ROLAND GEORGE INVESTMENTS PROGRAM

JACK HENRY & ASSOCIATES

ANALYST: CHRISTOPHER KENT

November 3, 2021

Where tradition meets technology[sm]

jack henry & ASSOCIATES INC.

JACK HENRY & ASSOCIATES (NASDAQ: JKHY)

SECTOR (GICS): IT SERVICES
INDUSTRY: INFORMATION TECHNOLOGY
RECOMMENDATION: **BUY** (11% UPSIDE)

STETSON UNIVERSITY

RECOMMENDATION - BUY	
Date	11/3/21
Current Price	$155
Target Price	$172
Upside	11%
Ticker	JKHY
Sector	IT Services
Industry	IT
Stock Exchange	NASDAQ

Market Cap ($M)	$11,717.8
EPS (2021)	$4.12
P/E	38.98
Shares Outstanding (M)	74
Consensus Target Price	$176

Figure 1: JKHY Office Locations

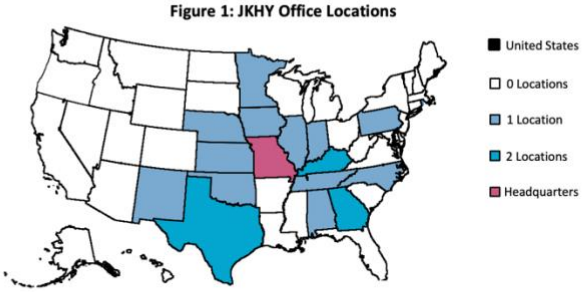


Figure 2: Reportable Revenue Segments

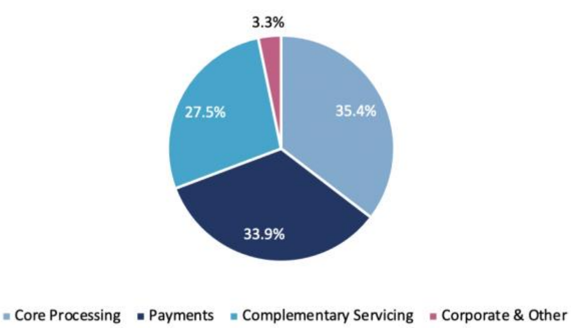
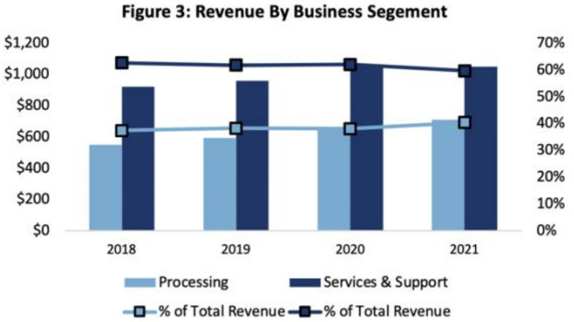


Figure 3: Revenue By Business Segement



INVESTMENT THESIS

Jack Henry & Associates (JKHY) is placed with a "**BUY**" recommendation given a 12-month price target of $172, representing 11% upside given the current stock price of $155 on November 3, 2021. The target price is formulated on a DCF and relative valuation analysis and supported through sensitivity analysis and a Monte Carlo simulation. JKHY is recommended predicated on the increased demand for cloud computing solutions, transformations towards digital transactions and mobile banking, and increased levels of consumer spending.

A need for public- and private-cloud computing: Due to its scalability and elimination of upfront costs, Software-as-a-Service (SaaS) has grown dramatically over the past decade. With the onset of the coronavirus pandemic, businesses have shifted operations online, spurring demand for cloud-computing products. Resulting from the intensity of competition, firms with the ability to make large-scale software purchases are granted with the opportunity to be the forefront of the industry.

Movements into mobile banking: Movements towards electronic transactions have significantly evolved consumer spending. Increased E-Commerce sales strongly correlate with mobile payments, ultimately boosting demand for mobile banking solutions. JKHY's customers represent a significant portion of U.S. financial institutions and corporate entities. Given their market share, JKHY is positioned to capitalize on the macroeconomic shifts.

Undervalued in a high growth industry: Through sensitivity analysis, JKHY signals higher efficiency and profitability measures compared to competitors. A Monte Carlo simulation with 50k iterations assigns a 60% probability of capital appreciation greater than 10% YoY. Given the high growth of the IT industry, JKHY appears to be relatively undervalued.

COMPANY DESCRIPTION

Business Overview:

JKHY's strong performance is attributable to its market-leading position in data and transaction processors and solutions, servicing over 1,000 financial institutions and 700 credit unions in the United States. JKHY's strength is driven by the online transformation of businesses, efficiencies in processing solutions, and continued investment in digital offerings. Management's disciplined approach towards strategic acquisitions and cross-selling complementary products allow for product line optimization and expansion into emerging markets within the financial services industry.

Business Model:

JKHY provides core technology and information processing solutions for financial institutions and corporate entities through three primary brands: Jack Henry Banking, Symitar, and ProfitStars. Each brand consists of four reportable segments, including core processing, payments, complementary servicing, and corporate and other. They are domiciled and conduct virtually all operations in the United States, in which 20.2% of all U.S. banks and 13.5% of all U.S. credit unions are representative customers. JKHY's primary competitive advantage, core processing solutions, represents the largest proportion of total revenue for the company (Figure 2). JKHY generates revenue through two main channels: services and support, and processing.

Figure 4: Overall Industry Revenue

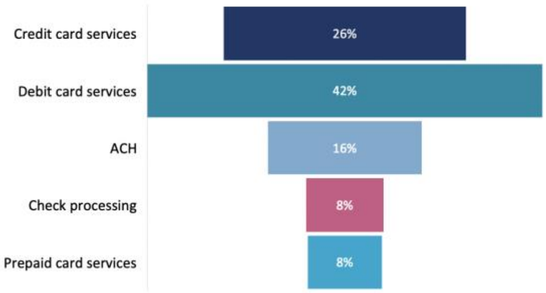


Figure 5: JKHY M&A Activity

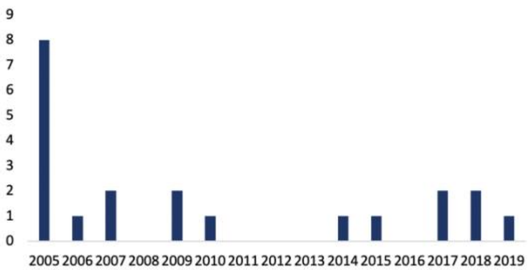


Figure 6: Public Cloud End-User Worldwide Spending ($B)

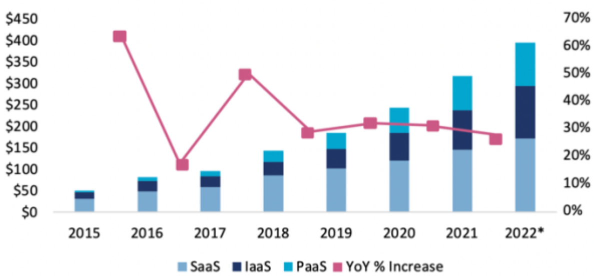


Figure 7: Debit & Credit Card Usage (M)

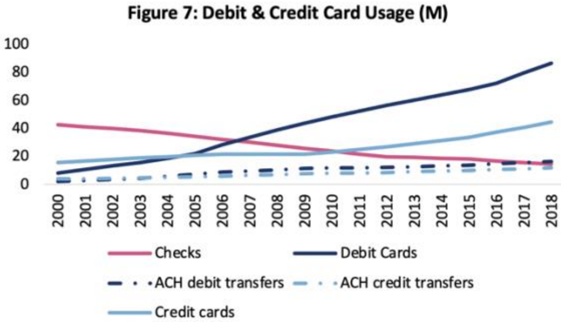
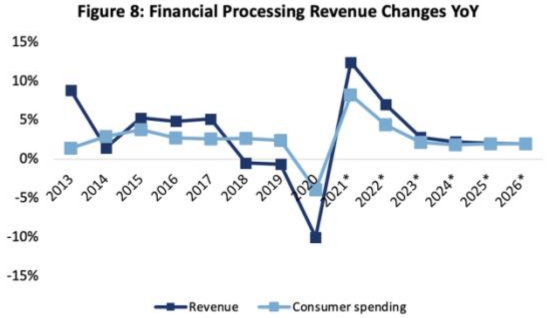


Figure 8: Financial Processing Revenue Changes YoY



Services and support: JKHY generates revenue from: 1. Private cloud core and complementary software solutions, such as “SilverLake,” “CIF 20/20,” “Core Director,” and “Episys,” which are designed for deposit, loan, and general ledger transactions, and to maintain centralized customer information; 2. Software licensing, in which on-premise solutions and recurring electronic payment contracts are paid in advance for the entire fiscal year and extend to seven years, respectively; 3. Professional services, including implementation and training in connection with software and hardware systems, data conversion, and project management; 4. On-premise hardware sales, completed through remarketing agreements with IBM, Lenovo, Dell, Canon, and others.

Processing: JKHY also generated revenue through 1. Remittance transactions, such as payment processing, remote capture, and ACH transactions; 2. Card transactions, such as card transaction processing; 3. Digital transactions, including mobile processing fees.

Company Strategy:

Strong growth through acquisitions: JKHY’s corporate growth strategy involves generating organic revenue and earnings growth augmented by strategic acquisitions. Given the company’s longstanding penetration into domestic markets, acquisition activity has slowed (Figure 5), as the company has completed three acquisitions in the last three years: DebtFolio, Inc., BOLTS Technologies, Inc., and Agletics, Inc. JKHY maintains a strong customer retention rate by cross-selling complementary products and services. R&D, which has stabilized YoY, is allocated towards cloud computing technology, intending to develop new software solutions and enhance existing products. JKHY believes investing in global digitalization will propel them above market returns.

MACROECONOMIC ANALYSIS

Demand Drivers:

JKHY is expected strong industry growth propelled by the transformation towards digitalization and increased mobile banking usage.

Increased appetite for cloud computing: The shift to digital business has necessitated the expansion of public and private cloud-based computing. Worldwide end-user spending for public cloud services increased at a 21.3% CAGR 2017-2020 (Figure 6), primarily due to the adoption of multi-cloud environments, automation processing, and wireless communications. Cloud technology provides scalability, flexibility, and accessibility for businesses to store data. Cloud-based applications, such as Software-as-a-Service (SaaS), serve as a main catalyst for the adoption of digital innovation. Due to stabilized cash flows compared to traditional develop-and-release formats, SaaS’ market size increased at a 19.7% CAGR 2017-2020, and is projected to reach $150B in 2022 (Figure 6). Additionally, SaaS spending represents 60% of total cloud spending, which has expanded at a 24.5% CAGR 2015-2021. The multi-tenant environment will benefit companies with the ability to make large-scale purchases for new software innovations.

Heightened usage for digital wallets: The integration of electronic payment solutions has proliferated the expansion of the fintech industry and mobile banking. Online retail and E-Commerce sales are the main driver of consumer spending. Between 2000-2018, credit and debit card transactions have increased at an 8.9% and 7.4% CAGR, respectively, along with decreases in cash and check payments (Figure 7). E-commerce sales strongly correlate with electronic transaction volume, leading to increased demand for electronic payment processing. Additionally, larger consumer spending due to recent decreases in the unemployment rate have positively benefited the financial processing industry (Figure 8). Increases in

Figure 9: FDIC Banks & Value of Credit ($B)

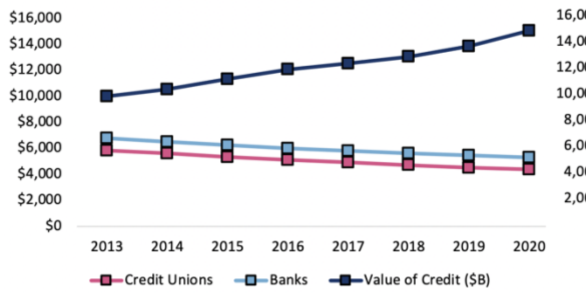


Figure 10: ^TNX

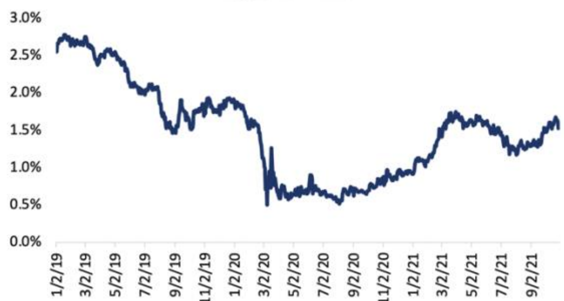


Figure 11: IT Cloud Services Revenue ($B)

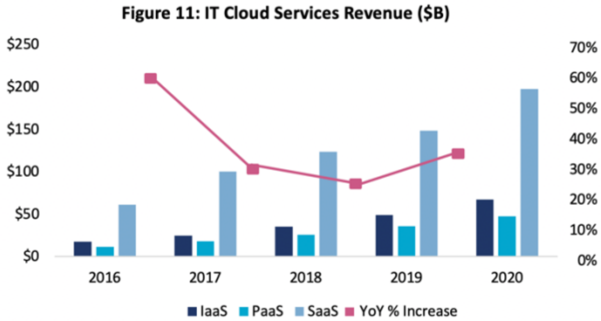


Figure 12: US Digital Banking Users By Age (%)

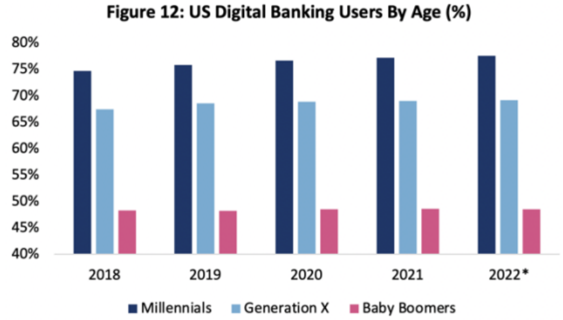
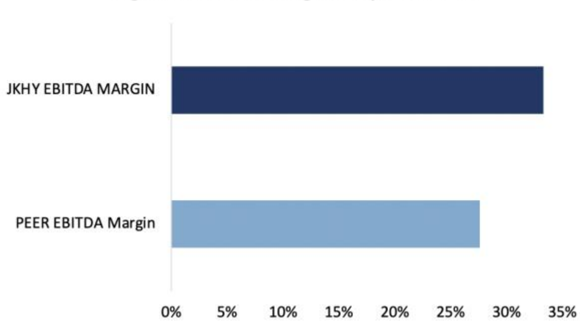


Figure 13: EBITDA Margin Comparison TTM



consumer spending is likely to decline from 2021 but sustain above pre-pandemic levels. Furthermore, increased efficiencies from digital wallets have intensified the speed-of-service customers expect, resulting in stronger competition. Out of mobile peer-to-peer (P2P) app, e-commerce, and proximity digital payments, P2P apps account for the most volume ($1T) and are projected to reach 148 million users by 2022. Industry growth is reflected through increases of credit and debit transactions, consumer spending, and digital app usage.

Supply Drivers:

Reduction of commercial banks and corporate entities*:* Merger and acquisition activities have reduced the overall proportion of FDIC-insured commercial banks and credit unions by 19% and 15% respectively between 2015 and year-end 2020 (Figure 9). This limits JKHY's ability to reach new customers. However, aggregate assets increased at 7% and 9% CAGR's for commercial banks and credit unions, respectively, offsetting the reduction of institutions and entities. Reflected in the increased value of credit of commercial banks (Figure 9), asset growth trends are projected to continue.

An increasingly low interest rate environment: Long-term Treasury and bond yields have fallen considerably since the onset of the coronavirus pandemic. Although the 10-year Treasury yield has increased to 1.56% from an all-time low of .49% (Figure 10), it sits beneath the historic average. This has resulted with an increase in borrowing and consumer spending. Additionally, the FED funds rate has maintained its target rate between 0-.25%. Short- and long-term interest rates are projected to maintain a low environment given the current quantitative easing measures.

FINANCIAL ANALYSIS

Revenue:

Forecasting revenues over a 12-month period has produced an 8% CAGR. Since 2017, JKHY has been able to increase revenue 1.53% QoQ. JKHY's revenue, driven by four primary segments and the two components of each segment, services and support and processing, were projected individually.

Increased demand for private- and public-cloud solutions: Services and support revenues are determined from cloud-computing SaaS subscriptions, licensing fees, and hardware sales. Between 2016-2020, SaaS represents the largest revenue segment for public cloud services (Figure 11), growing at a 26.5% CAGR. SaaS industry growth as well as a top-down GDP approach were used as proxies for JKHY's 12-month revenue estimate. Higher levels of inflation, real GDP, and strong demand for private- and public-cloud solutions are anticipated to continue in the 12-month forecast, justifying the 50bps premium for 22Q1-22Q2. However, due to transitory effects of inflation and reductions in consumer spending, a smaller 25bps premium for 22Q3-22Q4 is justified.

Digital payment trends propel forward*:* Processing revenues are determined from payment processing fees, remote capture, ACH transactions, and digital payments. Mobile banking usage, which has increased across each generation in the U.S. (Figure 12) and GDP were used as proxies for revenue growth. JKHY has capitalized on the growing popularity of electronic payment methods, resulting in a 9% CAGR regarding processing revenues between 2018-2021. With shifts to electronic payments and heightened consumer spending, a 75bps premium is justified.

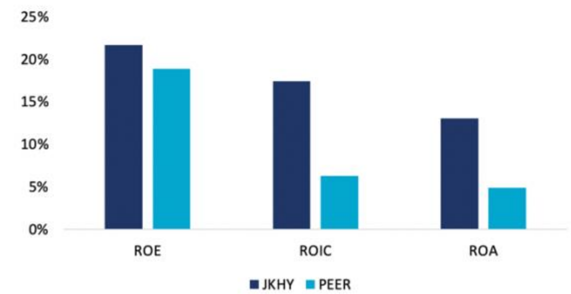
Margin Expansions & Cost Control:

Returning to a normal business environment: JKHY is projected to expand profitability margins despite a thinning margin environment from increased competition and lack of consumer spending due to the coronavirus pandemic. JKHY's operating and profit margin are projected to increase 1.6% and 1.3% YoY, respectively. Additionally, the company's EBITDA margin is 21% higher than its peer comparison in the trailing twelve months (Figure 13), signaling stabilization of earnings during weak economic conditions. Despite compressed margins due to the coronavirus pandemic, JKHY is projected to increase its EBITDA margin to pre-pandemic levels of 34%. Furthermore, JKHY's nominal increase in COGS is 5.3% YoY 2022, slightly below its five-year historic increase of 6.7%. This is primarily a result of economies of scale corresponding to their card processing platform and lower hardware costs corresponding with decreased hardware revenue.

Shareholders:

Benefiting shareholders with high earnings and dividends: Historically, JKHY has been able to obtain higher profitability than its competitors. In the trailing 12 months, JKHY outpaced its competitors with an ROA of 13% vs. 4.9%, ROE of 22% vs. 19%, and ROIC of 17.4% vs. 6.3% (Figure 14). JKHY is projected to continue strong performance with ROA and ROE margins increasing 15bps and 61bps YoY, respectively. This will translate into higher returns for stockholders, increasing EPS at a 19.8% CAGR to $4.93. Given the maturity of the company, JKHY is expected to pass earnings to shareholders through dividends with a projected payout ratio of 39% in 2022.

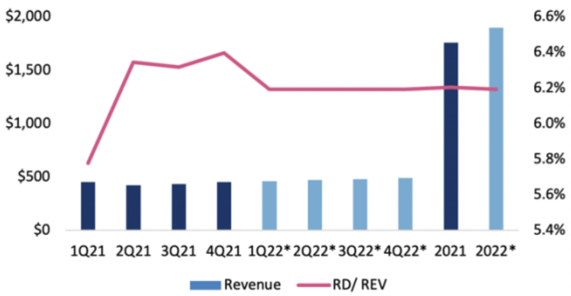
Figure 14: Profitability Ratios TTM



Research and Development:

R&D Matches Technological Innovation: Historically strong margins and high returns have enabled JKHY to allocate spending towards research and development. Nominal R&D expenditures are anticipated to increase 7.8% YoY in 2022 in response to the increased revenue (Figure 15). The spending is dedicated towards new software solutions and enhancing existing products to optimize efficiency, as SaaS and mobile banking are projected to continue a high growth phase.

Figure 15: JKHY Revenue and R&D



VALUATION

DCF Valuation:

JKHY's DCF valuation utilizes the Free Cash Flow to the Firm (FCFF) to arrive at an intrinsic value of the company. This model allows us to account for individual growth as well as the overall industry potential. JKHY's intrinsic value is projected at $171, implying 11% upside.

Estimated WACC: JKHY's WACC is estimated at 7.6%. The cost of equity is calculated with the CAPM formula, reflecting JKHY's equity risk premium, 5-year weekly adjusted beta, and the risk-free rate. The cost of debt was calculated using the corporate tax rate, pre-tax cost of debt, and the debt adjustment factor. We assumed the corporate tax rate of 21%. The forecasted 2022 D/E ratio was used through projected YoY estimated debt levels.

WACC Calculation	
Risk-free Rate	1.6%
Adjusted Beta	0.88
Exp. Risk Premium	7.7%
Cost of Equity	8.3%
Cost of Debt	1.7%
Tax Rate	21.0%
D/E Ratio	12.2%
WACC	7.6%
Terminal Growth	2.5%

Strong terminal growth boosts JKHY's performance: Given the current macroeconomic trends, JKHY is expected to stabilize at a 2.5% terminal growth rate. This projection was based on heightened real GDP growth, stronger demand for public- and private-cloud solutions, and the global transformation to mobile transactions. A higher terminal growth will result in continued strong performance and price appreciation.

Sensitivity Analysis:

JKHY's FCFF analysis was further analyzed through a sensitivity analysis measuring changes in WACC, terminal growth rates, and company revenue to determine the effect on the recommendation. It is apparent that a significant decline in the terminal growth rate and revenue may influence the analysis (Figure 16). However, it is projected that negative events as such are unlikely to occur. Assuming more favorable WACC, terminal growth, and revenue inputs, high potential upside is

Figure 16: JKHY Sensitivity Analysis

		Terminal Growth				
		2.50%	3%	3.50%	4%	4.50%
WACC	6.50%	$171	$195	$226	$270	$337
	7%	$153	$172	$196	$227	$272
	7.55%	$138	$153	$171	$194	$225
	8%	$128	$140	$155	$174	$197
	8.50%	$118	$128	$141	$156	$174

10%+ Decrease · 0-10% Increase · 10-20% Increase · 20-30%+ Increase · 30%+ Increase

Figure 16 Continued: JKHY Sensitivity Analysis

		Total Revenue ($M)				
		$1,709	$1,804	$1,899	$1,994	$2,089
WACC	6.50%	$185	$203	$226	$237	$255
	7%	$160	$175	$196	$205	$220
	7.55%	$140	$153	$171	$179	$192
	8%	$127	$139	$155	$162	$174
	8.50%	$115	$126	$141	$147	$158

10%+ Decrease · 0-10% Increase · 10-20% Increase · 20-30%+ Increase · 30%+ Increase

Figure 17: JKHY Relative Valuation

Figure 18: Monte Carlo Simulation

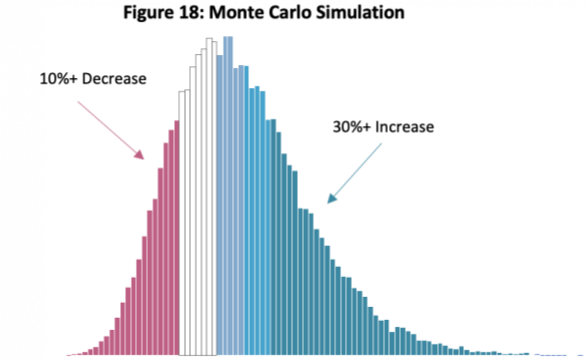
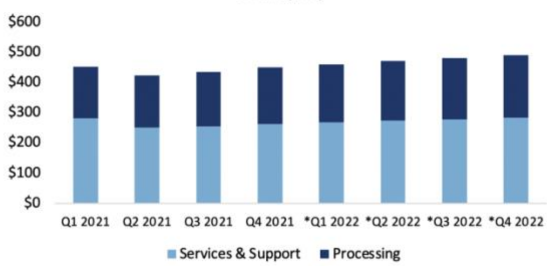


Figure 19: JKHY QoQ Revenue With Proposed Market Share ($M)



apparent. Given the macroeconomic state, with projected increases in consumer spending, and continued trends towards digitalization, JKHY's terminal growth and revenue are likely to increase, not decrease.

Relative Valuation:

An undervalued company in a high growth industry*:* To support JKHY's DCF estimates, a multiples valuation was conducted comparing JKHY to its competitors. The peer group was established based on based on industry affiliation and business characteristics. As a result of strong earnings and industry growth, it is anticipated that JKHY will trade closer to the multiples of their peer group in 2022. Consequently, a 75bps premium for EV/EBITDA estimates are justified. We obtained an implied target price of $175, representing 13% upside YoY. Although JKHY is compared based on EV/EBITDA, due to the low levels of capital intensity, JKHY is also compared on EV/Sales, P/E, and P/B (Figure 17). The analysis indicates that JKHY is relatively undervalued in a high growth industry.

Scenario Analysis:

A Monte Carlo simulation with 50k iterations was performed to forecast JKHY's 12-month price movements (Figure 18). Supporting the previous DCF and relative valuation models, the simulation implies a 60% probability for 12-month prices to have at least 10% upside. The Monte Carlo simulation also implies a 15% probability of outcomes between 0-10% upside. However, the simulation sheds light on the volatility of JKHY and the entire sector, reflecting a 26% probability of potential downside. Based on current macroeconomic conditions and favorable trends in the industry, it is forecasted to be unlikely that JKHY will face a recessive environment.

INVESTMENT RISKS

Sensitivity to the overall economy*:* JKHY operates in a highly cyclical industry and may face downside with an economic contraction. Revenues are heavily tied to consumer spending and mobile banking trends, which may decrease significantly under a recession. This is reflected throughout the sensitivity analysis, in which a 10% decline in projected revenue results in 10% downside. Given the FED's signals of reducing quantitative tightening measures to combat an increasing CPI, this may reduce consumer spending, negatively impacting JKHY.

A highly competitive industry: *Demand* for public- and private-cloud solutions have significantly increased with shifts towards automation and digitalization. This has increased the number of participants in the industry. The fast-paced environment with high demand for innovative technology puts pressure on JKHY to continue offering new solutions. If JKHY is unable to provide advanced technology, they will lose market share, negatively affecting JKHY.