2014 MBA SMF ANALYST REPORT

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JPMorgan Chase & Co (JPM)

Sector: Financial	Industry: Diversified Banking	Date: 10/16/2013
Current Price: $ 52.51	Target Price: $ 78.72	Recommendation: BUY

Executive Summary

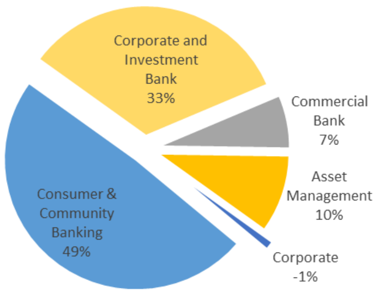
- **We issued a "BUY" recommendation to JPM stock with a target price of USD 78.72 on Oct 16th, 2013.** This implied a 52.93% holding period return (50% capital gain and 2.93% dividend yield).
- **Upward trend in interest rate**. J.P. Morgan Chase has achieved a reasonable level of profitability in recent years. With a rising market interest rate, its interest margin will be widened.
- **Strong position in non-interest income business.** Non-interest income has been a significant revenue driver for JPM, increasing from 28.05% in 2008 to 47.23% in 2012, partly offsetting the decrease in interest income.
- **Significant stock buyback**. A potential source of return.
- **Stronger position and lower risk among its peers**. JPM has the largest market cap among its peers, and its dividend yield, ROE, and ROA are also higher than the industry average. JPM has been less volatile than the average member of its peer group. JPM also has a higher credit rating than its peers.
- **Major Risks:** 1) high litigation costs, and 2) the macro economy is still struggling in the short run.

Key Statistics	
3 Yr. FV Reversion	14.42%
5 Yr. FV Reversion	9.67%
Beta	1.36
ROE	10.72%
ROA	0.92%
P/E TTM	10.77x
Forward P/E	9.26x
Div. Yield	2.93%
Market Cap	197.1 B
EPS Growth	9.00%
PEG	1.11
Credit	A
Tier 1 Cap Ratio	11.7
CSR Scores vs. Ind. Avg.	
Human Rights	1/1
Business Ethics Policy	1/1
ESG Disclosure Score	47.37/35.28
Equal Opportunity Score	1/1
Environmental Disclosure Score	44.64/38.70

Business Description

JPMorgan Chase & Co. (JPMorgan Chase) is a financial holding company. The company is a global financial services firm and a banking institution in the United States, with global operations. The Company is engaged in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association (JPMorgan Chase Bank, N.A.), and Chase Bank USA, National Association (Chase Bank USA, N.A.).

Figure 1: Revenue Breakdown



Source: Company Data

JPMorgan Chase & Co. provides global financial services and retail banking. The company's operations are divided into five major business lines (Figure 1).

Consumer & Community Banking, including Retail Financial Services (RFS) and Card Services & Auto (CSA), constitutes 50% of total revenue of the company in 2012. Retail Financial Services, 27.1% of total revenue, consists of Consumer & Business banking and Mortgage Production & Servicing. Card Services & Auto represent 19% of total revenue.

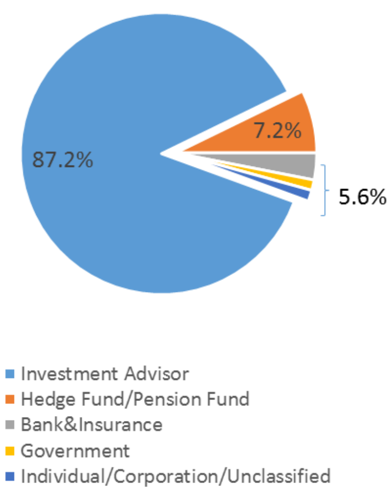
Corporate and Investment Banking, including Investment Bank and Treasury & Securities Services (TSS), constituted 34.4% of FY2012 revenue.

Asset Management (AM), including Private Bank, Retail, and Institutional, constitutes 10.0% of FY2012 revenue.

Commercial Banking (CB) was 6.8% of FY2012 revenue.

Corporate/Private Equity Segment (C/PE), - $1,152 million in FY 2012.

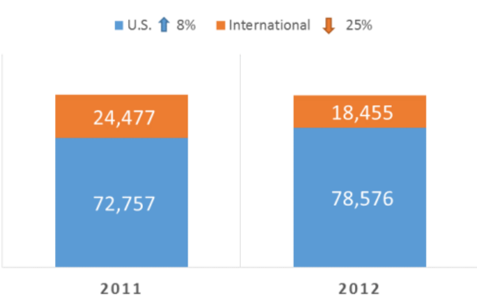
Figure 2: Shareholder Structure



Source: Company Data

During 2012 and YTD 2013 there was no major change in terms of the **shareholder structure** of JPM (Figure 2). The major shareholders are investment advisors, 87.2%, and hedge funds and pension funds, 7.2%. The biggest institutional shareholder is Vanguard Group, which held 4.75% of shares, followed by State Street Corp which held 4.55%, as of June 6, 2013.

Figure 3: Revenue by geographic



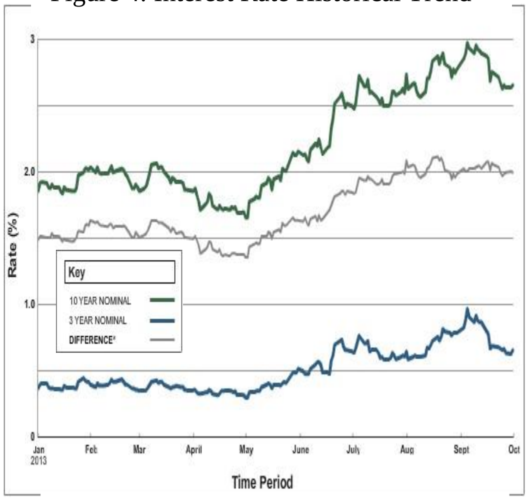
Source: Company Data

Domestic revenue accounts for 70-80%. Between 2011 and 2012, domestic revenue increased by 8% while international revenue decreased by 25% - mainly due to the Eurozone crisis (Figure 3).

JPM management is comprised of professionals. The CEO is Jamie Dimon, who was named in the Institutional Investor's Best CEOs list in the All-America Executive team survey from 2008 through 2011, and was named the CEO of the Year in 2011. He has an undergrad degree in psychology and economics at Tufts University and MBA from Harvard Business School. He was CEO of Bank One at the time JPM purchased the company in July 2004. Dimon became president and chief operating officer of JPM. Under his leadership, JPM has become the leading US bank in the domestic assets under management, market capitalization value, and publicly traded stock value. On May 10, 2012, JPM initiated an emergency conference call to report a loss of $2 billion or more in trades that Dimon said were "designed to hedge the bank's overall credit risks". The strategy was, in Dimon's words, "flawed, complex, poorly reviewed, poorly executed, and poorly monitored"

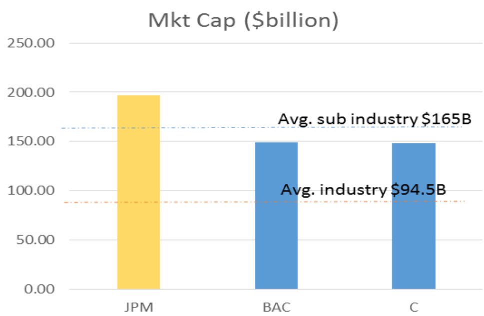
Industry Overview and Competitive Positioning

Figure 4: Interest Rate Historical Trend

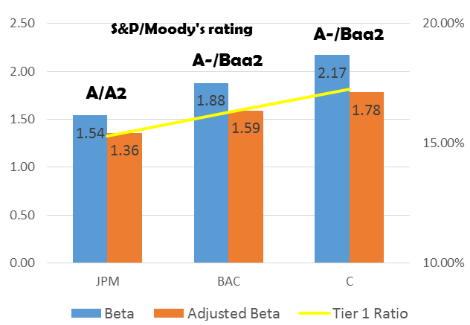


Source: U.S. Department of Treasury

Figure 5: Peer Group Comparison



Key ratios	Dvd Yld	ROE	ROA	NIM
JPM	2.45%	12.00%	0.94%	2.48%
BAC	0.29%	2.31%	0.19%	2.35%
C	0.08%	5.13%	0.39%	2.88%
Avg peers	0.94%	6.48%	0.51%	2.57%
Avg Financial Industry	2.30%	8.80%	0.84%	2.51%



Source: Bloomberg

High competitive rivalry and several substitutes

The banking industry is highly competitive. Due to the fact that almost everyone who needs banking services already has them, banks must attempt to lure clients away from competing banks. They do this by offering lower financing, preferred rates and investment services. The banking sector is in a race to see who can offer the best and fastest services, but this also causes banks to experience a lower ROA. In addition, there are a number of substitutes to the banking industry. Banks offer a suite of services over and above taking deposits and lending money, but there are non-banking financial services companies that can offer similar services. On the lending side of the business, banks are seeing competition rise from unconventional companies. Sony, General Motors and Microsoft all offer preferred financing to customers who buy big ticket items.

Positive trends for US banks

As the outlook for the US economy has become a little brighter, we see commercial customers making new investments, new individuals signing mortgages, and credit cards being actively used for consumer products. In addition, the industry-wide, nonperforming loans (NPL) continue to decline. These positive trends have loosened banks' capital reserves and allowed them to use the capital to generate cash inflows. However, with market interest rates rising, most refinancing activities have been done. Thus, banks will now have to find new mortgage opportunities from those who purchase properties. The improving housing market is a strong contributor to new mortgages. Market interest rates have increased since May 2013 (Figure 4), when the Fed signaled that it would pull back the bond purchasing program. A higher interest rate will widen the profit margins of banks. However, this month, the Fed decided to maintain monetary stimulus, reflecting the fact that the US economy is not strong enough and still needs support from financial markets.

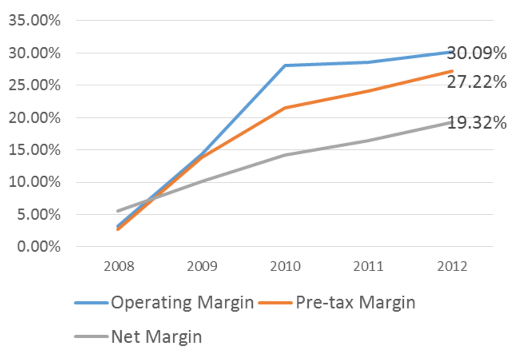
Strong position in peer group (Figure 5)

The main competitors of JPM are Citigroup (C) and Bank of America (BAC). JPM has the largest market cap among its peers. JPM's dividend yield, ROE, and ROA are also higher than it peers and the industry average. Net interest margin is in line with the industry average but behind Citigroup that has an NIM ratio of 2.88%.

JPM has low risk compared to its peers (Figure 5)

JPM has a raw Beta of 1.54 and an adjusted beta of 1.36, which means that over the last five years, it has shown greater volatility than the S&P 500 index. However, this company has been less volatile than the average constituent of its peer group. Among the three companies in this sub-industry, Citigroup has shown the most volatility, with a raw Beta of 2.1 and an adjusted Beta of 1.78. JPM's tier 1 capital ratio, which compares a banking firm's core equity capital to its total risk-weighted assets, is just slightly lower than its peers: 15.3% for JPM, 16.3% for BAC, and 17.2% for C. JPM has a higher credit rating than its peers. S&P and Moody's rank JPM as A and A2 respectively.

Figure 6: Margins over Five years



Source: Company Data

Financial Trend Analysis

Profitability of JPM is improving

Recovering from 2008, JPM revenue in 2009 jumped 13% from $101,491 million to $115,632 million and remained stable for the next two years, before dropping by 4.2% in 2012 due to the European Crisis. Due to low-interest rates, interest income has decreased over the last five years; however, non-interest income has been a significant revenue driver for JPM, increasing from 28.05% in 2008 to 47.23% in 2012, and partly offsetting the decrease in interest income. As a result, operating margin, pre-tax margin, and net margin show an upward trend over the last five years (Figure 6). Net interest Margin, which examines how successful a firm's investment decisions are compared to its debt situation, slightly decreased in 2012 due to a low market interest rate.

Profitability	2012	2011	2010	2009	2008
Revenue ($ mil)	106,239	110,914	115,575	115,632	101,491
Interest Income	56,063	61,293	63,782	66,350	73,018
Non-interest Income	50,176	49,621	51,793	49,282	28,473
Non-interest Income/ Revenues	47.23%	44.74%	44.81%	42.62%	28.05%
Net Interest Margin	2.48%	2.74%	3.06%	3.12%	2.87%

Management effectiveness

ROE, ROA, and ROIC slightly increased since 2008, suggesting an improvement in return on all types of capital.

Management Effectiveness	2012	2011	2010	2009	2008
ROE	10.72%	10.21%	9.69	6.01	3.82
ROA	1.06%	1.01%	0.96%	0.75%	0.59%
ROIC	3.26%	2.92%	2.52%	1.99%	1.63%

Investment Summary

Remarkable job limiting its losses during the financial crisis

JPM's performance under current leadership should give investors confidence in the firm's risk-management practices, despite the complexity of the business. The company made it through the worst of the financial crisis in remarkably good shape. Much of JPM's outperformance was due to common-sense risk management. For example, the bank carried far more tangible capital than Citigroup in early 2008, providing a much larger buffer against subsequent losses.

U.S. economy shows a better outlook

Banking is in many ways a cyclical business. To achieve its full earnings potential, JPM will need some help from the economy. Although, the low level of interest rates is continuing to pressure margins, in our five-year investment horizon, we forecast an upward trend in market interest rates.

Strong financial position and decent dividend yield

Although the interest income business shrunk in 2013, the continued growth in the noninterest income business partly compensated for the decrease in interest income. In addition, the expected rising market interest rate will bring strong profitability for J.P. Morgan Chase. Its reasonably strong dividend yield and return metrics make it outstanding among its competitors.

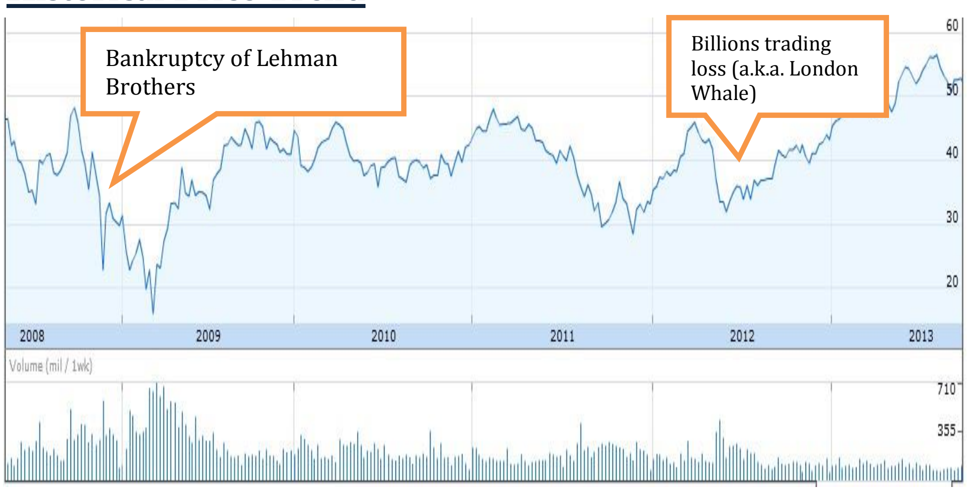
Possible investment risks

1. **Higher litigation costs**. During the last five years, JPM has been involved in many legal issues. On one hand, we understand it might be the nature of the banking business to have controversies; on the other hand, the number of cases reveals the difficulty of managing this complex business. Also**,** it is difficult to quantify potential exposure created by the firm's derivatives activities, as evidenced by the "London Whale" trades.

2. **Continued erosion in net interest revenue.** This results in declining loan balance and pressure on loan yields.

3. **The outlook for the mortgage business is challenging**. If the mortgage interest rate is in an upward trend, the revenue from refinancing activity could diminish around 30-40%. At the same time, mortgage production expenses are quite stable and will not fall as fast as revenues.

Historical Price Trend



Source: Yahoo! Finance

Valuation

Given the difficulty associated with defining total capital in a financial firm, it makes more sense to use the Excess Return Model which focuses on just equity to value a financial service firm. The Excess Return Model is appropriate for financial companies since they do not have much capital expenditure and their accounting standard is different from nonfinancial companies.

Our assumptions are as below:

1. We assume the **10 yr. US Treasury rate of 2.65% to be the risk free rate**, JPM's beta is 1.36, leading to a **cost of equity of 10.67%.**

2. We project **2013 to 2018 to be a high growth period**, and forecast a **stable growth period from 2019**.

3. The average ROE in the past 10 years (2003-2012) is 14%, after the financial crisis, the most recent ROEs are increasing but remain around 10%, so we use **12% as the ROE for the next 6 years**.

4. JPM's payout ratio was 33.62% in 2007, and after 2009, the ratio was around 23%. We assume the **dividend payout ratio will gradually increase to 30% from the current level of about 24%**.

As a result, the fair value based on our calculation is $78.72, representing a 50% capital gain from the current price at $52.51. We recommend this as a buy up to around $56.

We also performed a sensitivity analysis to see how JPM's intrinsic value would change when the cost of equity and return on equity change. We observed that changes in the cost of equity have a greater impact on the intrinsic value.

For a detailed valuation and projection please see Appendix 1&2.

Corporate Social Responsibility

In their annual corporate responsibility report, it states, "we believe we have an affirmative responsibility to play an even bigger role in helping solve the economic, social and environmental challenges of the day." JPM are using their resources and expertise to make this happen. The company helps people gain new skills to compete for jobs, grow small businesses, and support human rights across all business lines. The Global Health Investment Fund was launched for investors to finance health technologies that could save millions of lives in low-income countries. The 100,000 Jobs Mission is aiming to hire 100,000 more veterans. The Green Bond Principles encourage transparency, disclosure and integrity of investments targeted to address environmental issues.

Appendix 1:
Excess Return Valuation Model:

Historical Return				Projected Cash Flow						
$ million	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Net Income Available to common shareholder	15,764	17,568	19,877	21,601	26,440	28,796	31,324	34,035	36,938	40,040
- Equity Cost (see below)	17,651	18,798	19,595	21,782	23,519	25,614	27,863	30,274	32,856	35,616
Excess Equity Return	(1,887)	(1,230)	282	(181)	2,922	3,182	3,461	3,761	4,082	4,424
Terminal Value of Excess Equity									165,462	
Cumulated Cost of Equity				1.107	1.24	1.39	1.55	1.74	1.95	
Present Value				(164)	2,357	2,292	2,226	2,160	86,925	
Beginning BV of Equity	165,365	176,106	183,573	204,069	220,335	239,964	261,037	283,628	307,813	333,670
Cost of Equity	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%
Equity Cost	17,651	18,798	19,595	21,782	23,519	25,614	27,863	30,274	32,856	35,616
Return on Equity	9.69%	10.21%	10.72%	10.6%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Net Income	15,764	17,568	19,877	21,601	26,440	28,796	31,324	34,035	36,938	40,040
Dividend Payout Ratio	5.30%	22.94%	23.79%	24.70%	25.76%	26.82%	27.88%	28.94%	30.00%	30.00%
Dividend Paid	835	4,030	4,729	5,335	6,811	7,723	8,733	9,850	11,081	12,012
Retained Earnings	14,929	13,538	15,148	16,266	19,629	21,073	22,591	24,186	25,856	28,028

Return on Equity =	12.00%
Retention Ratio =	70%
Expected LT growth rate =	8%
Cost of equity =	10.67%

Equity Invested	204,069
PV of Equity Excess Return	95,796
Value of Equity	299,865
No. of Share	3,809
Value Per share	78.72

Sensitivity Analysis

Return on Equity	10.00%	11.00%	12.00%	13.00%	14.00%
Cost of Equity	Intrinsic Value per share($)				
12.67%	41.01	42.90	44.76	46.57	48.33
11.67%	54.16	55.96	57.71	59.42	61.08
10.67%	75.53	77.14	**78.72**	80.25	81.75
9.67%	119.74	120.96	122.15	123.32	124.46
8.67%	288.26	287.96	287.66	287.37	287.09

Appendix 2:
Historical Financial Data:

Income Statement - Annual (M)

	Dec '09	Dec '10	Dec '11	Dec '12	Dec '13	10Y Trend	5Y CAGR	10Y CAGR
Interest Income	66,350	63,782	61,293	56,063	52,996		-6.2%	8.5%
Total Interest Expense	15,198	12,781	13,604	11,153	9,677		-22.3%	-1.4%
Net Interest Income	51,152	51,001	47,689	44,910	43,319		2.2%	13.4%
Loan Loss Prov	32,015	16,639	7,574	3,385	225		-59.6%	-17.5%
Net Int Inc after Prov	19,137	34,362	40,115	41,525	43,094		19.3%	14.8%
Non-Interest Income	49,282	51,693	49,621	53,469	53,287		13.4%	9.8%
Non-Interest Expense	51,871	61,196	58,011	61,034	58,730		6.4%	10.9%
Operating Inc	16,548	24,859	31,725	33,960	37,651		63.7%	13.3%
Non-Oper Inc (Exp)	0	0	0	0	-		-	-
Unusual Exp (Inc) - Net	481	0	4,976	5,043	11,100		91.4%	31.3%
Pretax Income	16,067	24,859	26,749	28,917	25,914		56.4%	10.0%
Income Taxes	4,415	7,489	7,773	7,633	7,991		-	9.2%
Min Int Exp	0	0	0	0	-		-	-
Net Income	11,137	16,406	18,197	20,530	17,398		36.3%	10.0%
EPS (recurring)	2.748	3.964	5.370	6.124	6.386		47.2%	6.2%
EPS (diluted)	2.240	3.960	4.480	5.200	4.350		38.9%	3.0%

Source: FactSet

Balance Sheet - Annual (B)

	Dec '09	Dec '10	Dec '11	Dec '12	Dec '13	10Y Trend	5Y CAGR	10Y CAGR
Total Assets	2,032	2,118	2,279	2,377	2,416		2.1%	12.1%
Cash & Due fm Banks	26	28	60	54	40		8.1%	7.0%
Investments	1,155	1,179	1,274	1,363	1,404		3.4%	12.1%
Net Loans	597	655	693	707	722		0.2%	12.9%
Net Loan Losses	23	24	12	9	-		-	-
Total Liabilities	1,867	1,941	2,095	2,173	2,205		1.9%	11.8%
Deposits	938	930	1,128	1,194	1,288		5.0%	14.7%
Debt	625	617	544	571	535		-3.3%	10.8%
Other Liabilities	303	394	411	390	382		0.9%	6.3%
Shrhldrs Equity	165	176	184	204	211		4.8%	16.4%
Pfd Stk	8	8	8	9	11		-19.0%	27.2%
Common Equity	157	168	176	195	200		8.2%	16.1%
BVPS	39.897	43.042	46.601	51.272	53.252		8.0%	9.2%
Tang BVPS	22.511	26.025	31.060	36.016	37.461		14.2%	9.8%
Tier 1 Capital	133	142	150	160	-		-	-
Tier 1 CAR (%)	0	0	0	0	0		1.8%	3.4%
Tier 2 Capital	44	40	38	34	-		-	-
Risk Weight Assets	1,196	1,175	1,221	1,270	-		-	-

Source: FactSet

Cash Flow Statement - Annual (M)

	Dec '09	Dec '10	Dec '11	Dec '12	Dec '13	10Y Trend	5Y CAGR	10Y CAGR
FFO	46,199	44,526	34,430	31,381	-		-	-
Changes in Wk Cap	75,698	-48,278	61,502	2,998	-		-	-
Operating Cash Flow	**121,897**	**-3,752**	**95,932**	**34,379**	-		-	-
Cap Ex	0	0	0	0	-		-	-
Other Investing, Total	29,355	54,002	-170,752	-	-			
Investing Cash Flow	**29,355**	**54,002**	**-170,752**	**-129,125**	-		-	-
Free Cash Flow	**121,897**	**-3,752**	**95,932**	**34,379**	-		-	-
FCF/Share	31.417	-0.943	24.471	8.995	-		-	-
FCF Yield (%)	75.4	-2.2	73.6	20.5	-		-	-
% of Net Income	-	-	-	-	-		-	-
Cash Divs Pd	-3,422	-1,486	-3,895	-5,194	-		-	-
Change in Deposits	-107,700	-9,637	203,420	67,250	0		-100	-100
Change in Capital Stock	-19,244	-2,999	-8,863	-419	-		-	-
Iss/Red Debt	-20,606	-35,529	-83,120	25,659	-		-	-
Financing Cash Flow	**-152,179**	**-49,217**	**107,706**	**87,707**	-		-	-
Net Change in Cash	**-689**	**1,361**	**32,035**	**-5,879**	-		-	-

Source: FactSet