

Last Price Fair Value Consider Buy Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 77 83 usp 104 00 usp 72 80 usp 140 40 usp Medium Wide Stable Standard Credit Services

Economic Headwinds Could Persist in 2016, but Visa's Wide Moat and Growth Prospects Remain Intact

See Page 2 for the full Analyst Note from 28 Jan 2016

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The primary analyst covering this company does not own its stock.

Research as of 28 Jan 2016 Estimates as of 10 Dec 2015 Pricing data through 04 Apr 2016 Rating updated as of 04 Apr 2016

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted

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Investment Thesis 09 Feb 2015

Visa dominates the global market for electronic payments, accounting for about half of all credit card transactions and roughly three fourths of debit card transactions in recent years, according to the Nilson Report. The company primarily earns fees based on the volume of payments made under the Visa brand and the number of transactions processed through the Visa network. In a world in which the number of digital payment transactions is constantly growing, this wide-moat company should flourish.

The next five years are likely to see rapid changes in the nature of the payment business as cards are slowly replaced by electronic payment methods. This presents an opportunity for Visa in the form of volume growth tailwinds, but also a threat as new competitors attempt to manage the payment process and develop new ways to authenticate payments. We think Visa is on track to ensure that its connections in the virtual world are as plentiful and secure as they are in the physical, and competitors will have a tough time replicating the network's offering.

Like many dominant businesses, Visa faces the threat of increased regulation. The company's ability to set interchange fees at an optimal rate is slowly being reduced as countries around the world lower maximum interchange limits. Thus, issuers' incentives (and cardholders', due to a resulting decline in rewards) to choose Visa have fallen considerably. That said, few competitors can match the investments in technology, security, and marketing that Visa makes, limiting possible alternatives in the payment space. Furthermore, although the networks maintain the largest number of connections within the payment ecosystem--and therefore the widest moat--the fees they receive make up only a small portion of the value chain.

We've long believed that new payment methods would incorporate, rather that disrupt, Visa's business. We think Apple Pay's early success supports this thesis. Complex international regulatory regimes create a significant barrier to entry, and we still see the successful coordination of financial institutions and merchants around the world as a herculean task.

Vital Statistics				
Market Cap (USD Mil)				169,985
52-Week High (USD)				81.01
52-Week Low (USD)				60.00
52-Week Total Return %				20.0
YTD Total Return %				0.5
Last Fiscal Year End			30	Sep 2015
5-Yr Forward Revenue CAGR %				10.7
5-Yr Forward EPS CAGR %				11.5
Price/Fair Value				0.75
Valuation Summary and Fore	casts			
Fiscal Year:	2014	2015	2016(E)	2017(E)
Price/Earnings	5.2	20.7	28.8	25.9
EV/EBITDA	13.8	10.3	12.1	11.2
EV/EBIT	14.6	14.1	160.4	14.7
Free Cash Flow Yield %	5.3	4.7	7.3	5.9

Financial Summary	and Fore	ecasts ((USD Mil)		
	Fiscal Year:	2014	2015	2016(E)	2017(E)
Revenue		15,294	16,741	18,741	20,997
Revenue YoY %		8.5	9.5	11.9	12.0
EBIT		8,150	9,064	10,255	11,193
EBIT YoY %		12.6	11.2	13.1	9.2
Net Income, Adjusted		5,757	6,328	6,595	7,242
Net Income YoY %		15.6	9.9	4.2	9.8
Diluted EPS		9.12	2.58	2.70	3.01
Diluted EPS YoY %		20.2	-71.8	5.0	11.5
Free Cash Flow		6,385	6,020	-1,340	10,212
Free Cash Flow YoY %		150.3	-5.7	-122.3	-861.9

8.0

0.9

1.4

0.8

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

Profile

Dividend Yield %

Visa manages payment brands and an "open loop" global payment network, which allows it to provide authorization, clearing, and settlement of electronic payment transactions. The firm generates revenue by charging fees to its customers (issuers and acquirers) based on the dollar volume of card activity and the number of transactions processed through the network.



Visa Inc V (NYSE) | ***

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
77.83 USD	104.00 USD	72.80 USD	140.40 USD	Medium	Wide	Stable	Standard	Credit Services

Morningstar Analysis

Economic Headwinds Could Persist in 2016, but Visa's Wide Moat and Growth Prospects Remain Intact 28 Jan 2016

Wide-moat Visa's results for the first quarter of its 2016 fiscal year reflect a more volatile global economy over the past few months, but support our thesis that payment volume, revenue, and income are likely to continue growing at impressive rates for years to come. We believe the stock is attractive at its current discount to our \$104 per share fair value estimate, and see no reason to believe the company cannot achieve its 2016 goal of high-single digit to low double-digit EPS growth, including a 4 percentage point headwind from foreign currency movements but excluding the effects of the upcoming Visa Europe merger.

In fact, the company benefited from a lower-than-expected rate of rebates and incentives. Although this line item is lumpy, the results show no evidence that a more competitive issuing environment is impacting networks.

It's not surprising that the decline of economies linked to energy prices and China as well as a strong dollar had an impact on results. Over the course of the year to come, we expect these trends to continue. If the company's expenses also rise as it integrates its European counterpart, results could appear weak, but we'd view any further price declines as buying opportunities. In constant dollar terms, both credit and debit volume continue to grow at double-digit rates.

The company is continuing to buy back its own stock--in fact, the delay in repurchases due to the upcoming Visa Europe acquisition could actually benefit shareholders, as it now seems likely more buybacks will be done at a discount to fair value. The company has \$5.8 billion of authorization remaining under its current plan.

Visa also appears well-positioned to adjust its expense base if current trends continue. Personnel and marketing expenses both declined from the first quarter of Visa's fiscal

2015 and the company has not been especially aggressive on this front to date.

Valuation, Growth and Profitability 04 Jan 2016

We are increasing our fair value estimate for Visa to \$104 from \$71 based on increased long-term growth assumptions, a slightly lower weighted average cost of capital because of the changes in capital structure associated with the Visa Europe merger, and the time value of money since our last update. This fair value represents 34.5 times our 2017 earnings per share estimate. After analyzing the prospects for electronic spending growth around the world, we believe revenue growth will average 11% annually over our five-year forecast period, with operating margin growing from 54.1% in 2015 to 57.3% in 2020. We think rebates and incentives will consume 17.8% of gross revenue over this period. We expect capital expenditures to more than double between 2015 and 2020 as the company invests in changing technology. Over the longer term, we think growth in earnings before interest will average 7% annually between 2020 and 2035.

Scenario Analysis

In an upside scenario, with gross revenue growth averaging 13% over the next five years and pretax operating earnings expanding at a 9% clip for the next 15 years, we think Visa could be worth \$130 per share. In such a scenario, we think operating margin could average 57% over the next five years, versus an average of 55% in our base case. This estimate represents 39 times our upside 2017 earnings per share estimate and incorporates EPS growth averaging 14% over the next five years.

In a downside scenario, with revenue growth averaging just under 9% over the next five years along with operating margin averaging 52% over that time frame, we think Visa could be worth \$80 per share. This downside estimate represents 29 times our downside 2017 earnings per share



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bargaining power of customers, yet Visa still maintains a strong position relative to its customers, as evidenced by the relatively small recent increases in rebates and incentive payments to customers. We believe that the potential effects of mobile applications are balanced. It may be marginally easier for cardholders to switch among payment methods using mobile technology, but these applications could also raise switching costs for cardholders and merchants by applying spending data to optimize rewards, discounts, and other offers.

estimate and incorporates near-term EPS growth averaging just 7% annually, with pretax operating income growing at a pace averaging 6% annually thereafter.

Economic Moat

A powerful network effect is responsible for Visa's wide economic moat. A payment method widely accepted by merchants is attractive to cardholders, while a payment method used by many cardholders is attractive to merchants. Thus, each additional user of the Visa brand increases its value to others.

The company also benefits from other moat sources. A trusted brand is important to users of payment systems, and Visa has spent billions of dollars over decades on this intangible asset.

Moat Trend

We view Visa's moat trend as stable. Although a number of competitive threats are visible on the horizon, we don't foresee a substantial change in the company's near-term competitive position. In recent years, issuer and merchant consolidation and cooperation has strengthened the



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Bulls Say/Bears Say

Bulls Say

- ➤ Visa is king of the hill in the digital payment market and will not be easily toppled.
- ► The ability to deal with hundreds of legal and regulatory frameworks around the world is a significant barrier to entry.
- Visa has an established network and brand and has only to adopt new technologies for its own purposes in order to fend off competition.

Bears Say

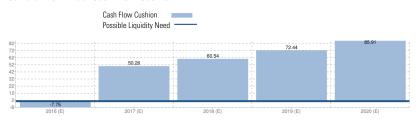
- The global financial system is becoming increasingly regulated, and the biggest players will be the first victims.
- Visa's already large market share, and its relative dependence on U.S. spending and debit cards, may place it at a growth disadvantage.
- ► The increasing use of mobile technologies will usher in a new payment paradigm at some point.



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Five Year Adjusted Cash Flow Forecast (USD Mil)					
	2016(E)	2017(E)	2018(E)	2019(E)	2020(E)
Cash and Equivalents (beginning of period)	3,518	18,260	23,734	29,304	35,758
Adjusted Available Cash Flow	-6,672	9,005	9,111	9,995	10,850
Total Cash Available before Debt Service	-3,154	27,265	32,844	39,299	46,609
Principal Payments	_	_	_	_	_
Interest Payments	-407	-543	-543	-543	-543
Other Cash Obligations and Commitments	_		_	_	
Total Cash Obligations and Commitments	-407	-543	-543	-543	-543

Cumulative Annual Cash Flow Cushion



Adjusted Cash Flow Summary

		% of
	USD Millions	Commitments
Beginning Cash Balance	3,518	136.5
Sum of 5-Year Adjusted Free Cash Flow	32,289	1,253.0
Sum of Cash and 5-Year Cash Generation	35,807	1,389.6
- · · · · · · · · · · · · · · · · · · ·		
Revolver Availability	_	_
Asset Adjusted Borrowings (Repayment)	_	_
	05.007	4 000 0
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	35,807	1,389.6
Sum of 5-Year Cash Commitments	-2,577	_

Financial Health

Visa's capital structure is exemplary. More than three fourths of Visa's assets are funded by equity, and the firm has no long-term debt outstanding. Current liabilities and deferred taxes make up almost all of the remainder.

Enterprise Risk

The largest risk to Visa, in our view, is related to regulation and litigation. As an extremely profitable participant in an oligopoly, Visa is often the target of lawyers and politicians. For example, the Dodd-Frank Act limited debit interchange fees in the United States in 2010, and the European Union has taken the first steps toward new regulations covering interchange and other aspects of the payment system. Merchants in the United States have also taken issue with the company's fee-setting practices. Additionally, Visa could be vulnerable to disruption via new technologies or innovative agreements between issuers and acquirers.

Management Activity



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Management & Ownership

wianagement Activity				
Name	Position	Shares Held	Report Date*	InsiderActivity
WILLIAM M. SHEEDY		235,528	16 Dec 2015	_
CHARLES W. SCHARF	Director	233,844	19 Nov 2015	_
Mr. Rajat taneja		115,947	04 Feb 2016	_
VASANT M. PRABHU		95,461	09 Feb 2016	_
CATHY E. MINEHAN	Director	75,612	19 Nov 2015	_
KELLY MAHON TULLIER		70,241	19 Nov 2015	_
MR. RYAN MCINERNEY		62,810	19 Nov 2015	_
JOHN A.C. SWAINSON	Director	62,472	19 Nov 2015	_
DAVID J. PANG	Director	61,612	19 Nov 2015	_

^{*}Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

% of Shares Held	% of Fund	Change	
пеш	Assets	(k)	Portfolio Date
1.70	0.69	603	29 Feb 2016
1.45	2.27	-283	29 Feb 2016
1.10	1.36	150	31 Dec 2015
1.11	0.83	139	29 Feb 2016
0.98	0.83	167	29 Feb 2016
0.20	17.10	-106	29 Feb 2016
_	10.63	0	30 Sep 2015
0.01	10.34	_	31 Dec 2015
0.25	9.76	-1,625	31 Jan 2016
0.17	9.74	-1,081	31 Jan 2016
% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
5.01	_	109,777	31 Dec 2015
0.49		•	31 Dec 2015
		•	31 Dec 2015
			31 Dec 2015
0.78	9.12	2,803	31 Dec 2015
2.20	1.99	-6,254	31 Dec 2015
2.38	0.67	-5,900	31 Dec 2015
0.19	0.42	-4,884	31 Dec 2015
0.14	0.26	-2,990	31 Dec 2015
0.12	0.51	-2,767	31 Dec 2015
	1.45 1.10 1.11 0.98 0.20 0.01 0.25 0.17 % of Shares Held 5.01 0.49 0.14 0.58 0.78 2.20 2.38 0.19 0.14	1.45 2.27 1.10 1.36 1.11 0.83 0.98 0.83 0.20 17.10	1.45

Management 04 Jan 2016

We view Visa's stewardship as standard. Charles Scharf was named CEO in late 2012, after spending time at JPMorgan Chase, where he was head of retail financial services, as well as Bank One, Citigroup, and Salomon Smith Barney. We think his background is a good fit for Visa, and we are impressed by the firm's capital actions since he took over the top spot.

We like the company's efforts to return capital to shareholders. Visa effectively returned all of its net income to shareholders via buybacks and dividends in its fiscal 2013 and 2014 years. At the same time, the company has spent only a few hundred million dollars on acquisitions over the past three years, limiting the risk of a bad capital-allocation decision. We believe the company's acquisition of Visa Europe will strengthen both its economic moat and its growth prospects, and view the high-priced deal as a strategic necessity.



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Analyst Notes

Merchant-Friendly Firms Will Win the Payment Wars 04 Jan 2016

Three major trends will drive developments in the payment industry over the next five years. First is the end-to-end facilitation of commerce. Consumers once found out about products on TV or through their co-workers, shopped at the mall, and paid with cash or checks. Today, firms like Facebook and Alphabet (Google) are inserting themselves into the entire shopping process, and merchants are using technology to create closer ties with customers. Second, merchant scale and regulation are strengthening the hands of merchants relative to the banks that long dominated the payment industry. Third, new firms and technologies are increasing the number of options consumers have for storing funds, obtaining credit, and making payments, further diminishing the importance of banks. At the same time, mobile technology is enabling payments to recede further into the background, as in the case of Uber.

As a result, we think card issuers' moats are at risk as the balance of power shifts to merchants and online commerce platforms and options to store funds and obtain credit multiply. A combination of heightened regulation and merchant control of customer relationships will necessitate a major shift in American Express' business model, and we are lowering our fair value estimate to \$72 per share. Merchant-friendly firms such as MasterCard, Visa, PayPal, and Synchrony are poised to produce growing profits as the historically well-defined lines in the payment competitive landscape become increasingly blurred. We are raising our fair values for wide-moat networks Visa and MasterCard to \$104 and \$120, respectively. These two firms are wellpositioned to grow both processing volume and ancillary revenue for years to come, and we have recently boosted our fair value for Synchrony to \$39 per share.

Finally, while emerging markets will experience rapid growth in electronic payment volume, the evolution of the

payment landscape will be dominated by developments in the U.S. and China.

Visa Finally Acquiring Visa Europe; Full Price Offsets Strategic Benefits 02 Nov 2015

Along with its fiscal 2015 fourth-quarter results, Visa announced that it will finally acquire Visa Europe, which has continued to operate as a member association since Visa's 2008 initial public offering. Visa Europe serves a number of developed and developing markets, including Germany, Poland, the United Kingdom, and Turkey. The long-awaited merger will geographically diversify Visa's business away from the mature North American market, which has historically made up more than half of volume and revenue. We agree that the move is strategically beneficial, but think the costs offset this in terms of shareholder value. Visa is paying at least EUR 16.5 billion in exchange for EUR 1.3 billion in 2014 net revenue and EUR 343 million in pretax profits and plans on \$600 million-\$650 million in closing and integration costs over time, offset by \$200 million of potential annual cost savings. We note that Visa's operating margins expanded dramatically in the years following its IPO, and management's goal of achieving margin parity over time would more than double reported operating income out of the European segment, making the price appear reasonable. We plan to raise our fair value estimate for the wide-moat firm by \$1, to \$72 per share.

Though the year's results were negatively affected by the strength of the U.S. dollar against various other currencies, the company still managed to generate double-digit growth (11%) in net revenue and operating income (14%). Client incentives consumed 18.3% of gross revenue as the company renewed agreements. We continue to believe the increasing bargaining power of customers will result in growing incentive payments, but think this will be offset by revenue growth and the ability to leverage other expenses.



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Analyst Notes

Visa Checkout's growing acceptance at e-commerce merchants is not in itself notable, but we think the proliferation of such options may actually bolster the position of the few major networks.



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Morningstar Analyst Forecasts

Fiscal Year Ends in September						Forecast	
Tiodal Todal Endo in Ooptombol	3-Year				-	TOTCCUST	5-Yea
Growth (% YoY)	Hist. CAGR	2013	2014	2015	2016	2017	Proj. CAGF
Revenue	10.0	12.1	8.5	9.5	11.9	12.0	10.7
EBIT	61.8	238.4	12.6	11.2	13.1	9.2	12.0
EBITDA	71.3	208.9	12.4	44.7	9.9	7.2	9.4
Net Income	43.4	132.3	15.6	9.9	4.2	9.8	10.1
Diluted EPS	-6.6	140.1	20.2	-71.8	5.0	11.5	11.5
Earnings Before Interest, after Tax	12.6	34.4	-14.1	23.5	5.9	3.2	7.1
Free Cash Flow	9.6	-44.2	150.3	-5.7	-122.3	-861.9	17.1
	- 11						
Profitability	3-Year Hist. Avg	2013	2014	2015	2016	2017	5-Year Proj. Avg
Operating Margin %	52.9	51.3	53.3	54.1	54.7	53.3	54.9
EBITDA Margin %	61.5	54.2	56.1	74.2	72.8	69.7	70.1
Net Margin %	36.9	35.3	37.6	37.8	<i>35.2</i>	34.5	35.3
Free Cash Flow Margin %	31.9	18.1	41.8	36.0	-7.2	48.6	36.8
ROIC %	26.7	26.8	20.5	32.9	30.4	28.2	36.4
Adjusted ROIC %	51.7	52.6	40.3	62.4	71.0	89.5	197.4
Return on Assets %	14.6	13.1	14.6	16.1	13.1	11.6	12.7
Return on Equity %	20.1	18.3	20.0	22.1	21.7	22.3	22.7
	3-Year						5-Yea
Leverage	3-rear Hist. Avg	2013	2014	2015	2016	2017	o-real Proj. Avg
Debt/Capital	_	_	_	_	0.30	0.29	0.27
Total Debt/EBITDA	_	_	_	_	1.14	1.06	0.97
EBITDA/Interest Expense	_	_	_	_	33.54	26.96	31.6

	2014	2013	2010(L)	2017(L)
Price/Fair Value	1.25	0.96	_	_
Price/Earnings	5.2	20.7	28.8	25.9
EV/EBITDA	13.8	10.3	12.1	11.2
EV/EBIT	14.6	14.1	160.4	14.7
Free Cash Flow Yield %	5.3	4.7	7.3	5.9
Dividend Yield %	0.8	0.9	1.4	0.8
Key Valuation Drivers				
Cost of Equity %				9.0
Pre-Tax Cost of Debt %				5.3
Weighted Average Cost of Ca	pital %			8.2
Long-Run Tax Rate %				33.0
Stage II EBI Growth Rate %				7.0
Stage II Investment Rate %				12.7
Perpetuity Year				20
Additional automotives and according				

2015

2016/FI

2017(F)

Valuation Summary and Forecasts

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation			
	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	33,894	13.9	14.01
Present Value Stage II	109,207	44.7	45.14
Present Value Stage III	100,990	41.4	41.74
Total Firm Value	244,091	100.0	100.88
Cash and Equivalents	5,835	_	2.41
Debt	_	_	_
Preferred Stock	_	_	_
Other Adjustments	-3,000	_	-1.24
Equity Value	246,925	_	102.06
D :	0.400		
Projected Diluted Shares	2,420		
Fair Value per Share (USD)	_		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.



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Morningstar Analyst Forecasts

Income Statement (USD Mil)				r	
Fiscal Year Ends in September	2013	2014	2015	Fore	<u>2017</u>
Revenue	14,099	15,294	16,741	18,741	20,997
Cost of Goods Sold	2,321	2,592	2,861	3,326	3,727
Gross Profit	11,778	12,702	13,880	15,414	17,270
Selling, General & Administrative Expenses	2,383	2,382	2,626	2,731	3,520
Advertising & Marketing	876	507	474	498	523
Other Operating Expense (Income)	883	1,228	1,222	1,399	1,463
Depreciation & Amortization (if reported separately)	397	435	494	531	571
Operating Income (ex charges)	7,239	8,150	9,064	10,255	11,193
Restructuring & Other Cash Charges	_	453	_	150	_
Impairment Charges (if reported separately)	_	_	_	_	_
Other Non-Cash (Income)/Charges	_	_	_	_	
Operating Income (incl charges)	7,239	7,697	9,064	10,105	11,193
Interest Expense	_	_	_	407	543
Interest Income	_	27	-69	_	_
Pre-Tax Income	7,239	7,724	8,995	9,698	10,651
Income Tax Expense	2,277	2,286	2,667	3,103	3,408
Other After-Tax Cash Gains (Losses)	18	_	_	_	_
Other After-Tax Non-Cash Gains (Losses)	_	_	_	_	_
(Minority Interest)	_	_	_	_	_
(Preferred Dividends)					
Net Income	4,980	5,438	6,328	6,595	7,242
Weighted Average Diluted Shares Outstanding	656	631	2,457	2,438	2,402
Diluted Earnings Per Share	7.59	8.62	2.58	2.70	3.01
Adjusted Net Income	4,980	5,757	6,328	6,595	7,242
Diluted Earnings Per Share (Adjusted)	7.59	9.12	2.58	2.70	3.01
Dividends Per Common Share	0.88	1.32	0.48	0.56	0.56
EBITDA	7,636	8,132	12,419	13,497	14,625
Adjusted EBITDA	7,636	8,585	12,419	13,647	14,625



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Morningstar Analyst Forecasts

Balance Sheet (USD Mil)				-	
Fiscal Year Ends in September	2013	2014	2015	Fore	<u>ecast</u> 2017
Cash and Equivalents	2.186	1,971	3,518	18.260	23.734
Investments	2,069	1,979	2,497	1,200	1,224
Accounts Receivable	1,560	1,608	847	1,797	2,013
nventory	_	_	_	_	_,
Deferred Tax Assets (Current)	481	1,028	871	481	481
Other Short Term Assets	1,526	2,976	3,159	1,500	1,750
Current Assets	7,822	9,562	10,892	23,238	29,202
Net Property Plant, and Equipment	1,732	1,892	1,888	1,807	1,887
Goodwill	11,681	11,753	11,825	22,825	22,825
Other Intangibles	11,351	11,411	11,361	8,500	5,639
Deferred Tax Assets (Long-Term)	_	_	_	_	_
Other Long-Term Operating Assets	610	936	886	930	977
Long-Term Non-Operating Assets	2,760	3,015	3,384	3,384	3,384
Total Assets	35,956	38,569	40,236	60,684	63,914
Accounts Payable	1,409	1,479	127	1,640	1,838
Short-Term Debt	_	_	_	_	_
Deferred Tax Liabilities (Current)	_	_	_	_	_
Other Short-Term Liabilities	2,926	4,527	780	873	978
Current Liabilities	4,335	6,006	907	2,514	2,816
Long-Term Debt	_	_	_	15,500	15,500
Deferred Tax Liabilities (Long-Term)	4,149	4,145	4,123	4,149	4,149
Other Long-Term Operating Liabilities	602	1,005	3,443	602	632
Long-Term Non-Operating Liabilities		_	1,921	1,921	1,921
Total Liabilities	9,086	11,156	10,394	24,686	25,018
Preferred Stock	_	_	_	5,000	5,000
Common Stock	_	_	_	_	_
Additional Paid-in Capital	18,875	18,299	18,073	18,073	18,073
Retained Earnings (Deficit)	7,974	9,131	11,843	15,999	21,896
(Treasury Stock)	_	_	_	-3,000	-6,000
Other Equity	21	-17	-74	-74	-74
Shareholder's Equity	26,870	27,413	29,842	35,998	38,895
Minority Interest		_	_		_
Total Equity	26,870	27,413	29,842	35,998	38,895



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
77.83 USD	104.00 USD	72.80 USD	140.40 USD	Medium	Wide	Stable	Standard	Credit Services

Morningstar Analyst Forecasts

Cash Flow (USD Mil)					
Fiscal Year Ends in September	2040	2011	2045		ecast
N	2013	2014	2015	2016	2017
Net Income	4,980	5,438	6,328	6,595	7,242
Depreciation	397	435	494	531	571
Amortization	_	_	2,861	2,861	2,861
Stock-Based Compensation	_	_	103	107	138
Impairment of Goodwill	_	_	_	_	_
Impairment of Other Intangibles	_	_	_	_	_
Deferred Taxes	1,527	-580	195	416	_
Other Non-Cash Adjustments	2,516	2,916	148	_	_
(Increase) Decrease in Accounts Receivable	-383	-40	-19	-950	-216
(Increase) Decrease in Inventory	_	_	_	_	_
Change in Other Short-Term Assets	-2,879	-2,774	_	1,659	-250
Increase (Decrease) in Accounts Payable	546	51	-13	1,513	198
Change in Other Short-Term Liabilities	-3,682	1,511	-3,513	93	105
Cash From Operations	3,022	6,957	6,584	12,825	10,649
(Capital Expenditures)	-471	-553	-404	-450	-651
Net (Acquisitions), Asset Sales, and Disposals	_	_	-93	-11,000	_
Net Sales (Purchases) of Investments	-693	-239	-925	1,297	-24
Other Investing Cash Flows	_	_	-13	-2,885	-16
Cash From Investing	-1,164	-792	-1,435	-13,038	-691
Common Stock Issuance (or Repurchase)	-5,365	-4,118	-2,910	-3,000	-3,000
Common Stock (Dividends)	-864	-1,006	-1,177	-2,438	-1,345
Short-Term Debt Issuance (or Retirement)	_	_		_	_
Long-Term Debt Issuance (or Retirement)	_	_	_	15,500	_
Other Financing Cash Flows	4,483	-1,354	484	4,893	-138
Cash From Financing	-1,746	-6,478	-3,603	14,955	-4,483
Exchange Rates, Discontinued Ops, etc. (net)	_	_	1	_	_
Net Change in Cash	112	-313	1,547	14,742	5,474



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Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis																
		Price/Ea	rnings		EV/EBITD	Α		Price/Fre	ee Cash Flo	w	Price/Bo	ok		Price/Sa	les	
Company/Ticker	Price/Fair Value	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
MasterCard Inc MA USA	0.79	26.0	24.9	23.0	16.3	14.3	13.0	24.9	23.6	19.4	17.2	16.4	19.1	8.0	7.1	6.5
Average		26.0	24.9	23.0	16.3	14.3	13.0	24.9	23.6	19.4	17.2	16.4	19.1	8.0	7.1	6.5
Visa Inc V US	0.75	20.7	28.8	<i>25.9</i>	10.3	12.1	11.2	21.3	13.7	17.0	4.4	4.7	4.4	7.9	9.1	8.1

Returns Analysis		ROIC %		:	Adjusted	ROIC %		Return o	n Equity %		Return o	n Assets %		Dividend	l Yield %	
Company/Ticker MasterCard Inc MA USA	Last Historical Year Total Assets (Mil) — USD	2015 190.5	2016(E) 175.5	2017(E) 171.2	2015 685.4	2016(E) 429.7	2017(E) 358.8	2015 57.8	2016(E) 66.2	2017(E) 73.5	2015 25.3	2016(E) 29.1	2017(E) 30.8	2015 0.7	2016(E) 0.4	2017(E) 0.8
Average		190.5	175.5	171.2	685.4	429.7	358.8	57.8	66.2	73.5	25.3	29.1	30.8	0.7	0.4	0.8
Visa Inc V US	40,236 USD	32.9	30.4	28.2	62.4	71.0	89.5	22.1	21.7	22.3	16.1	13.1	11.6	0.9	1.4	0.8

Growth Analysis																
	Last Historical Year	Revenue	Growth %		EBIT Gro	wth %		EPS Grov	wth %		Free Cas	h Flow Gro	wth %	Dividend	l/Share Gro	wth %
Company/Ticker MasterCard Inc MA USA	Revenue (Mil)	2015 6.9	2016(E) 9 1	2017(E) 9.5	2015 2.5	2016(E) 12.8	2017(E) 10.4	2015 7.4	2016(E) 15.0	2017(E) 8.0	2015 9.3	2016(E) -0.2	2017(E) 24.7	2015	2016(E) 19.4	2017(E) 8.0
Average	10,021 005	6.9	9.1	9.5	2.5	12.8	10.4	7.4	15.0	8.0	9.3	-0.2	24.7	-	19.4	8.0
Visa Inc V US	16,741 USD	9.5	11.9	12.0	11.2	13.1	9.2	-71.8	5.0	11.5	-5.7	-122.3	-861.9	-63.6	16.7	_



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Comparable Company Analysis

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Profitability Analysis																
	Last Historical Year	Gross M	argin %		EBITDA N	Vlargin %		Operatin	g Margin %	0	Net Mar	gin %		Free Cas	sh Flow Ma	rgin %
Company/Ticker	Net Income (Mil)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
MasterCard Inc MA USA	3,781 USD	72.0	71.8	71.5	47.2	48.2	48.4	38.4	39.7	40.0	27.8	28.3	27.0	32.0	30.1	33.5
Average		72.0	71.8	71.5	47.2	48.2	48.4	38.4	39.7	40.0	27.8	28.3	27.0	32.0	30.1	33.5
Visa Inc V US	6,328 USD	82.9	<i>82.3</i>	<i>82.3</i>	74.2	72.8	69.7	54.1	54.7	<i>53.3</i>	37.8	<i>35.2</i>	34.5	36.9	66.0	47.6

Leverage Analysis		Debt/Equ	ity %		Debt/Tota	ıl Cap %	İ	EBITDA/	nterest Exp	р.	Total Del	bt/EBITDA		Assets/E	Equity	
Company/Ticker MasterCard Inc MA USA	Last Historical Year Total Debt (Mil) 1,494 USD	2015 23.7	2016(E) 23.2	2017(E) 27.1	2015 19.2	2016(E) 18.9	2017(E) 21.3	2015 94.5	2016(E) 104.2	2017(E) 114.5	2015 0.2	2016(E) 0.2	2017(E) 0.2	2015 2.3	2016(E) 2.2	2017(E) 2.6
Average		23.7	23.2	27.1	19.2	18.9	21.3	94.5	104.2	114.5	0.2	0.2	0.2	2.3	2.2	2.6
Visa Inc V US	— USD	<u> </u>	43.1	39.9	_	30.1	28.5	_	33.5	27.0	_	1.1	1.1	1.3	1.7	1.6

Liquidity Analysis																
	Market Cap	Cash per	Share		Current R	atio		Quick Ra	tio		Cash/Sho	ort-Term De	ebt	Payout F	łatio %	
Company/Ticker	(Mil)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
MasterCard Inc MA USA	105,576 USD	3.15	2.78	2.06	1.74	1.79	1.56	1.74	1.79	1.56	_		_	19.3	20.0	20.0
Average		3.15	2.78	2.06	1.74	1.79	1.56	1.74	1.79	1.56	_	_	_	19.3	20.0	20.0
Visa Inc V US	169,985 USD	1.43	7.49	9.88	12.01	9.24	10.37	12.01	9.24	10.37	_	_	_	62.1	37.0	18.6



Research Methodology for Valuing Companies

Components of Our Methodology

- ▶ Economic Moat™ Rating
- ▶ Moat Trend™ Rating
- ► Moat Valuation
- ► Three-Stage Discounted Cash Flow
- ► Weighted Average Cost of Capital
- ► Fair Value Estimate
- Scenario Analysis
- Uncertainty Ratings
- Margin of Safety
- ► Consider Buying/Selling
- Stewardship Rating

We believe that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth. Four key components drive the Morningstar rating: our assessment of the firm's economic moat, our estimate of the stock's fair value, our uncertainty around that fair value estimate and the current market price. This process ultimately culminates in our single-point star rating. Underlying this rating is a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's equity analysts.

The concept of the Morningstar Economic Moat™
Rating plays a vital role not only in our qualitative
assessment of a firm's investment potential, but
also in our actual calculation of our fair value
estimates. We assign three moat ratings—none,
narrow, or wide—as well as the Morningstar Moat
Trend™ Rating—positive, stable, or negative—to
each company we cover. Companies with a narrow
moat are those we believe are more likely than not
to achieve normalized excess returns on invested
capital over at least the next 10 years. Wide-moat
companies are those in which we have very
high confidence that excess returns will remain for

10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. The assumptions that we make about a firm's economic moat play a vital role in determining the length of "economic outperformance" that we assume in the terminal sections of our valuation model. To assess the sustainability of excess profits, analysts perform ongoing assessments of what we call the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from one year (for companies with no economic moat) to 10-15 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard perpetuity formula. In deciding on the rate at which to discount future cash flows, we use a building block approach,

Morningstar Research Methodology for Valuing Companies



Source: Morningstar, Inc.

Detailed Methodology Documents and Materials*

- ► Comprehensive Equity Research Methodology
- Uncertainty Methodology
- Cost of Fauity Methodology
- ▶ Morningstar DCF Valuation Model
- ► Stewardship Rating Methodology

which takes into account expectations for market real return, inflation, country risk premia, corporate credit spread, and any additional systematic risk.

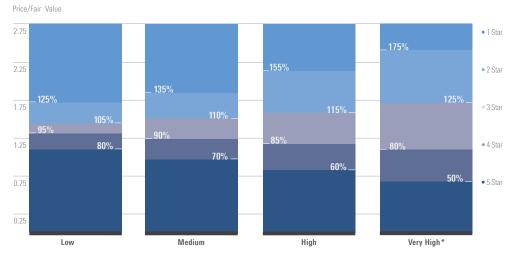
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts model three scenarios for each company we cover, stresstesting the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of likely potential fair values and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including

operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

Morningstar Margin of Safety and Star Rating Bands



* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Source: Morningstar, Inc.

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