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Introduction

Headquartered in Columbus, Georgia, Total System Services (TSS) is a United States credit card processor, merchant acquirer and bank credit card issuer. Total System Services provides payment processing, merchant, and related payment services to financial and nonfinancial institutions in the United States, Europe, Canada, Mexico, and internationally. It originally started as a division of Columbus Bank & Trust. In 1974, Columbus Bank & Trust began to process credit cards for other banks, and in 1983 Total System Services became a separate publicly traded company. Today they have three different segments for their business:

- **Merchant Solutions**
Provides merchant and related services to clients based primarily in the US such as processing services, acquiring solutions, related systems, and integrated support services to merchant acquirers and merchants.
- **Issuer Solutions**
Offers account processing and output services for printing and embossing items, as well as processing the card application, initiating service for the cardholder, processing each card transaction, and accumulating the account's transactions.
- **Consumer Solutions**
Includes the production of payroll cards and convenience checks and is designed to allow employers to comply with state wage and hour laws.

Some of the reasons why we chose this company and are issuing a buy recommendation, in addition to its growth in sales, strong cash flows, and innovation, is because we believe this is the exact right time to invest in this market. With technology constantly evolving and many people relying on their payment card rather than cash, as illustrated in the table to the right, makes for the perfect timing to get into this fintech market.

Number of Credit Cards	Percentage of Americans
0	29%
1-2	33%
3-4	18%
5-6	9%
7 or more	7%

Management

Management is led by M. Troy Woods. He serves as the company's President, CEO, and Chairman. He is 66 years old and has been with the company for nearly half of his life, 32 years. Under him is Paul Michael Todd. Paul Michael Todd is 47 years old has been with the company for 11 years, currently serving as the CFO and Senior Executive VP. Mr. Todd has acquired his MBA and CPA. Lastly, the CIO and a Senior Executive VP is Patricia A. Watson, MBA. Ms. Watson is 53 years old and joined the company 4 years ago.

S&P 500 vs Total System Services

In the past year Total System Services and the S&P 500's performance has been adjacent with each other. Since the beginning of 2019 Total System Services has been outperforming the S&P 500, currently outperforming the S&P 500 by 9%. We wanted to show one of TSS's competitor's performance vs the S&P 500 in addition. Green Dot is a relatively new company that does many of the same things as TSS. They show volatile trends in their stock

performance over the past year. Currently, they are underperforming the S&P 500 by 7% and underperforming Total System Services by 16%.



Investment Thesis

Strong Cash Flows

Over the past five years, Total System Services has had an average YOY growth in free cash flow of 17.7%. Total System Services has increased their annual dividends per share from \$0.40 to \$0.52 since 2016. Strong free cash flow growth indicates that their dividend growth is sustainable. Additionally, the company has an expected growth rate of 11.9%, which is also considered sustainable based on the strong, positive free cash flows. The primary driver for this growth is the company's strong net income growth.

Stock Repurchasing

In 2015, Total System Services began a stock repurchase plan with the intention of repurchasing up to 20 million shares of TSS stock. At the end of FY 2018, the company had repurchased 11.5 million shares at an average price of \$62.69. In January of 2019, an additional \$400 million of common stock, and 83 percent of these shares were purchased on February 5, 2019. In 2015, Total System Services had earnings per share of 1.95, and in 2018 earnings per share had increased to 3.2.

Innovation

Total System Services aims to be innovative, exploiting consumer's needs. This past month they introduced two new products to its consumer solutions segment: TSYS Customer Service PlatformSM and TSYS Digital Engagement PlatformSM. According to a consumer payment study conducted by Total System Services, the percentage of consumers who are aware of person-to-person (P2P) payments is 81%, which is an 8% increase from last year. The addition of the TSYS Digital Engagement Platform will improve the digital experience for cardholders, including an upgrade in P2P payments. The TSYS Customer Service Platform will upgrade the current capabilities of customer service providers to assist with simple and complex cardholder interactions.

Total System Services also maintains an innovative, competitive edge through mergers and acquisitions. In 2018, Total System Services closed three deals with the most recent deal being closed on June 7, 2018 with the acquisition of iMobile3 LLC. By acquiring iMobile3, Total Service Systems will be able to expand their product offerings within the consumer solutions segment. Before the deal took place, iMobile3 created industry-leading tablet and smartphone solutions.

Partnerships

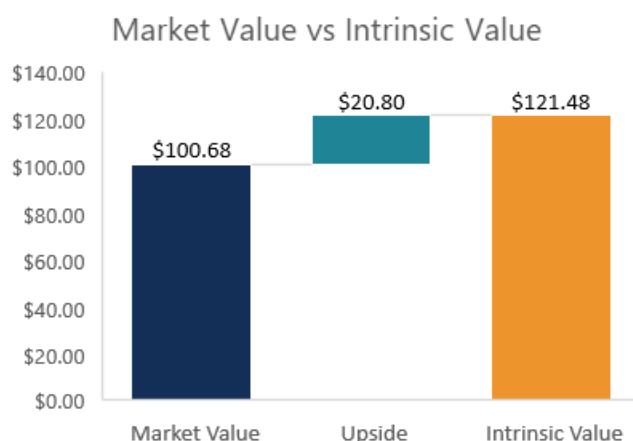
Total System Services relies heavily on mutually beneficial partnerships with well-respected companies to drive its revenue. All three of TSS's business segments have key partners in their operations.

- Issuer Solutions**
 Companies such as Navy Federal Credit Union and Regions Bank partner with Total System Services to use their Issuer Solutions. Just recently Total System Services announced that they would be expanding their contract with CapitalOne this year.
- Merchant Solutions**
 Total System Services has built relationships with over 800,000 merchants. 225,000 of these relationships came in 2018 alone, almost one-third of the total relationships came in just this past year. During the first quarter earnings call they announced a partnership with T-Mobile.
- Consumer Solutions**
 Key partnerships with Walmart, Family Dollar, and Liberty Tax are a few of the reasons for this business segment's success. Consumer Solution sales have consistently grown since its inception back in 2013. Total System Services will be expanding their DDA accounts with Netspend who have decided they want to partner with Total System Services.

Valuation

Our valuation combined a two-stage DCF model and a P/E multiples model. Through these models we calculated a target price of \$116.64. The two-stage DCF model was given a weight of 65% and the P/E multiples model was given a weight of 35%. A higher weight was given to the DCF model due to the possibility that EPS will change as Total System Services continues to repurchase stock. Further explanation on how these valuation models were used is below:

We chose a two-stage DCF model, because we believed it would demonstrate Total System Services' strong cash flows. The assumptions we used for the DCF model are shown in Table 1. With these assumptions, we calculated an intrinsic value of \$121.48.



DCF Assumptions (Table 1)	
Three-Year Growth Rate	14%
Perpetual Growth Rate	2.75%
WACC	7.9%
Tax Rate	21%

Our WACC of 7.9% was taken directly from Bloomberg, and we chose a perpetual growth rate of 2.75%, because we wanted to approach this valuation conservatively. Having a lower WACC benefits us, because it allows

us to estimate the stock will have a positive upside even if the stock grows slower than the market. Through our sensitivity analysis, we calculated that the worst-case scenario is a price of \$86.44, which is 40.5% lower than the intrinsic value, and the best-case scenario is a price of \$343.17, which is 182.4% higher than the intrinsic value.

WACC	5.9%	6.9%	7.9%	8.9%	9.9%
Perpetual Growth Rate					
0.75%	\$ 127.13	\$ 113.21	\$ 102.45	\$ 93.73	\$ 86.44
1.75%	\$ 143.14	\$ 124.26	\$ 110.62	\$ 100.09	\$ 91.57
2.75%	\$ 168.41	\$ 139.99	\$ 121.48	\$ 108.11	\$ 97.80
3.75%	\$ 215.83	\$ 164.82	\$ 136.93	\$ 118.77	\$ 105.68
4.75%	\$ 343.17	\$ 211.46	\$ 161.34	\$ 133.95	\$ 116.14

As Total System Services continues to buy back their shares, they have seen growth in EPS, so we chose the P/E multiples model as our second valuation model. Using the P/E multiples model, we calculated an intrinsic value of \$107.66. This was done by using the following competitors: First Data, Global Payments, Fiserv, and Green Dot.

Risks

- Security Breaches**
 Being a credit card payment processing company, and much more, it is crucial that their security is very thorough. Customer's credit card numbers, bank accounts, money, and savings are at stake with a security breach. However, it is not only hackers they have to be worried about. Fraudulent activity by merchant's prepaid card holders has become a big concern as TSS is starting to sell more prepaid cards.
- Client Relations**
 Acquiring new clients, renewing contracts with existing clients, and renegotiating agreements in an effective manner with existing clients. Drawing in new clients is a necessary challenge. Keeping existing clients happy is important, and being able to renegotiate terms with clients when seeing eye to eye is not originally met poses as a challenge and risk as well.
- Governmental Requirements**
 Laws, regulations, policies, credit card association rules or other industry standards. Because this is a heavily regulated market new regulations can lead to costly burdens that negatively impact their business.

Regulations

- Subject to Examination**
 Total System Services is subject to examination by the Federal Financial Institutions Examination Council, banking regulators, and various state financial regulatory agencies. These agencies are entrusted with supervising and regulating the financial institutions for which Total System Services provides these electronic payment processing solutions and other related payment services.

- **Financial Oversight**
The Consumer Solutions business segment is specifically subject to money transfer and payment instrument regulations, obtaining the proper licenses to operate as a money transmitter, seller of checks and/or provider of payment instruments. Furthermore, relevant state banking departments or similar agencies impose regulations of supervision and requirements that include maintenance of a certain level of net worth, selection and oversight of authorized agents, and maintaining permissible investments.
- **Anti-Money Laundering and Counter Terrorist**
The Financial Crimes Enforcement Network of the US Department of the Treasury prohibits the Consumer Solutions segment from engaging in money-laundering. Provisions have been specifically made for their prepaid cards access programs to prohibit this from happening.

Peer Analysis

Compared to its competitors Equifax and Global Payments, Total System Services has a smaller Market Cap Value than both but does better in its Sales. Its ROE of 25.1 is 13.7% higher than Global Payments and 15.7% higher than Equifax. Additionally, TSS' stock performed 43% better than its competitor Green Dot this past quarter.

Recommendation

We are issuing a BUY recommendation for Total System Services with a target price of \$116.41 which is a 15.9% upside from the closing price on March 26, 2019 of \$100.68. We believe Total System Services' strong free cash flow growth, stock repurchasing plan, innovative products, and high-quality partnerships are all strong indicators of a healthy, growing company.