>\$ (8 468)</b>	<b>\$ (8 244)</b>	<b>\$ (8 750)</b>	<b>\$ (9 155)</b>	<b>\$ (9 563)</b>	<b>\$ (9 957)</b>	<b>\$ (10 607)</b>	<b>\$ (11 014)</b>	<b>\$ (17 522)</b>	<b>\$ (18 227)</b>
<b>Financial Cash Flows</b>	<b>\$ (10 039)</b>	<b>\$ (5 658)</b>	<b>\$ (10 536)</b>	<b>\$ (8 993)</b>	<b>\$ (9 646)</b>	<b>\$ (10 328)</b>	<b>\$ (11 492)</b>	<b>\$ (11 110)</b>	<b>\$ (12 214)</b>	<b>\$ (12 766)</b>	<b>\$ (18 505)</b>	<b>\$ (19 110)</b>

## Forecasted Net PP&E and Capital Expenditures

USD (\$) \$ in Millions	2021	2022	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2042F	2043F
Vehicles	\$ 5 174	\$ 5 472	\$ 6 430	\$ 6 737	\$ 7 056	\$ 7 361						
% of Ground, Domestic, Export, Cargo & Other, Logi	19.87%	20.12%	25.00%	25.00%	25.00%	25.00%						
Aircraft	\$ 11 349	\$ 11 635	\$ 11 872	\$ 12 289	\$ 12 525	\$ 12 762						
Total Pounds (thousand)	39 202	39 936	40 748	42 178	42 990	43 802						
Aircraft fleet per total thousand pounds of cargo	\$ 0.29	\$ 0.29	\$ 0.29	\$ 0.29	\$ 0.29	\$ 0.29						
Land	\$ 1 105	\$ 1 102	\$ 1 158	\$ 1 217	\$ 1 267	\$ 1 315						
% of Total Core Revenues	1.14%	1.10%	1.23%	1.23%	1.23%	1.23%						
Buildings	\$ 2 997	\$ 3 106	\$ 3 288	\$ 3 455	\$ 3 596	\$ 3 734						
% of Total Core Revenues	3.08%	3.10%	3.50%	3.50%	3.50%	3.50%						
Building and leasehold improvements	\$ 2 588	\$ 2 609	\$ 2 737	\$ 2 877	\$ 2 993	\$ 3 109						
% of Total Core Revenues	2.66%	2.60%	2.91%	2.91%	2.91%	2.91%						
Plant equipment	\$ 8 084	\$ 8 313	\$ 8 254	\$ 8 675	\$ 9 027	\$ 9 375						
% of Total Core Revenues	8.31%	8.28%	8.79%	8.79%	8.79%	8.79%						
Technology equipment	\$ 1 445	\$ 1 241	\$ 1 375	\$ 1 445	\$ 1 504	\$ 1 561						
% of Total Core Revenues	1.49%	1.24%	1.46%	1.46%	1.46%	1.46%						
Construction-in-progress	\$ 732	\$ 1 240	\$ 1 083	\$ 1 138	\$ 1 185	\$ 1 230						
% of Total Core Revenues	0.75%	1.24%	1.15%	1.15%	1.15%	1.15%						
<b>Net PP&amp;E</b>	<b>\$ 33 475</b>	<b>\$ 34 719</b>	<b>\$ 36 197</b>	<b>\$ 37 832</b>	<b>\$ 39 152</b>	<b>\$ 40 448</b>	<b>\$ 40 991</b>	<b>\$ 42 563</b>	<b>\$ 44 196</b>	<b>\$ 45 891</b>	<b>\$ 72 095</b>	<b>\$ 74 860</b>
% of Total Core Revenues	34.41%	34.60%	38.53%	38.32%	38.11%	37.91%	37.00%	37.00%	37.00%	37.00%	37.00%	37.00%
Depreciation and amortization	\$ (2 953)	\$ (3 188)	\$ (3 298)	\$ (3 449)	\$ (3 570)	\$ (3 690)	\$ (3 746)	\$ (3 889)	\$ (4 039)	\$ (4 194)	\$ (6 588)	\$ (6 841)
% of PP&E and Intangible Assets	(8.21%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)	(8.50%)
<b>Net Capex</b>	<b>\$ (4 174)</b>	<b>\$ (4 432)</b>	<b>\$ (4 776)</b>	<b>\$ (5 085)</b>	<b>\$ (4 890)</b>	<b>\$ (4 986)</b>	<b>\$ (4 289)</b>	<b>\$ (5 462)</b>	<b>\$ (5 671)</b>	<b>\$ (5 889)</b>	<b>\$ (9 251)</b>	<b>\$ (9 606)</b>
% of Total Core Revenues	(4.29%)	(4.42%)	(5.08%)	(5.15%)	(4.76%)	(4.67%)	(3.87%)	(4.75%)	(4.75%)	(4.75%)	(4.75%)	(4.75%)

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<b>Buy</b>	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
<b>Hold</b>	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
<b>Sell</b>	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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