## Hewlett-Packard Co (HPQ)

## Attractive Risk/Reward Rating

## Valuation Report

This report presents a concise review of our DCF valuation and economic profitability analysis from our MaxVal model.

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- HPQ has an Overall Risk/Reward Rating of Attractive because the stock offers more upside potential than downside risk.
- Figure 1 summarizes the five factors that drive our Overall Risk/Reward Rating for HPQ. Each factor offers insights into the profitability and valuation of HPQ.
- Positive EP means that economic EPS are positive because the company's ROIC is greater than WACC.
- The biggest adjustment that lowers economic EPS and is not captured in Reported EPS is Reported Net Assets.
- The combination of positive economic EPS with a cheap stock valuation drives a Risk/Reward Rating of Attractive for HPQ.
- Our Risk/Reward Rating system identifies disconnects between the market's expectations for future cash flows and current cash flows.
- This report provides a detailed explanation of each diagnostic criterion and each rating for HPQ. Appendix 1 offers an explanation of how our Risk/Reward Rating system works.

Figure 1: New Constructs' Risk/Reward Rating

| Overall <br> Risk/Reward <br> Rating | Quality of Earnings |  |  | Valuation |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Economic vs <br> Reported EPS | Return on Invested <br> Capital (ROIC) | FCF Yield | Price-to-EBV Ratio | Growth Appreciation <br> Period (yrs) |  |
| Very Dangerous | Misleading Trend | Bottom Quintile | $<-5 \%$ | $>3.5$ or $-1>0$ | $>50$ |  |
| Dangerous | False Positive | 4th Quintile | $-5 \%<-1 \%$ | $2.4>3.5$ or <-1 | $20>50$ |  |
| Neutral | Neutral EP | 3rd Quintile | $-1 \%<3 \%$ | $1.6>2.4$ | $10>20$ |  |
| Attractive | Positive EP | 2nd Quintile | $3 \%<10 \%$ | $1.1>1.6$ | $3>10$ |  |
| Very Attractive | Rising EP | Top Quintile | $>10 \%$ | $0>1.1$ | $0>3$ |  |
| Actual Values | $\$ 1.58$ vs. $\$ 3.14$ | $12.1 \%$ | $6.9 \%$ | 0.79 | $<1$ year |  |
| S\&P 500 | $\$ 0.12$ vs. $\$ 2.48$ | $13 \%$ | $0.2 \%$ | $1 \%$ | 20 years |  |
| Russell 1000 | $\$ 0.12$ vs. $\$ 2.36$ | $13 \%$ | $0.1 \%$ | 1.6 | 23 years |  |

Source: New Constructs, LLC

## Economic vs Reported Earnings

## Why Economic Earnings Matter

Economic earnings are almost always meaningfully different than GAAP earnings. We believe economic earnings provide a truer measure of profitability and shareholder value creation than offered by GAAP earnings. Investors should beware investing in companies that report profits meaningfully different than their economic profits.

Figure 2 highlights the differences between the reported and economic earnings for HPQ. Positive EP reflects the improving economic performance of the business.

During the last Fiscal Year, the biggest driver of the difference between reported and economic EPS is Reported Net Assets.

Figure 2: Economic Earnings Per Share vs Reported EPS

## HPQ - Economic Earnings Per Share vs Reported EPS



Source: New Constructs, LLC
Economic earnings and return on capital metrics are significantly more accurate when as-reported financial statements have been adjusted to reverse accounting distortions. The majority of the data required to reverse accounting distortions is available only in the Notes to the Financial Statements, which we analyze rigorously. Our core competency is gathering and analyzing all relevant financial data (from Financial Statements and the Notes) so that we can deliver earnings analyses that best represent the true profitability of businesses. See Figure 3 for a list of the adjustments we make to a company's reported GAAP profits in order to reverse accounting distortions and arrive at a better measure of a firm's profits.

## Figure 3: Accounting Issues that Distort GAAP

- Employee Stock Options
- Pension Over/Under Funding
- Excess Cash
- Restructuring charges
- Pooling Goodwill
- Minority Interests

Source: New Constructs, LLC

Figure 4 compares HPQ's Return on Invested Capital (ROIC) to its Weighted-Average Cost of Capital (WACC). This company's ROIC during its last fiscal year ranks in the 2nd Quintile.

Figure 4: Return on Invested Capital vs Weighted Average Cost of Capital
HPQ - Return on Invested Capital vs Weighted Average Cost of Capital


Source: New Constructs, LLC

## How We Measure Economic Earnings

The metrics we use to measure the economic performance of companies are Economic Profit Margin and Economic Earnings. The Economic Profit Margin for a company equals its Return on Invested Capital (ROIC) minus its Weighted-Average Cost of Capital (WACC). The Economic Earnings of a company equal its Economic Profit Margin multiplied by its Invested Capital. Economic Earnings per Share equal Economic Earnings divided by Basic Shares Outstanding. ROIC equals Net Operating Profit After Tax (NOPAT) divided by Invested Capital.

We believe our measures of economic performance are substantially more accurate than accounting metrics because we make adjustments for all the issues listed in Figure 3.

Appendix 3 provides a line item by line item reconciliation of Net Income to Economic Earnings.

## Free Cash Flow Yield

Rigorous back-testing shows that stocks with a Free Cash Flow Yield of at least 10\% significantly out-performed both the S\&P 500 and a survivor-bias-adjusted index. For more detail on Free Cash Flow Yield and our backtesting, see our report "Cash Is King," which was published November 30th, 2004.

Using Free-Cash-Flow Yields to pick stocks is not a new strategy. However, our strategy yields superior results because we use a better measure of Free Cash Flow (FCF), in our opinion. In the same way our economic EPS are better measures of profitability than reported EPS, our measure of FCF is better than traditional accounting-based FCF. We measure Free Cash Flow by subtracting the change in Invested Capital from NOPAT.

Figure 5: Free Cash Flow Yield


Source: New Constructs, LLC. Note: Dot on the line(s) in the chart marks the current value(s).
Figure 5 shows HPQ's FCF Yield over the past several years. HPQ's current FCF Yield is 6.9\%.

Free Cash Flow Yield equals unlevered FCF divided by enterprise value. The level of FCF does not always reflect the health of a business or its prospects. For example, a large amount of FCF can be a sign that a company has limited investment opportunities and, hence, limited growth prospects. On the other hand, negative FCF can be an attractive indication that a company has more investment opportunities than it can fund with cash from operations. Zero FCF could mean that the company generates just enough cash to internally fund its growth opportunities.

The lower the stock price is versus EBV, the lower the potential risk of investing in the stock.

The higher the stock price is versus EBV, the greater the potential risk of investing in the stock.

## Price-to-EBV Per Share

Figure 6 shows the differences between the stock market price and Economic Book Value (EBV) per share of HPQ. These differences reflect the portion of the stock price that is entirely dependent on future cash flow growth.

When stock prices are much higher than EBVs, the market predicts the economic profitability (as distinct from accounting profitability) of the company will meaningfully increase. When stock prices are much lower than EBVs, the market predicts the economic profitability of the company will meaningfully decrease. If the stock price equals the EBV, the market predicts the company's economic profitability will not change.

Figure 6: Economic Book Value Per Share vs Market Price

## HPQ - Economic Book Value Per Share vs Market Price



Source: New Constructs, LLC. Note: Dot on the line(s) in the chart marks the current value(s).
EBV measures the no-growth value of the company based on the current economic cash flows generated by the business. It is also known as the "pre-strategy value" of the company because it ignores the value attributable to future cash flows, which are, in theory, what business strategies should aim to improve.

The Formula for EBV is: (NOPAT / WACC) + Excess Cash + Unconsolidated Subsidiary Assets + Net Assets from Discontinued Operations - Debt (incl. Operating Leases) Value of Outstanding Stock Options - Preferred Capital - Minority Interests. EBV per share equals EBV divided by shares outstanding.

Stock prices reflect the market's expectations for the present value of future cash promised to the owner.

Comparing the required future performance to historical performance positions investors to asses the feasibility of market expectations and valuations.

See Appendix 8 for the specific estimates used in this company's valuation model.

Appendix 2 details each Adjustment made to this company's reported financial results.

## Quantifying Market Expectations

We believe this stock has an Attractive Risk/Reward Rating because there is a relatively small difference between the expected financial performance implied by its market price and the company's historical performance.

Figure 7 compares the future performance required to justify the company's stock market price to its historical performance. Specifically, Figure 7 shows: the current stock price of $\$ 38.45$ implies that HPQ will not generate any growth in economic profits.

Figure 7: Future Performance Required to Justify Valuation

| Performance Hurdles | Historical Performance |  |  | Furture Performance |
| :--- | :---: | :---: | :---: | :---: |
|  | 5 Yr | 3 Yr | Last FY |  |
|  | $\$ 28.04$ | $\$ 51.68$ | $\$ 47.46$ | $\$ 38.45$ |
| Stock Price | $7.2 \%$ | $4.8 \%$ | $(3.2 \%)$ | - |
| 1. Revenue CAGR | $4.5 \%$ | $5.6 \%$ | $5.1 \%$ | - |
| 2. Avg Economic Profit Margin | - | - | - | $<1$ year |
| 3. Growth Appreciation Period | - |  |  |  |

Source: New Constructs, LLC
Note: The Default Scenario is Based on the forecast set by the New Constructs analytical team, this scenario represents a likely financial performance path the company may follow to justify the current market price. Subscribers to our services may create alternate forecast scenarios based on their own estimates.

Historically, HPQ has generated a Revenue CAGR of 7.2\%, 4.8\%, and (3.2\%) and Economic Profit Margins of 4.5\%, 5.6\%, and 5.1\% over the past 5, 3 and 1 year(s).

The market does not expect HPQ to achieve any future profit growth. See the Price-toEBV Per Share analysis for more detail.

GAP measures the number of years implied by the stock price over which the company must maintain an edge over its current and future competitors. Specifically, GAP measures the number of years a company will earn returns on invested capital greater than its cost of capital on new investments. The law of competition dictates that a company can only grow its economic profits for the finite period over which it can maintain a competitive advantage.

The Market-implied GAP of the S\&P 500 is $\mathbf{2 0}$ years. For the Russell 1000, it is $\mathbf{2 3}$ years. HPQ has a GAP of < 1 year, which is much less than the indices. Based on this criterion, HPQ has a much greater chance of seeing price appreciation versus the indices.

## Our Overall Rating is Attractive. Other criteria (per pages above) in our rating system also indicate HPQ is an Attractive investment.

GAP analysis comes from our dynamic discounted cash flow model, a multi-stage DCF model that values companies across multiple forecast horizons. Each forecast horizon (i.e., Growth AppreciationPeriod - GAP), assumes the company cannot grow profits beyond the GAP period. Our model exclusively uses no-growth terminal value assumptions for calculating the value of the stock for each GAP.

The forecast drivers for our DCF model are: (1) Revenue Growth; (2) NOPBT Margin, (i.e. EBIT Margin with Adjustments*), (3) Cash Tax Rate, (4) Incremental Net Working and Fixed Capital needs. See Appendix 8 for the forecasts that drive our DCF model for this company.

Our MaxVal models value stocks based on the present value of expected free cash flows, with that free cash flow measured according to our economic (as distinct from conventional accounting) methodology. MaxVal subscribers forecast economic free cash flow by assigning estimates to three value drivers:

## 1. Revenue Growth

Compounded over the indicated time frame.

## 2. Economic Profit Margin

The Return On Invested Capital minus the weighted-average cost of capital.

## 3. Growth Appreciation Period

Number of years the company can earn a positive Economic Profit Margin on incremental investments, i.e. the number of years it can create economic value.

An alternative way to conceptualize the three value drivers is:

1. "How fast will the company grow?"
2. "How profitable will the company be?"
3. "For how many years will the company grow economic profits or create incremental value?"

## Appendix 1: Explanation of New Constructs' Stock Ratings Scale

Our Risk/Reward Rating (Figure 1) system grades every stock under our coverage according to what we believe are the 5 most important criteria for assessing the risk versus reward of a stock. Each grade reflects the balance of potential risk and reward of buying that stock. Our Risk/Reward analysis results in the 5 ratings described below. Most Attractive corresponds to a "Buy" rating, Most Dangerous corresponds to a "Sell" rating, and everything in-between corresponds to a "Hold" rating.

## Overall Risk/Reward Rating

The Overall Risk/Reward Rating provides a final rating based on the equal-weighted average rating of each criterion.

| Very Dangerous |
| :---: |
| Dangerous |
| Neutral |
| Attractive |
| Very Attractive |

All criteria are equal-weighted in the average calculation except 2yr FCF Yield is excluded.
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## Economic vs Reported EPS

Ranks stocks based on how their Economic Earnings compare their Reported Earnings. Values based on Latest Fiscal Year.

| Misleading Trend | Very Dangerous $=$ negative and declining Economic Earnings despite positive and rising Reported Earnings |
| :---: | :--- |
| False Positive | Dangerous $=$ same as above except Reported EPS are not positive or are not rising |
| Neutral EP | Neutral $=$ Negative Economic and Reported Earnings |
| Positive EP | Attractive $=$ Economic Earnings are positive |
| Rising EP | Very Attractive $=$ Economic Earnings are positive and rising |

Return on Invested Capital (ROIC)
Ranks stocks based on their ROIC. Values based on Latest Fiscal Year.

| Bottom Quintile | Very Dangerous $=$ in the bottom $20 \%$ of all companies |
| :--- | :--- |
| 4th Quintile | Dangerous $=$ in the bottom $40 \%$ of all companies |
| 3rd Quintile | Neutral $=$ in the middle $20 \%$ of all companies |
| 2nd Quintile | Attractive $=$ in the top $40 \%$ of all companies |
| Top Quintile | Very Attractive $=$ in the top $20 \%$ of all companies |

FCF Yield
Ranks stocks based on their Free Cash Flow Yield. Values based on Latest Closing Stock price and Latest Fiscal Year.

| $<-5 \%$ | Very Dangerous = less than or equal to $-5 \%$ |
| :---: | :--- |
| $-5 \%<-1 \%$ | Dangerous = more than $-5 \%$ but less than or equal to $-1 \%$ |
| $-1 \%<3 \%$ | Neutral = more than $-1 \%$ but less than or equal to $+3 \%$ |
| $3 \%<10 \%$ | Attractive = more than $+3 \%$ but less than or equal to $+10 \%$ |
| $>10 \%$ | Very Attractive = more than $+10 \%$ |

## Price-to-EBV Ratio

Ranks stocks based on their Price-to-Economic Book Value Ratio. Values based on Latest Closing Stock price and Latest Fiscal Year.

| $\mid>3.5$ or $-1>0$ |  |
| ---: | :--- |
| 2.4 | $>3.5$ or $<-1$ |
| 1.6 | $>2.4$ |
| 1.1 | $>1.6$ |
| 0 | $>1.1$ |

Very Dangerous $=$ greater than or equal to 3.5 or less than 0 but greater than -1
Dangerous = greater than or equal to 2.4 but less than 3.5 and less than or equal to -1
Neutral = greater than or equal to 1.6 but less than 2.4
Attractive = greater than or equal to 1.1 but less than 1.6
Very Attractive $=$ greater than or equal to 0 but less than 1.1

## Growth Appreciation Period (yrs)

Ranks stocks based on their Market-Implied Growth Appreciation Period. Values based on Latest Closing Stock price and Default Forecast Scenario.

| $>50$ | Very Dangerous = greater than or equal to 50 years |
| :---: | :--- | :--- |
| $20>50$ | Dangerous = greater than or equal to 20 years but less than 50 |
| $10>20$ | Neutral $=$ greater than or equal to 10 years but less than 20 |
| $3>10$ | Attractive $=$ greater than or equal to 3 years but less than 10 |
| $0>3$ | Very Attractive $=$ greater than or equal to 0 years but less than 3 |

## Appendix 2: Economic Adjustments Summary

Values in millions except per share amounts

|  | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NOPAT Adjustments - Impact Analysis |  |  |  |  |  |
| GAAP Net Income | \$2,398.00 | \$6,198.00 | \$7,264.00 | \$8,329.00 | \$7,660.00 |
| Net Non-Operating Expense | \$1,417.00 | (\$154.00) | (\$36.00) | \$570.00 | \$1,831.00 |
| Change in Total Reserves | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Goodwill Amortization | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ESO Expense (Employee Stock Options) | (\$285.59) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| Implied Interest for PV of Operating Leases | \$62.98 | \$77.49 | \$80.76 | \$121.75 | \$62.01 |
| Non-Operating Taxes | (\$385.99) | (\$648.97) | (\$159.65) | (\$146.75) | (\$540.32) |
| After-tax Charge | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| After-tax Income | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| NOPAT (Net Operating Profit After Tax) | \$3,206.40 | \$5,472.51 | \$7,149.10 | \$8,874.00 | \$9,012.69 |
| Invested Capital Adjustments - Impact Analysis |  |  |  |  |  |
| Reported Net Assets | \$47,688.00 | \$48,836.00 | \$52,625.00 | \$67,406.00 | \$69,416.00 |
| Excess Cash | (\$9,594.20) | (\$11,839.10) | (\$6,230.70) | (\$4,327.80) | (\$7,606.40) |
| Total Reserves | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Deferred Tax Liability | \$0.00 | \$0.00 | \$0.00 | \$3,162.00 | \$4,230.00 |
| Unconsolidated Subsidiary Assets (non-operating) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| Net Assets from Discontinued Operations | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| Off-Balance-Sheet Operating Leases | \$1,831.75 | \$1,792.45 | \$1,921.92 | \$3,351.87 | \$2,005.15 |
| Accumulated Unrecorded Goodwill | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Accumulated Goodwill Amortization | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cumulative Asset Write-Offs After Tax | \$1,847.00 | \$2,098.53 | \$2,548.17 | \$2,775.49 | \$2,990.69 |
| Accumulated OCI (Other Comprehensive Income) | \$21.00 | (\$18.00) | (\$559.00) | \$65.00 | \$3,247.00 |
| Invested Capital | \$41,793.55 | \$40,869.88 | \$50,305.40 | \$72,432.57 | \$74,282.44 |

## Appendix 3: Reconciling Net Income to Economic Earnings

Values in millions except per share amounts

|  | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NOPAT = Net Income with Adjustments as per below |  |  |  |  |  |
| GAAP Net Income | \$2,398.00 | \$6,198.00 | \$7,264.00 | \$8,329.00 | \$7,660.00 |
| Net Non-Operating Expense | 1,417.0 | (154.0) | (36.0) | 570.0 | 1,831.0 |
| As a \% of Revenue | 1.6\% | (0.2\%) | (0.0\%) | 0.5\% | 1.6\% |
| Change in Total Reserves | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| As a \% of Revenue | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| Goodwill Amortization | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| As a \% of Revenue | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| ESO Expense (Employee Stock Options) | (285.6) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.3\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Implied Interest for PV of Operating Leases | 63.0 | 77.5 | 80.8 | 121.8 | 62.0 |
| As a \% of Revenue | 0.1\% | 0.1\% | 0.1\% | 0.1\% | 0.1\% |
| Non-Operating Taxes | (386.0) | (649.0) | (159.7) | (146.8) | (540.3) |
| As a \% of Revenue | (0.4\%) | (0.7\%) | (0.2\%) | (0.1\%) | (0.5\%) |
| After-tax Charge | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| As a \% of Revenue | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| After-tax Income | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| As a \% of Revenue | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| NOPAT (Net Operating Profit After Tax) | \$3,206.40 | \$5,472.51 | \$7,149.10 | \$8,874.00 | \$9,012.69 |
| Capital Charge = WACC * Invested Capital as detailed below |  |  |  |  |  |
| Capital Charge for Reported Net Assets | $(3,572.0)$ | $(3,764.3)$ | $(4,030.9)$ | $(4,737.5)$ | $(4,898.0)$ |
| As a \% of Revenue | (4.1\%) | (4.1\%) | (3.9\%) | (4.0\%) | (4.3\%) |
| Capital Charge for Excess Cash | 718.6 | 912.6 | 477.2 | 304.2 | 536.7 |
| As a \% of Revenue | 0.8\% | 1.0\% | 0.5\% | 0.3\% | 0.5\% |
| Total Reserves Capital Charge | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Deferred Tax Liability Capital Charge | 0.0 | 0.0 | 0.0 | 222.2 | 298.5 |
| As a \% of Revenue | 0.0\% | 0.0\% | 0.0\% | 0.2\% | 0.3\% |
| Capital Charge for Unconsolidated Subsidiary Assets (non-operating) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Capital Charge for Net Assets from Discontinued Operations | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Off-Balance-Sheet Operating Leases Capital Charge | (137.2) | (138.2) | (147.2) | (235.6) | (141.5) |
| As a \% of Revenue | (0.2\%) | (0.2\%) | (0.1\%) | (0.2\%) | (0.1\%) |
| Unrecorded Goodwill Capital Charge | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Accumulated Goodwill Amortization Capital Charge | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| As a \% of Revenue | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) | (0.0\%) |
| Asset Write-Offs After Tax Capital Charge | (138.3) | (161.8) | (195.2) | (195.1) | (211.0) |
| As a \% of Revenue | (0.2\%) | (0.2\%) | (0.2\%) | (0.2\%) | (0.2\%) |
| Accumulated OCI Capital Charge | (1.6) | 1.4 | 42.8 | (4.6) | (229.1) |
| As a \% of Revenue | (0.0\%) | 0.0\% | 0.0\% | (0.0\%) | (0.2\%) |
| Invested Capital | \$41,793.55 | \$40,869.88 | \$50,305.40 | \$72,432.57 | \$74,282.44 |
| WACC * Invested Capital is the charge for capital deducted from NOPAT |  |  |  |  |  |
| Invested Capital * WACC | \$3,130.45 | \$3,150.26 | \$3,853.21 | \$5,090.79 | \$5,241.35 |
| Economic Earnings = NOPAT minus Capital Charge |  |  |  |  |  |
| Economic Profit | 75.9 | 2,322.3 | 3,295.9 | 3,783.2 | 3,771.3 |
| Economic Profit per Share | \$0.03 | \$0.83 | \$1.25 | \$1.52 | \$1.58 |
| Basic EPS | \$0.83 | \$2.23 | \$2.76 | \$3.35 | \$3.21 |

Appendix 4: Net Operating Profit After Tax (NOPAT) - Operating Approach
Values in millions except per share amounts

|  | 2005 |
| :--- | ---: |
| Operating Revenue |  |
| Net Sales Revenue | $\$ 68,945.00$ |
| Net Interest Income | 0.0 |
| Licensing Revenue | 0.0 |
| Service Revenue | $17,380.0$ |
| Fee Income | 0.0 |
| Commission Income | 0.0 |
| Gain on Sale (operating revenue) | 0.0 |
| Revenue from Company-Owned Life Insurance | 0.0 |
| Other Revenue | 371.0 |
| Total Operating Revenue | $\$ 86,696.00$ |
| Operating Income |  |
| Income from Discontinued Operations (operating) | $\$ 0.00$ |
| Gain on Sale of Discontinued Operations (operating) | 0.0 |
| Income from Unconsolidated Subsidiaries (operating) | 0.0 |
| Income from Unconsolidated Subsidiaries After-tax (operating | 0.0 |
| Gain on Sale (operating income) | 0.0 |
| Other Income | 0.0 |
| Total Operating Income | $\$ 0.00$ |


| Operating Expenses and Adjustments |  |
| :--- | ---: |
| Cost of Sales | $\$ 52,550.00$ |
| Cost of Licensing Revenue | 0.0 |
| Cost of Service Revenue | $13,674.0$ |
| Other Cost of Revenue | 0.0 |
| Credit Loss Provision | 0.0 |
| Total Cost of Sales | $\$ 66,224.00$ |
| Gross Profit | $\$ 20,472.00$ |
| Gross Margin | $23.6 \%$ |
| General and Administrative | $\$ 11,184.00$ |
| Sales and Marketing | 0.0 |
| Occupancy and Equipment | 0.0 |
| Research and Development Expense | $3,490.0$ |
| Depreciation and Amortization | 622.0 |
| Energy Depreciation, Depletion, and Amortization | 0.0 |
| Goodwill Amortization | 0.0 |
| Interest Expense (operating) | 216.0 |
| Stock Compensation | 0.0 |
| Other Compensation | 0.0 |
| Loss on Sale (operating) | 0.0 |
| Non-Income Taxes | 0.0 |
| Property Operating Expense | 0.0 |
| Energy Operating Expense | 0.0 |
| Losses from Discontinued Operations (operating) | 0.0 |
| Losses from Unconsolidated Subsidiaries (operating) | 0.0 |
| Insurance Expense | 0.0 |
| Operating Other Real Estate Owned Expense | 0.0 |
| Other Operating Expense | 0.0 |
| Total Operating Expense | $\$ 81,736.00$ |

## new Constructs

Net Operating Profit After-Tax (NOPAT) - Operating Approach (continued)

| Asset Write-Offs Included in Total Operating Expenses | $(0.0)$ |
| :--- | ---: |
| Non-operating Expenses Included in Total Operating Expense | $(0.0)$ |
| ESO Expense (Employee Stock Options) | $(285.6)$ |
| ESO Expense as a \% of Revenue | $0.3 \%$ |
| Adjusted Total Operating Expenses | $\$ 82,021.59$ |
| EBIT | $\$ 4,674.41$ |
| Goodwill Amortization | 0.0 |
| EBITA | $\$ 4,674.41$ |
| Change in Total Reserves | 0.0 |
| Implied Interest for PV of Operating Leases | 63.0 |
| Capitalized Items Net Adjustment | $\$ 62.98$ |
| NOPBT (Net Operating Profit Before Tax) | $\$ 4,737.39$ |
| NOPBT Margin | $5.5 \%$ |
| Taxes and Adjustments | $\$ 4,737.39$ |
| NOPBT (Net Operating Profit Before Tax) | $32.3 \%$ |
| Cash Tax Rate | $\$ 1,530.99$ |
| Cash Operating Taxes | $\$ 3,206.40$ |


| $(267.0)$ | $(362.0)$ | $(214.0)$ | $(221.0)$ |
| ---: | ---: | ---: | ---: |
| $(0.0)$ | $(0.0)$ | $(0.0)$ | $(0.0)$ |
| $(0.0)$ | $(0.0)$ | $(0.0)$ | $(0.0)$ |
| $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
| $\$ 84,621.00$ | $\$ 95,145.00$ | $\$ 107,321.00$ | $\$ 103,306.00$ |
| $\$ 7,037.00$ | $\$ 9,141.00$ | $\$ 11,043.00$ | $\$ 11,246.00$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $\$ 7,037.00$ | $\$ 9,141.00$ | $\$ 11,043.00$ | $\$ 11,246.00$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5 | 80.8 | 121.8 | 62.0 |
| $\$ 77.49$ | $\$ 80.76$ | $\$ 121.75$ | $\$ 62.01$ |
| $\$ 7,114.49$ | $\$ 9,221.76$ | $\$ 11,164.75$ | $\$ 11,308.01$ |
| $7.8 \%$ | $8.8 \%$ | $9.4 \%$ | $9.9 \%$ |
|  |  |  |  |
| $\$ 7,114.49$ | $\$ 9,221.76$ | $\$ 11,164.75$ | $\$ 11,308.01$ |
| $23.1 \%$ | $22.5 \%$ | $20.5 \%$ | $20.3 \%$ |
| $\$ 1,641.97$ | $\$ 2,072.65$ | $\$ 2,290.75$ | $\$ 2,295.32$ |
| $\$ 5,472.51$ | $\$ 7,149.10$ | $\$ 8,874.00$ | $\$ 9,012.69$ |

## Appendix 5: Invested Capital - Operating Approach

Values in millions except per share amounts

| Current Assets / Investment Assets |
| :--- |
| Cash and Equivalents (non-operating) |
| Short-Term Investments (non-operating) |
| Long-Term Investments (non-operating) |
| Company Owned Life Insurance (non-operating) |
| Total Cash and Investments |
| Required Cash as \% of Revenue |
| Excess Cash |
| Required Cash |
| Cash and Equivalents (operating) |
| Restricted Cash |
| Available for Sale Securities (operating) |
| Held to Maturity Securities (operating) |
| Trading Securities (operating) |
| Other Investment Securities (operating) |
| Accounts Receivable |
| Inventory |
| Prepaid Expenses |
| Current Deferred Costs |
| Current Deferred Taxes |
| LIFO Reserves |
| Loan Loss Reserves |
| Inventory Reserves |
| Other Receivables |
| Net Loans |
| Loans Held for Sale |
| Separate Accounts |
| Interest-Bearing Deposits |
| Federal Funds Sold and Securities Purchased for Resale |
| Other Current or Investment Assets |
| Total Current Assets (adjusted) |

2005
\$13,911.00
18.0
0.0
0.0
$\$ 13,929.00$
$5.0 \%$
$9,594.2$
$4,334.8$
$\$ 0.00$
0.0
0.0
0.0
0.0
0.0
$9,903.0$
$6,877.0$
0.0
0.0
0.0
0.0
0.0
0.0
$2,551.0$
0.0
0.0
0.0
0.0
0.0
$10,074.0$
$\$ 33,739.80$

| 2006 | 2007 | 2008 | $\mathbf{2 0 0 9}$ |
| ---: | ---: | ---: | ---: |
| $\$ 16,400.00$ | $\$ 11,293.00$ | $\$ 10,153.00$ | $\$ 13,279.00$ |
| 22.0 | 152.0 | 93.0 | 55.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $\$ 16,422.00$ | $\$ 11,445.00$ | $\$ 10,246.00$ | $\$ 13,334.00$ |
| $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ |
| $11,839.1$ | $6,230.7$ | $4,327.8$ | $7,606.4$ |
| $4,582.9$ | $5,214.3$ | $5,918.2$ | $5,727.6$ |
| $\$ 0.00$ | $\$ 0.00$ | $\$ 0.00$ | $\$ 0.00$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $10,873.0$ | $13,420.0$ | $16,928.0$ | $16,537.0$ |
| $7,750.0$ | $8,033.0$ | $7,879.0$ | $6,128.0$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $4,144.0$ | $4,609.0$ | $3,920.0$ | $4,979.0$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $7,682.0$ | $8,162.0$ | $8,511.0$ | $8,764.0$ |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| $1,393.0$ | $1,733.0$ | $4,244.0$ | $2,797.0$ |
| $\$ 36,424.90$ | $\$ 41,171.30$ | $\$ 47,400.20$ | $\$ 44,932.60$ |
|  |  |  |  |

Invested Capital - Operating Approach (continued)
Current Liabilities / Investment Liabilities
Accounts Payable
Accrued Expenses
Accrued Compensation
Accrued Interest
Accrued Other Taxes
Income Taxes Payable
Deferred Income Taxes
Accrued Restructuring Charges
Current Deferred Revenue
Deposits
Separate Accounts
Federal Funds Purchased and Securities Loaned for Repurchi
Other NIBCL or Investment Liabilities
Investment Liabilities - Debt
NIBCL (Non-Interest-Bearing Current Liabilities)
Net Working Capital

## Fixed Assets

PPE (Property, Plant, and Equipment)
Net Goodwill
Net Other Intangibles
Net Combined Intangibles
Restricted Cash
Deferred Tax Assets
Prepaid Expenses
Deferred Costs
Deposits
Receivables
Company Owned Life Insurance (operating)
Federal Home Loan Bank Stock
Discontinued Operations (operating)
Unconsolidated Subsidiary Assets (operating)
Other Real Estate Owned
Other Fixed Assets
Off-Balance-Sheet Operating Leases
Cumulative Asset Write-Offs After Tax
Accumulated Unrecorded Goodwill
Accumulated Goodwill Amortization
Accumulated OCI (Other Comprehensive Income)
Total Adjusted Fixed Assets
Invested Capital

2005
$\$ 10,223.00$
0.0
$2,343.0$
0.0
0.0
$2,367.0$
0.0
$1,119.0$
$3,815.0$
0.0
0.0
0.0
$9,762.0$
0.0

$\$ 29,629.00$ | \$4,110.80 |
| :--- |

\$6,451.00
16,441.0 0.0 0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
7,502.0
$1,831.8$
$1,847.0$
0.0
0.0

2006
$\$ 12,102.00$
0.0
$\$ 11,787.00$
0.0
$3,465.0$
0.0
$2,965.0$
$1,891.0$
0.0
123.0

| $\$ 14,138.00$ | $\$ 14,809.00$ |
| ---: | ---: |
| 0.0 | 0.0 |
| $4,159.0$ | $4,071.0$ |
| 0.0 | 0.0 |
| $3,258.0$ | $2,784.0$ |
| 869.0 | 910.0 |
| 0.0 | 0.0 |
| $1,099.0$ | $1,109.0$ |
| $6,287.0$ | $6,182.0$ |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| $12,953.0$ | $11,288.0$ |
| 0.0 | 0.0 |
| $\$ \mathbf{\$ 2 , 7 6 3 . 0 0}$ | $\$ 41, \mathbf{1 5 3 . 0 0}$ |
| $\$ \mathbf{\$ 4 , 6 3 7 . 2 0}$ | $\$ 3,779.60$ |


| $\$ 10,838.00$ | $\$ 11,262.00$ |
| ---: | ---: |
| $32,335.0$ | $33,109.0$ |
| $7,962.0$ | $6,600.0$ |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 792.0 | $1,750.0$ |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| $2,722.0$ | $3,303.0$ |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| $6,954.0$ | $6,236.0$ |
| $3,351.9$ | $2,005.2$ |
| $2,775.5$ | $2,990.7$ |
| 0.0 | 0.0 |
| 0.0 | 0.0 |
| 65.0 | $3,247.0$ |
| $\$ 67,795.37$ | $\$ 70,502.84$ |
| $\mathbf{\$ 7 2 , 4 3 2 . 5 7}$ | $\$ 74,282.44$ |

## Appendix 6: WACC (Weighted Average Cost of Capital)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | Current |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost of Equity Capital according to the Capital Asset Pricing Model (CAPM) |  |  |  |  |  |  |
| Risk-Free Rate (10-yr Treasury) | 4.24\% | 4.78\% | 4.71\% | 3.86\% | 3.17\% | 3.50\% |
| Beta Adjusted | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Expected Market Return | 8.50\% | 8.50\% | 8.50\% | 8.50\% | 8.50\% | 8.50\% |
| Equity Risk Premium | 4.26\% | 3.72\% | 3.79\% | 4.64\% | 5.33\% | 5.00\% |
| Cost of Equity | 7.84\% | 7.93\% | 7.92\% | 7.79\% | 7.68\% | 7.73\% |
| Market Value of Basic Equity | \$80,727.16 | \$107,774.68 | \$135,918.40 | \$95,049.24 | \$113,334.48 | \$91,818.60 |
| Equity Per Total Adjusted Capital | 91.96\% | 93.91\% | 93.08\% | 81.76\% | 86.40\% | 83.74\% |
| Weighted Cost of Equity Capital | 7.21\% | 7.44\% | 7.37\% | 6.37\% | 6.64\% | 6.47\% |
| Cost of Debt Capital |  |  |  |  |  |  |
| Risk-Free Rate (10-yr Treasury) | 4.24\% | 4.78\% | 4.71\% | 3.86\% | 3.17\% | 3.50\% |
| Debt Spread Adjusted | 0.84\% | 0.84\% | 0.71\% | 0.71\% | 0.71\% | 0.71\% |
| Cash Tax Rate | 32.32\% | 23.08\% | 22.48\% | 20.52\% | 20.30\% | 20.30\% |
| Cost of Debt After Tax | 3.44\% | 4.32\% | 4.20\% | 3.63\% | 3.09\% | 3.36\% |
| Adjusted Total Debt | 7,054.8 | 6,987.5 | 10,104.9 | 21,203.9 | 17,835.2 | 17,825.8 |
| Debt Per Total Adjusted Capital | 8.04\% | 6.09\% | 6.92\% | 18.24\% | 13.60\% | 16.26\% |
| Weighted Cost of Debt After Tax | 0.28\% | 0.26\% | 0.29\% | 0.66\% | 0.42\% | 0.55\% |
| Cost of Preferred Capital |  |  |  |  |  |  |
| Preferred Dividends | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Preferred Capital | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cost of Preferred Capital | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| WACC (Weighted Average Cost of Capital) | 7.49\% | 7.71\% | 7.66\% | 7.03\% | 7.06\% | 7.02\% |

## Appendix 7: Key Economic Metrics Summary

Values in millions except per share amounts

## Economic Book Value (EBV)

Economic Book Value (EBV) Per Share
Stock Price (closing)
Economic Book Value (EBV)
PEBV (Price to Economic Book Value) per Share
Price to Accounting Book Value
Price to Unlevered NOPAT per Share
P/E (Price/Earnings Multiple)
Components of Economic Book Value
NOPAT (Net Operating Profit After Tax)

| 2005 | 2006 | 2007 | 2008 | 2009 | Current |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$14.79 | \$25.37 | \$31.34 | \$42.73 | \$47.64 | \$48.45 |
| \$28.04 | \$38.74 | \$51.68 | \$38.28 | \$47.46 | \$38.45 |
| \$42,579.14 | \$70,575.11 | \$82,423.51 | \$106,106.13 | \$113,756.78 | \$115,705.72 |
| 1.90 | 1.53 | 1.65 | 0.90 | 1.00 | 0.79 |
| 2.19 | 2.90 | 3.64 | 2.52 | 2.85 | 2.31 |
| 25.18 | 19.69 | 19.01 | 10.71 | 12.57 | 10.18 |
| 34.02 | 17.83 | 19.32 | 11.80 | 15.10 | 12.23 |
| \$3,206.40 | \$5,472.51 | \$7,149.10 | \$8,874.00 | \$9,012.69 | \$9,016.64 |
| 7.49\% | 7.71\% | 7.66\% | 7.03\% | 7.06\% | 7.02\% |
| 9,594.2 | 11,839.1 | 6,230.7 | 4,327.8 | 7,606.4 | 7,606.4 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| \$7,054.75 | \$6,987.45 | \$10,104.92 | \$21,203.87 | \$17,835.15 | \$17,825.76 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| (\$2,005.00) | (\$1,004.00) | \$832.00 | (\$1,996.00) | (\$5,122.00) | (\$5,122.00) |
| 2,767.7 | 5,274.1 | 7,036.9 | 3,278.4 | 3,745.7 | 2,531.5 |
| 2005 | 2006 |  | 007 | 2008 | 2009 |

Return on Invested Capital (ROIC)
ROIC derived from prime components (NOPAT Margins * Invested Capital Turns)
NOPAT Margin

| $3.7 \%$ | $6.0 \%$ |
| ---: | ---: |
| 2.07 | 2.24 |
| $7.7 \%$ | $13.4 \%$ |
| $7.49 \%$ | $7.71 \%$ |
| $0.1 \%$ | $5.7 \%$ |
| $(7.7 \%)$ | $(70.3 \%)$ |
| $6.5 \%$ | $16.2 \%$ |

$6.9 \%$
2.07
$14.2 \%$
$7.66 \%$
$0.8 \%$
$(181.5 \%)$
$18.9 \%$

Economic Profit (EP) and Free Cash Flow (FCF)
Economic Profit Margin (ROIC - WACC) $0.2 \% \quad 5.7 \%$
$6.6 \%$
$3,295.9$
$\$ 7,264.00$
$\$ 973.64$
$\$ 1.25$
$50.1 \%$
$(\$ 2,286.41)$
$(4.5 \%)$
$(2.2 \%)$
$\$ 2.67$
$23.1 \%$
$\$ 2.76$
$24.0 \%$
$\$ 2.72$
$38.2 \%$
$5.2 \%$
$3,783.2$
$\$ 8,329.00$
$\$ 487.32$
$\$ 1.52$
$21.6 \%$
$(\$ 13,253.17)$
$(18.3 \%)$
$(11.2 \%)$
$\$ 3.24$
$21.3 \%$
$\$ 3.35$
$21.4 \%$
$\$ 3.57$
$31.5 \%$
$5.1 \%$
$3,771.3$
$\$ 7,660.00$
$(\$ 11.87)$
$\$ 1.58$
$3.7 \%$
$\$ 7,162.81$
$9.6 \%$
$6.3 \%$
$\$ 3.14$
$(3.1 \%)$
$\$ 3.21$
$(4.4 \%)$
$\$ 3.77$
$5.6 \%$

## Appendix 8: DCF Forecast Drivers Summary

Values in millions except per share amounts

| Historical |  |  |  |  | DCF Forecast Drivers |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2005 | 2006 | 2007 | 2008 | 2009 | $\underset{1}{\mathrm{EY}}$ | $\underset{2}{\mathrm{EY}}$ | $\underset{3}{\mathrm{EY}}$ | $\underset{4}{\mathrm{EY}}$ | $\underset{6}{\mathrm{EY}}$ | $\begin{aligned} & \text { EY } \\ & \hline 11 \end{aligned}$ | $\begin{aligned} & \text { EY } \\ & 16 \end{aligned}$ | $\begin{aligned} & \text { EY } \\ & 21 \end{aligned}$ | $\begin{aligned} & \mathrm{EY} \\ & 26 \end{aligned}$ | $\begin{aligned} & \text { EY } \\ & 51 \end{aligned}$ |
| Total Operating Revenue Growth |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.5\% | 5.7\% | 13.8\% | 13.5\% | (3.2\%) | 9.6\% | 4.9\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.0\% |
| $\begin{gathered} \text { NOPBT } \\ 5.5 \% \end{gathered}$ | Margin <br> 7.8\% | 8.8\% | 9.4\% | 9.9\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% | 9.6\% |
| Cash Tax Rate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 32.3\% | 23.1\% | 22.5\% | 20.5\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% | 20.3\% |
| Net Working Capital Delta as \% of Revenue Delta |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (55.0\%) | (16.7\%) | 14.4\% | (3.3\%) | 22.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| Fixed Adjusted Assets Delta as \% of Revenue Delta |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.6\% | (1.9\%) | 60.3\% | 160.4\% | (71.0\%) | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% |

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