

## The Henry Fund

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## Visa Inc. (V)

Financial Services – Payment Processing

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Stock Rating

Buy

### Investment Thesis

We recommend buying Visa Inc stock based on its potential 18% upside, the bullish market sentiment in the industry and the continuing growth in non-cash payment transactions, e-commerce, transformative M&A activities, and technological innovations. In addition, we expect further breakthrough in data security technology as Amazon has already started to test palm-scanning techniques with Visa, which would further strengthen the firm's dominant position in the industry. Among its peers, Visa is one of the major payment processing players who does not hold consumer loan risk. Due to these reasons, we recommend a Buy rating for Visa.

### Drivers of Thesis

- **Future Growth in Non-Cash Payment Transactions:** Global non-cash transactions are expected to reach a CAGR of 14% over the next five years, which translates to a 2% increase from 2016-2018's CAGR [5]. With the effect of COVID-19, we also see more growth in non-cash payment transactions as customers are now minimizing contact with each other.
- **Firm's Profitability Outperforms Peers:** Visa's ROE outperforms other companies in the financial services industry by 25.6%, and by 19.3% to other companies in the payment processing industry.
- **Firm's Ongoing Expansion in Card Ecosystem:** Visa continues to build and reinforce its card ecosystem through mergers and acquisitions, partnerships, and technology innovation to ensure data security and payment efficiency.

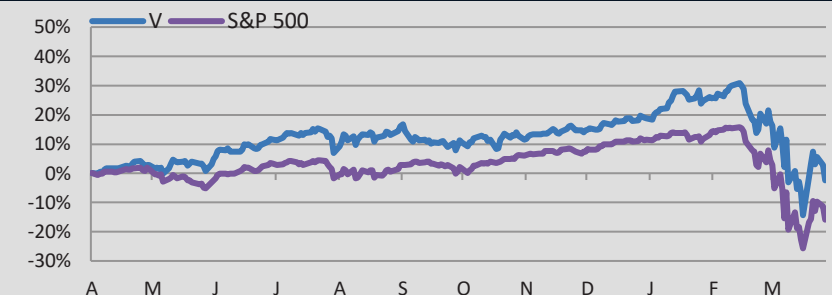
### Risks to Thesis

- **Regulations on Security in the Industry:** Data privacy and protection continues to be the main challenge for the industry in general, potentially hurting Visa's revenue and increasing total cost by 10.4% [27].
- **Decreasing Consumer Spending from Event Risk - Coronavirus:** With the coronavirus spreading across countries, it has started to cause disruptions to product supply chains and reduce consumer spending as a result. Slower and less economic activities lead to lower transactions being processed and hence impact Visa's revenues.

### Earnings Estimates

Year	2017	2018	2019	2020E	2021E	2022E
EPS	\$3.48	\$4.61	\$5.44	\$6.18	\$7.17	\$8.30
Growth	22.54%	32.47%	18.00%	12.46%	17.31%	15.89%
Consensus				\$5.53	\$6.63	\$7.77

### 12 Month Performance



Source: Yahoo! Finance

### Target Price

\$200-220

Henry Fund DCF	\$218
Henry Fund DDM	\$200
Relative Multiple	\$235

### Price Data

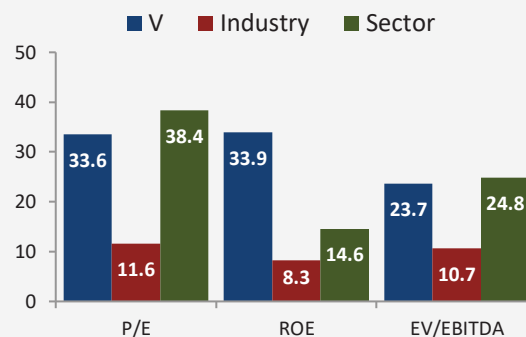
Current Price	\$151.85
52wk Range	\$133.93 – 214.17
Consensus 1yr Target	\$200.12

### Key Statistics

Market Cap (B)	\$398.9
Shares Outstanding (M)	2,148
Institutional Ownership	95.8%
Five Year Beta	1.08
Dividend Yield	0.6%
Est. 5yr Growth	19.0%
Price/Earnings (TTM)	35.47
Price/Earnings (FY1)	33.55
Price/Sales (TTM)	17.01
Price/Book (mrq)	12.71

### Profitability

Operating Margin	67.03%
Profit Margin	79.02%
Return on Assets (TTM)	16.43%
Return on Equity (TTM)	33.92%



Source: Net Advantage, FactSet

### Company Description

Visa is based in San Francisco, CA, and it maintains the largest payment network in the world. It engages in the provision of digital payment services and facilitating global commerce through the transfer of information and payments among global network of consumers, merchants, financial institutions, businesses, strategic partners, and government entities. It offers services including debit/credit cards, prepaid products, commercial payment solutions, and automated clearinghouse services.

Important disclosures appear on the last page of this report.

## EXECUTIVE SUMMARY

We recommend buying Visa Inc stock based on its potential 18% upside. Visa has consistently outperformed the domestic equity market and industry peers. Over the last year, Visa has generated a 25.6% return on equity relative to the S&P 500 index and a 19.3% relative to the payment processing industry. On ex-ante basis, we expect Visa stock performance will continue to move up driven by the continuing growth in global non-cash transactions, the firm's strong profitability and an expanded card ecosystem.

On the flip side, we see emerging risks in slower consumer spending as coronavirus spreads across states. However, we believe as the weather gets warmer and a vaccine is developed, the coronavirus will not last for an extended period of time and lower revenue would be a short-term loss. On the other hand, we also see consumer spending changes as people limit social interaction with each other due to COVID-19. We believe that since COVID-19 is a recent event, the market has not yet reflected the change in shopping habits due to COVID-19 outbreak. In addition, with Visa's ongoing efforts and upcoming new initiatives in addressing data security concerns, we believe Visa has positioned itself to respond to the stronger regulation policies.

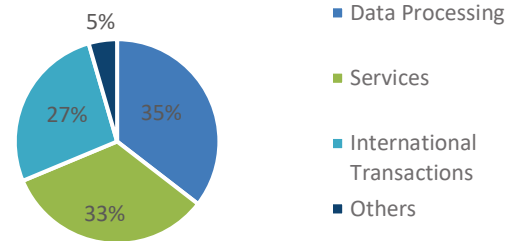
**Therefore, we initiate a BUY rating for the Visa Inc Stock.**

## COMPANY DESCRIPTION

Visa is based in San Francisco, CA. A Company engages in the provision of digital payment services. It also offers global commerce through the transfer of information and payments among global network of consumers, merchants, financial institutions, businesses, strategic partners, and government entities. With international exposure, Visa dominates the industry by establishing partnerships around the world. For example, in 2020, Visa and Accor (Ticker: AC.PA) formed a partnership to launch a payment card globally as part of Visa's loyalty program[13]. Visa views Accor as a suitable partner to launch a co-brand payment card, given its niche target in the hospitality industry. Due to its partnerships and wide acceptance around the world, we believe Visa is the most well-positioned company in the industry.

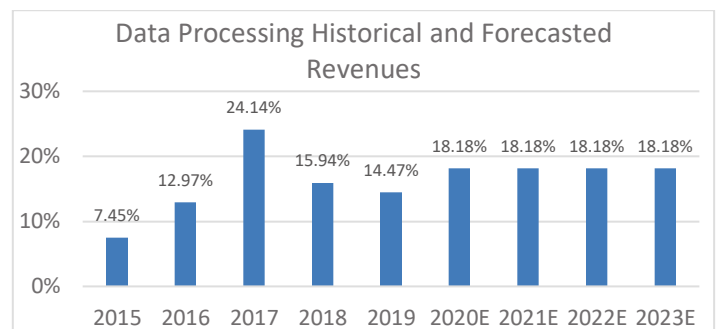
Visa has a diversified portfolio with 35% of its revenue generated by data processing, 33% from services, and 27% from international transactions.

Each revenue segment as % of total revenue, as of FY 2019



Source: Visa's 10K

## Data Processing



Source: FactSet, HF Model

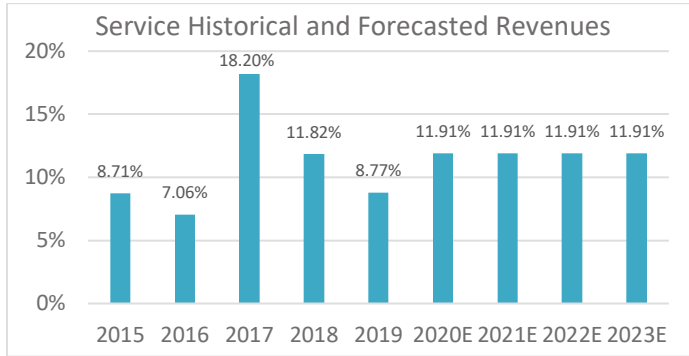
Data processing mainly generated revenue by authorization, clearing, settlement, value-added services[3]. Visa generated 35% of its revenue from data processing and is expected to grow further over the next 5 years with the emerging trend and demand for e-commerce.

According to IBIS World, customers have gradually shifted to online shopping and changed the way they purchase to non-cash transactions as a result. E-commerce is expected to grow at a rate of 20.1% to reach \$1.9 trillion by the year of 2024 [9]. In addition to changes in consumer behaviors, the dollar amount of consumer spending is also expected to trend upward over the next five years.

In addition, Visa has recently announced an increase in processing rates for card-not-present transactions. These transactions include e-commerce, online, and mobile payments. On the other hand, for traditional Visa cards, the fee on \$100 transactions will increase from \$1.90 to \$1.99, according to the Bloomberg news.[10]

Note that in our Henry Fund financial model, we forecast data processing business segment to grow at an average rate of 15.72%, more conservative modeling approach, for the next 5 years.

## Service



Source: FactSet, HF Model

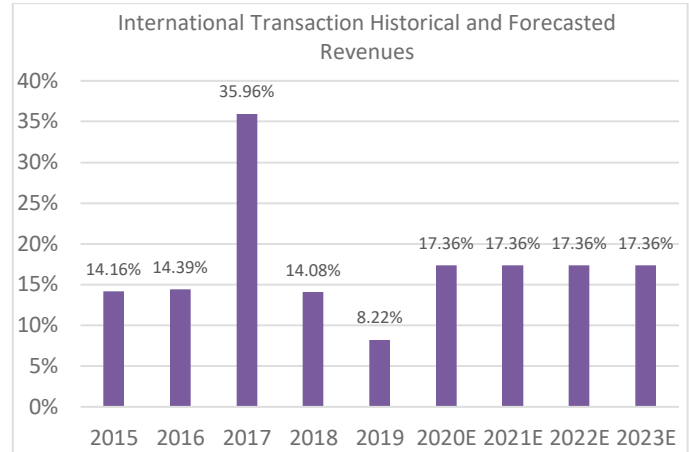
Service revenue is generated by client usage of Visa payment services and ongoing acceptance and volume growth for Visa [3].

Similar to data processing, the service business segment of their business reached its peak in 2017 due to strong financial markets and consumer confidence soaring to a 17-year high. Visa is highly dependent on consumer spending [14]. After 2017, though slower than before, the growth rate continues at the level of 10%.

Visa’s service revenue includes both domestic and international payments. Based on our Henry Fund model, we have observed that the average service revenue per U.S. payment is \$2.17 whereas the average service revenue per international payments is \$1.30. The lower fee for international payment is because the international user base hasn’t been fully developed yet. Visa is currently having conversations with the Chinese government to obtain a bank license so that they can operate in China. The Chinese government claimed that they would approve the license no later than 90 days post January 2020 [15].

We expect going forward in the next 5 years, Visa will increase its service revenue by 11.91% (historical average) each year due to its global partnership, entrance into the Chinese market and larger user base accordingly.

## International Transactions

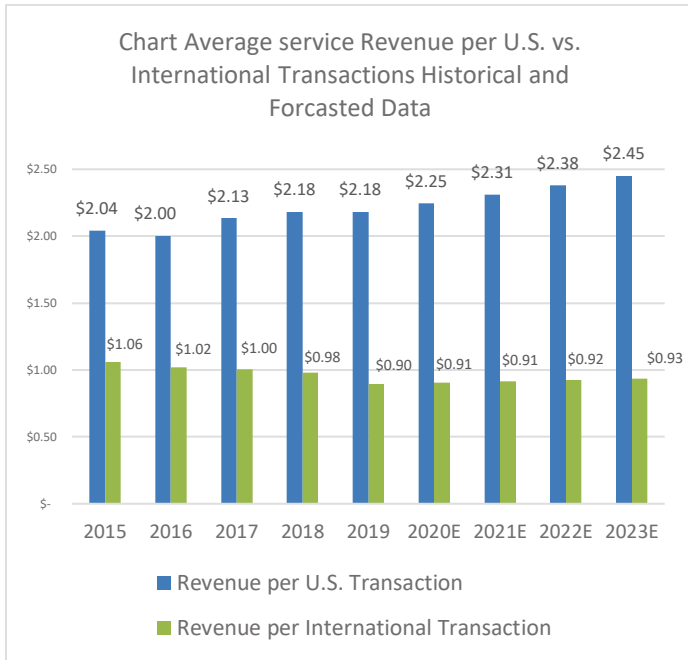


Source: FactSet, HF Model

International transaction revenue mainly includes cross-border transaction processing and currency conversion activities[3]. Similar to other business segments, international transactions reached a peak in 2017 due to overall strong financial markets. Historically, this business segment has an average growth rate of 15.33%. We expect the growth to continue going forward as Visa started to gradually expand its footprint in the Chinese market in 2018 by co-branding with UnionPay. In addition, according to Bloomberg News, Visa is working closely with the Chinese government, including the People’s Bank of China, to apply for a bank card clearing institution license [15]. Once the bank card cleaning institution license is obtained, Visa can officially enter the Chinese market. Consequently, the firm can expand its user base, cross-border transaction processing and currency conversion activities. Therefore, we forecast international transaction fees to grow at 17.36% which is higher than the historical average growth rate.

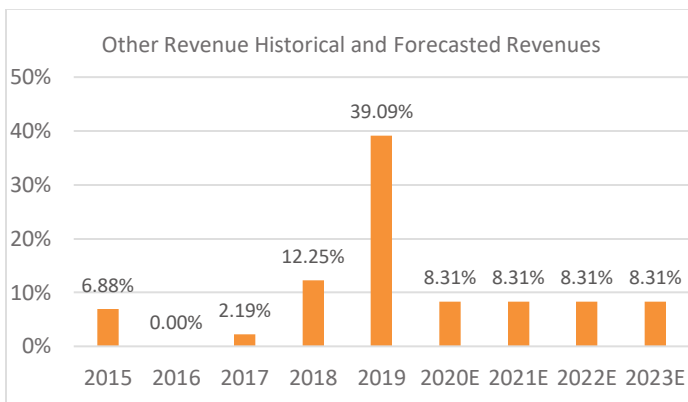
According to our Henry Fund model, Visa earns \$0.91 international revenue per transaction in 2020. If the Chinese market is opened up this year, we believe the international revenue per transaction will go up. Thus, we forecast total international payment volume to grow at 17.36%, and an average of 0.97% growth in international revenue per transaction. As a result, we expect international transaction revenue to grow at an average annual growth rate of 18.50% going forward into the next 5 years.

Below is a chart comparing U.S. revenue per transaction to international revenue per transaction:



Source: FactSet, HF Model

### Other Business



Source: FactSet, HF Model

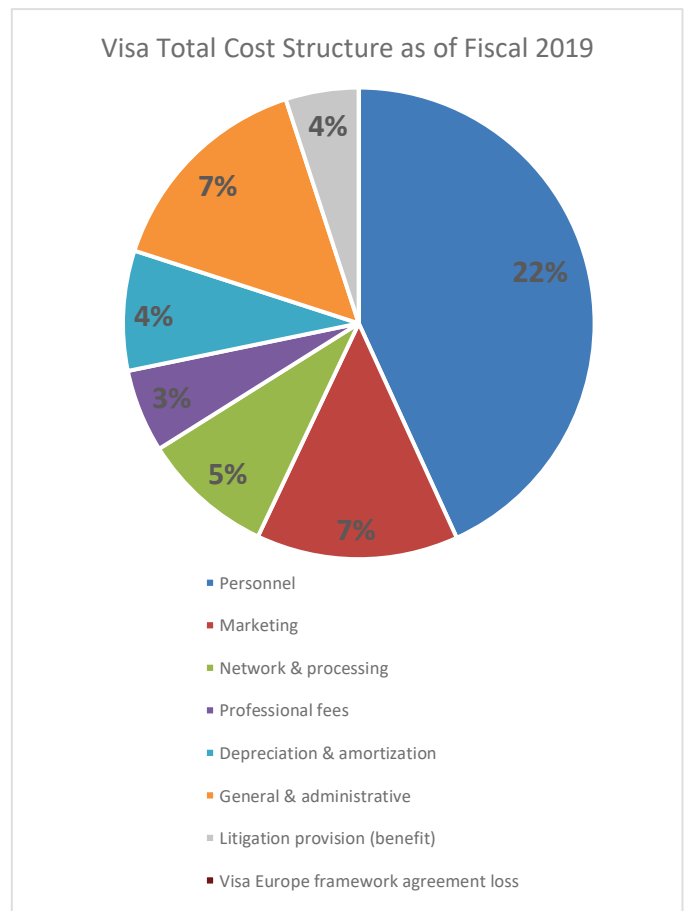
Other revenue consists of value-added services including license fees for use of the Visa brand or technology, account holder services, certification, licensing and product enhancement. [3]

The significant increase in the growth rate of 39.1% in 2019 was due to changes in the classification and timing of recognition of revenue, which was a result from switching to new revenue standard and an increase in value-added services. As Visa continues to grow its user base, we expect Visa’s other revenue streams continue to grow by an average of 8.31% per year. Especially, if the license to operate in China is approved, value-added services will continue to grow.

### Company Analysis

**Cost Structure:** Visa cost structure includes personnel, marketing, network & processing, professional fees, litigation provision, and Europe framework agreement expenses. As shown in the pie chart below, personnel expenses are 22% of total operating expenses. Personnel expenses include salaries, employee benefits, incentive compensation, share-based compensation, severance charges and contractor expenses [3]. Since we expect Visa to continue to grow in the U.S. and globally, we also expect more personnel expenses going forward. Therefore, we forecast an average annual growth rate of 12.57% higher than historical average growth rate: 11.89% [27].

Marketing, network & processing, and professional fees are all related to the growth of Visa payment volumes. Therefore, we also expect these expenses to grow higher than historical average going forward. Litigation expenses will remain constant at the current level \$400 going forward since there hasn’t been an exact measure of how anti-trust legislation in this industry will be enacted [27]. Overall, we expect an average 12.23% annual growth rate in total operating expenses which is higher than the historical total operating expenses growth rate of 11.88% [27].



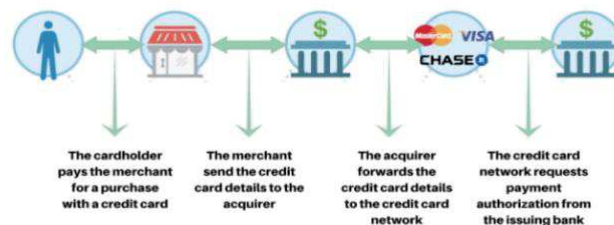
Source: FactSet, HF Model

**Target Customers and Strategic Positioning:** Visa’s target market includes individuals with middle income levels or people who need credit. Visa also position itself as a brand which values convenience. In particular, Visa uses value-based positioning [16]. Different from the Discover card of American Express which targets higher income groups, Visa’s target customers do not need to open an account with Visa. Visa acts as a middle person who provides card services without taking on credit card loan risk. Therefore, we believe Visa is well-positioned by this strategy of not providing credit directly to customers. As a result, we forecast Visa to grow higher than its average growth rate.

**Firm’s Competitive Advantages:** Visa has competitive advantages based on its convenience, interoperability, accessibility and security [17]. Visa understands the needs of the individual markets in which Visa operates by partnering with local financial institutions, merchants, governments, non-governmental organizations and business organizations to provide tailored solutions to meet individual’s needs. For example, Visa worked with Colombia’s coffee federation, Tarjeta Cafetera and Banco de Bogota to launch a reloadable debit card so farmers can receive harvest payments and government the subsidies without making long trips to town. Visa helped Egyptian government to convert its cash economy by delivering wages for nearly 7 million government employees directly to Visa prepaid cards [18]. All these examples are evidence that Visa can adjust its strategy based on location and business unique needs and circumstances. From farmers to government workers, Visa card is convenient to use and secured.

Another competitive advantage is the VisaNet service network. VisaNet is Visa’s patented payment network that enables authorization, clearing and settlement of payment transactions, allowing Visa to provide financial institutions and merchant clients a wider range of products, platforms and value-added services. VisaNet ensure payment is secured and efficient [3]. VisaNet does not take on any credit risk, they only provide access to their credit card network. When customers purchase items using one of Visa’s authorized cards, the merchant sends the credit card details through VisaNet to banks. In the end, banks to check this transaction and approve or deny it. The graph below shows how VisaNet works.

**AUTHORIZATION**



Source: Wallet Hub

**Viability and Sustainability of the Firm’s Business Model:** Visa has started to become aware of and initiate new projects to reduce adverse direct environmental impacts made. For example, Visa is planning on operating its offices using 100% renewable electricity across their global operations. Visa also pursues certification for facilities through the U.S. Green Building Council’s (USGBC) Leadership in Energy and Environmental design (LEED) program. With the emerging awareness of Environmental, Social, and Governance (ESG) factor, we believe Visa’s business model will continue to focus on environmental sustainability which customers now prefer. We believe that with Visa’s action and advocacy in ESG, Visa is increasing its value on a relative basis compared to its competitors.

Visa also advocates equality in wealth, education, genders, work pay, etc. via various campaigns in the U.S. Different from their competitors, such as Mastercard, and American Express, Visa advocates social justice in many areas not just the environment [18].

**Key risks and Merits Relative to Peers:** Some key risks that Visa might face include a better technology developed by competitors, and more innovative or a wider range of products and services offered by competitors. For example, Visa might lose its revenue stream from VisaNet transactions if competitors develop a more effective service. Also, Visa’s competitors might adopt a more effective advertising and marketing strategy that results in broader brand recognition, and greater issuance and merchant acceptance. However, we believe this risk in the next five years is minimal as Visa is currently the largest payment processing company and has many loyal customers including JPMorgan Chase & Co (Ticker: JPM)

**RECENT DEVELOPMENTS**

Recent developments include rising fees, quarterly report, technology innovation, and M&A activity.

## Rising Fees

In the past, retailers have spent more than \$100 billion each year to solely accept electronic payments [10]. However, payment processors are updating their systems and merchants are facing new rate adjustments accordingly.

Visa has recently just announced an increase in processing rates for card-not-present transactions. These transactions include e-commerce, online, and mobile payments. For traditional Visa cards, the fee on \$100 transactions will climb to \$1.99 from \$1.90, according to the Bloomberg news [10].

While the rise in fees may increase Visa revenue, some may argue that e-commerce retailer might change to other payment channels. However, the change in Visa transactions is minimal, and most internet retailers who rely on electronic payment have already adopted Visa payment processing. Therefore, Visa would still hold the competitive advantage in the internet market even with the fee jump [21].

## Quarterly Earnings

On January 30, 2020, Visa reported first-quarter earnings of \$1.46 per share, which is consistent with the analyst's expectations. Quarter over quarter, service revenue grew 9%, data processing grew 16%, international transactions grew 9%, and other revenue grew 22% [22]. The growth was driven by extension and expansion partnerships with large clients globally while also establishing new partnerships in emerging companies across the payment ecosystem [22]. Overall, business has been stable and exhibited robust growth around the world. First, we believe the recent acquisition of Plaid will strengthen growth further going into 2020. Second, Visa's recent partnership with Amazon to develop a palm-scanning payment processing method will further enhance consumer confidence in data security.

Based on our Henry Fund model, the total net revenue growth is estimated at a rate of 12.68% for the next 5 years.

## Technology Innovation

Visa has partnered with Amazon to allow customers to connect their credit card information using their hands. Although the technique is still at early stages, we believe there will be significant breakthroughs within next 5 years. Amazon has tested this technology on Visa terminals, and is in discussion with Mastercard, JP Morgan Chase, Wells Fargo and Synchrony Financial.

With the palm-scanning paying technique, customers feel more confident about contactless payment transactions as each person has unique palm patterns [23]. Even though some would argue after COVID-19 outbreak, people might be hesitant to use

palm-scanning payment methods, if customers are leaving their house to shop that would also mean they are confident that the virus is under control or they would stay at home and order online. So, we do not believe post-COVID-19 will affect the usage of palm-scanning payment processing in the long term.

## Mergers & Acquisitions

On January 13, 2020, Visa announced it was acquiring Plaid, a financial technology company based in San Francisco for \$5.3 billion. Visa will pay with debt and cash, and the transaction is expected to close within the next 3 to 6 months. Acquiring Plaid would enable consumers to conveniently integrate their financial information with thousands of apps and services such as Acorns, Betterment, Chime, Transferwise and Venmo [24]. These apps are popular for P2P transactions. For example, when a user sets up a Venmo account, Plaid enables the user to link their bank account to their Venmo account. This acquisition would expand the Visa user base because today one in four people with a U.S. bank account have used Plaid as a connector to their money transfer apps [18].

On October 22, 2019, Visa completed acquisition of Rambus Payments Portfolio (Ticker: RMBS). Rambus Payments Portfolio is a premier silicon IP and chip provider. Visa acquired it to enhance tokenization capabilities by which Visa will be able to extend its reach to domestic card networks as well. It will also provide security and convenience for its transaction better than before [18].

Overall, we expect Visa continue to expand its card ecosystem via mergers and acquisition activities and partnerships with technology firms to enhance its security and payment efficiency. Therefore, we forecast Visa's net income to grow at an average annual growth rate of 12.42% with its M&A activities stimulating the company growth [27].

## Global Partnership

On February 18, 2020, Visa partnered with Accor, a world-leading hospitality group to bring new payment experiences to ALL-Accor Live Limitless loyalty members. This partnership will combine Accor's loyalty program and Visa's global payment capabilities to create the new ALL Visa card that offers members tailored rewards based on customer preferences and the ability to earn more loyalty points when staying at one of the Accor property or when marking purchases. [18] As a result, Visa will not only expand user base, but also would benefit from Accor's niche presence in the hospitality industry that would increase loyal customers.

On December 11, 2019, Visa partnered with the fintech platform MFS Africa, the largest digital payments hub, to extend its service to more than 15 countries in Africa. The online digital platform would provide safe, secure, and convenient ways to

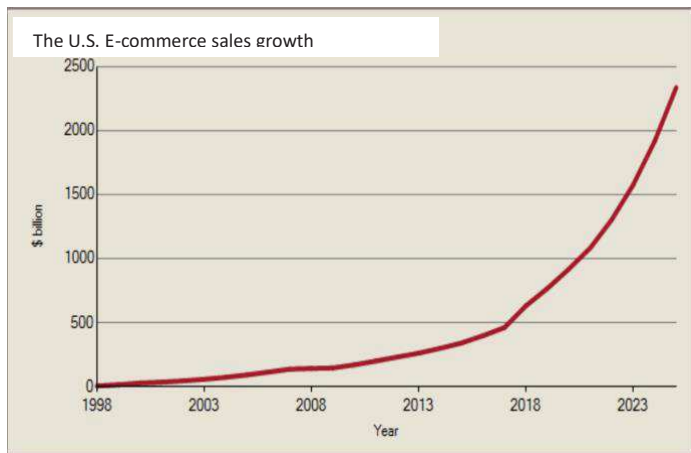
transfer money to Africa. This partnership helps bridge the gap between online digital payment network, and Africa’s growing mobile money ecosystem [18].

As the global market continue to grow, we expect Visa to continue to partner with other international companies to expand its user base worldwide.

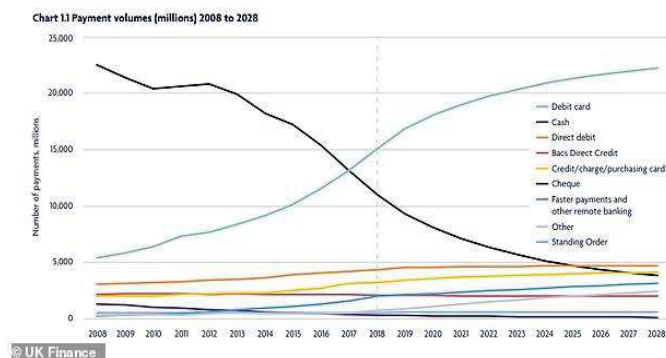
## INDUSTRY TRENDS

### Growth in Non-Cash Payment Transactions

Customers have gradually changed main shopping channels to online shopping and changed the way they purchased to non-cash transactions. E-commerce is expected to grow at a rate of 20.1% to reach \$1.2 trillion by the year of 2024. Consumer spending is also expected to trend upward over the next five years. Therefore, data payment processing companies could benefit from the rise of e-commerce evidenced by their recent increase in non-cash transactions processing payment rate.



Source: IBIS World



Source: ThisisMoney

From the graph above, we see cash transactions drastically declines going forward. Thus, in the long-term, Visa can expect the growth in non-cash transactions to continue as more

physical stores are closing. Consumer spending is also expected to grow further. [25] We expect this trend to continue to 2023.

### Growth in Number of Market Participants

More and more startup companies are entering this market. In 2019, India’s Paytm raised \$1 billion, Klarna collected \$460 million in an equity round, Toast, Marqeta and Stripe each raised \$250 million. As many more startups enter the industry, the smaller market cap companies might be in more competition.

However, we believe that Visa will not be affected by these developing startups because of Visa’s expanding card ecosystem, strong VisaNet network that enhance data security, and firm’s large global customer base.

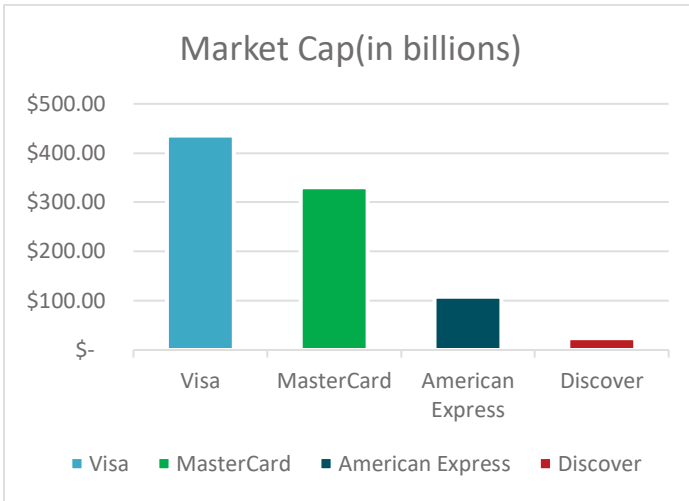
### M&A Activity & Partnership with Technology Firms

Some major players in the industry have made merger and acquisitions with other technology companies to enhance their competitive advantages. Recently, M&A actions have been accelerating. For example, in 2020, Visa acquired Plaid, an API software that allows start-ups connecting to users’ bank accounts and make it compatible with Venmo [11], in order to increase payment efficiency and secure user accounts. Furthermore, Fiserv acquired First data, FIS acquired WorldPay, and Global Payments and TSYS[24]. The growth in M&A activities in the industry has been evident and continues to accelerate due to the increasing trend in e-commerce, online payments, and mobile payments whose transactions have strong dependencies on data security.

We see Visa is also one of the M&A performers, which is a positive trend that will improve data security and payment efficiency. We also believe Visa would still outperform the competitors with its various global partnerships, wide acceptance worldwide, and its patented payment network.

## MARKETS AND COMPETITION

Major players in the industry include Visa, Mastercard, American Express, and Discover. The graph below shows market capital of each company. Visa is the largest company in the market consisting of 48% of the total U.S. market, followed by MasterCard with 37% and American Express with 12%. Common services for these firms include debit/credit card, automated clearinghouse, and check processing services. However, Visa and MasterCard have larger exposure in international markets than the others. American Express has recently expanded its Chinese market as Chinese Central Banks starting to open the region for foreign payments.



Source: FactSet

Visa offers in all forms of payments including paper-based payments, card-based payments, eCommerce and mobile-based payments, and other electronic payments. In particular, electronic payments include wire transfers, electronic benefits transfers, automated clearing house (“ACH”), and electronic data interchange. As a matter of fact, Visa has the largest retail electronic payments network in the world with its payments volume, total volume and number of transactions [17].

## Fee Comparisons

Visa operates globally so its main competitor differs geographically such as JCB in Japan, Mastercard in the United States, and UnionPay in China [17].

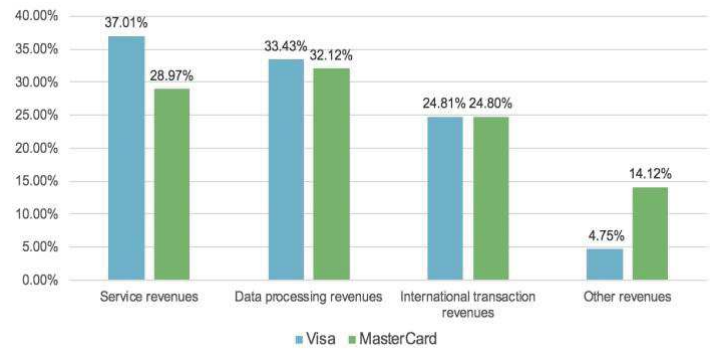
However, Visa is the best-positioned relative to peers due to its broad set of global payment network that provides security and efficiency through VisaNet. For example, for the processing fees, Visa’s fee is in the medium range within the top 5 players in the industry. Therefore, we expect customers to continue to choose Visa with its medium range processing fees and VisaNet patented network.

	Visa	Mastercard	Discover	American Express	JCB	UnionPay
<b>Average Credit Card Processing Fees</b>	1.43% to 2.4%	1.55% to 2.6%	1.56% to 2.3%	2.5% to 3.5%	3.75%	3%

Source: Payment Depot

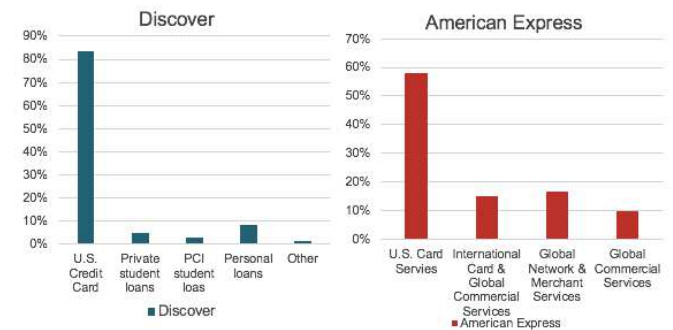
## Revenue & Profitability Comparisons

Among its competitors, Visa share the most similar revenue stream with Mastercard.



Source: CSI Market

Accordingly, to the revenue metric, on a relative basis, Visa consistently generated higher revenue than Mastercard across business segments due to its larger market cap than Mastercard in the industry. On the other hand, American Express and Discover card mainly generated revenue from U.S. credit cards.



Source: CSI Market

According to the profitability metrics, Visa and Mastercard outperform the industry benchmark due to their international exposure whereas American Express and Discover underperform the industry average ROA. On the other hand, Discover and American Express hold credit card risk, so they are not as well-positioned as Visa does not hold credit loan risk.

However, P/E multiple among these companies are all below the industry average. A generally lower P/E ratio is due to the fact that these four companies have been going through M&A activities with other companies and lowering the price of the companies as a result. Therefore, with the ongoing efforts to expand the business in international market, though temporally decrease in share price, Visa will continue to excel going forward.



Profitability Metrics	ROE	ROA	ROIC	P/E multiple
Visa	24.87%	13.62%	18.60%	33.69x
MasterCard	90.2%	24.46%	47.17%	33.97x
American Express	25.68%	3.07%	8.31%	17.59x
Discover	22.09%	2.54%	8.47%	10.81x
Industry	14.6%	4.5%	7.4%	38.4x

Source: FactSet, NetAdvantage

## Threats: Blockchain

Blockchain carries decentralized traits through a shared ledger of transactions. Without a central authority, every transaction eliminates the need to trust one party. In addition, every transaction is time-stamped and protected by cryptographic signatures to provide full data integrity. So, if anyone tries to adjust transactions, it would be visible to every node in the network, essentially making transactions fully immutable once submitted. Thus, blockchain can become the trusted intermediary, as opposed to credit card networks in which security has been a concern.

However, blockchain will not eventually become a competitor to Visa since there is no patent technology in processing payments like Visa's VisaNet. Visa also has more customer exposure worldwide. Furthermore, regulations will be a further challenge for the full deployment of blockchain technology. Until regulations set a common ground for blockchain, the threat of blockchain will not be material enough to disrupt the payment processing industry.

## ECONOMIC OUTLOOK

The current state of economy and its outlook both have impact on the payment processing industry. Factors including consumer confidence, real GDP index, and personal disposable income all have high influence on customers spending. As the spending increases, the probability of customers using one of the services offered by Visa would increase respectively.

## Consumer Confidence

Consumer confidence is a macro indicator that shows how confident the customers feel about the future economy. The consumer confidence index shows the highest reading in eight months according to January data. Consumer confidence climbed back from October 2019 due to low unemployment,

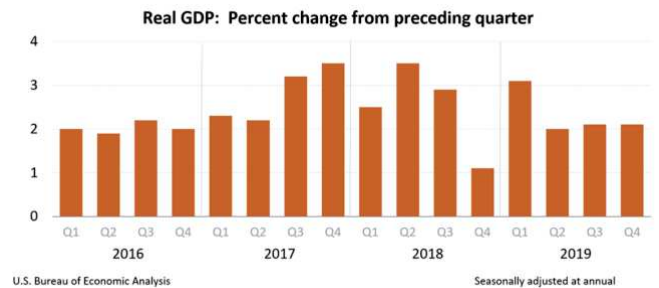
record gains in income and wealth, as well as new record low inflation and interest rates. Especially, Fed just announced a 50 basis points cut in fed fund rate due to the fear originated from the Coronavirus. Also, the trade war between the U.S. and China has shown progress on reaching the agreement. With the investor remains bullish and continues to invest money in the market, the consumer confidence will maintain this upward trend throughout the year.



SOURCE: TRADINGECONOMICS.COM | UNIVERSITY OF MICHIGAN

## Real GDP

Real GDP is expected to continue to grow contributing by low unemployment rate and interest rate. General positive macro will lead to positive effect on the payment processing industry. Though the Coronavirus has impacted the market recently and might impact Visa's Q2 earnings, we believe this is a temporary disruption and would not pose as a long-term risk to the industry and market.



U.S. Bureau of Economic Analysis

Seasonally adjusted at annual

## CATALYSTS FOR GROWTH

### Growth in E-Commerce & Non-Cash Payment Transaction

E-commerce has been rapidly growing as the customers now prefer to shop online rather than going to physical stores. In February 2020, Macy announced a massive restructuring that it would close about 125 stores this year due to change in consumer shopping habit. The convenience of e-commerce has brought a greater demand for online payment respectively. Essentially, payment processing industry is the key to support

online shopping and payment experience as customers cannot pay online items in-person. Therefore, we believe as more physical stores shifting to online services, the payment processing industry would continue to grow.

## Strong Profitability Compared to General Financial Services Industry

Visa's ROE outperforms other companies in the financial services industry by 25.6%, and by 19.3% to other companies in the payment processing industry. With the rise in e-commerce and non-cash transactions, we expect Visa to continue to outperform the financial industry and the sector. Visa does not hold credit loan risk, leading to lower default risk and higher profitability compared to its competitors such as Discover and American Express.

## Technology Breakthrough & Transformative M&A Activities

To date, Visa has acquired Plaid, an API software that allows start-ups connecting to users' bank accounts and makes it compatible with Venmo [11] in order to increase payment efficiency and secure user accounts.

As an ongoing effort to enhance security and data protection, Visa has been working with Amazon to develop palm-scanning payment processing technology to address the emerging data security concern from the customers.

## INVESTMENT POSITIVES

- **Future Growth in Non-Cash Payment Transactions:** Global non-cash transactions are expected to reach a CAGR of 14% over the next five years, which translates to a 2% increase from 2016-2018's CAGR [5]. With the effect of COVID-19, we also see more growth in non-cash payment transactions as customers are now minimizing contact with each other.
- **Firm's Profitability Outperforms Peers:** Visa's ROE outperforms other companies in the financial services industry by 25.6%, and by 19.3% to other companies in the payment processing industry.
- **Firm's Ongoing Expansion in Card Ecosystem:** Visa continues to build and reinforce its card ecosystem through mergers and acquisitions, partnerships, and technology innovation to ensure data security and payment efficiency.

## INVESTMENT NEGATIVES

- **Regulations on Security in the Industry:** Data privacy and protection continues to be the main challenge for the industry in general, potentially hurting Visa's revenue and increasing total cost by 10.4% [27].
- **Decreasing Consumer Spending from Event Risk - Coronavirus:** With the coronavirus spreading across countries, it has started to cause disruptions to product supply chains and reduce consumer spending as a result. Slower and less economic activities lead to lower transactions being processed and hence impact Visa's revenues.

## VALUATION

In the valuation analysis, both DCF and DDM models were both produced. DCF/EP models reflect more on historical and forecasted invested capital, return on invested capital, and NOPLAT. In the DCF model, we adjusted our assumptions based on the objective market data with industry trend and economic outlook. On the other hand, DDM model looks at the income statement metric, whereas DCF model provides a thorough analysis sourcing metrics across various financial statements to determine the intrinsic value of the firm.

According to the DCF, and DDM model, the target price range for the company stock is around \$230 - \$240. In addition, we conducted relative valuation analysis with Visa's key competitors including American Express (Ticker:AXP), Discover(Ticker:DFS), Mastercard(Ticker:MA), Synchrony Financial(Ticker:SYF), PayPal Holdings(Ticker:PYPL), Fiserv(Ticker: FISV), Capital One Financial(Ticker: COF), Global Payments(Ticker: GPN), WEX Inc. (Ticker: WEX), and Fidelity National Information Services(Ticker: FNF) which is aligned with DCF model result. The average company's P/E multiple for 2020 is 38.05x, and for 2021 is 32.17x while Visa is currently trading at 31.5x P/E of 2020, and 27.3x P/E of 2021 and undervalued than its peers. However, since Visa does not hold credit card loan risk and does not share the same business models as its peers. Mastercard is the only company that would be the major competitor to Visa as Mastercard share similar revenue structure and no credit card loan risk.

Therefore, we focused more on DCF/EP, and DDM models in our valuation process. Based on the results from DCF/EP model and DDM models, we initiate the BUY rating recommendation for Visa Inc.

## General Assumptions

When building the DCF model, several assumptions were made based on the key economic trends and industry outlook.

**Marginal Tax Rate:** In 2018, the passage of the Tax Cuts and Jobs Acts of 2017 changed the nominal federal corporate tax rate in the U.S. to a flat rate of 21%. The state tax is also 24.5% but was also decreased to 21% in fiscal 2019. The 21% was applied to state and foreign tax rate as Visa has more business in the U.S. now. [7] Therefore, we assume a 21% flat marginal tax rate throughout the forecasting period (2020 – 2024).

**CV Long Term Growth Rate (NOPLAT, EPS):** According to IBIS World, Visa is the payment processing industry, and payment processing industry has reached its mature state, the long-term growth rate would equal to the GDP growth rate. Since Visa operates globally, we used international global GDP growth rate as our Long-Term CV NOPLAT growth. According to IMF, global GDP growth rate would be between 2.9% - 3.3% in 2020. Given Coronavirus has started affected the financial markets, we are taking the more conservative estimate of 3% [6].

**Normal Cash as % of Sales:** A 15.52% normal cash as a percentage of sales was assumed to be the normal cash level because 15.52% is the historical lowest cash flow/ total sales value.

**Repurchase Shares in the Forecasting Period:** Visa has been repurchasing its shares back since 2009. So, we expect Visa would continue to repurchase its shares going forward. Thus, by taking the average historical repurchase shares from 2009 - 2019. As a result, the repurchase share for the forecast period is \$7,563.33. We believe as COVID-19 would be a short-term effect on Visa, so we do not see Visa adding more repurchases going forward.

**Risk Free Rate:** The risk-free rate is using the 10-year treasury rate of the current day. Since the Fed had just cut 50 bps from the original 1.5-1.75 target range. The 10-year treasury is around 1.1%.

**CV Year Return on Equity:** : Visa's ROE outperforms the financial industry by 25.6%, and 19.3% comparing with the payment processing industry. Due to Visa ROE outperformance to both financial industry and the payment processing industry, we expect a high growth in net income which is the nominator when calculating for ROE. As a result, we forecasted 26.73% ROE in our CV year 2024, comparing to 2024 the SP 500 ROE of 17.42%. [2]

## Revenue Decomposition Assumptions

Revenue decomposition was broken down into global and domestic segments because Visa operates globally. By

separating the revenue stream geographically, we are able to evaluate which region is more profitable. Along with the revenue split by regions, each transaction fee is also included so that we see a clearer transaction revenue breakdown.

Global non-cash transaction is expected to reach a CAGR of 14% over the next five years [5]. Therefore we forecast the international revenue growth by 15.33% ( given that this is the average international transaction fee YOY % change). We expect the international transaction fee growth rate to be greater than 14% since Visa had announced increase in e-commerce sales transaction. [10]

## Income Statement Assumptions

Revenue is forecasted by taking the average YOY % change in each category and multiplied by the previous year revenue because by taking the average of YOY change, we would approximate the growth rate and carry forward to the forecasting year. We continue to expect Visa will dominate the industry with strong growth in revenue due to its recent acquisition with Plaid, and technology breakthrough with Amazon to enhance their data security.

**Network & Processing Expense:** We expect the network & processing expense to increase as Visa is currently working with Amazon on its palm-scanning payment processing technology [11]. On the other hand, Amazon has already tested this technique on Visa's payment terminal and is looking to test on JP Morgan, Wells Fargo, and other banks terminals, we believe that this technique would be used by the public in the next 5 years.

Therefore, we expect the network & processing fee to grow at a 3.37% which is higher than 2018 – 2019's network & processing expense as a percentage of sales for the next 5 years.

**Litigation Provision (benefit):** Visa has been charged with litigation expense the past few years because the rise of data protection. These laws include antitrust law, consumer protection law, and intellectual property law.[3]

As we mentioned in one of our drivers, we believe the anti-trust regulations would be enacted in the future with the rise of consumer data security concerns. So, we assume every year would have \$400 (the most recent, fiscal 2019, litigation is \$400) because we assume the litigation expense to be at least \$400 each year going forward, but the growth on this litigation would be subjective to what the actual anti-trust act, and consumer protection act are.

**EPS:** Visa's outstanding shares includes class A, B and C. In these classes, only class A is dividend paying common stock. Class B and C common stockholders are sometimes holders of series B and series C. Thus, common share B, and C are not regular

common stockholders. For these reasons, we separate each class and calculate for each EPS. While for the overall total basic weighted-eps, we use the share change of class A as it is the primary common stock class.

**Dividend per Common Share:** Dividend per share was assumed based on the dividend payout ratio because Visa has been paying dividend historically from 2009 – 2019. We believe that by calculating the average of the dividend payout ratio based on historical data could provide us the reasonable forward-looking estimate in dividend payment. Moreover, since only class A shares paid dividend, we only used class A EPS divided by dividend common share to get each year's dividend payout per share. Similarly, for the forecasting period, we then used the average dividend payout ratio multiply by the projected EPS for the class A.

## Balance Sheet Assumptions

**Restricted Cash – U.S. Litigation Escrow, and Investment Securities:** Restricted cash account is related to litigation escrow account in which we expect to be \$400 each year. Therefore, we also expect restricted cash account which is an account that save cash for potential settlements or judgements expenses to increase by 1.5%, which is the 10-year treasury yield.

Moreover, we expect it to grow by ROI rate because restricted cash is a payable account and associates with debt, so we grow it by the treasury yield.

**Client Incentives:** Since we expect the non-cash payment transaction to grow going forward, we also expect client incentive account to increase going forward too.

Client incentives include Visa's contracts with financial institution clients, merchants and strategic partners for various programs designed to grow payments volume. This account is viewed as the reduction to revenue[3] As the non-cash payment transactions, we expect more contracts would be signed and more incentives would be in place. Therefore, we forecasted an average of 3.73% ( historical average of incentive as percentage of sales) for 2020, and 4.21% going forward.

### Capital Expenditure, Property, Equipment & Technology:

It is stated from Visa's 10k that Visa would be actively seeking for additional funds either through debt or equity to meet capital expenditure requirement going forward. [3] Therefore, in our model, we expect the capital expenditure account to remain at 3.42% ( historical capital expenditure as percentage of sales) in 2020 because Visa expected the current projected liquidity needs are sufficient for another 12 months ( from Fiscal year 2019 to 2020). After 2020, we forecasted the capital expenditure to grow since the sales would also be growing going forward with the non-cash payment transaction rise.

## WACC

Both cost of equity and cost of debt are calculated based on McKinsey's guidance. Visa has convertible preferred stock B, and C that can be converted to common stock. So, when calculating the cost of capital, we made assumption that Visa would not convert those convertible preferred stock in the next 5 years. Given that the total convertible preferred stock value is \$3,914.33 millions, but the common share value is \$ 411,362.8 millions which is not closed to the preferred stock value. Therefore, we did not incorporate preferred stock as part of the value of equity. We put preferred stock as the cost of preferred stock and put into our WACC calculation.

## KEYS TO MONITOR

Some key things to monitor in 2020 are:

### Regulation Announcement

In 2020, SRC (Secure Remote Commerce) goes online and aims to provide online shoppers a more streamlined and secure guest checkout process through a common "buy" button. The network anticipates conducting more aggressive migration of merchants and consumers from Visa Checkout. A similar timeline could be expected with Mastercard's Masterpass.

Regulations on data protection and governance would also be taken into action in 2020. The threat of cyber-attack is the risk concern globally as the expansion of international markets will on the other hand put many companies at risk due to the intercorrelation between countries. However, with massive M&A activities with technology firms, companies in this industry are anticipated to take minimal shock to the regulation.

### 2020 Presidential Election

The presidential election in 2020 would be critical to this industry because if the Republic Party gets elected, then they would have higher chance to roll back more section of the Dodd-Frank Act, which would continue to benefit the payment processing industry. However, if the Democratic Party gets elected, there would be chances that they would raise tax on affluent individuals that would affect their spending and affect the payment processing industry.

In general, Visa is expected to continue to grow going forward. The consumer spending would continue to grow, and the coronavirus would be a temporary disruption thus not causing long-term damage to the market and industry. In addition, Visa's strong profitability relative to the peers, lack of credit card loan risk, and larger card ecosystem leads to our BUY rating recommendation for Visa Inc.

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Visa

Revenue Decomposition - All figures in millions

Fiscal Years Ending Sep. 30	2017	2018	2019	2020E	2021E	2022E	2023E	2024CV
<b>Service revenues</b>	7,975	8,918	9,700	10,855	12,148	13,595	15,214	15,640
Payments volume ( In billions, USD)								
U.S. Consumer credit	1,309	1,441	1,540	1,691	1,856	2,038	2,237	2,300
U.S. Consumer debit	1,379	1,521	1,702	1,840	1,990	2,152	2,327	2,392
U.S. Commercial	507	564	633	700	774	856	947	973
U.S. Cash volume	544	563	573	597	622	649	676	695
Total U.S. payments volume	3,738	4,089	4,448	4,835	5,255	5,712	6,208	6,382
YOY % Change	10.92%	9.39%	8.78%	8.69%	8.69%	8.69%	8.69%	2.80%
Service revenue per U.S. payment volume	\$ 2.13	\$ 2.18	\$ 2.18	\$ 2.25	\$ 2.31	\$ 2.38	\$ 2.45	\$ 2.45
YOY % Change	6.56%	2.23%	-0.01%	2.96%	2.96%	2.96%	2.96%	0.00%
International consumer credit	2,186	2,457	2,487	2,789	3,129	3,509	3,936	4,046
International consumer debit	1,510	1,792	1,876	2,594	3,587	4,961	6,860	7,052
International commercial	306	364	381	447	525	616	723	743
International cash volume	2,348	2,437	2,260	2,428	2,609	2,803	3,011	3,095
Total International payments volume	6,350	7,049	7,004	7,877	8,859	9,964	11,206	11,520
YOY % Change	33.71%	11.01%	-0.64%	12.47%	12.47%	12.47%	12.47%	2.80%
Service revenue per international payment volume	\$ 1.26	\$ 1.27	\$ 1.38	\$ 1.38	\$ 1.37	\$ 1.36	\$ 1.36	\$ 1.36
YOY % Change	-11.60%	0.74%	9.47%	-0.50%	-0.50%	-0.50%	-0.50%	0.00%
Total Visa payments volume	10,088	11,139	11,452	12,665	14,006	15,490	17,130	17,610
YOY % Change	24.25%	10.42%	2.81%	10.59%	10.59%	10.59%	10.59%	2.80%
Service revenue per total Visa Payment volume( U.S. + international volume)	\$ 0.79	\$ 0.80	\$ 0.85	\$ 0.86	\$ 0.87	\$ 0.88	\$ 0.89	\$ 0.89
YOY % Change	-4.87%	1.27%	5.80%	1.19%	1.19%	1.19%	1.19%	0.00%
<b>Data processing revenues</b>	7,786	9,027	10,333	11,958	13,838	16,014	18,532	19,051
Processed transactions ( in millions, #)	111,215	124,320	138,329	156,958	178,097	202,082	229,297	235,717
Data revenue per processed transactions	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.08	\$ 0.08	\$ 0.08	\$ 0.08	\$ 0.08
YOY % Change	-7.18%	3.72%	2.88%	1.99%	1.99%	1.99%	1.99%	0.00%
CyberSource billable transactions ( in millions, #)	-	-	-	-	-	-	-	-
Data revenue per processed transactions	NA	NA	NA	NA	NA	NA	NA	NA
<b>International transaction fees</b>	6,321	7,211	7,804	9,159	10,749	12,616	14,807	15,221
Total International payments volume	6,350	7,049	7,004	8,300	9,835	11,655	13,811	14,198
YOY % Change	33.71%	11.01%	-0.64%	18.50%	18.50%	18.50%	18.50%	2.80%
International revenue per transaction	\$ 1.00	\$ 0.98	\$ 0.90	\$ 0.91	\$ 0.91	\$ 0.92	\$ 0.93	\$ 0.93
YOY % Change	-1.66%	-2.69%	-8.19%	0.97%	0.97%	0.97%	0.97%	0.00%
<b>Other revenues</b>	841	944	1,313	1,422	1,540	1,668	1,807	1,857
<b>Client incentives</b>	(4,565)	(5,491)	(6,173)	(7,266)	(8,553)	(10,067)	(11,850)	(12,182)
<b>Net revenues</b>	18,358	20,609	22,977	25,925	29,252	33,005	37,241	38,283

Visa

Income Statement - All figures in millions

<b>Fiscal Years Ending Sep. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024CV</b>
Service revenues	7,975	8,918	9,700	10,759	11,933	13,235	14,679	15,090
Data processing revenues	7,786	9,027	10,333	11,882	13,664	15,712	18,068	18,574
International transaction fees	6,321	7,211	7,804	9,159	10,749	12,616	14,807	15,221
Other revenues	841	944	1,313	1,472	1,649	1,849	2,072	2,130
Client incentives	(4,565)	(5,491)	(6,173)	(7,360)	(8,775)	(10,463)	(12,475)	(12,824)
<b>Net operating revenues</b>	<b>18,358</b>	<b>20,609</b>	<b>22,977</b>	<b>25,911</b>	<b>29,220</b>	<b>32,949</b>	<b>37,151</b>	<b>38,192</b>
<b>Operating Expenses</b>								
Personnel	(2,628)	(3,170)	(3,444)	(3,857)	(4,349)	(4,904)	(5,530)	(5,685)
Marketing	(922)	(988)	(1,105)	(1,525)	(1,720)	(1,939)	(2,186)	(2,247)
Network & processing	(620)	(686)	(721)	(745)	(840)	(948)	(1,069)	(1,099)
Professional fees	(409)	(446)	(454)	(589)	(664)	(749)	(845)	(868)
Depreciation & amortization	(556)	(613)	(656)	(713)	(774)	(841)	(914)	(993)
General & administrative	(1,060)	(1,145)	(1,196)	(1,335)	(1,505)	(1,697)	(1,914)	(1,967)
Litigation provision (benefit)	(19)	(607)	(400)	(400)	(400)	(400)	(400)	(411)
Visa Europe framework agreement loss	-	-	-	-	-	-	-	-
<b>Total operating expenses</b>	<b>(6,214)</b>	<b>(7,655)</b>	<b>(7,976)</b>	<b>(9,163)</b>	<b>(10,253)</b>	<b>(11,479)</b>	<b>(12,857)</b>	<b>(13,270)</b>
<b>Operating income</b>	<b>12,144</b>	<b>12,954</b>	<b>15,001</b>	<b>16,748</b>	<b>18,967</b>	<b>21,471</b>	<b>24,295</b>	<b>24,921</b>
<b>Non-Operating income (expense)</b>								
Interest expense	(563)	(612)	(533)	(545)	(557)	(570)	(583)	(596)
Investment and other non-operating income (expense)	113	464	416	380	414	451	492	536
Total non-operating income (expense)	(450)	(148)	(117)	(165)	(143)	(119)	(91)	(61)
Income before income taxes	11,694	12,806	14,884	16,583	18,824	21,352	24,203	24,861
Income tax provision	4,995	2,505	2,804	3,482	3,953	4,484	5,083	5,221
<b>Net income</b>	<b>6,699</b>	<b>10,301</b>	<b>12,080</b>	<b>13,101</b>	<b>14,871</b>	<b>16,868</b>	<b>19,120</b>	<b>19,640</b>
<b>Basic weighted-average shares outstanding</b>								
Weighted average class A shares outstanding - basic	1,845	1,792	1,742	1,693	1,647	1,604	1,564	1,526
Weighted average class B shares outstanding - basic ( Conversion rate to Class A common shares : 1.6228%)	245	245	245	245	245	245	245	245
Weighted average class C shares outstanding - basic ( Conversion rate to Class A common shares : 4%)	14	12	12	12	12	12	12	12
<b>Total Basic weighted-average shares outstanding</b>	<b>2,294</b>	<b>2,244</b>	<b>2,188</b>	<b>2,139</b>	<b>2,093</b>	<b>2,050</b>	<b>2,010</b>	<b>1,972</b>
<b>Basic earnings per share</b>								
Net earnings per class A share - basic	2.80	4.43	5.32	3.95	4.58	5.30	6.13	6.42
Net earnings per class B share - basic	4.62	7.28	8.68	7.24	8.40	9.73	11.25	11.78
Net earnings per class C share - basic	11.21	17.72	21.30	15.79	18.32	21.21	24.53	25.68
Total basic earnings per share (\$)	5.08	5.82	6.78	6.12	7.10	8.23	9.51	9.96
<b>Dividends per common share</b>								
	0.66	0.83	1.00	1.13	1.32	1.52	1.76	1.85

Visa

Balance Sheet - All figures in millions

<b>Fiscal Years Ending Sep. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
<b>Assets</b>								
Cash & cash equivalents	9,874	8,162	7,838	9,202	18,668	25,923	37,751	47,913
Restricted cash - U.S. litigation escrow	1,031	1,491	1,205	1,313	1,431	1,559	1,699	1,851
Investment securities	3,564	3,547	4,236	4,616	5,030	5,481	5,973	6,509
Income tax receivable	-	-	-	-	-	-	-	-
Settlement receivable	1,422	1,582	3,048	2,143	2,417	2,725	3,073	3,159
Accounts receivable	1,132	1,208	1,542	1,645	1,855	2,092	2,359	2,425
Customer collateral	1,106	1,325	1,648	1,842	2,060	2,303	2,574	2,878
Current portion of client incentives	344	340	741	1,002	1,354	1,831	2,475	3,345
Deferred tax assets	-	-	-	-	-	-	-	-
Prepaid expenses & other current assets	550	562	712	924	1,198	1,554	2,016	2,616
<b>Total current assets</b>	<b>19,023</b>	<b>18,216</b>	<b>20,970</b>	<b>22,687</b>	<b>34,013</b>	<b>43,468</b>	<b>57,920</b>	<b>70,695</b>
Investment securities, available-for-sale	1,926	4,082	2,157	2,339	2,536	2,750	2,982	3,234
Client incentives	591	538	2,084	967	1,091	1,230	1,387	1,426
Property, equipment & technology, net	2,253	2,472	2,695	2,867	3,091	3,375	3,730	4,041
Capital Expenditure	(707)	(718)	(756)	(885)	(998)	(1,125)	(1,269)	(1,304)
Goodwill	15,110	15,194	15,656	15,656	15,656	15,656	15,656	15,656
Intangible assets, net	27,848	27,558	26,780	24,466	22,352	20,420	18,656	17,044
Other assets	1,226	1,165	2,232	2,232	2,232	2,232	2,232	2,232
<b>Total assets</b>	<b>67,977</b>	<b>69,225</b>	<b>72,574</b>	<b>71,214</b>	<b>80,970</b>	<b>89,132</b>	<b>102,562</b>	<b>114,327</b>
<b>Liabilities</b>								
Accounts payable	179	183	156	348	393	443	499	513
Settlement payable	2,003	2,168	3,990	2,476	2,792	3,149	3,550	3,650
Customer collateral	1,106	1,325	1,648	1,825	2,021	2,238	2,478	2,744
Accrued compensation & benefits	757	901	796	1,230	1,387	1,564	1,763	1,813
Client incentives	2,089	2,834	3,997	2,821	3,182	3,588	4,045	4,159
Accrued liabilities	1,129	1,160	1,625	1,721	1,941	2,189	2,468	2,537
Current portion of long-term debt	1,749	-	-	2,400	3,000	-	-	-
Accrued litigation	982	1,434	1,203	1,203	1,203	1,203	1,203	1,203
<b>Total current liabilities</b>	<b>9,994</b>	<b>11,305</b>	<b>13,415</b>	<b>14,025</b>	<b>15,918</b>	<b>14,373</b>	<b>16,007</b>	<b>16,618</b>
Long-term debt	16,618	16,630	16,729	11,118	11,150	11,292	11,557	11,843
Payment Schedule	-	-	-	-	-	-	-	-
Deferred tax liabilities	5,980	4,618	4,807	6,098	6,921	7,850	8,898	9,140
Other liabilities	1,321	2,666	2,939	2,012	2,269	2,558	2,885	2,966
<b>Total liabilities</b>	<b>35,217</b>	<b>35,219</b>	<b>37,890</b>	<b>33,253</b>	<b>36,259</b>	<b>36,073</b>	<b>39,348</b>	<b>40,567</b>
<b>Equity</b>								
Common Equity	22,426	22,148	22,003	22,078	24,172	26,222	28,231	30,203
Treasury stock	-	-	-	(7,563)	(15,127)	(22,690)	(30,253)	(37,817)
Right to recover for covered losses	(52)	(7)	(171)	(171)	(171)	(171)	(171)	(171)
Par Value	0.023	0.022	0.022	0.021	0.021	0.021	0.020	0.020
Accumulated income (deficit)	9,508	11,318	13,502	24,268	36,487	50,347	66,058	82,195
Total accumulated other comprehensive income (loss), net	878	547	(650)	(650)	(650)	(650)	(650)	(650)
<b>Total Visa Inc. stockholders' equity</b>	<b>32,760</b>	<b>34,006</b>	<b>34,684</b>	<b>37,962</b>	<b>44,711</b>	<b>53,058</b>	<b>63,215</b>	<b>73,761</b>
<b>Total liabilities and equity</b>	<b>67,977</b>	<b>69,225</b>	<b>72,574</b>	<b>71,214</b>	<b>80,970</b>	<b>89,132</b>	<b>102,562</b>	<b>114,327</b>



Visa

Historical Cash Flow Statement - All figures in millions, USD

Fiscal Years Ending Sep. 30	2017	2018	2019
<b>Operating Activities</b>			
Net income	6,699	10,301	12,080
Adjustments to reconcile net income to net cash provided by operating activities:			
Client incentives	4,565	5,491	6,173
Fair value adjustment for the Visa Europe put option	-	-	-
Share-based compensation	235	327	407
Excess tax benefit for share-based compensation	-	-	-
Depreciation & amortization of property, equipment, technology & intangible assets	556	613	656
Deferred income taxes	1,700	(1,277)	214
Right to recover for covered losses recorded in equity	(209)	(11)	-
VE territory covered losses incurred	-	-	(172)
Charitable contribution of Visa Inc. shares	192	-	-
Other net income adjustments	50	(74)	(271)
Change in operating assets and liabilities:			
Settlement receivable	94	(223)	(1,533)
Accounts receivable	(54)	(70)	(333)
Client incentives	(4,628)	(4,682)	(6,430)
Other assets	(252)	(160)	(310)
Accounts payable	(30)	3	(24)
Settlement payable	(176)	262	1,931
Accrued & other liabilities	465	1,761	627
Accrued litigation	1	452	(231)
<b>Net cash flows from operating activities</b>	<b>9,208</b>	<b>12,713</b>	<b>12,784</b>
<b>Investing Activities</b>			
Purchases of property, equipment, technology & intangible assets	(707)	(718)	-
Proceeds from sales of property, equipment & technology	12	14	-
Purchases	(3,238)	(5,772)	(2,653)
Proceeds from maturities & sales	5,012	3,636	3,996
Acquisitions, net of cash & restricted cash acquired	(302)	(196)	(699)
Purchases of / contributions to other investments	(46)	(50)	(501)
Proceeds / distributions from other investments	4	2	12
Other investing activities	-	-	10
<b>Net cash flows from investing activities</b>	<b>735</b>	<b>(3,084)</b>	<b>(591)</b>
<b>Financing Activities</b>			
Repurchase of class A common stock	(6,891)	(7,192)	(8,607)
Repayments of long-term debt	-	(1,750)	-
Treasury stock - class C common stock	-	-	-
Dividends paid	(1,579)	(1,918)	(2,269)
Payment of deferred purchase consideration related to the Visa Europe acquisition	-	-	(1,236)
Proceeds from issuance of senior notes	2,488	-	-
Debt issuance costs	(15)	-	-
Deposit into U.S. litigation escrow account - U.S. retrospective responsibility plan	-	(600)	-
Payments from (return to) U.S. litigation escrow account - U.S. retrospective responsibility plan	-	150	-
Cash proceeds from issuance of common stock under employee equity plans	149	164	162
Restricted stock & performance shares settled in cash for taxes	(76)	(94)	(111)
Excess tax benefit for share-based compensation	-	-	-
Principal payments on capital lease obligations	-	-	-
Payments for earn-out related to PlaySpan acquisition	-	-	-
<b>Net cash flows from financing activities</b>	<b>(5,924)</b>	<b>(11,240)</b>	<b>(12,061)</b>
Effect of exchange rate changes on cash & cash equivalents	236	(101)	(277)
<b>Increase (decrease) in cash, cash equivalents, &amp; restricted cash &amp; restricted cash equivalents</b>	<b>4,255</b>	<b>(1,712)</b>	<b>145</b>
Cash & cash equivalents, and restricted cash & restricted cash equivalents at beginning of year	5,619	9,874	10,977
Cash & cash equivalents, and restricted cash & restricted cash equivalents at end of year	9,874	8,162	10,832

Visa

Forecasted Cash Flow Statement - All figures in millions, USD

Fiscal Years Ending Sep. 30	2020E	2021E	2022E	2023E	2024E
<b>Operating Activities</b>					
Net income	13,213	14,998	17,011	19,282	19,806
Depreciation & amortization of property, equipment, technology & intangible assets	713	774	841	914	993
Net change by operating activities:					
<b>Assets:</b>					
Change in Settlement receivable	905	(274)	(308)	(348)	(86)
Change in Accounts receivable	(103)	(210)	(237)	(267)	(66)
Change in Customer collateral	(194)	(217)	(243)	(272)	(304)
Change in Current portion of client incentives	(261)	(352)	(476)	(644)	(871)
Change in Prepaid expenses and other current assets	(212)	(275)	(356)	(462)	(599)
Change in Client incentives	1,117	(123)	(139)	(157)	(39)
Change in Other assets	-	-	-	-	-
<b>Liabilities</b>					
Change in Accounts payable	192	44	50	56	14
Change in Settlement payable	(1,514)	316	356	402	99
Change in Customer collateral	177	196	217	240	266
Change in Accrued compensation and benefits	434	157	177	199	49
Change in Client incentives	(1,176)	360	406	458	113
Change in Accrued liabilities	96	220	248	279	69
Change in Accrued Litigation	-	-	-	-	-
Change Deferred tax liabilities	1,291	824	929	1,048	242
Change in Other liabilities	(927)	257	290	326	81
<b>Net cash flows from operating activities</b>	<b>\$ 13,751</b>	<b>\$ 16,695</b>	<b>\$ 18,766</b>	<b>\$ 21,056</b>	<b>\$ 19,768</b>
<b>Investing Activities</b>					
Capital Expenditures	(885)	(998)	(1,125)	(1,269)	(1,304)
Intangibles	2,314	2,114	1,931	1,765	1,612
Restricted cash	(108)	(118)	(128)	(140)	(152)
Investment securities	(380)	(414)	(451)	(492)	(536)
Investment securities, available-for-sale	(182)	(197)	(214)	(232)	(252)
<b>Net cash flows from investing activities</b>	<b>\$ 759</b>	<b>\$ 387</b>	<b>\$ 13</b>	<b>\$ (368)</b>	<b>\$ (632)</b>
<b>Financing Activities</b>					
Current maturities of long-term debt	2,400	600	(3,000)	-	-
Long-term debt	(5,611)	32	142	265	285
Repurchase of Class A common stock	(7,563)	(7,563)	(7,563)	(7,563)	(7,563)
Dividends paid	(2,448)	(2,778)	(3,151)	(3,572)	(3,669)
Cash proceeds from issuance of common stock under employee equity plans	75	2,093	2,050	2,010	1,972
<b>Net cash flows from financing activities</b>	<b>\$ (13,146)</b>	<b>\$ (7,616)</b>	<b>\$ (11,523)</b>	<b>\$ (8,860)</b>	<b>\$ (8,975)</b>
<b>Increase (decrease) in cash</b>	<b>1,364</b>	<b>9,466</b>	<b>7,255</b>	<b>11,828</b>	<b>10,161</b>
Cash & cash equivalents beginning of year	7,838	9,202	18,668	25,923	37,751
Cash & cash equivalents end of year	9,202	18,668	25,923	37,751	47,913

Visa

Common Size Income Statement ( as % of sales)

<b>Fiscal Years Ending Sep. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
Service revenues	43.44%	43.27%	42.22%	41.55%	40.90%	40.26%	39.63%	39.63%
Data processing revenues	42.41%	43.80%	44.97%	45.89%	46.84%	47.80%	48.78%	48.78%
International transaction fees	34.43%	34.99%	33.96%	35.38%	36.85%	38.38%	39.97%	39.97%
Other revenues	4.58%	4.58%	5.71%	5.68%	5.65%	5.62%	5.59%	5.59%
Client incentives	-24.87%	-26.64%	-26.87%	-28.43%	-30.08%	-31.83%	-33.68%	-33.68%
<b>Net operating revenues</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Operating Expenses</b>								
Personnel	-14.32%	-15.38%	-14.99%	-14.88%	-14.88%	-14.88%	-14.88%	-14.88%
Marketing	-5.02%	-4.79%	-4.81%	-5.33%	-5.33%	-5.33%	-5.33%	-5.33%
Network & processing	-3.38%	-3.33%	-3.14%	-2.88%	-2.88%	-2.88%	-2.88%	-2.88%
Professional fees	-2.23%	-2.16%	-1.98%	-2.27%	-2.27%	-2.27%	-2.27%	-2.27%
Depreciation & amortization	-3.03%	-2.97%	-2.86%	-2.75%	-2.65%	-2.56%	-2.47%	-2.60%
General & administrative	-5.77%	-5.56%	-5.21%	-5.15%	-5.15%	-5.15%	-5.15%	-5.15%
Litigation provision (benefit)	-0.10%	-2.95%	-1.74%	-1.54%	-1.37%	-1.22%	-1.08%	-1.08%
Visa Europe framework agreement loss	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total operating expenses	-33.85%	-37.14%	-34.71%	-35.64%	-36.59%	-37.56%	-38.56%	-38.56%
<b>Operating income</b>	<b>66.15%</b>	<b>62.86%</b>	<b>65.29%</b>	<b>65.19%</b>	<b>65.46%</b>	<b>65.71%</b>	<b>65.94%</b>	<b>65.80%</b>
<b>Non-Operating income (expense)</b>								
Interest expense	-3.07%	-2.97%	-2.32%	-2.11%	-1.91%	-1.73%	-1.57%	-1.56%
Investment and other non-operating income (expense)	0.62%	2.25%	1.81%	1.50%	1.33%	1.18%	1.05%	1.02%
Non-operating income (expense)	-2.45%	-0.72%	-0.51%	-0.61%	-0.58%	-0.56%	-0.53%	-0.55%
Income before income taxes	63.70%	62.14%	64.78%	75.51%	88.17%	102.93%	120.13%	120.11%
Income tax provision	27.21%	12.15%	12.20%	10.83%	9.61%	8.53%	7.57%	7.57%
<b>Net income</b>	<b>36.49%</b>	<b>49.98%</b>	<b>52.57%</b>	<b>50.99%</b>	<b>51.33%</b>	<b>51.63%</b>	<b>51.90%</b>	<b>51.86%</b>

Visa

Common Size Balance Sheet ( as % of sales)

<b>Fiscal Years Ending Sep. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
<b>Assets</b>								
Cash & cash equivalents	53.79%	39.60%	34.11%	43.69%	40.36%	26.33%	12.86%	-31.02%
Restricted cash - U.S. litigation escrow	5.62%	7.23%	5.24%	7.49%	10.70%	15.29%	21.84%	34.16%
Investment securities	19.41%	17.21%	18.44%	17.81%	17.21%	16.64%	16.08%	17.04%
Income tax receivable	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Settlement receivable	7.75%	7.68%	13.27%	8.28%	8.28%	8.29%	8.30%	8.30%
Accounts receivable	6.17%	5.86%	6.71%	6.35%	6.36%	6.36%	6.37%	6.37%
Customer collateral	6.02%	6.43%	7.17%	7.12%	7.06%	7.00%	6.95%	7.55%
Current portion of client incentives	1.87%	1.65%	3.22%	3.87%	4.64%	5.57%	6.68%	8.78%
Deferred tax assets	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Prepaid expenses & other current assets	3.00%	2.73%	3.10%	3.57%	4.11%	4.73%	5.44%	6.86%
<b>Total current assets</b>	<b>103.62%</b>	<b>88.39%</b>	<b>91.27%</b>	<b>106.70%</b>	<b>119.14%</b>	<b>127.31%</b>	<b>145.19%</b>	<b>161.07%</b>
Investment securities,	10.49%	19.81%	9.39%	9.03%	8.69%	8.37%	8.05%	8.48%
Client incentives	3.22%	2.61%	9.07%	3.74%	3.74%	3.74%	3.74%	3.74%
Property, equipment & technology, net	12.27%	11.99%	11.73%	11.07%	10.59%	10.27%	10.07%	10.61%
Capital Expenditure	-3.85%	-3.48%	-3.29%	-3.42%	-3.42%	-3.42%	-3.43%	-3.43%
Goodwill	82.31%	73.73%	68.14%	60.47%	53.66%	47.62%	42.26%	41.07%
Intangible assets, net	151.69%	133.72%	116.55%	94.50%	76.61%	62.12%	50.36%	44.71%
Other assets	6.68%	5.65%	9.71%	8.62%	7.65%	6.79%	6.03%	5.86%
<b>Total assets</b>	<b>370.29%</b>	<b>335.90%</b>	<b>315.85%</b>	<b>294.13%</b>	<b>280.09%</b>	<b>266.21%</b>	<b>265.71%</b>	<b>275.54%</b>
<b>Liabilities</b>								
Accounts payable	0.98%	0.89%	0.68%	1.34%	1.35%	1.35%	1.35%	1.35%
Settlement payable	10.91%	10.52%	17.37%	9.56%	9.57%	9.58%	9.58%	9.58%
Customer collateral	6.02%	6.43%	7.17%	7.05%	6.93%	6.81%	6.69%	7.20%
Accrued compensation & benefits	4.12%	4.37%	3.46%	4.75%	4.75%	4.76%	4.76%	4.76%
Client incentives	11.38%	13.75%	17.40%	10.90%	10.91%	10.91%	10.92%	10.92%
Accrued liabilities	6.15%	5.63%	7.07%	6.65%	6.65%	6.66%	6.66%	6.66%
Current portion of long-term debt	9.53%	0.00%	0.00%	9.27%	10.28%	0.00%	0.00%	0.00%
Accrued litigation	5.35%	6.96%	5.24%	4.65%	4.12%	3.66%	3.25%	3.16%
<b>Total current liabilities</b>	<b>54.44%</b>	<b>54.85%</b>	<b>58.38%</b>	<b>54.17%</b>	<b>54.56%</b>	<b>43.72%</b>	<b>43.21%</b>	<b>43.63%</b>
Long-term debt	90.52%	80.69%	72.81%	62.54%	41.65%	30.67%	21.63%	8.65%
Deferred tax liabilities	32.57%	22.41%	20.92%	23.36%	23.49%	23.61%	23.72%	23.66%
Other liabilities	7.20%	12.94%	12.79%	7.77%	7.78%	7.78%	7.79%	7.79%
<b>Total liabilities</b>	<b>191.83%</b>	<b>170.89%</b>	<b>164.90%</b>	<b>147.84%</b>	<b>127.48%</b>	<b>105.78%</b>	<b>96.34%</b>	<b>83.72%</b>
<b>Equity</b>								
Series A-C convertible participating preferred stock & Additional paid-in capital	122.16%	107.47%	95.76%	85.28%	82.92%	79.92%	76.45%	79.59%
Treasury stock	0.00%	0.00%	0.00%	-29.21%	-51.85%	-69.02%	-81.67%	-99.21%
Right to recover for covered losses	-0.28%	-0.03%	-0.74%	-0.66%	-0.59%	-0.52%	-0.46%	-0.45%
Accumulated income (deficit)	51.79%	54.92%	58.76%	93.39%	124.35%	152.04%	176.80%	213.59%
Total accumulated other comprehensive income (loss), net	4.78%	2.65%	-2.83%	-2.51%	-2.23%	-1.98%	-1.75%	-1.71%
<b>Total Visa Inc. stockholders' equity</b>	<b>178.45%</b>	<b>165.01%</b>	<b>150.95%</b>	<b>146.29%</b>	<b>152.61%</b>	<b>160.44%</b>	<b>169.37%</b>	<b>191.82%</b>
<b>Total liabilities and equity</b>	<b>370.29%</b>	<b>335.90%</b>	<b>315.85%</b>	<b>294.13%</b>	<b>280.09%</b>	<b>266.21%</b>	<b>265.71%</b>	<b>275.54%</b>

Visa

Value Driver Estimation

<b>Fiscal Years Ending Sep. 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
Net operating revenues	18,358	20,609	22,977	25,911	29,220	32,949	37,151	38,192
<b>Operating Expenses:</b>								
-Personnel	(2,628)	(3,170)	(3,444)	(3,857)	(4,349)	(4,904)	(5,530)	(5,685)
-Marketing	(922)	(988)	(1,105)	(1,382)	(1,559)	(1,757)	(1,982)	(2,037)
-Network & processing	(620)	(686)	(721)	(745)	(840)	(948)	(1,069)	(1,099)
-Professional fees	(409)	(446)	(454)	(589)	(664)	(749)	(845)	(868)
-Depreciation & amortization	(556)	(613)	(656)	(713)	(774)	(841)	(914)	(993)
-General & administrative	(1,060)	(1,145)	(1,196)	(1,335)	(1,505)	(1,697)	(1,914)	(1,967)
+Implied interest on operating leases	13	13	16	17	16	18	19	21
<b>EBITA</b>	<b>12,176</b>	<b>13,574</b>	<b>15,417</b>	<b>17,307</b>	<b>19,544</b>	<b>22,070</b>	<b>24,918</b>	<b>25,564</b>
<b>Adjusted Taxes</b>								
Income tax provision	4,995	2,505	2,804	3,512	3,987	4,522	5,126	5,265
+Litigation provision (benefit)	(4)	(127)	(84)	(84)	(84)	(84)	(84)	(86)
+Visa Europe framework agreement loss	-	-	-	-	-	-	-	-
+Tax shield interest expense	118	129	112	114	117	120	122	125
+ Tax on Lease Interest	3	3	3	3	3	4	4	4
+ Tax on investment income and other expense	24	97	87	80	87	95	103	113
<b>Total adjusted taxes</b>	<b>5,136</b>	<b>2,606</b>	<b>2,923</b>	<b>3,626</b>	<b>4,110</b>	<b>4,656</b>	<b>5,271</b>	<b>5,421</b>
<b>NOPLAT Calculation:</b>								
EBITA	12,176	13,574	15,417	17,307	19,544	22,070	24,918	25,564
- total adjusted taxes	5,136	2,606	2,923	3,626	4,110	4,656	5,271	5,421
+ Change in Deferred Taxes	1,172	(1,362)	189	1,291	824	929	1,048	242
<b>NOPLAT</b>	<b>8,212</b>	<b>9,606</b>	<b>12,683</b>	<b>14,972</b>	<b>16,258</b>	<b>18,343</b>	<b>20,695</b>	<b>20,385</b>
<b>Operating Current Assets:</b>								
Normal Cash (15.52% of sales)	2,849	3,199	3,566	4,021	4,535	5,114	5,766	5,927
+ Income tax receivable	-	-	-	-	-	-	-	-
+ Settlement receivable	1,422	1,582	3,048	2,143	2,417	2,725	3,073	3,159
+ Accounts receivable	1,132	1,208	1,542	1,645	1,855	2,092	2,359	2,425
+ Customer collateral	1,106	1,325	1,648	1,842	2,060	2,303	2,574	2,878
+ Current portion of client incentives	344	340	741	1,002	1,354	1,831	2,475	3,345
+ Prepaid expenses and other current assets	550	562	712	924	1,198	1,554	2,016	2,616
<b>Total Operating CA</b>	<b>7,403</b>	<b>8,216</b>	<b>11,257</b>	<b>11,577</b>	<b>13,419</b>	<b>15,618</b>	<b>18,262</b>	<b>20,350</b>
<b>Operating Current Liabilities:</b>								
Accounts payable	179	183	156	348	393	443	499	513
+ Settlement payable	2,003	2,168	3,990	2,476	2,792	3,149	3,550	3,650
+ Customer collateral	1,106	1,325	1,648	1,825	2,021	2,238	2,478	2,744
+Accrued compensation and benefits	757	901	796	1,230	1,387	1,564	1,763	1,813
+Client incentives	2,089	2,834	3,997	2,821	3,182	3,588	4,045	4,159
+Accrued liabilities	1,129	1,160	1,625	1,721	1,941	2,189	2,468	2,537
<b>Total Operating CL</b>	<b>7,263</b>	<b>8,571</b>	<b>12,212</b>	<b>10,422</b>	<b>11,715</b>	<b>13,170</b>	<b>14,804</b>	<b>15,415</b>
<b>Net Operating Working Capital</b>	<b>140</b>	<b>(355)</b>	<b>(955)</b>	<b>1,156</b>	<b>1,703</b>	<b>2,449</b>	<b>3,458</b>	<b>4,934</b>
<b>Invested Capital (IC):</b>								
+Client Incentives	591	538	2,084	967	1,091	1,230	1,387	1,426
+ Property, equipment and technology, net	2,253	2,472	2,695	2,867	3,091	3,375	3,730	4,041
+ Other assets	1,226	1,165	2,232	2,232	2,232	2,232	2,232	2,232
+ Intangible assets, net	27,848	27,558	26,780	24,466	22,352	20,420	18,656	17,044
+ PV of operating leases	578	691	729	723	780	851	941	1,019
+ Other liabilities	1,321	2,666	2,939	2,012	2,269	2,558	2,885	2,966
<b>Invested Capital (IC)</b>	<b>33,957</b>	<b>34,734</b>	<b>36,504</b>	<b>34,423</b>	<b>33,517</b>	<b>33,115</b>	<b>33,288</b>	<b>33,661</b>
<b>Return on Invested Capital (ROIC):</b>								
NOPLAT	8,212	9,606	12,683	14,972	16,258	18,343	20,695	20,385
Beginning Invested Capital	32,078	33,957	34,734	36,504	34,423	33,517	33,115	33,288
<b>ROIC</b>	<b>25.60%</b>	<b>28.29%</b>	<b>36.51%</b>	<b>41.01%</b>	<b>47.23%</b>	<b>54.73%</b>	<b>62.49%</b>	<b>61.24%</b>
<b>Economic Profit (EP):</b>								
Beginning Invested Capital	32,078	33,957	34,734	36,504	34,423	33,517	33,115	33,288
* (ROIC-WACC)	19.23%	21.91%	30.14%	34.64%	40.85%	48.35%	56.12%	54.87%
<b>Economic profit</b>	<b>6,168</b>	<b>7,441</b>	<b>10,469</b>	<b>12,645</b>	<b>14,063</b>	<b>16,206</b>	<b>18,584</b>	<b>18,264</b>
<b>Free Cash Flow (FCF):</b>								
NOPLAT	8,212	9,606	12,683	14,972	16,258	18,343	20,695	20,385
+Beginning Invested Capital	32,078	33,957	34,734	36,504	34,423	33,517	33,115	33,288
-Ending Invested Capital	33,957	34,734	36,504	34,423	33,517	33,115	33,288	33,661
<b>Free Cash Flow</b>	<b>6,333</b>	<b>8,829</b>	<b>10,913</b>	<b>17,053</b>	<b>17,164</b>	<b>18,745</b>	<b>20,522</b>	<b>20,012</b>

Visa

Key Management Ratios

Fiscal Years Ending Sep. 30	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
<b>Liquidity Ratios:</b>								
Current ratio (current assets/current liabilities)	1.90	1.61	1.56	1.62	2.14	3.02	3.62	4.25
Quick ratio (cash+securities+receivables)/current liabilities	1.60	1.28	1.24	1.26	1.76	2.52	3.07	3.61
Operating CF ratio (operating cash flow/ current liabilities)	0.92	1.12	0.95	0.98	1.05	1.31	1.32	1.19
<b>Asset-Management Ratios:</b>								
Total asset turnover (total revenue/avg assets)	0.28	0.30	0.32	0.36	0.38	0.39	0.39	0.35
Accounts receivable turnover (total revenue/ avg receivabl	6.87	5.59	10.01	6.19	7.25	7.25	7.25	6.93
Net working capital turnover (net sales/ working capital)	1.67	2.51	2.38	2.99	1.61	1.13	0.89	0.71
<b>Financial Leverage Ratios:</b>								
Debt ratio (total debt/total assets)	0.52	0.51	0.52	0.47	0.45	0.40	0.38	0.35
Debt to equity ratio (debt/avg equity)	0.92	1.05	1.10	0.92	0.88	0.74	0.68	0.59
LT Debt to Assets (LT debt/avg assets)	0.25	0.24	0.24	0.15	0.15	0.13	0.12	0.11
<b>Profitability Ratios:</b>								
Gross margin (total revenue - COGS/total revenue)	75.06%	74.33%	75.09%	74.63%	74.63%	74.63%	74.63%	74.63%
Free Cash Flow margin (free cash flow/sales)	34.50%	42.84%	47.49%	65.81%	58.74%	56.89%	55.24%	52.40%
ROA (net income/ avg assets)	10.15%	15.02%	17.04%	18.38%	19.71%	20.00%	20.12%	18.26%
ROE (net income/ avg total equity)	20.40%	30.86%	35.17%	36.38%	36.28%	34.80%	33.17%	28.92%
EBITDA Margin (EBITDA/ total revenue)	66.32%	65.87%	67.10%	66.79%	66.89%	66.98%	67.07%	66.94%
<b>Payout Policy Ratios:</b>								
Dividend Payout Ratio (Dividend/EPS)	12.99%	14.18%	14.75%	18.52%	18.52%	18.52%	18.52%	18.52%
Total Payout Ratio ((Divs. + Repurchases)/NI)	126.44%	88.44%	90.03%	75.76%	68.95%	62.98%	57.75%	56.71%

**Visa***Weighted Average Cost of Capital (WACC) Estimation*

<b>Cost of Capital</b>	
Risk free rate	0.75%
Equity Risk Premium	5.69%
Beta	1.01
<b>Cost of Equity</b>	<b>6.50%</b>
<b>Cost of Debt</b>	
Pre tax Cost of Debt	2.27%
Marginal Tax Rate	21%
<b>After Tax Cost of Debt</b>	<b>1.79%</b>
<b>Weight of Capital</b>	
Total Shares Outstanding	7,650.10
Share Price	\$151.85
<b>Value of Equity</b>	<b>\$1,161,668</b>
Short-term debt	13,415.00
Current Portion Long Term Debt	0.00
Long-term Debt	16,729
PV of operating leases	729
<b>Value of Debt</b>	<b>30,873</b>
Total Value of Capital	1,192,541
Weight of Equity	97.41%
Weight of Debt	2.59%
Weighted Cost of Equity	6.33%
Weighted Cost of Debt	0.05%
<b>Weighted Average Cost of Capital (WACC)</b>	<b>6.37%</b>

## Visa

### Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

#### Key Inputs:

CV Growth of NOPLAT	2.80%
CV Year ROIC	61.24%
WACC	6.37%
Cost of Equity	6.50%
CV NOPLAT	20,385

<b>Fiscal Years Ending Sep. 30</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
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#### DCF Model:

Free Cash Flow (FCF)	17,053	17,164	18,745	20,522	20,012
Continuing Value (CV)					544,277
PV of FCF	16,031	15,168	15,573	16,028	425,084

Value of Operating Assets:	487,885
Non-Operating Adjustments:	
+ Marketable Securities, ST Investment Securities	4,616
+ Excess Cash	5,181
+Long Term Investment	2,339
-Debt	(30,873)
-Litigation Liabilities	(1,203)
-Convertible Preferred Stock	(5,462)
-ESOP	(368)
Value of Equity	462,114
Shares Outstanding	2,188
Intrinsic Value of Last FYE	\$ 211.19
<b>Implied Price as of Today</b>	<b>\$ 218.05</b>

#### EP Model:

Economic Profit (EP)	12,645	14,063	16,206	18,584	18,264
Continuing Value (CV)					510,989
PV of EP	11,887	12,429	13,464	14,514	399,086

Total PV of EP	451,381
Invested Capital (last FYE)	36,504
Value of Operating Assets:	487,885
Non-Operating Adjustments	
+ Marketable Securities, ST Investment Securities	4,616
+ Excess Cash	5,181
+Long Term Investment	2,339
-Debt	(30,873)
Litigation Liabilities	(1,203)
-Convertible Preferred Stock	(5,462)
-ESOP	(368)
Value of Equity	462,114
Shares Outstanding	2,188
Intrinsic Value of Last FYE	\$ 211.19
<b>Implied Price as of Today</b>	<b>\$ 218.05</b>



## Visa

Dividend Discount Model (DDM) or Fundamental P/E Valuation Model

<b>Fiscal Years Ending Sep. 30</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>
EPS	\$ 6.18	\$ 7.17	\$ 8.30	\$ 9.59	\$ 10.04
<b>Key Assumptions</b>					
CV growth of EPS	2.80%				
CV Year ROE	26.85%				
Cost of Equity	6.50%				
<b>Future Cash Flows</b>					
P/E Multiple (CV Year)					24.24
EPS (CV Year)					10.04
Future Stock Price					243.44
Dividends Per Share	1.14	1.33	1.54	1.78	1.86
Discounted Cash Flows	1.07	1.17	1.27	1.38	\$ 189.259
Intrinsic Value as of Last FYE	\$ 194.16				
<b>Implied Price as of Today</b>	<b>\$ 200.46</b>				

## Visa

### Relative Valuation Models

Ticker	Company	Price	EPS		P/E 20	P/E 21
			2020E	2021E		
AXP	American Express	\$115.57	\$9.02	\$9.97	12.81	11.59
DFS	Discover	\$65.97	\$8.91	\$9.69	7.40	6.81
MA	Mastercard	\$299.03	\$8.91	\$10.72	33.56	27.89
SYF	Synchrony Financial	\$30.02	\$3.98	\$4.60	7.54	6.53
PYPL	Paypal Holdings, Inc	\$114.64	\$2.18	\$2.90	52.59	39.53
FISV	Fiserv	\$109.37	\$4.97	\$5.86	22.01	18.66
COF	Capital One Financial	\$86.42	\$11.77	\$12.98	7.34	6.66
GPN	Global Payments	\$191.57	\$3.77	\$5.12	50.81	37.42
WEX	WEX Inc.	\$182.62	\$5.84	\$7.37	31.27	24.78
FIS	Fidelity Natl Info Svcs	\$148.05	\$1.98	\$3.31	74.77	44.73
Average					<b>38.05</b>	<b>32.17</b>

V	Visa	\$151.85	6.18	7.17	24.6	21.2
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#### Implied Relative Value:

P/E (EPS20)	\$	<b>235.02</b>	Undervalued
P/E (EPS21)	\$	<b>230.49</b>	Undervalued

**Visa****Valuation of Options Granted under ESOP**

Current Stock Price	\$151.85
Risk Free Rate	0.75%
Current Dividend Yield	0.60%
Annualized St. Dev. of Stock Returns	19.65%

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)		B-S Option Price	Value of Options Granted
Range 1	5,714,658	90.18	6.83	\$	64.45	\$ 368,302,278
Total	5,714,658	\$ 90.18	6.83	\$	69.95	<b>\$ 368,302,278</b>
				Scale down by 1,000,000:	\$	368

Visa

Present Value of Operating Lease Obligations

Fiscal Years Ending Sep. 30		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Year	1	42.0	57.0	65.0	95.0	100.0	76.0	95.0	126.0	155.0	180.0	143.0
Year	2	35.0	36.0	56.0	75.0	77.0	60.0	63.0	103.0	119.0	123.0	121.0
Year	3	26.0	28.0	23.0	48.0	43.0	37.0	57.0	82.0	68.0	102.0	106.0
Year	4	18.0	14.0	19.0	35.0	35.0	32.0	39.0	61.0	64.0	89.0	96.0
Year	5	6.0	10.0	10.0	28.0	20.0	30.0	31.0	57.0	57.0	75.0	82.0
	Thereafter	14.0	12.0	34.0	64.0	82.0	118.0	107.0	190.0	163.0	178.0	250.0
Total Minimum Payments		141.0	157.0	207.0	345.0	357.0	353.0	392.0	619.0	626.0	747.0	798.0
Less: Cumulative Interest		8.3	8.5	13.2	23.4	26.3	30.8	31.2	52.1	48.1	56.4	68.8
<b>PV of Minimum Payments</b>		<b>132.7</b>	<b>148.5</b>	<b>193.8</b>	<b>321.6</b>	<b>330.7</b>	<b>322.2</b>	<b>360.8</b>	<b>566.9</b>	<b>577.9</b>	<b>690.6</b>	<b>729.2</b>
<b>Implied Interest in Year 1 Payment</b>			<b>3.0</b>	<b>3.4</b>	<b>4.4</b>	<b>7.3</b>	<b>7.5</b>	<b>7.3</b>	<b>8.2</b>	<b>12.9</b>	<b>13.1</b>	<b>15.7</b>
Pre-Tax Cost of Debt		2.27%	2.27%	2.27%	2.27%	2.27%	2.27%	2.27%	2.27%	2.27%	2.27%	2.27%
Years Implied by Year 6 Payment		2.3	1.2	3.4	2.3	4.1	3.9	3.5	3.3	2.9	2.4	3.0
Expected Obligation in Year 6 & Beyond		6	10	10	28	20	30	31	57	57	75	82
<b>Present Value of Lease Payments</b>												
PV of Year 1		41.1	55.7	63.6	92.9	97.8	74.3	92.9	123.2	151.6	176.0	139.8
PV of Year 2		33.5	34.4	53.5	71.7	73.6	57.4	60.2	98.5	113.8	117.6	115.7
PV of Year 3		24.3	26.2	21.5	44.9	40.2	34.6	53.3	76.7	63.6	95.4	99.1
PV of Year 4		16.5	12.8	17.4	32.0	32.0	29.3	35.7	55.8	58.5	81.4	87.8
PV of Year 5		5.4	8.9	8.9	25.0	17.9	26.8	27.7	50.9	50.9	67.0	73.3
PV of 6 & beyond		12.1	10.5	28.9	55.1	69.2	99.8	91.0	161.8	139.5	153.2	213.6
Capitalized PV of Payments		132.7	148.5	193.8	321.6	330.7	322.2	360.8	566.9	577.9	690.6	729.2

**Visa***Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding*

Number of Options Outstanding (shares):	5,714,658
Average Time to Maturity (years):	6.83
Expected Annual Number of Options Exercised:	836,700

Current Average Strike Price:	\$ 90.18
Cost of Equity:	6.50%
Current Stock Price:	\$151.85

<b>Fiscal Years Ending Sep. 30</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>
Increase in Shares Outstanding:	836,700	836,700	836,700	836,700	836,700	836,700	694,461
Average Strike Price:	\$ 90.18	\$ 90.18	\$ 90.18	\$ 90.18	\$ 90.18	\$ 90.18	\$ 90.18
<b>Increase in Common Stock Account:</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>63</b>
Change in Treasury Stock	7,563	7,563	7,563	7,563	7,563	0	0
Expected Price of Repurchased Shares:	\$ 151.85	\$ 161.71	\$ 172.22	\$ 183.41	\$ 195.32	\$ 208.01	\$ 221.52
<b>Number of Shares Repurchased:</b>	<b>50</b>	<b>47</b>	<b>44</b>	<b>41</b>	<b>39</b>	-	-
Shares Outstanding (beginning of the year)	2,188	2,139	2,093	2,050	2,010	1,972	1,973
Plus: Shares Issued Through ESOP	0.84	0.84	0.84	0.84	0.84	0.84	0.69
Less: Shares Repurchased in Treasury	50	47	44	41	39	-	-
<b>Shares Outstanding (end of the year)</b>	<b>2,139</b>	<b>2,093</b>	<b>2,050</b>	<b>2,010</b>	<b>1,972</b>	<b>1,973</b>	<b>1,973</b>

Visa  
Sensitivity Tables

DCF:

		Beta										
		218.05	0.82	0.87	0.92	0.97	1.01	1.07	1.12	1.17	1.22	1.27
Equity Risk Premium	5.19%		372.55	332.09	299.41	272.46	254.08	230.62	214.06	199.65	186.99	175.79
	5.29%		358.76	320.38	289.28	263.56	245.98	223.50	207.60	193.74	181.56	170.76
	5.39%		345.93	309.46	279.80	255.21	238.37	216.80	201.51	188.17	176.42	166.00
	5.49%		333.98	299.23	270.90	247.36	231.20	210.47	195.75	182.89	171.55	161.49
	5.59%		322.80	289.65	262.54	239.96	224.44	204.49	190.30	177.89	166.93	157.20
	5.69%		312.33	280.65	254.67	232.98	218.05	198.82	185.13	173.14	162.55	153.12
	5.79%											
	5.79%		302.51	272.17	247.24	226.38	212.00	193.45	180.23	168.63	158.38	149.24
	5.89%		293.27	264.18	240.22	220.13	206.26	188.35	175.56	164.34	154.40	145.55
	5.99%		284.56	256.64	233.57	214.21	200.82	183.51	171.13	160.25	150.61	142.02
	6.09%		276.35	249.50	227.28	208.59	195.65	178.89	166.90	156.35	147.00	138.65
	6.19%		268.58	242.73	221.30	203.24	190.72	174.49	162.86	152.62	143.54	135.42

		CV NOPLAT Growth										
		218.05	2.40%	2.50%	2.60%	2.70%	2.80%	2.90%	3.00%	3.10%	3.20%	3.30%
W A C C	6.03%		219.15	224.50	230.17	236.18	242.55	249.34	256.58	264.30	272.58	281.46
	6.08%		216.00	221.20	226.69	232.50	238.67	245.23	252.22	259.67	267.65	276.19
	6.13%		212.94	217.98	223.30	228.94	234.91	241.25	248.00	255.20	262.88	271.11
	6.28%		204.23	208.84	213.70	218.84	224.27	230.02	236.12	242.61	249.52	256.89
	6.33%		201.47	205.95	210.68	215.66	220.92	226.50	232.40	238.68	245.35	252.46
	6.38%		198.55	202.90	207.48	212.30	217.39	222.78	228.48	234.54	240.97	247.82
	6.43%		196.16	200.40	204.86	209.55	214.51	219.74	225.29	231.16	237.40	244.03
	6.48%		193.61	197.73	202.06	206.62	211.43	216.51	221.88	227.57	233.60	240.02
	6.53%		191.11	195.12	199.33	203.77	208.44	213.36	218.57	224.08	229.92	236.13
	6.58%		188.68	192.58	196.67	200.98	205.52	210.30	215.35	220.69	226.35	232.35
	6.63%		186.30	190.10	194.08	198.27	202.68	207.32	212.23	217.40	222.88	228.69

		International Transaction Fee Growth										
		218.05	6.36%	9.36%	11.36%	14.36%	17.36%	20.36%	23.36%	26.36%	29.36%	32.36%
Pre-tax Cost of Debt	1.27%		188.19	195.80	201.23	209.91	219.30	229.39	240.25	251.91	264.41	277.79
	1.47%		187.97	195.58	201.00	209.67	219.05	229.12	239.97	251.62	264.11	277.48
	1.67%		187.76	195.35	200.77	209.43	218.80	228.86	239.70	251.33	263.81	277.16
	1.87%		187.54	195.13	200.54	209.19	218.55	228.60	239.42	251.04	263.50	276.84
	2.07%		187.33	194.91	200.31	208.95	218.30	228.34	239.15	250.76	263.20	276.52
	2.27%		187.11	194.68	200.08	208.71	218.05	228.07	238.87	250.47	262.90	276.20
	2.57%		186.79	194.35	199.73	208.35	217.67	227.68	238.46	250.04	262.45	275.73
	2.87%		186.47	194.02	199.39	208.00	217.30	227.29	238.06	249.61	262.00	275.26
	3.17%		186.15	193.68	199.05	207.64	216.93	226.90	237.65	249.18	261.55	274.78
	3.47%		185.83	193.35	198.71	207.28	216.55	226.51	237.24	248.76	261.10	274.31
	3.77%		185.51	193.02	198.37	206.93	216.18	226.13	236.83	248.33	260.65	273.84

		CV ROIC Rate										
		218.05	57.24%	58.24%	59.24%	60.24%	61.24%	62.24%	63.24%	64.24%	65.24%	66.24%
Risk Free Rate	-0.09%		284.08	284.32	284.55	284.76	284.98	285.18	285.38	285.57	285.76	285.94
	-0.07%		282.04	282.27	282.50	282.71	282.92	283.13	283.33	283.52	283.70	283.88
	-0.05%		280.02	280.25	280.47	280.69	280.90	281.10	281.30	281.49	281.67	281.85
	0.35%		244.84	245.04	245.23	245.42	245.60	245.77	245.94	246.11	246.27	246.42
	0.55%		230.28	230.47	230.65	230.83	231.00	231.16	231.32	231.47	231.62	231.77
	0.75%		217.37	217.55	217.72	217.89	218.05	218.20	218.35	218.50	218.64	218.77
	0.95%		205.68	205.85	206.01	206.17	206.32	206.46	206.60	206.74	206.87	207.00
	1.15%		195.19	195.35	195.50	195.65	195.79	195.93	196.06	196.19	196.32	196.44
	1.35%		185.68	185.83	185.98	186.12	186.25	186.38	186.51	186.63	186.75	186.86
	1.55%		177.02	177.16	177.30	177.43	177.56	177.68	177.80	177.92	178.03	178.14
	1.75%		169.10	169.24	169.37	169.49	169.61	169.73	169.85	169.96	170.06	170.17

DDM:

		CV EPS Growth										
		200.46	2.40%	2.50%	2.60%	2.70%	2.80%	2.90%	3.00%	3.10%	3.20%	3.30%
Cost of Equity	6.00%		212.35	217.40	222.74	228.41	234.44	240.85	247.69	255.01	262.84	271.26
	6.10%		206.08	210.82	215.83	221.13	226.76	232.74	239.10	245.88	253.14	260.91
	6.20%		200.15	204.60	209.30	214.27	219.53	225.11	231.04	237.35	244.09	251.28
	6.30%		194.53	198.72	203.13	207.80	212.72	217.94	223.48	229.36	235.62	242.30
	6.40%		189.18	193.13	197.29	201.67	206.29	211.18	216.36	221.85	227.68	233.89
	6.50%		184.31	188.04	191.97	196.10	200.46	205.06	209.92	215.07	220.53	226.33
	6.60%		179.27	182.79	186.48	190.37	194.46	198.77	203.32	208.13	213.22	218.62
	6.70%		174.66	177.99	181.48	185.14	188.00	193.05	197.33	201.84	206.61	211.66
	6.80%		170.26	173.41	176.71	180.18	183.81	187.63	191.66	195.90	200.37	205.10
	6.90%		166.06	169.05	172.17	175.45	178.88	182.49	186.28	190.27	194.47	198.91
	7.00%		162.04	164.88	167.84	170.94	174.19	177.59	181.17	184.93	188.88	193.06

Revenue Per Transaction:

		Processed Transaction Volume Growth Rate											
		\$	0.17	11.47%	11.97%	12.47%	12.97%	13.47%	13.97%	14.47%	15.97%	16.47%	17.97%
Net Operating Revenue Growth	0.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	3.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	6.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	9.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	12.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	15.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	18.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	21.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	24.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
	27.83%		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16