

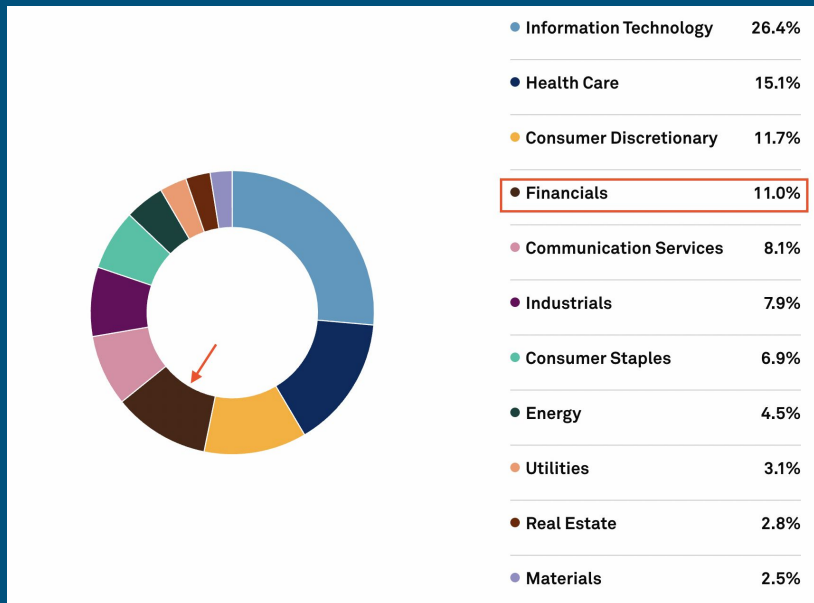


Financials

Analysts Selby, Stergar, Wang, Xu



Sector Overview



Financial S&P 500 Weighting: 11.38%

SIM Weighting: 9.85% (under by 153 bps)

Current Holdings (10/31/22)

American Express (AXP): 208 bps

Bank of America (BAC): 367 bps

Citi Group (C): 89 bps

Discover Financial Services (DFS): 155 bps

JP Morgan Chase & Co (JPM): 166 bps

American Express (AXP)

Analyst: Parker Selby





American Express

Current Price: \$152.61 | Price Target: \$175.25 | Price Upside: 14.8% upside



Growth/Revenue Drivers

Closed Loop System - both payment processor and issuer of their credit cards

Growing Customer Base - increased customer base by 20% YoY, with rampant growth among millennials and Gen Z

Leader in Innovation - Despite large job cuts among tech giants, AXP hired almost 5,000 new tech workers in 2022

Financial Ratios Comparison

Ticker	Quarterly Revenue Growth (YoY)	Quarterly Earnings Growth (YoY)	Operating Margin	Forward Annual Dividend Yield	Return on Equity (TTM)
AXP	24.05%	2.90%	20.77%	1.44%	31.68%
V	18.72%	9.93%	67.15%	0.90%	40.88%
MA	15.47%	3.52%	56.96%	0.60%	147.74%
PYPL	10.74%	22.36%	14.12%	0.00%	10.86%

Valuation Multiples

Ticker	P/E	P/S	P/B	P/CF	EV/ EBITDA
Average (Median)	32.17	8.89	8.53	20.44	22.43
AXP	15.73	2.37	4.96	6.78	10.07
V	31.22	13.64	11.58	22.60	23.02
MA	33.11	15.32	51.23	32.08	26.39
PYPL	33.94	4.14	5.48	18.28	21.84

American Express DCF Analysis

American Express (AXP)											
Analyst: Parker Selby		Terminal Discount Rate = 9.5%									
Date: 11/29/2022		Terminal FCF Growth = 3.50%									
Year	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Total Revenue	52,227	58,794	65,597	71,501	76,506	81,479	86,368	91,118	95,674	99,979	103,979
% Growth		12.6%	11.0%	9.0%	7.0%	6.5%	6.0%	5.5%	5.0%	4.5%	4.0%
Pretax Income	10,028	10,759	11,480	12,155	13,006	13,851	14,683	15,490	16,265	16,997	17,676
Pretax Income % of sales	19.2%	18.3%	17.5%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
Taxes	2,507	2,905	3,444	3,647	3,902	4,155	4,405	4,647	4,879	5,099	5,303
Tax Rate	25.0%	27.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Net Income	7,521	7,854	8,036	8,509	9,104	9,696	10,278	10,843	11,385	11,898	12,373
% Growth		4.4%	2.3%	5.9%	7.0%	6.5%	6.0%	5.5%	5.0%	4.5%	4.0%
Add Depreciation/Amort	1,957	2,175	2,427	2,646	2,831	3,015	3,196	3,371	3,540	3,699	3,847
% of Sales	3.6%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Plus/(minus) Changes WC	(2,611)	(2,352)	(1,968)	(1,430)	(765)	(815)	(864)	(911)	(957)	(1,000)	(1,040)
% of Sales	-5.0%	-4.0%	-3.0%	-2.0%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Subtract Cap Ex	1,880	2,175	2,427	2,646	2,831	3,015	3,196	3,371	3,540	3,699	3,847
Capex % of sales	3.6%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Free Cash Flow	4,986	5,503	6,068	7,079	8,339	8,881	9,414	9,932	10,428	10,898	11,334
% Growth		10.4%	10.3%	16.7%	17.8%	6.5%	6.0%	5.5%	5.0%	4.5%	4.0%
NPV of Cash Flows	52,076	40%									
NPV of terminal value	78,889	60%									
Projected Equity Value	130,966	100%									
Free Cash Flow Yield	4.37%										
										Terminal Value	195,506
										Free Cash Yield	5.80%

Current P/E	15.2	14.5	14.2
<i>Projected P/E</i>	17.4	16.7	16.3
Shares Outstanding	747.32		
Current Price	\$ 152.61		
Implied equity value/share	\$ 175.25		
Upside/(Downside) to DCF	14.8%		
Debt	40,495		
Cash	26,277		
Cash/share	35.16		

Recommendation



Buy 25 bps

Current Price: 152.61

Target Price: \$175.25

Expected Return (inc dividends): 14.8%

Weighting: 208 bps

Recommended Weight: 233 bps

Evidence

- Relatively cheap compared to competitors
- More recession proof than competitors

Risks

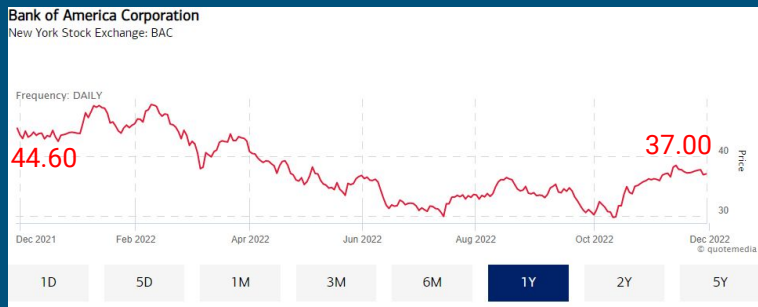
- Looming recession
- Customer growth doesn't turn into earnings

Bank of America (BAC)

Analyst: Luke Stergar

Overview

- 9th largest bank in the world
- 3rd largest public bank by market cap
- 4 business segments
- Offers wide variety of services
- 6th most trustworthy bank
 - from Lifestory Research
- \$3.17T assets under management



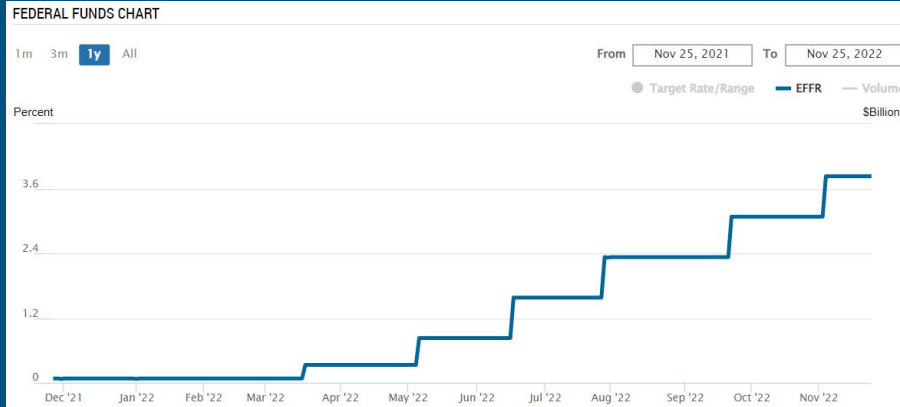
Company Profile	
Market Capitalization	\$287.84B
Shares Outstanding	8.02B
52-Week High	\$50.11
52-Week Low	\$29.31
12-Month Total Return	-25.28%
Year-To-Date Return	-22.33%
Average Daily Volume	41.39M
5-Year Adjusted Beta	1.36
Earnings per Share	\$3.16
Dividend Yield	2.453%
Insider Holdings	0.14%
Institutional Holdings	70.65%
Short Ratio	1.95

Sources: Yahoo Finance, Bloomberg

Financial Analysis	
Price-to-Earnings Ratio	11.0
Price to Book Ratio	1.2
Price to Sales Ratio	2.8
Price to Cash Flow Ratio	42.7
Loans to Deposits	48.2%
Book Value per Share	29.96
Revenue per Share	11.05
Return on Assets	0.9%
Return on Equity	10.6%
Net Interest Margin	1.8%
Effective Tax Rate	5.9%

Sources: Yahoo Finance, Bloomberg

Macroenvironmental Outlook



- Bank stock usually cyclical
 - May act defensive due to Fed trying to force recession
- Banks outperform market immediately after recession



Business Analysis



- Maturity and Scale

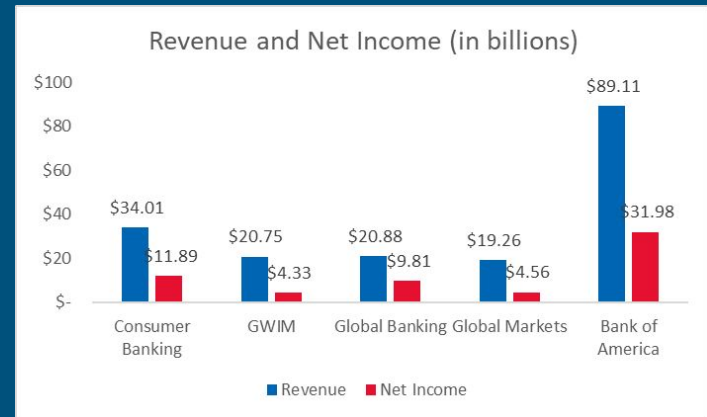
- Tier 1 investment bank
- Top 4 credit card issuer
- Top 3 US acquirer
- 67m US consumer and small business clients

- Leadership

- Brian Moynihan, CEO
 - In charge since 2010
 - Focused on “responsible growth”
 - Stock price has appreciated 167%
 - Dividend went from \$0.04 to \$0.85

- Business Segments

- Most Income: Consumers and small business
- Most Profitable: Global Banking



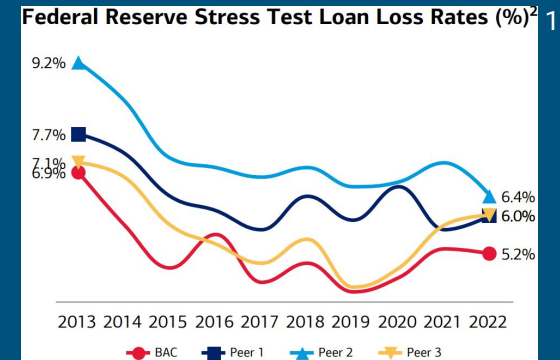
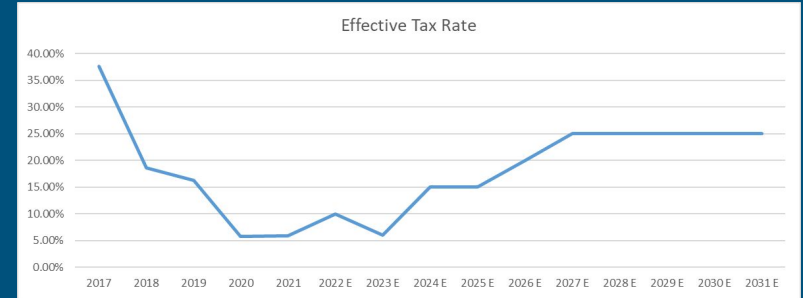
Financial Analysis

- Income Statement

- Revenue
 - Short-term growth due to rates
 - Medium-term growth during recovery
 - Stable terminal growth due to massive size
- Expenses
 - Largest expense is office space
 - Will decrease due to remote work

- Balance Sheet

- Divesting from consumer loans
- Increased cash-to-debt ratio
- Improved results from stress test



Recommendation

HOLD

Current Price: \$37.00

Target Price: \$40.70

Expected Return (inc dividends): 12.62%

Weighting: 367 bps

Recommended Weight: 367 bps

Evidence

- Unique economic situation
 - High cost of capital
 - Moderate extended slowdown expected
- Strong balance sheet
- Responsible growth

Risks

- Minimal Market Downturn
- Extreme Market Downturn
- Scandal

Bank of America DCF



Bank of America (BAC)										
Analyst: Luke Stergar										
10/27/2022										
All \$ Amounts, # Shares in Millions										
Year	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E	2031 E
Revenues	96,665	106,457	111,054	114,385	117,245	119,590	121,981	123,811	125,668	127,553
% Growth		10.1%	4.3%	3.0%	2.5%	2.0%	2.0%	1.5%	1.5%	1.5%
Expenses	62,832	72,391	71,630	75,494	76,209	77,733	79,288	80,477	81,684	82,910
% of Sales	65.0%	68.0%	64.5%	66.0%	65.0%	65.0%	65.0%	65.0%	65.0%	65.0%
EBIT	33,833	34,066	39,424	38,891	41,036	41,856	42,694	43,334	43,984	44,644
Taxes	3,383	2,044	5,914	5,834	8,207	10,464	10,673	10,833	10,996	11,161
Tax Rate	10.0%	6.0%	15.0%	15.0%	20.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Net Income	30,449	32,022	33,510	33,057	32,829	31,392	32,020	32,500	32,988	33,483
% Growth		5.2%	4.6%	-1.4%	-0.7%	-4.4%	2.0%	1.5%	1.5%	1.5%
Add Depreciation/Amort	1,933	2,129	2,221	2,288	2,345	2,392	2,440	2,476	2,513	2,551
% of Sales	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Investing Activities	5,558	(5,323)	(7,774)	(5,719)	(5,862)	(3,588)	(3,659)	(3,714)	(3,142)	(2,551)
% of Sales	5.8%	-5.0%	-7.0%	-5.0%	-5.0%	-3.0%	-3.0%	-3.0%	-2.5%	-2.0%
Free Cash Flow	37,941	28,828	27,958	29,626	29,311	30,196	30,800	31,262	32,360	33,483
% Growth		-24.0%	-3.0%	6.0%	-1%	3.0%	2.0%	1.5%	3.5%	3.5%
NPV of Cash Flows	173,066	53%								
NPV of terminal value	154,149	47%						Terminal Value		399,824
Projected Equity Value	327,215	100%						Free Cash Yield		8.37%
Free Cash Flow Yield	12.52%							Terminal P/E		11.9
Current P/E	3.14	2.85	2.73							
<i>Projected P/E</i>	3.4	3.1	2.9							
<i>Shares Outstanding</i>	8,040.0									
Current Price	\$ 37.70									
Implied equity value/share	\$ 40.70									
Upside/(Downside) to DCF	8.0%									
Debt	308,073									
Cash	348,221									

Sensitivity Analysis on Implied Value per Share						
		Discount Rate				
F.C.F. Growth	40.70	9.00%	9.50%	10.00%	10.50%	11.00%
	1.50%	46.24	43.29	40.70	38.40	36.34
	1.25%	45.42	42.60	40.10	37.89	35.90
	1.00%	44.64	41.94	39.54	37.41	35.49
	0.75%	43.92	41.32	39.01	36.95	35.09
	0.50%	43.23	40.74	38.51	36.51	34.71

JP Morgan & Co. (JPM)

Analyst: Wenxi Xu

Overview

- Multinational investment bank and financial services holding company headquartered in New York City
- Largest bank in the World By Market Cap
- Two main segment
 - Consumer & Community Banking (50.07B)
 - Corporate & Investment Banking(51.75B)

Overview	
Industry	financial Services
Market Cap	385.57B
Beta	1.12
52-week High	169.81
52-week Low	101.28
Dividend Yield	3.04%
Diluted Shares Out Standing	3.02B

Stock Price today: 136.56

Macro Environment and Drivers

- Possible rate hike slowdown and economic rebound
- Post-pandemic recovery of the global economy and increased investment activity
- Globalization and expansion

Financial Analysis and Valuation

Ticker	P/E	P/S	P/B	P/CF	EV/ EBITDA	Dividend Yield
Average	7.6	1.93	0.97	10.08	3.3	3.25%
JPM	9.29	2.6	1.32	9.05	3.4	3.52%
BOA	9.38	2.8	1.11	11.1	3.25	2.66%
Goldman Sachs	9.17	2	1.04	8.11	8.47	3.06%

Recommendation

Buy 25 bps

Current Price: 136.36

Target Price: \$171.31

Expected Return: 25.6%

Weighting: 1.66%

Recommended Weight: 1.66%

Evidence

- Valuations suggest the company is trading at historical averages
- Still cheap compared to the SP500
- Interest income increasing

Risks

- Inflation keeps going high, and recession continues

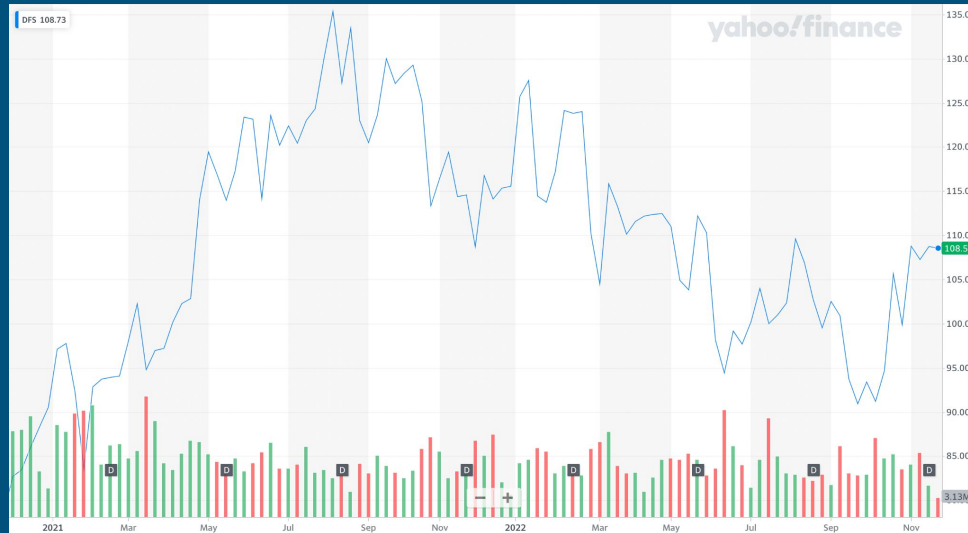
Discover Financial Services (DFS)

Analyst: Kai Wang

DISCOVER[®]

Overview

Discover Financial Services is the 6th largest credit card issuer in the U.S by purchase volume and the 3rd largest when measured by individual holders. 50 Million card holders.



Overview	
Industry	Financial Services
Market Cap	\$27.6 B
Shares Outstanding	273,170,000
Beta (5Y)	1.41
Avg Volume	1,608,847
Performance History	
52 Week High	\$130.81
52 Week Low	\$87.64
Dividend Yield	2.38%
Financial Data	
Revenue (2021)	\$12.09 B
EPS (2021)	\$17.83
P/E (TTM)	6.56

Overview

2 business segments

- Discover Global Network
 - Diners Club (Credit cards)
 - Pulse Network (interbank electronic funds transfer)
- Discover bank
 - Credit cards
 - Various Loans

Explosive short term revenue growth due to opening up after the pandemic

Credit card long term growth slow down

Sizable growth in:

Pulse Network 6.1%

Diner Club and 12.9%

Third-party issuers 13.3%

Discover DCF Model

Discover Financial Services (DFS)													
Analyst: Kai Wang		Terminal Discount Rate = 12.0%											
11/7/22		Terminal FCF Growth = 2.5%											
(000s)													
Year	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E		
Revenue	\$ 14,474	\$ 14,406	\$ 14,338	\$ 14,697	\$ 15,064	\$ 15,441	\$ 15,827	\$ 16,222	\$ 16,628	\$ 17,044	\$ 17,470		
% Growth		-0.5%	-0.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%		
Operating Income	\$ 6,568	\$ 6,476	\$ 6,022	\$ 5,879	\$ 6,026	\$ 6,176	\$ 6,331	\$ 6,489	\$ 6,651	\$ 6,818	\$ 6,988		
Operating Margin	45.4%	45.0%	42.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%		
Interest Expense (Income)	\$ 1,581	\$ 1,837	\$ 1,721	\$ 1,470	\$ 1,506	\$ 1,544	\$ 1,583	\$ 1,622	\$ 1,663	\$ 1,704	\$ 1,747		
Interest % of Sales	10.9%	12.8%	12.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%		
Income Before Taxes	\$ 4,987	\$ 4,639	\$ 4,432	\$ 4,409	\$ 4,519	\$ 4,632	\$ 4,748	\$ 4,867	\$ 4,988	\$ 5,113	\$ 5,241		
Taxes	\$ 1,105	\$ 978	\$ 979	\$ 970	\$ 994	\$ 1,019	\$ 1,045	\$ 1,071	\$ 1,097	\$ 1,125	\$ 1,153		
Tax Rate	22.2%	21.1%	22.1%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%		
Net Income	\$ 3,882	\$ 3,661	\$ 3,453	\$ 3,439	\$ 3,525	\$ 3,613	\$ 3,703	\$ 3,796	\$ 3,891	\$ 3,988	\$ 4,088		
Free Cash Flow	3,882	3,661	3,453	3,439	3,525	3,613	3,703	3,796	3,891	3,988	4,088		
% Growth		-5.7%	-5.7%	-0.4%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%		
NPV of Cash Flows	20,679	61%											
NPV of terminal value	13,425	39%											
Projected Equity Value	34,104	100%											
Free Cash Flow Yield	13.10%										Terminal Value	\$ 41,697.04	
										Free Cash Yield	9.80%		
Current P/E	7.6	8.1	8.6									Terminal P/E	10.2
<i>Projected P/E</i>	8.8	9.3	9.9									Terminal EV/EBITDA	6.0
Current EV/EBITDA	4.5	4.6	4.9										
<i>Projected EV/EBITDA</i>	5.2	5.3	5.7										
Shares Outstanding (Millions)	273												
Current Price	\$ 108.55												
Implied equity value/share	\$ 124.92												
Upside/(Downside) to DCF	15.1%												

Financial Analysis and Valuation

Ticker	P/E	P/S	P/B	P/CF	P/ EBITDA	5 year CAGR
Average	4.76	1.29	1.26	4.40	2.50	24.18
DFS	6.58	2.25	2.19	4.75	3.89	26.1
SYF	4.76	1.03	1.26	3.98	1.56	22.25
COF	4.66	1.29	0.84	4.06	2.5	31.34
AXP	15.75	2.37	4.96	10.92	9.02	14.48

Recommendation

Buy 25 bps

Current Price: \$108.55

Target Price: \$124.92

Weighting: 1.55%

Recommended Weight: 1.80% (25 bps increase)

Evidence

- Strong Consumer Spending
- Strong growth in Diners club, Pulse Network and third party issuers
- Recessionary fears loosening

Risks

- CPI still high
- Recessionary fears still valid soft landing almost impossible
- Risk of increase in delinquencies

Summary

Current Total: 9.85%

| Projected Total: 10.85%

| S&P500: 11.38%

Stock	Current Price	Target Price	Upside	SIM Weight (bps)	Recommended Weight (bps)	Decision
	152.61	\$175.25	14.8%	208	233	BUY 25 bps
	\$37.00	\$40.70	12.62%	367	367	HOLD
	\$47.57	\$50.90	11.52%	89	89	HOLD
	\$108.55	\$124.92	15.1%	155	180	BUY 25 bps
	\$136.56	\$171.31	25.6%	166	216	BUY 50 bps



Questions?