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A Time Series Look at the Level and Adequacy of Capital Spending: An Analysis Using Data from June 2000 through May 2015

Executive Summary

In this study we examine capital spending for the period June 2000 (referred to as 2000) through May 2015 (referred to as 2014) for U.S. non-financial firms with total revenues exceeding $100 million. We find that capital spending was curtailed significantly during the recession, falling to 3.43% of revenue in 2009 from 4.25% in 2008. With the metric reading 4.50% in 2014, spending has recovered to pre-recession levels. However, companies have not taken steps to increase capital spending to make up for the recession-induced decline. We estimate the cumulative amount of capital expenditures effectively lost to the recession to be $296.5 billion.

Using a series of graphs we examine the level of capital spending, the cash flow capacity for capital spending, the extent of capital asset replacement, the mix of assets on corporate balance sheets and alternatives to capital expenditures.

The results are presented in a series of graphs. These graphs depict the findings for the overall sample of non-financials and for each of nine sectors. Tabular results are presented in an appendix.

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Georgia Tech Financial Analysis Lab

The Georgia Tech Financial Analysis Lab conducts unbiased research on issues of financial reporting and analysis. Unbiased information is vital to effective investment decision-making. Accordingly, we think that independent research organizations, such as our own, have an important role to play in providing information to market participants.

Because our Lab is housed within a university, all of our research reports have an educational quality, as they are designed to impart knowledge and understanding to those who read them. Our focus is on issues that we believe will be of interest to a large segment of stock market participants. Depending on the issue, we may focus our attention on individual companies, groups of companies, or on large segments of the market at large.

A recurring theme in our work is the identification of reporting practices that give investors a misleading signal, whether positive or negative, of corporate earning power. We define earning power as the ability to generate a sustainable stream of earnings that is backed by cash flow. Accordingly, our research may look into reporting practices that affect either earnings or cash flow, or both. At times, our research may look at stock prices generally, though from a fundamental and not technical point of view.

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INTRODUCTION

According to the National Bureau of Economic Research's business cycle dating committee, the last recession ended in June 2009, 18 months after it began in December 2007. Since the end of the recession, there has been much debate regarding the role of lagging capital expenditures and increased levels of corporate cash balances and stock repurchases in the slow growth of the U.S. economy. For example, Andrew Chang of Standard and Poor's states in a *Business Insider* article, ". . . nearly 2,000 U.S. nonfinancial companies held $1.82 trillion in cash and short- and long-term investments as of year-end 2014, an almost 5% increase from 2013".[1] Highlighting cutbacks in the oil and energy sectors due to growth concerns globally, *ThomsonReuters* reports, "U.S. capital spending seen falling to four-year low in 2015".[2] In the same article, Thomson Reuters data show that "S&P 500 energy companies account for the biggest fall in projected spending levels."[3] Similarly, *The Wall Street Journal* reports, "Big companies . . . are starting the new year with a tight rein on capital spending. . ."[4] In an article titled "As Activism Rises, U.S. Firms Spend More on Buybacks Than Factories", *The Wall Street Journal* discusses how investors have a new appetite for buybacks as a means to record higher returns.[5] Carl Icahn, a noted activist investor, was cited in the same article, stating ". . . activism with a long-term focus improves the economy by promoting efficient use of capital."[6] Bloomberg contributes to the discussion in an article titled, "Record U.S. Capital Spending Is Last Thing the Market Wants."[7] The article notes that equities of companies in the S&P 500 with more capital expenditures in 2014 underperformed when compared to those with less capital spending during the same period. In particular, the article notes, ". . . the S&P 500 has added 1.1 percent in 2014, compared with a 2.9 percent advance in an S&P index tracking the top 100 stocks with the highest buyback ratio."[8]

These articles raise specific questions. Post-recession, has capital spending returned to normal levels? Have capital expenditures increased above normal levels to replenish spending lost during the recession? If not, have stock repurchases, also known as buybacks, and dividends increased to take up the slack in capital spending? Are corporate cash balances inflated? Do specific sectors stand out?

The purpose of this study is to shed light on these questions. More specifically, we collect and analyze capital spending levels for a period that extends from before until after the recession of 2008 - 2009. We look at five separate aspects of capital spending over a fifteen-year period that begins with fiscal years ending in June 2000 (referred to as 2000) and extending through May 2015 (referred to as 2014). A separate section of the paper is devoted to each of the following five aspects of capital spending:

1. In the first, we examine the level of capital spending. Here we inspect trends in capital spending in order to measure the extent to which capital spending declined during the recession and the extent to which it has recovered in the period since.

2. In the second section, we look at the cash flow capacity for capital spending. Here we are interested in determining whether corporate capacity for capital spending has increased to pre-recession levels.

3. In the third section, we examine the extent of capital asset replacement. In particular, we seek to determine whether the level of capital spending is adequate to replace fixed assets consumed through operations.

4. In the fourth section, we examine the mix of assets on corporate balance sheets to determine whether the proportion of fixed assets on corporate balance sheets has declined.

5. In the fifth section we seek to estimate the amount of capital expenditures effectively lost to the recession. In this section we also look at the level of important alternatives to capital spending, in particular, dividends and stock repurchases. Our objective is to determine whether lost capital expenditures are showing up as dividends and stock repurchases or simply as increased corporate cash and short-term investments.

DESIGN

Using COMPUSTAT from Wharton Research Data Services (WRDS), we gather historical financial data on all US publicly traded companies with revenues exceeding $100 million. This data is based on fiscal-year-ending balance sheets, cash flow statements and income statements for the years 2000 through 2014. Using the Global Industrial Classification (GIC), we sort these companies by sector and eliminate all financial firms (GIC 40). In particular, we eliminate Banks (GIC 4010), Diversified financials (GIC 4020), Insurance companies (GIC 4030) and Real estate companies (GIC 4040). After eliminating all financials, nine sectors remain, Energy (GIC 10), Materials (GIC 15), Industrials (GIC 20), Consumer discretionary (GIC 25), Consumer staples (GIC 30), Healthcare (GIC 35), Information technology (GIC 45), Telecommunication services (GIC 50) and Utilities (GIC 55).

Additionally, it is worth noting the industry groups that are included in these sectors. The Industrials sector (GIC 20) includes three industry groups: Capital goods (GIC 2010), Commercial & professional services (GIC 2020) and Transportation (GIC 2030). The Consumer discretionary sector (GIC 25) includes five industry groups: Automobiles & components (GIC 2510), Consumer durables & apparel (GIC 2520), Consumer services (GIC 2530), Media (GIC 2540) and Retailing (GIC 2550). The Consumer staples sector (GIC 30) includes three industry groups: Food & staples retailing (GIC 3010), Food, beverage & tobacco (GIC 3020) and Household & personal products (GIC 3030). The Healthcare sector (GIC 35) has two industry groups: Health equipment & services (GIC 3510) and Pharmaceuticals, biotechnology & life sciences (GIC 3520). Finally, the Information technology sector (GIC 45) includes three industry groups: Software & services (GIC 4510), Technology hardware & equipment (GIC 4520) and Semiconductors & semiconductors equipment (GIC 4530).

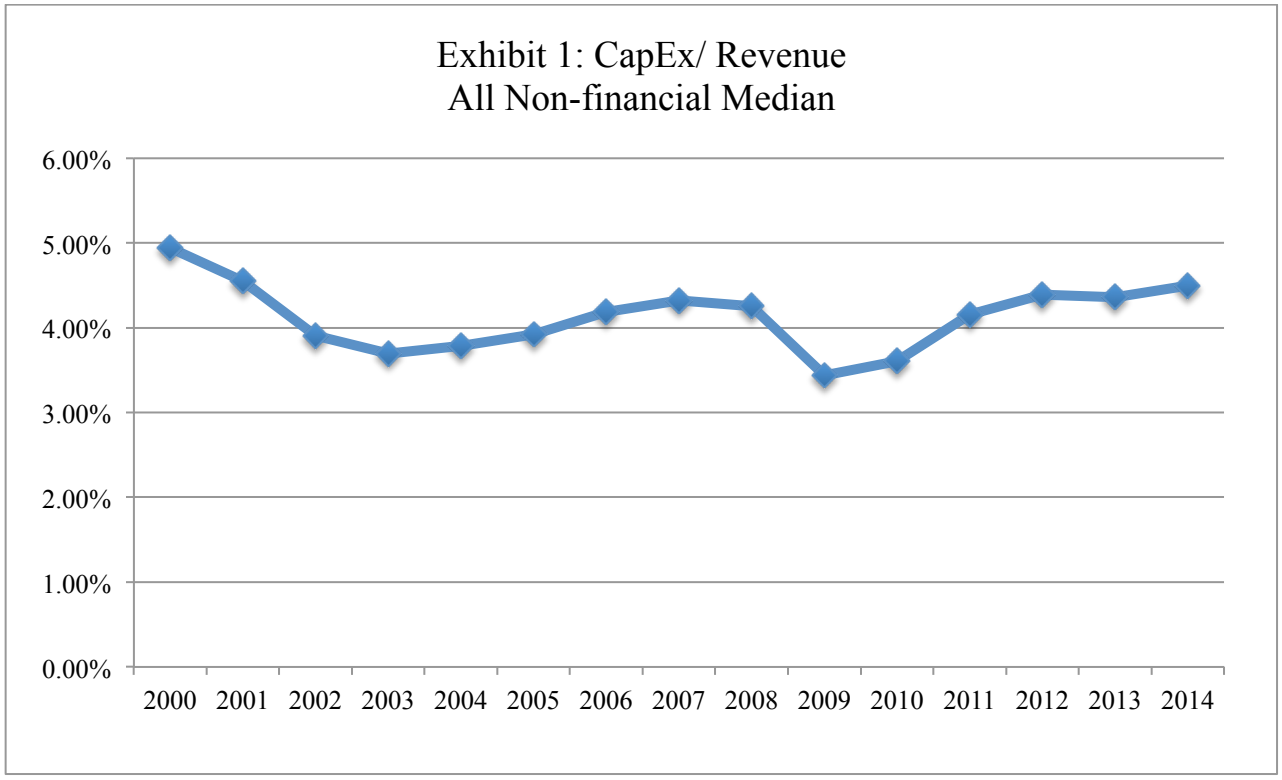
The total number of companies in our sample ranged from a high of 4,471 in 2000 to 3,659 in 2014. The decline can be attributed to many factors, including, underperformance, bankruptcy and consolidation.

RESULTS

We present our results on the level and adequacy of capital spending with a series of graphs. The results look separately at the five aspects of capital spending that serve as the focus for the paper, (1) the level of capital spending, (2) the cash flow capacity for capital spending, (3) the extent of capital asset replacement, (4) the mix of assets on corporate balance sheets, and (5) capital expenditures lost to the recession. Each year, 2000 – 2014, represents fiscal years beginning in June of the year indicated and ending in May of the succeeding year. Thus, the results cover the period June 2000 (referred to as 2000) through May 2015 (referred to as 2014).

1. Level of Capital Spending

Here the focus is on capital expenditures as a percentage of revenue. By scaling capital expenditures by revenue, we eliminate size effects. The results for the entire sample of non-financials is presented in Exhibit 1. The median is used to present the sample-wide results for each year. Tabular results for the entire sample and for each sector are presented in the appendix.



The graph presents median capital expenditures divided by revenue for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

In Exhibit 1 we can see the effects of the recession on capital spending. From a level of 4.32% of revenue in 2007 and 4.25% of revenue in 2008, capital spending declined to 3.43% of revenue in 2009 and 3.60% in 2010. Apparently, long-term capital spending commitments resulted in capital expenditures remaining at pre-recession levels into 2008, but then declining for an extended period that included 2010.

In the years since the recession, capital spending has recovered to pre-recession levels, rising to 4.5% of revenue in 2014. However, capital expenditures have not increased above normal levels sufficiently to replace capital expenditures lost during the recession.

The recession of 2001 had a similar effect on capital spending. Capital expenditures declined with and following the recession, to a low of 3.70% of revenue in 2003, and then recovered. However, the capital expenditures lost to the recession were never replaced.

1A. Level of Capital Spending: Sector Specific Results

The graphs 1a through 1g below provide sector-specific results for capital expenditures to revenue. Two sectors that followed closely the overall trend in capital spending were industrials and consumer discretionary. As presented in Exhibit 1c, the Industrials saw median Capital Expenditures/ Revenue decline from a five-year high of 2.96% in 2007 to a ten-year low of 2.34% in 2010. This means that industry groups in this sector, including Capital goods, Commercial & professional services, and Transportation, representing the overall economy, followed the general trend of all non-financials. In exhibit 1d we see that the Consumer discretionary sector experienced a dramatic reduction in median Capital Expenditure/ Revenue from 3.50% in 2008 to a ten-year low of 2.42% in 2009. This sector includes Automobiles & components, Consumer durables & apparel, Consumer services, Media and Retailing – all industries that were impacted directly by the recession.

Two sectors that significantly increased capital spending after the recession apparently to offset reductions experienced during the recession, as well as to respond to a global boom in commodities, are Energy and Materials. As seen in Exhibit 1a, the Energy sector increased capital spending to 27.09% of revenue in 2014, up from 18.61% in 2010. Similarly, as presented in Exhibit 1b, capital spending in the Materials sector increased to 6.18% of revenue in 2014 from 4.69% in 2010. Given the present-day decline in commodity and energy prices, we would expect to see a significant drop in capital spending in these industries.

A third sector that is witnessing continued increases in capital spending is the Utilities sector. As presented in Exhibit 1i, capital expenditures to revenue increased to 21.36% in 2014, up from 16.01% in 2010.

Exhibit 1a: CapEx/ Revenue
Energy Sector Median

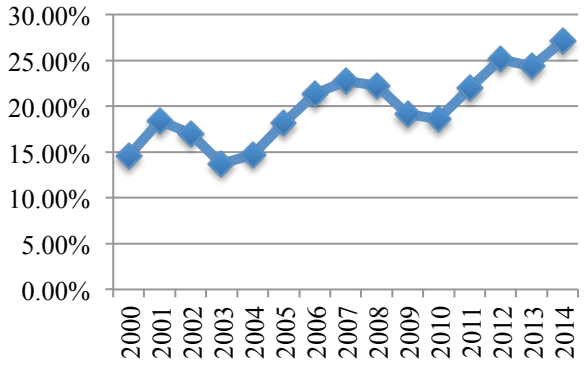


Exhibit 1b: CapEx/ Revenue
Materials Sector Median

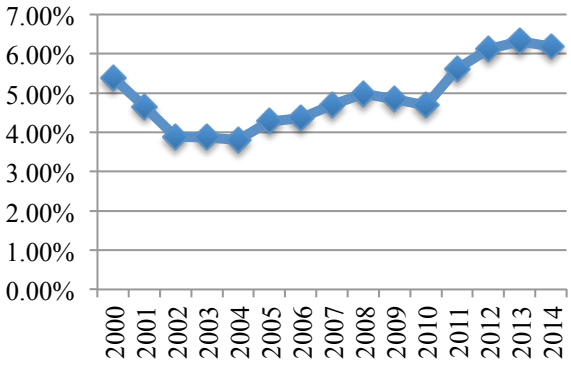


Exhibit 1c: CapEx/ Revenue
Industrials Sector Median

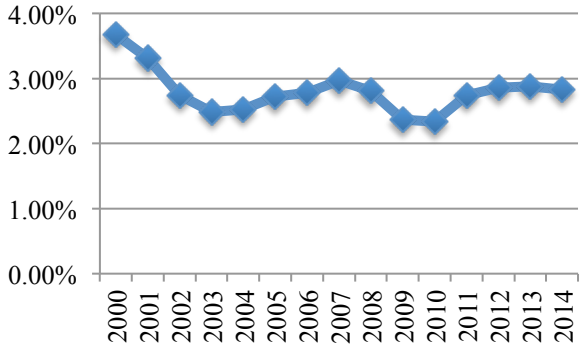


Exhibit 1d: CapEx/ Revenue
Consumer Discretionary Sector Median

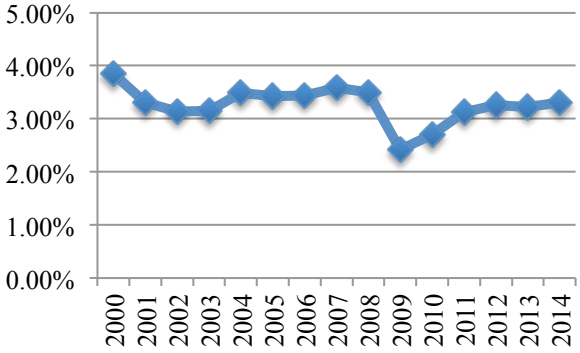


Exhibit 1e: CapEx/ Revenue
Consumer Staples Sector Median

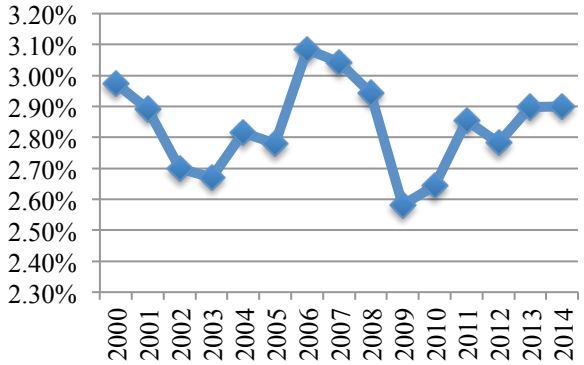


Exhibit 1f: CapEx/ Revenue
Healthcare Sector Median

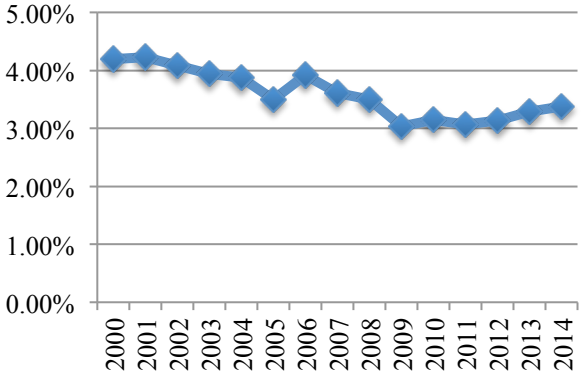


Exhibit 1g: CapEx/ Revenue
IT Sector Median

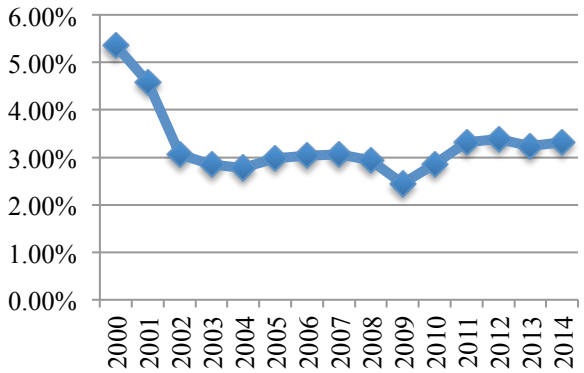


Exhibit 1h: CapEx/ Revenue
Telecommunication Sector Median

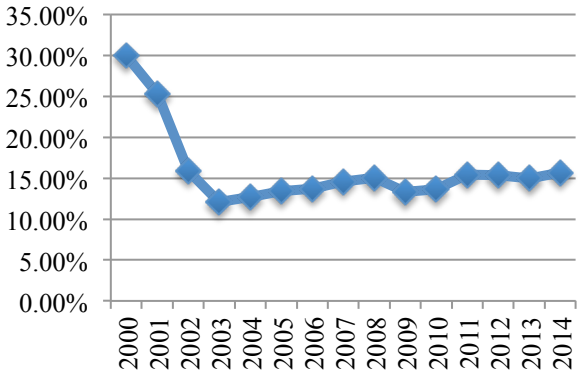
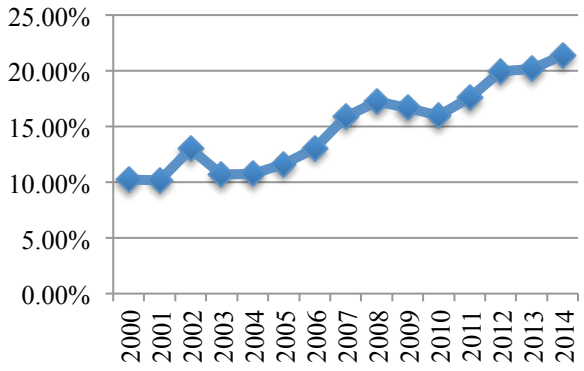
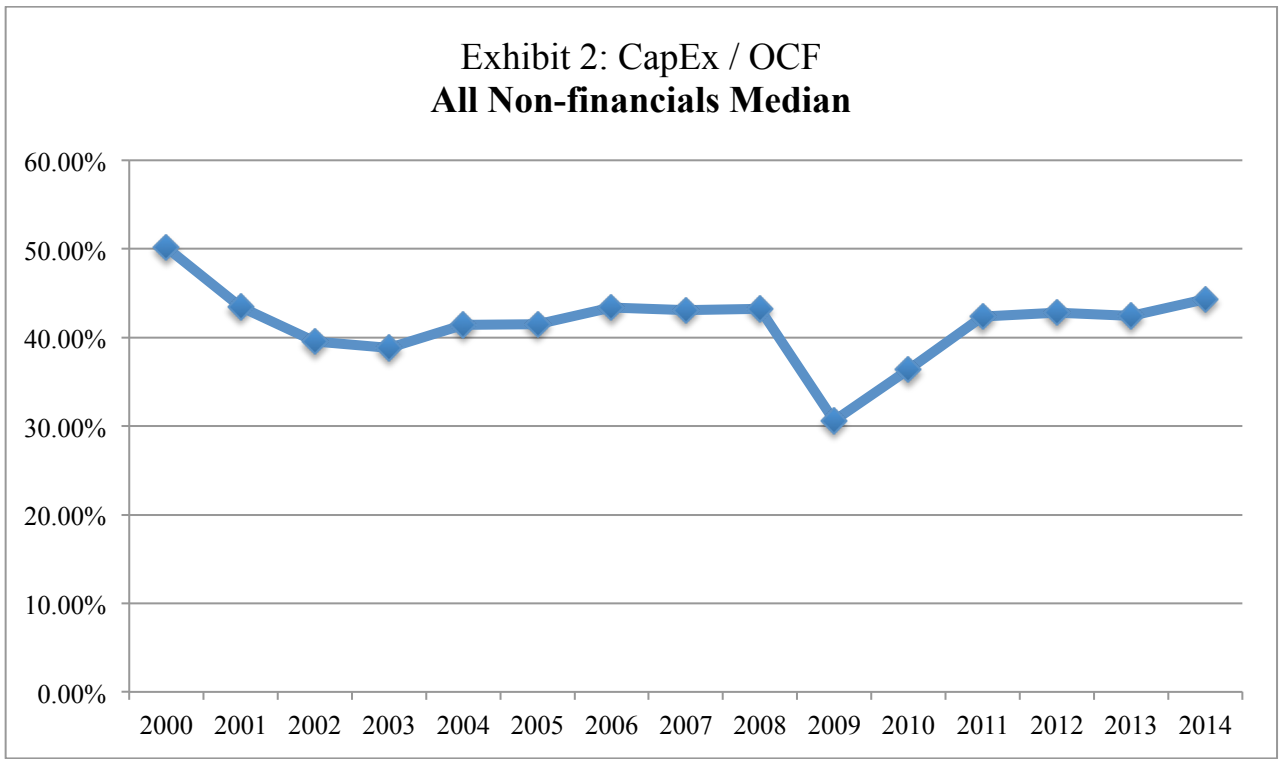


Exhibit 1i: CapEx/ Revenue
Utilities Sector Median



2. Cash Flow Capacity for Capital Spending

Operating cash flow represents funds that are available for capital expenditures. Operating cash flow less capital expenditures is often referred to as free cash flow. Firms may then spend free cash flow on other investments or on such financing activities as dividends, debt repayment and stock buybacks. To check on the extent to which firms have the capacity to commit to capital spending, we examined capital expenditures to operating cash flow. The results for our entire sample of non-financial firms are presented in Exhibit 2. Tabular results for the entire sample and for each sector are presented in the appendix.



The graph presents median capital expenditures divided by operating cash flow for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

As presented in Exhibit 2, before the recession, capital expenditures comprised 43.23% of operating cash flow. During the recession, in an effort to preserve resources, firms reduced capital spending. Capital expenditures as a percentage of operating cash flow declined to 30.61% of operating cash flow. By 2011, capital expenditures to operating cash flow had recovered to 42.37% of revenue. What is also quite clear from Exhibit 2 is that for the four years prior to the recession, 2005 to 2008, and for the four years after the recession, 2011 to 2014, median Capital Expenditure / Operating Cash Flow was quite stable, ranging between 41% and 44%. Firms are apparently committing consistent amounts of operating cash flow to capital expenditures. However, any cash conserved by reducing capital expenditures during the recession has not been committed to increased spending in subsequent years.

In the 2001 recession, capital expenditures as a percentage of operating cash flow declined, but not to the extent experienced during the most recent recession. Capital expenditures bottomed at 38.81% of operating cash flow in 2003.

2A. Cash Flow Capacity for Capital Spending: Sector Specific Results

In Exhibits 2a through 2i below, we present sector-specific graphs for capital expenditures to operating cash flow. Several sectors deserve special mention. For example, as presented in Exhibits 2a, 2b, and 2h, respectively, Energy, Materials and Telecommunications are committing consistently increasing amounts of operating cash flow to capital expenditures. In the case of Energy, capital expenditures are greater than 100% of operating cash flow in 2011 – 2014. That commitment will likely decline in 2015. Materials are presently committing 58.81% of operating cash flow to capital expenditures, up from 39.78% during the recession and Telecommunications are presently spending 65.48% of operating cash flow on capital expenditures, up from 50.80% during the recession. Also, during the recession, as presented in Exhibit 2i and at odds with the other sectors, Utilities increased the proportion of operating cash flow committed to capital spending. In this sector, capital expenditures peaked at 117.32% of operating cash flow. Finally, per Exhibit 2f, capital spending as a proportion of operating cash flow in the Healthcare sector declined during the recession and has not recovered since.

Exhibit 2a: CapEx / OCF
Energy Sector Median

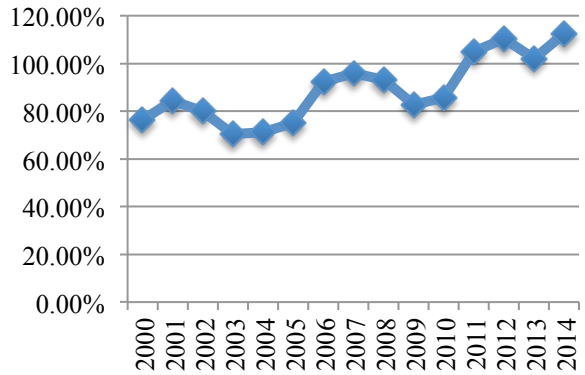


Exhibit 2b: CapEx / OCF
Materials Sector Median

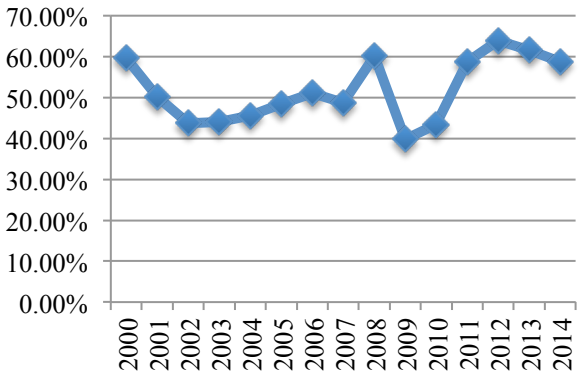


Exhibit 2c: CapEx / OCF
Industrials Sector Median

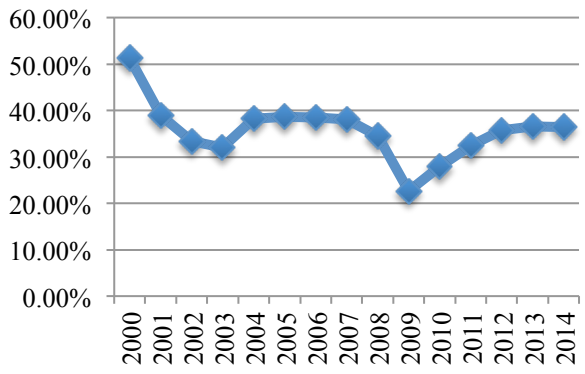


Exhibit 2d: CapEx / OCF
Consumer Discretionary Sector Median

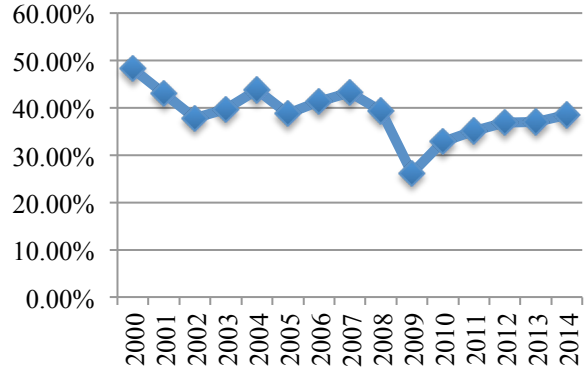


Exhibit 2e: CapEx / OCF
Consumer Staples Sector Median

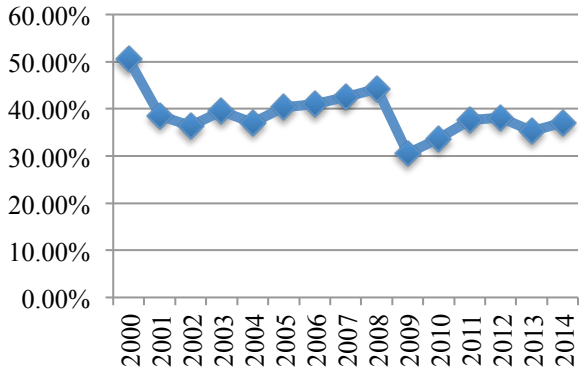


Exhibit 2f: CapEx / OCF
Healthcare Sector Median

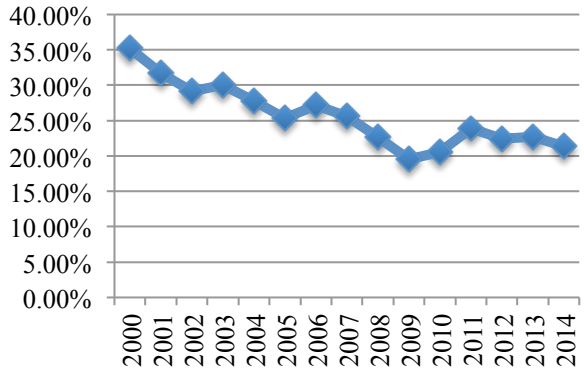


Exhibit 2g: CapEx / OCF
IT Sector Median

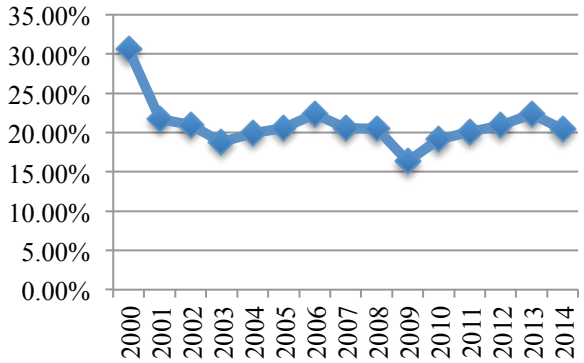


Exhibit 2h: CapEx / OCF
Telecommunication Sector Median

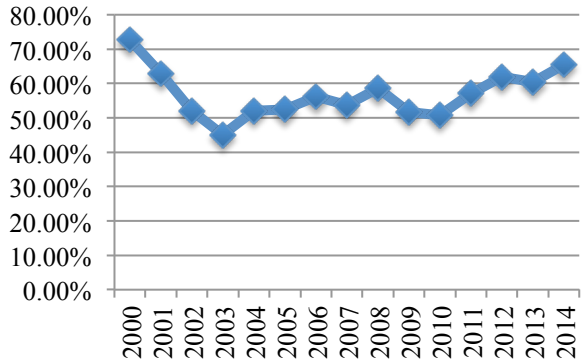
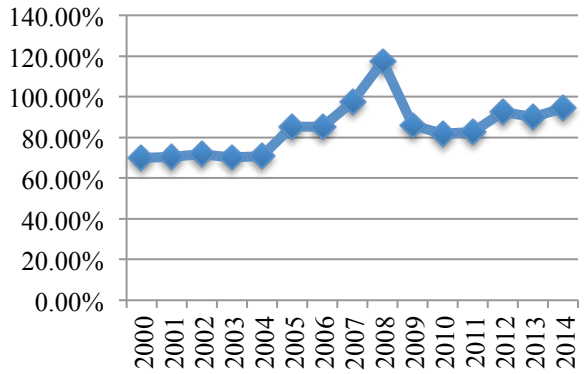


Exhibit 2i: CapEx / OCF
Utilities Sector Median

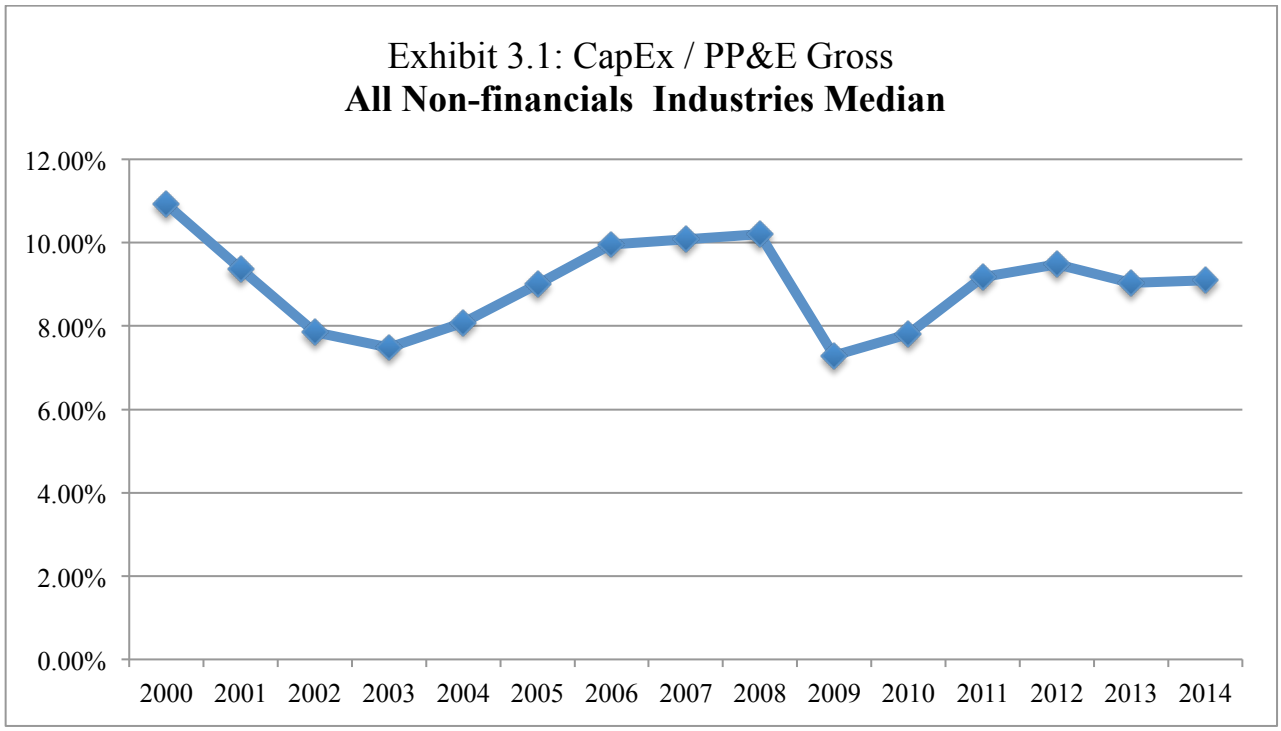


3. Extent of Capital Assets Replacement

In examining the extent of capital asset replacement, we seek to determine whether the level of capital spending is adequate to replace fixed assets consumed through operations. For this purpose, we employ two metrics, capital expenditures as a percentage of property, plant and equipment (PP&E), gross and capital expenditures as a percentage of depreciation expense. In evaluating capital expenditures as a percentage of PP&E, gross, we measure capital spending relative to the installed fixed asset base. After a recession-induced decline in capital spending, one would expect to see a rebound above pre-recession levels as corporations move to offset the effects of underinvestment. Depreciation expense provides a proxy for the amount of PP&E consumed in operations in any one year. Measuring capital expenditures as a percentage of depreciation expense provides a measure of whether current-year capital spending is adequate to not only replace fixed assets consumed by operations, but whether it is also sufficient to add to the installed fixed asset base. The graphical results are presented in Exhibits 3.1 and 3.2. Tabular results for the entire sample and for each sector are presented in the appendix.

3.1 Extent of Capital Assets Replacement: Capital Expenditures/ Property Plant & Equipment, Gross

Exhibit 3.1 presents a graphical display of capital expenditures measured as a percentage of PP&E, gross. As the Exhibit presents, capital expenditures as a percentage of PP&E, gross declined to 7.29% in 2009 from 10.21% the previous year, a 25% reduction. While capital spending has recovered to 9.09% of PP&E, gross in 2014, the measure still has not returned to pre-recession levels. Further, while after the recession one would expect to see a rebound in capital spending to above pre-recession levels, that has not been the case. Capital spending remains weak and has not recovered in the manner it did following the recession of 2001. The failure of capital expenditures as a percentage of PP&E, gross to return to pre-recession levels indicates that capital spending remains weak. Also attesting to this weakness is the fact that capital spending has not rebounded to levels higher than the recession.



The graph presents median capital expenditures divided by property, plant & equipment, gross for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

3.1A Capital Expenditures / Property Plant & Equipment, Gross: Sector Specific Results

In Exhibits 3.1a through 3.1i below, we present sector-specific graphs for capital expenditures to property, plant and equipment, gross. Several sectors deserve mention. For example, in the Information technology sector, as presented in Exhibit 3.1g, capital expenditures declined to 8.98% of PP&E, gross in 2009 and recovered to pre-recession levels in 2011. The Telecommunications sector performed in a similar fashion, declining to 7.45% of revenue in 2009 and 7.23% of revenue in 2010, before returning to pre-recession levels in 2011. Excluding the drop in capital expenditures that followed the technology boom that ended in 2000, both sectors have generally followed the trend of the entire sample. In fact, most of the other sectors studied followed a similar pattern. There are two notable exceptions. Capital spending in the Healthcare sector has lagged significantly since the end of the recession. As seen in Exhibit 3.1f, from levels exceeding 12% before the recession, capital expenditures are running well below 11% of revenue since the recession ended. In the Utilities sector, as presented in Exhibit 3.1i, capital expenditures to PP&E, gross declined to 6.19% in 2009, but that was down from an unusual peak in capital spending in 2007 and 2008. Capital expenditures to PP&E, gross in the Utilities sector is now running at levels that generally exceed pre-recession amounts.

Exhibit 3.1a: CapEx / PP&E Gross
Energy Sector Median

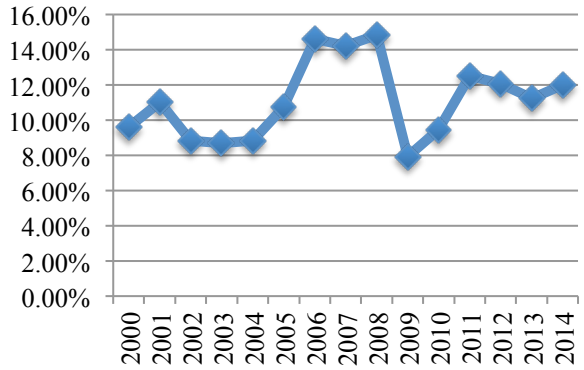


Exhibit 3.1b: CapEx / PP&E Gross
Materials Sector Median

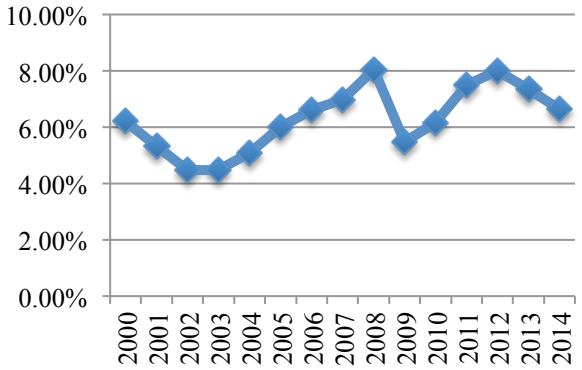


Exhibit 3.1c: CapEx / PP&E Gross
Industrials Sector Median

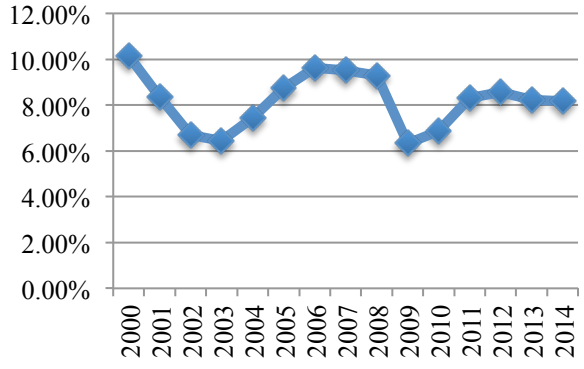


Exhibit 3.1d: CapEx / PP&E Gross
Consumer Discretionary Sector Median

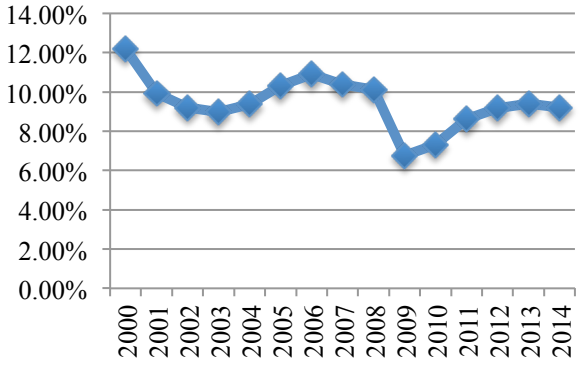


Exhibit 3.1e: CapEx / PP&E Gross
Consumer Staples Sector Median

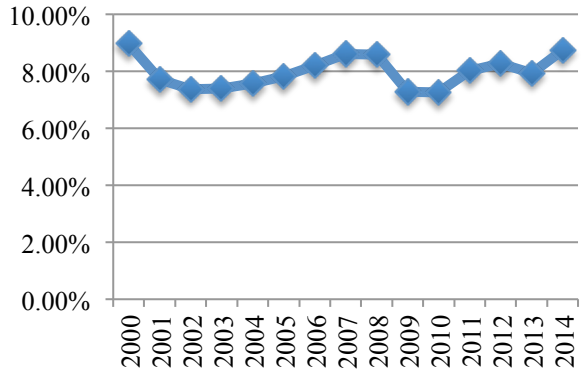


Exhibit 3.1f: CapEx / PP&E Gross
Healthcare Sector Median

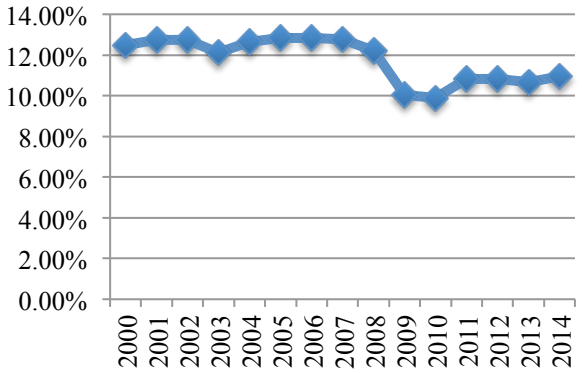


Exhibit 3.1g: CapEx / PP&E Gross
IT Sector Median

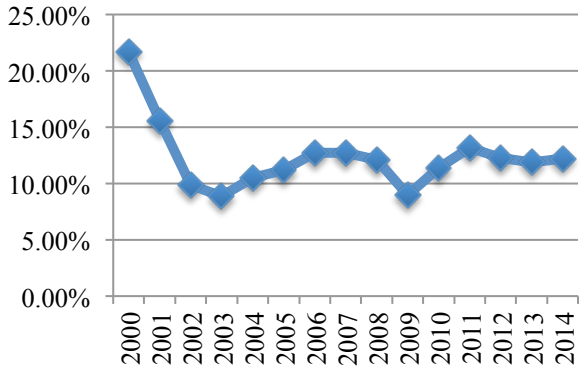


Exhibit 3.1h: CapEx / PP&E Gross
Telecommuication Sector Median

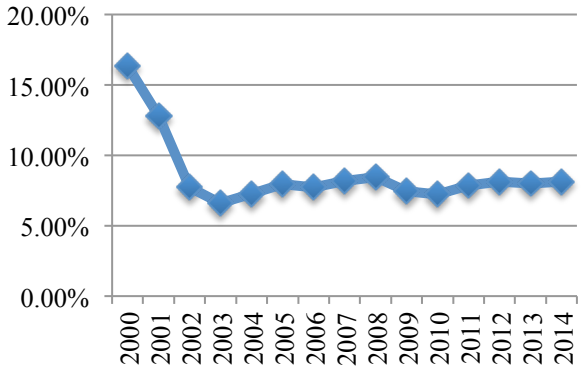
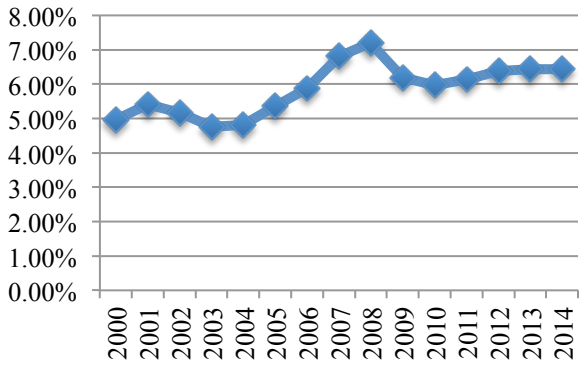
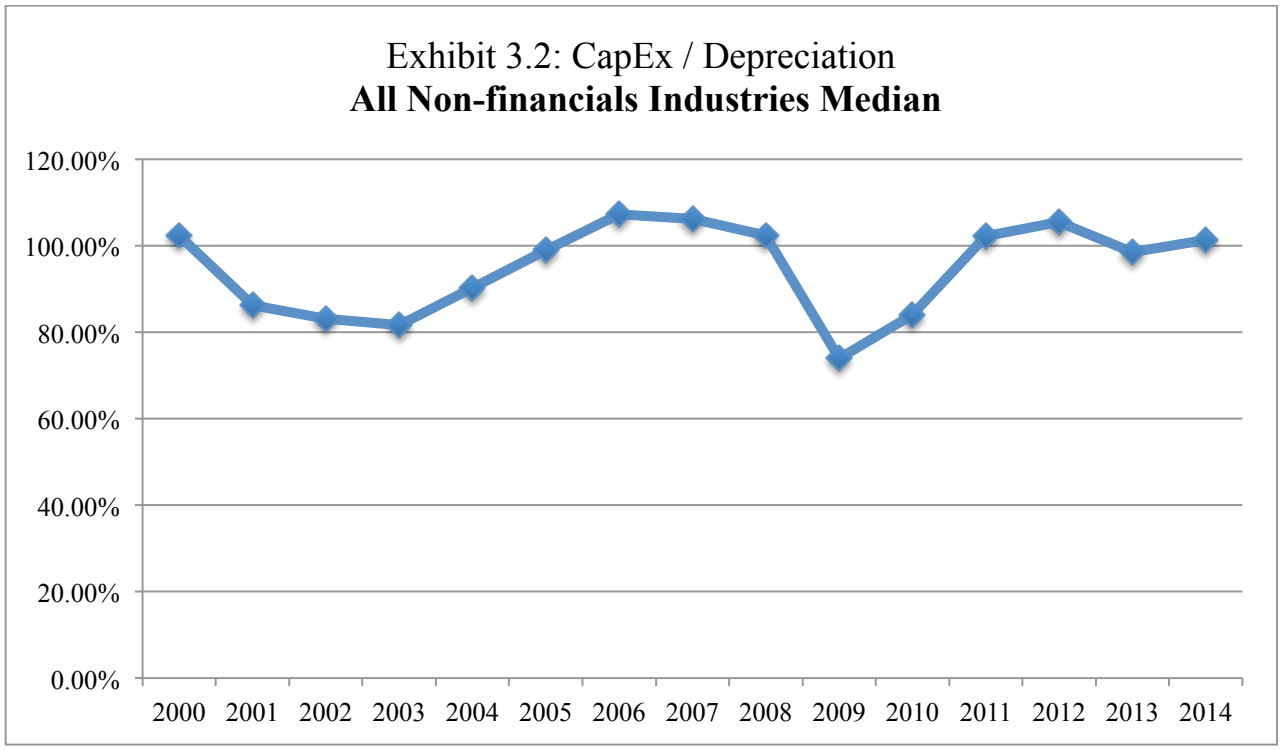


Exhibit 3.1i: CapEx / PP&E Gross
Utilities Sector Median



3.2 Extent of Capital Assets Replacement: Capital Expenditures / Depreciation

Exhibit 3.2 presents a graph of capital expenditures to depreciation. For this metric, measures below 100% generally indicate a consumption of a corporation's fixed asset base. Measures above 100% imply additions to that base. From measures well above 100% in 2006, 2007 and 2008, capital expenditures declined to 73.90% in 2009 and 84.06% in 2010. The metric returned to 102.24% in 2011 and has remained very near 100% in the ensuing years. By all indications capital expenditures are replacing fixed assets consumed in operations, but are not sufficient to replace the underinvestment experienced during the recession.



The graph presents median capital expenditures divided by depreciation expense for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

Note: As a proxy for depreciation expense we use depreciation and amortization reported on the statement of cash flows. In those instances where purchases of long-lived intangible assets are not included in capital expenditures, the inclusion of amortization expense with depreciation will tend to bias the metric capital expenditures to depreciation to the low side. However, the fact that, as presented in Exhibit 3.2, in most non-recession years, capital expenditures to depreciation has hovered near, or slightly above 100%, suggests that our data do not include a systematic bias from this measurement constraint.

3.2A Capital Expenditures / Depreciation: Sector Specific Results

In Exhibits 3.2a through 3.2i below, we present sector-specific graphs for capital expenditures to depreciation expense. Every sector studied shows a decline in capital expenditures to depreciation during the recession with a recovery in the years that follow. What deserves mention, however, are the sectors where capital spending is presently running at levels that are significantly above and below 100%. For example, in the Utilities sector, as presented in Exhibit 3.2i, in 2014 capital expenditures are running at 204.11% of depreciation. In contrast, as presented in Exhibit 3.2c, in 2014 the Industrials are investing in capital assets at 88.29% of depreciation, per Exhibit 3.2f, in 2014 the Healthcare sector is investing at 74.49% of depreciation and per Exhibit 3.2g, in 2014 the Information Technology sector is investing in capital assets at 68.97% of depreciation.

Exhibit 3.2a: CapEx / Depreciation
Energy Sector Median

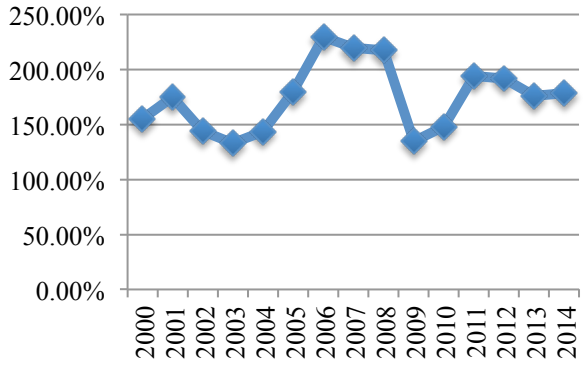


Exhibit 3.2b: CapEx / Depreciation
Materials Sector Median

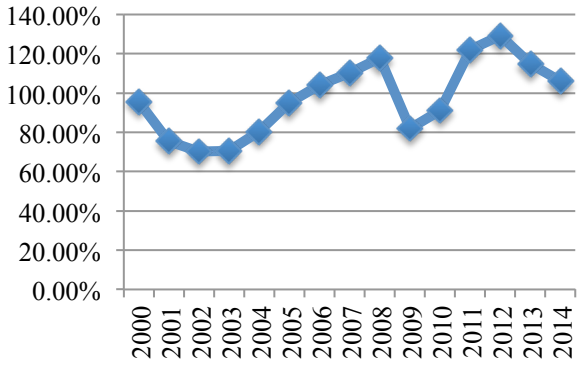


Exhibit 3.2c: CapEx / Depreciation
Industrials Sector Median

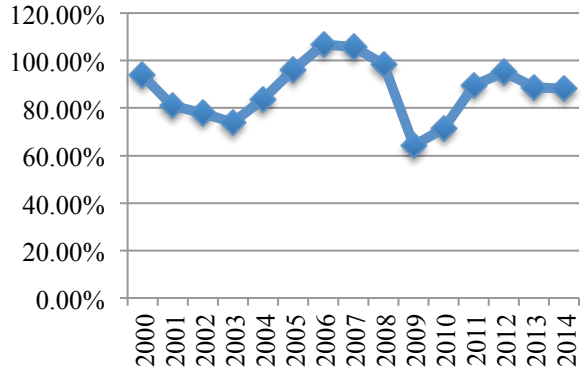


Exhibit 3.2d: CapEx / Depreciation
Consumer Discretionary Sector Median

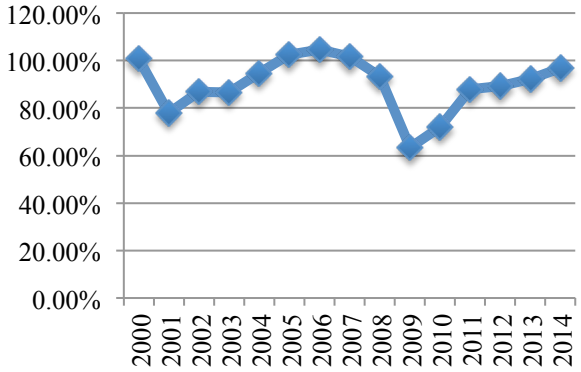


Exhibit 3.2e: CapEx / Depreciation
Consumer Discretionary Sector Median

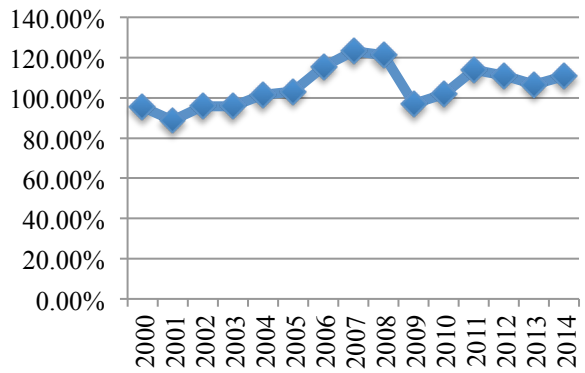


Exhibit 3.2f: CapEx / Depreciation
Healthcare Sector Median

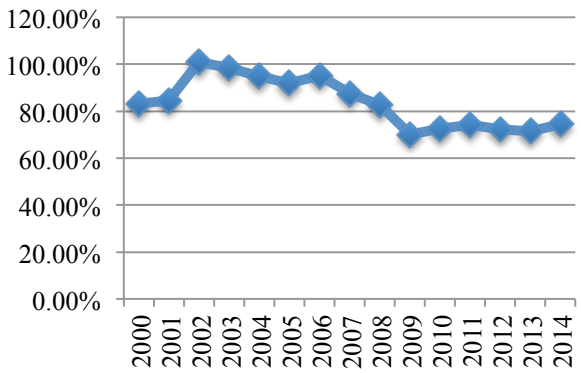


Exhibit 3.2g: CapEx / Depreciation
IT Sector Median

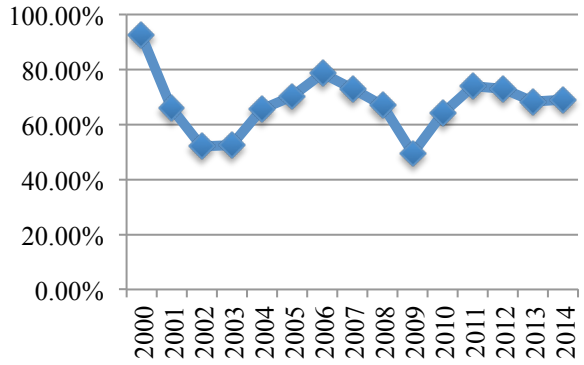


Exhibit 3.2h: CapEx / Depreciation
Telecommunicate Sector Median

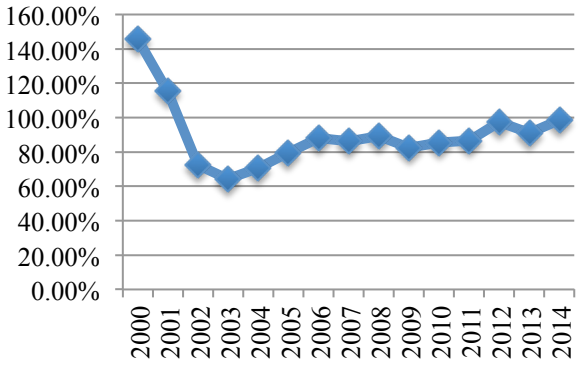
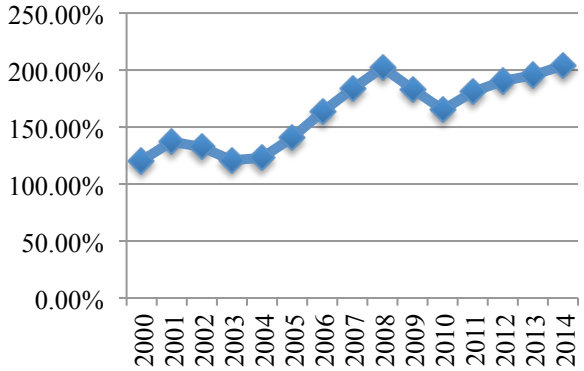


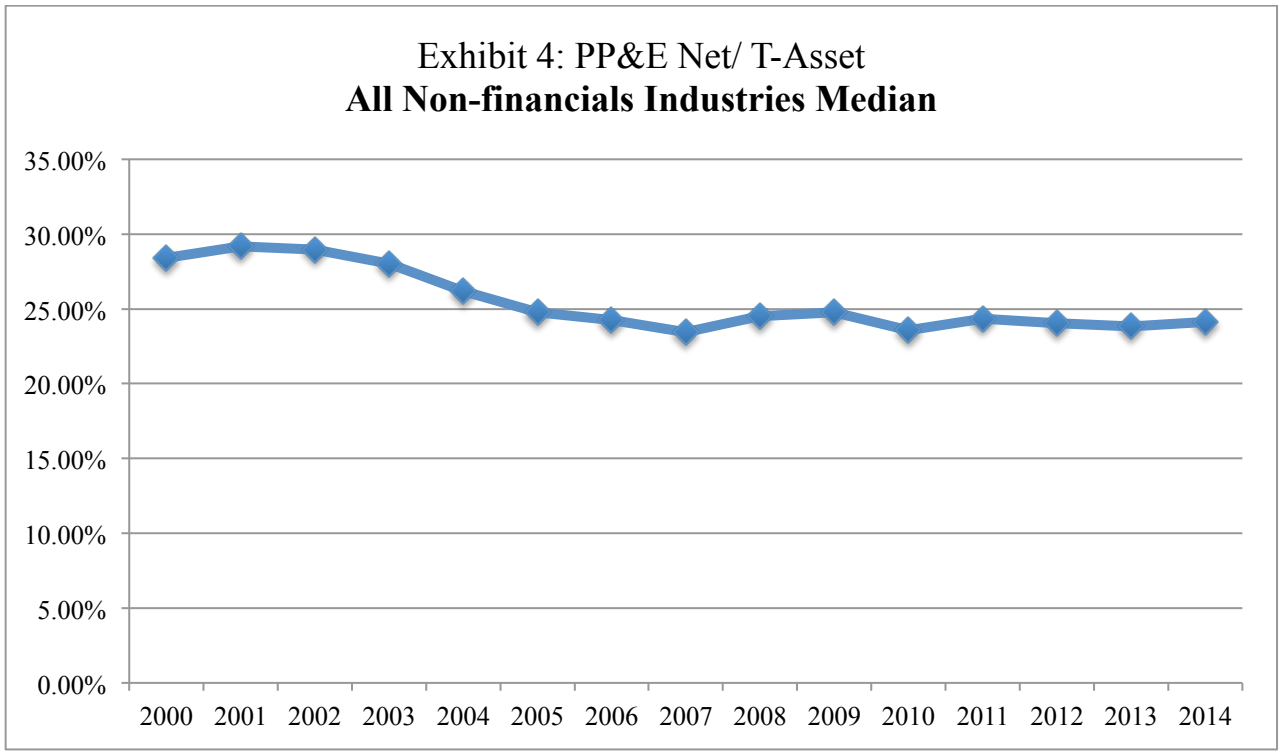
Exhibit 3.2i: CapEx / Depreciation
Utilities Sector Median



4. Asset Mix

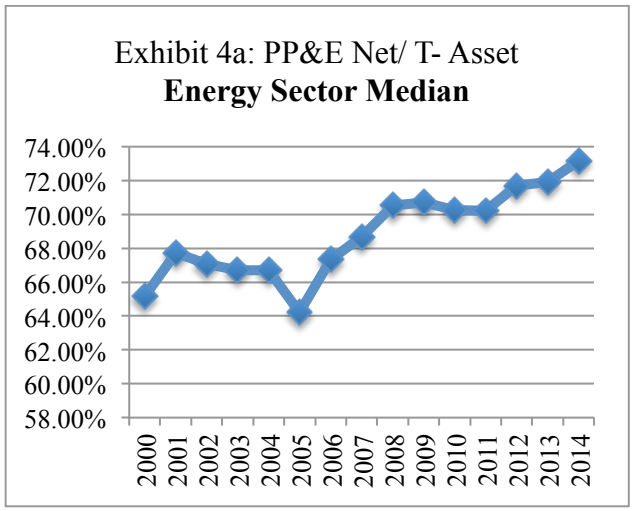
In examining the mix of assets on corporate balance sheets we seek to determine whether the proportion of fixed assets on corporate balance sheets has declined with below-normal levels of capital expenditures. For this purpose, we examine property, plant & equipment, net as a percentage of total assets. With underinvestment in fixed assets one would expect the proportion of total assets reported as property, plant and equipment, net to decline. The graphical results are presented in Exhibit 4. Tabular results for the entire sample and for each sector are presented in the appendix.

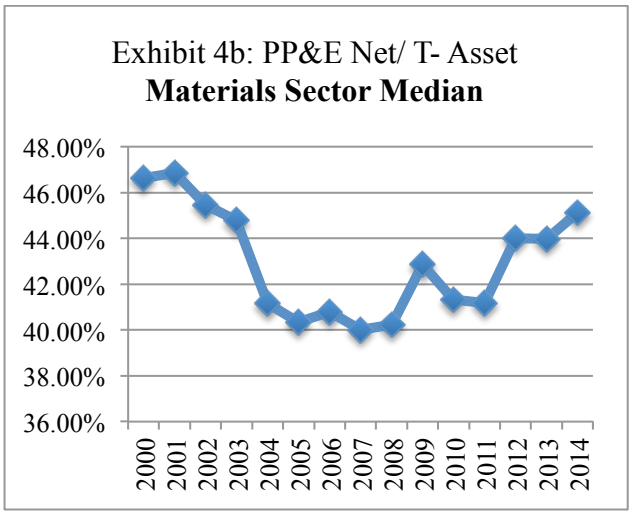
As presented in Exhibit 4, PP&E, net as a percentage of total assets, which had been as high as 29.18% in 2001, declined each year through 2007, bottoming at 23.44%. In recent years, the metric has remained well below 25%, indicating a decline in the overall level of investment in property, plant and equipment.



4A. Asset Mix: Sector Specific Results

In Exhibits 4a through 4i below, we present sector-specific graphs for property, plant and equipment, net to total assets. Six of the nine sectors show a generally declining trend in PP&E, net as a percentage of total assets. In Energy, as presented in Exhibit 4a, and Materials, as presented in Exhibit 4b, there is an increasing trend in the proportion of PP&E, net, likely reflecting increased investment related to the energy and commodities boom. Utilities, as reflected in Exhibit 4i, also reflects increased relative investment in fixed assets





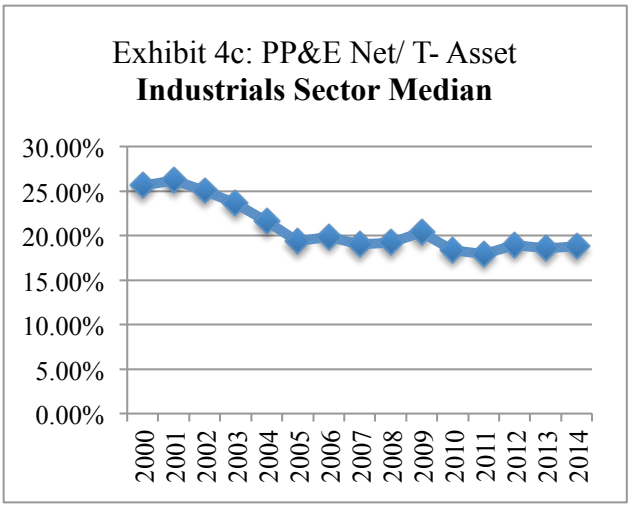


Exhibit 4c: PP&E Net/ T- Asset
Industrials Sector Median
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

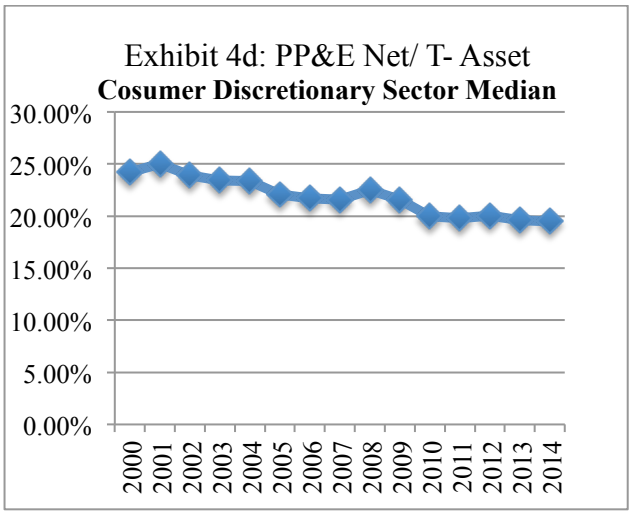


Exhibit 4d: PP&E Net/ T- Asset
Cosumer Discretionary Sector Median
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

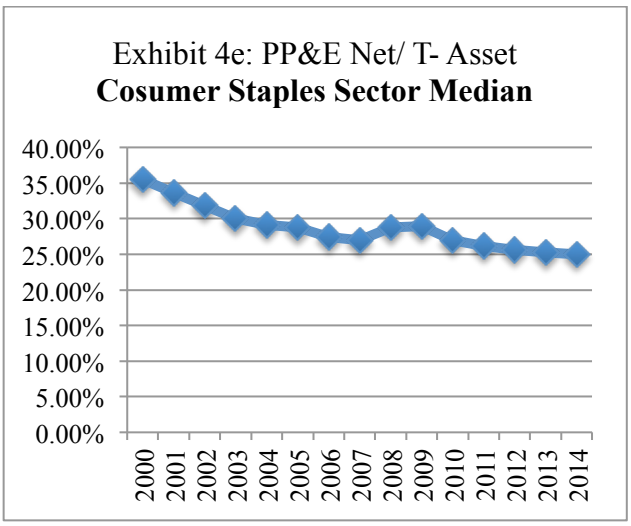


Exhibit 4e: PP&E Net/ T- Asset
Cosumer Staples Sector Median
40.00%
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

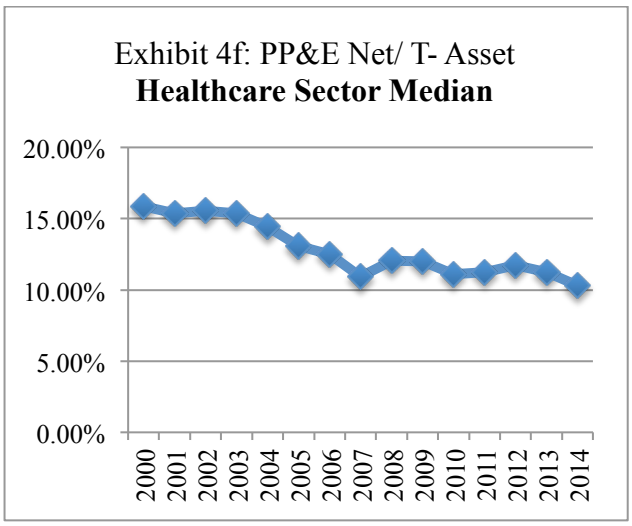


Exhibit 4f: PP&E Net/ T- Asset
Healthcare Sector Median
20.00%
15.00%
10.00%
5.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

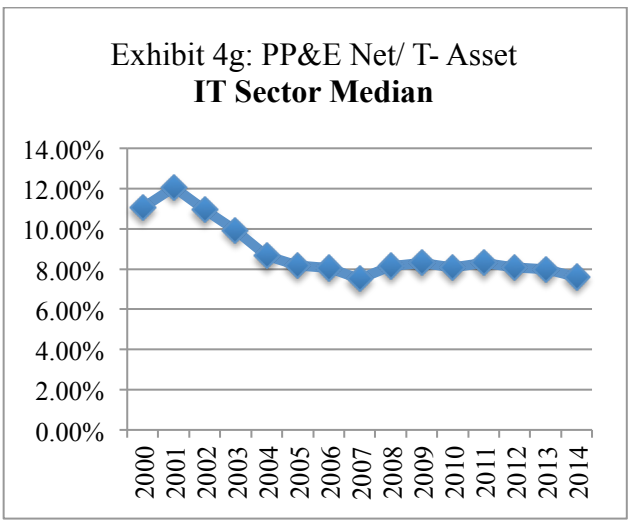


Exhibit 4g: PP&E Net/ T- Asset
IT Sector Median
14.00%
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

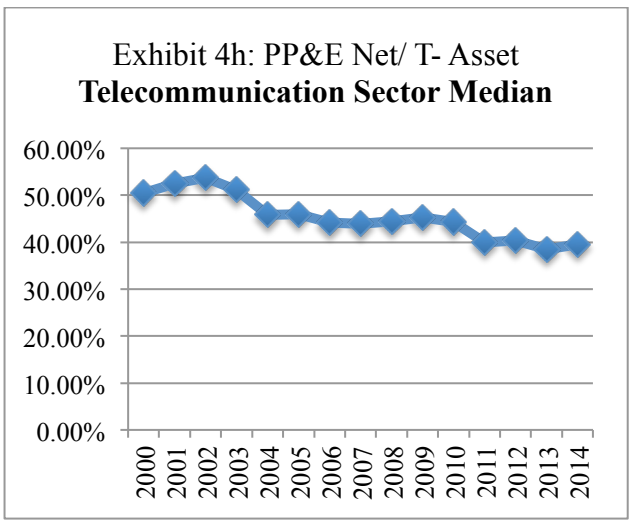
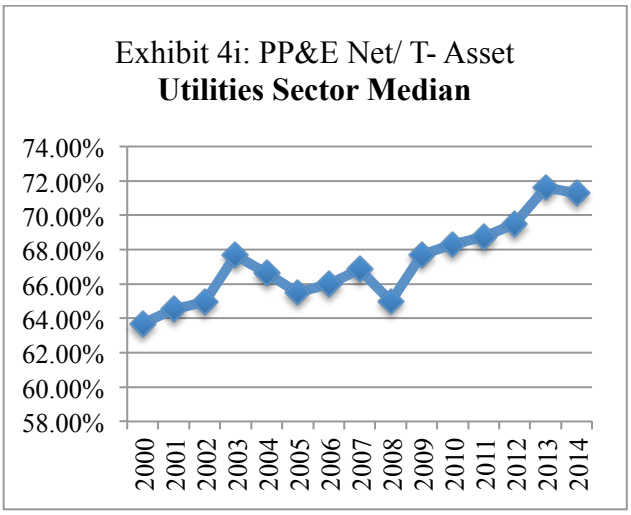


Exhibit 4h: PP&E Net/ T- Asset
Telecommunication Sector Median
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014



5. Capital Assets: Lost Expenditures

In the research presented here, there is evidence of under-investment in capital assets during the recession. While capital spending has increased since the recession, it has only returned to pre-recession levels and has not increased sufficiently to compensate for recession-related under-investment.

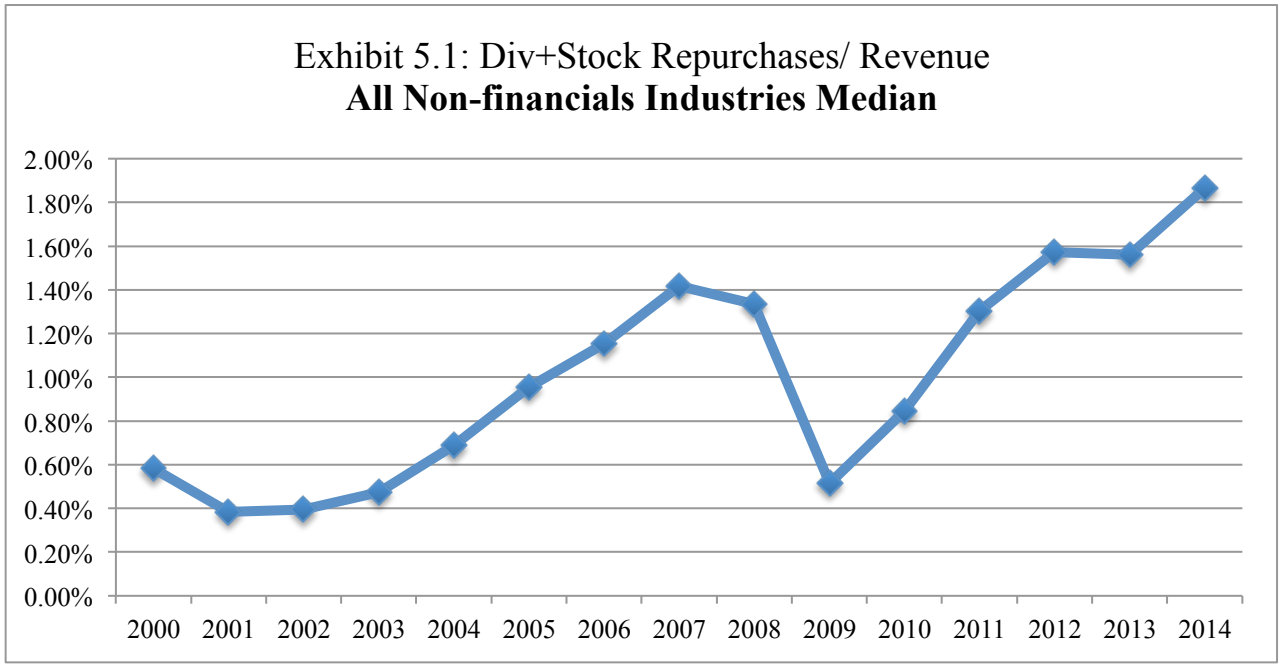
It is possible to estimate the amount of capital expenditures that have been effectively "lost" to the recession. Referring to Exhibit 1, we see that capital expenditures declined to 3.43% of revenue in 2009 from 4.25% in 2008, a decline of .082%. In 2009, total revenues for our sample were $19,200 billion. If capital expenditures to revenue had remained at 4.25% in 2009, capital expenditures would have been higher by $157.4 billion (.82% times $19,200 billion). In 2010, capital expenditures to revenue were 3.60%, down .65% from 2008. Sample-wide revenues in 2010 were $21,400 billion. If capital expenditures to revenue had remained at 4.25% in 2010, capital expenditures would have been higher by $139.1 billion (.+-65% times $21,400 billion). Summing the shortfall in capital expenditures for 2009 and 2010 provides a total cumulative loss in capital expenditures for the two years, 2009 and 2010, of $296.5 billion ($157.4 billion plus $139.1 billion). While this calculation excludes small firms that were not included in our sample, the exclusion of these small firms is not expected to have a material effect on the overall calculated result.

With a nearly $300 billion shortfall in capital expenditures, a valid question is raised: where have those funds gone? That is, is there evidence that funds not used for capital expenditures have been redeployed into dividends and stock repurchases? Have they accumulated on hand in cash and short-term investments?

Exhibit 2 presents graphical evidence on the cash flow capacity of firms to commit to capital expenditures. Referring to the Exhibit, excluding recession-induced reductions in capital spending during 2009 and 2010, firms are fairly consistent in committing approximately 43% of operating cash flow to capital expenditures. Beyond capital expenditures, firms may commit operating cash flow to other uses, including other investments, or various financing activities such as dividends, debt repayment and stock repurchases. Operating cash flow that is not employed for these purposes accumulates on the balance sheet. In this section, we seek to determine whether there is evidence that firms are using operating cash flow that has not been committed to capital expenditures to increase dividends and stock repurchases or to simply increase cash and short-term investments held on hand. In Exhibit 5.1 we present a graphical display of dividends plus stock repurchases as a percentage of revenue. In Exhibit 5.2 we present a graphical display of cash plus short-term investments as a percentage of revenue. Tabular results for the entire sample and for each sector are presented in the appendix.

5.1 Dividends + Stock Repurchases / Revenue

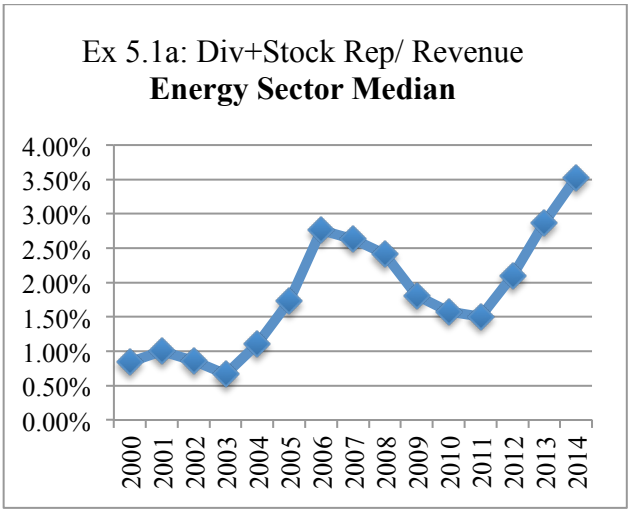
Exhibit 5.1 presents a graph of the sample-wide median of dividends plus stock repurchases to revenue. As the Exhibit presents, dividends and stock repurchases declined precipitously during the recession. From 1.33% of revenue in 2008, the metric declined to .52% in 2009 and .85% in 2010. The metric returned to pre-recession levels, 1.30% in 2011 and has increased significantly since, rising to 1.86% of revenue in 2014. Tabular results for the entire sample and for each sector are presented in the appendix.

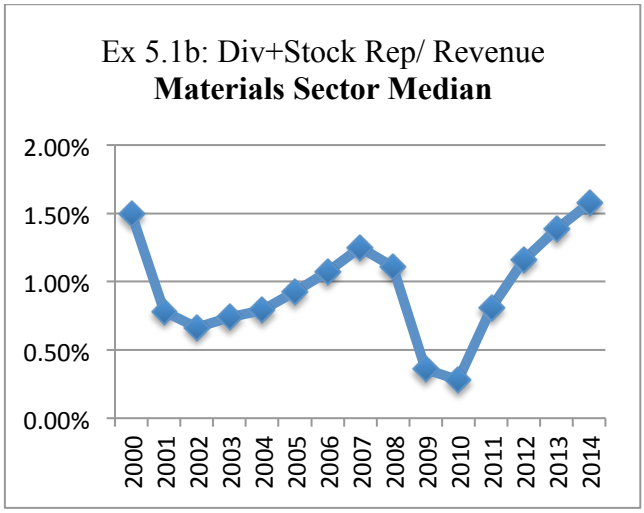


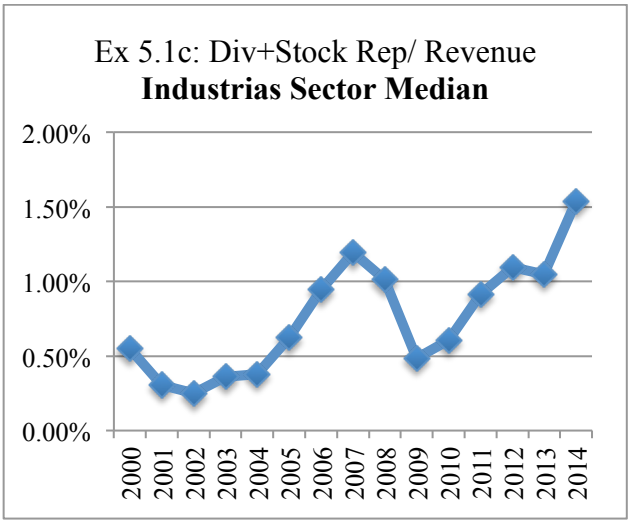
The graph presents median dividends plus stock repurchases divided by revenue for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

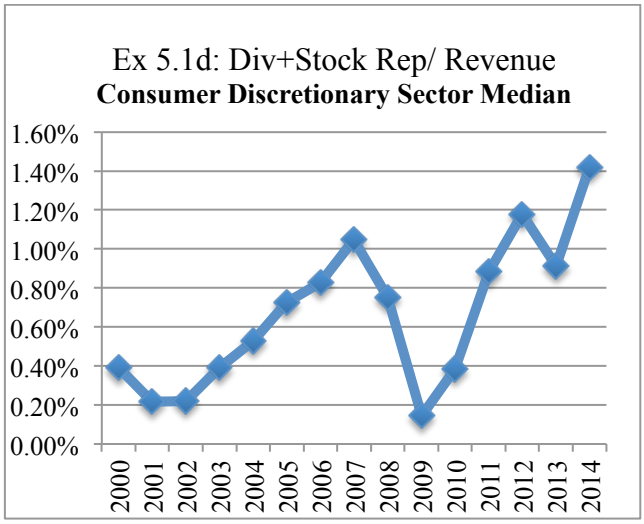
5.1A Dividend + Stock Repurchase / Revenue: Sector Specific Results

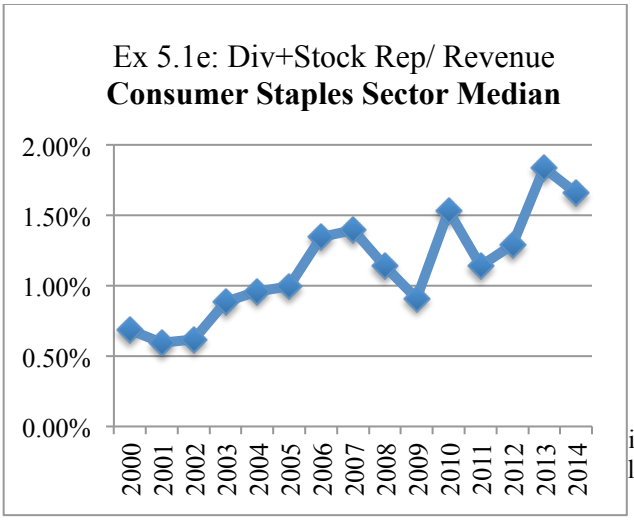
In Exhibits 5.1a through 5.1i below, we present sector-specific graphs for dividends plus stock repurchases divided by revenue. Eight of the nine sectors show a generally rising trend in dividends plus stock repurchases, similar to the overall sample. Only in the Telecommunications sector, as presented in Exhibit 5.1h, are dividends and stock repurchases as a percentage of revenue declining in the period since the recession.

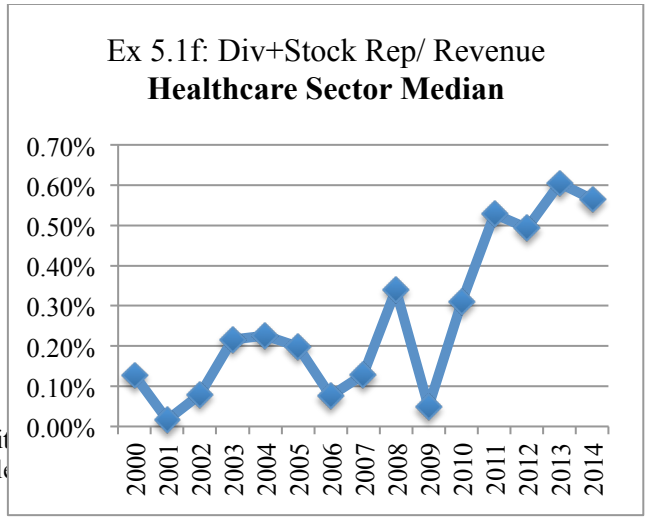


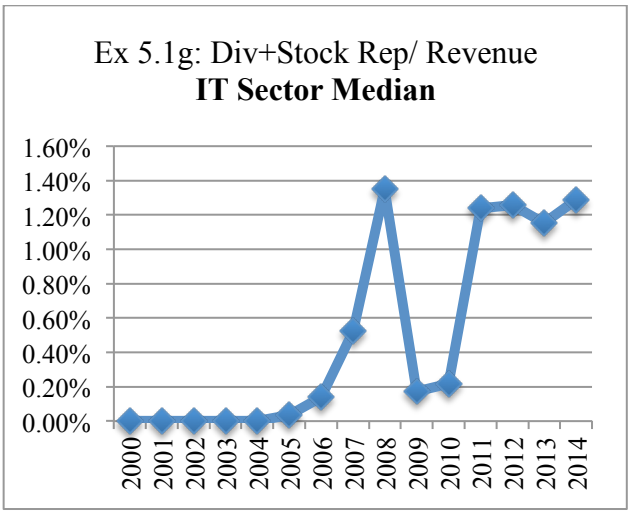


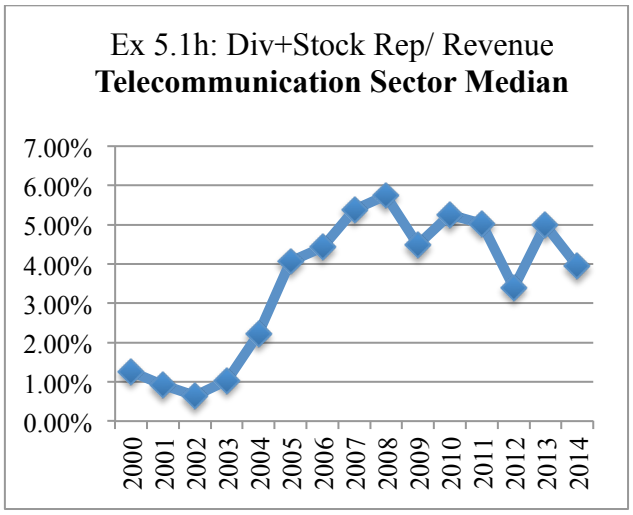


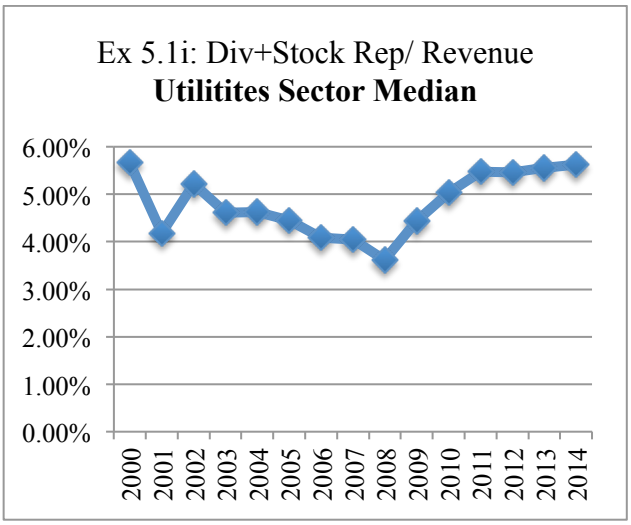






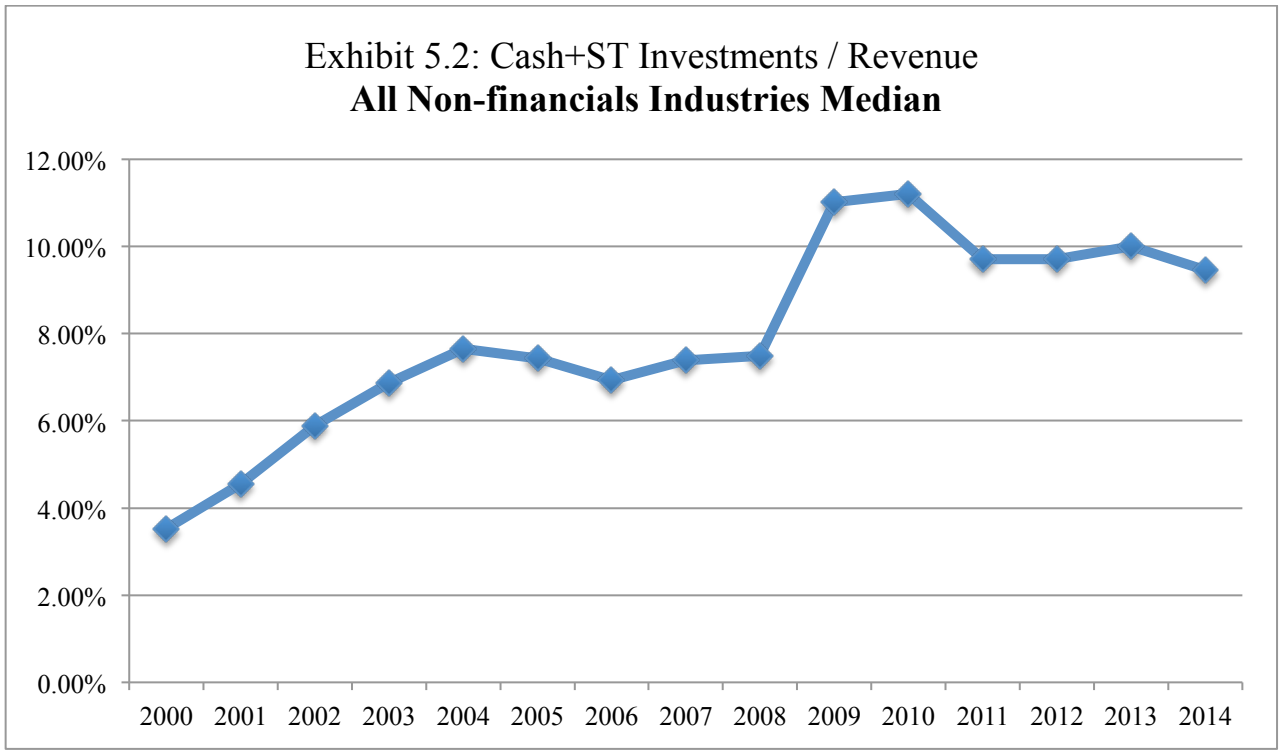






5.2 Cash + Short-term Investments / Revenue

Exhibit 5.2 presents a graph of the sample-wide median of cash plus short-term investments to revenue. As the Exhibit presents, cash plus short-term investments as a percentage of revenue increased significantly during the recession. From 7.5% of revenue in 2008, the metric increased to 11.01% in 2009 and 11.21% in 2010. While the metric has declined to around 10% in the years since the recession, it remains approximately 25% higher than levels reported before the recession.



The graph presents median cash plus short-term investments divided by revenue for all non-financials with revenues exceeding $100 million. Each year refers to fiscal years beginning in June and ending in May of the succeeding year. Thus, 2014 refers to fiscal years ending June 2014 through May 2015.

5.2A Cash + Short-term Investments / Revenue: Sector Specific Results

In Exhibits 5.2a through 5.2i below, we present sector-specific graphs for cash plus short-term investments divided by revenue. Most of the sectors studied show a similar move in cash plus short-term investments as the overall sample. There is an increase in cash plus short-term investments to revenue in 2009 and 2010 followed by a declining trend in subsequent years. The Healthcare sector is an exception. In this sector, cash plus short-term investments to revenue continued to increase into 2014. As presented in Exhibit 5.2f, from 17.17% of revenue in 2009, cash plus short-term investments to revenue has increased to 19.73% in 2014.

Exhibit 5.2a: Cash+ST Inv / Revenue
Energy Sector Median

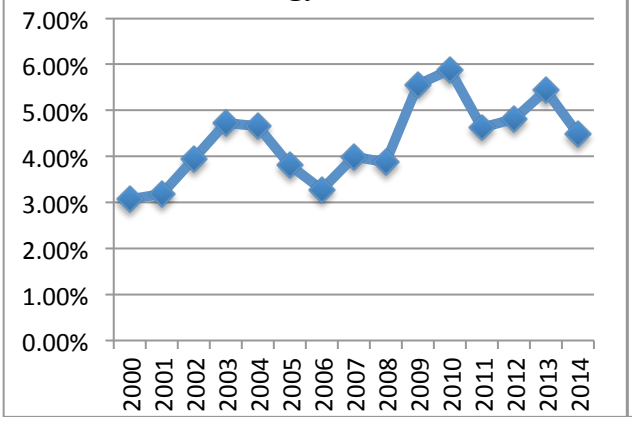


Exhibit 5.2b: Cash+ST Inv / Revenue
Materials Sector Median

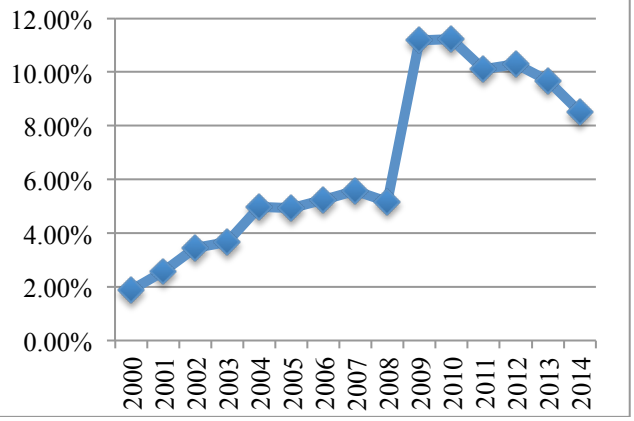


Exhibit 5.2c: Cash+ST Inv / Revenue
Industrials Sector Median

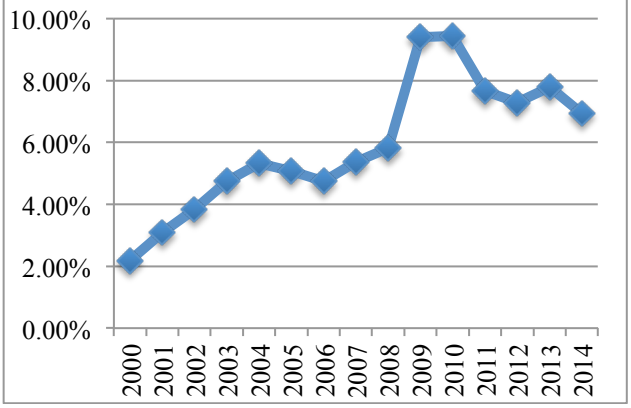


Exhibit 5.2d: Cash+ST Inv / Revenue
Cosumer Discretionary Sector Median

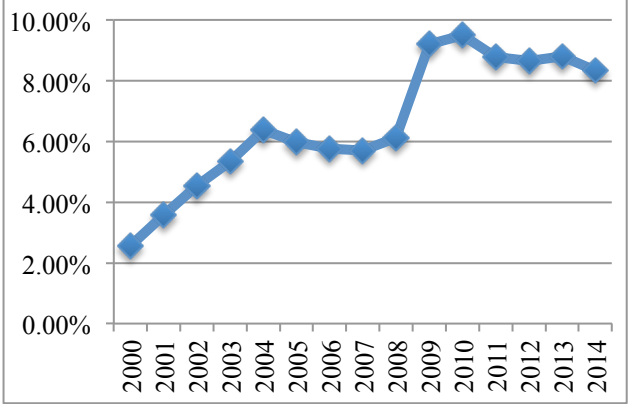


Exhibit 5.2e: Cash+ST Inv / Revenue
Cosumer Staples Sector Median

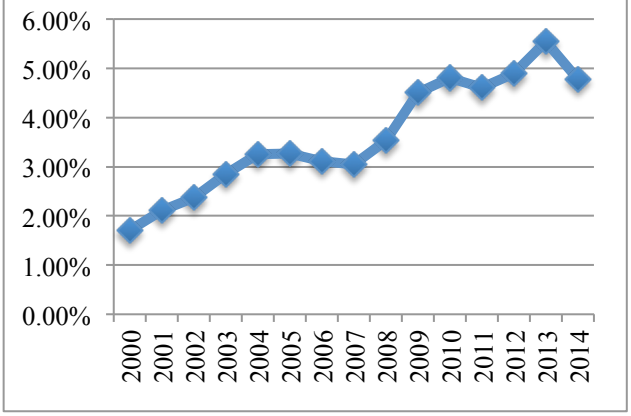
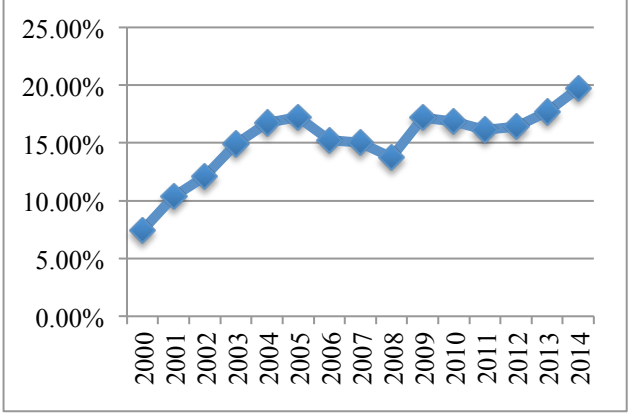
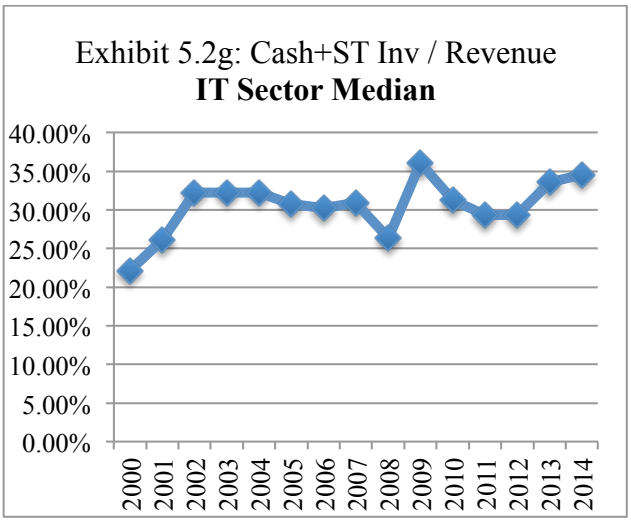
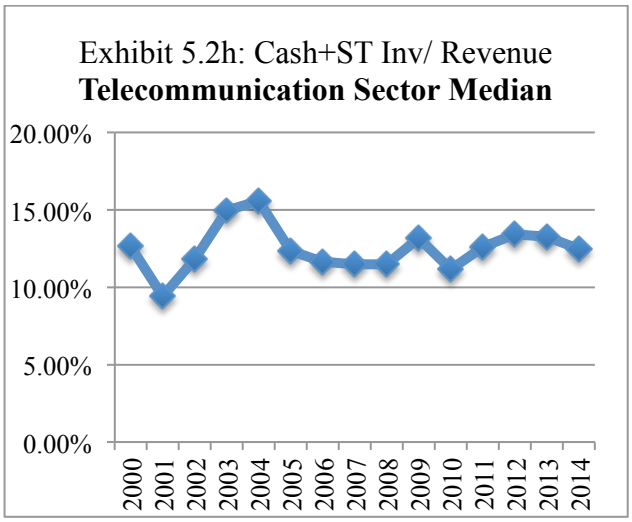
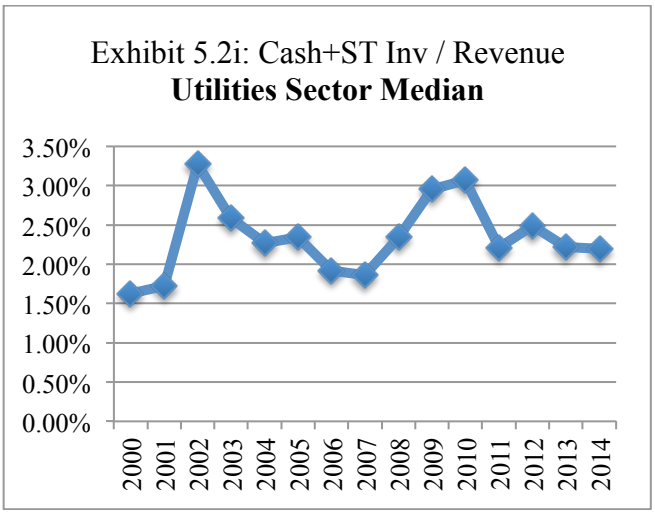


Exhibit 5.2f: Cash+ST Inv / Revenue
Healthcare Sector Median









CONCLUSION

In this study we examine capital spending for the period June 2000 (referred to as 2000) through May 2015 (referred to as 2014) for U.S. non-financial firms with total revenues exceeding $100 million. We find that capital spending was curtailed significantly during the recession, falling to 3.43% of revenue in 2009 from 4.25% in 2008. With the metric reading 4.50% in 2014, spending has recovered to pre-recession levels. However, companies have not taken steps to increase capital spending to make up for the recession-induced decline. We estimate the cumulative amount of capital expenditures effectively lost to the recession to be $296.5 billion.

We see evidence of the effects of reduced capital spending in other metrics examined. In terms of the capacity for capital spending, we find that, as a percentage of operating cash flow, firms lowered capital expenditures to 30.61% in 2009 from 43.23% in 2008. The metric has recovered to pre-recession levels, reading 44.31% in 2014.

We study two measures that give some insight into the extent of capital asset replacement. Capital expenditures to property, plant and equipment, gross continues at below pre-recession levels. Measured at 10.21% in 2008, the metric declined to 7.29% in 2009. In 2014, the metric is measured at 9.09%, still below pre-recession levels. Further, capital expenditures to depreciation fell to 73.90% in 2009 from 102.38% in 2008. In 2014, the metric is measured at 101.38%, indicating that capital expenditures are just barely covering the amount of fixed assets consumed through operations.

With reduced capital spending comes the expectation that property, plant and equipment will comprise a declining share of total assets. We see a gradual decline in property, plant and equipment, net as a percentage of total assets. Measured at 24.52% in 2008, we find the metric to be 24.13% in 2014, which is down from 29.18% as recently as 2001.

Finally, given that companies have reduced the amount of funds earmarked for capital expenditures, we look for evidence of alternative uses for these funds. We find that dividends and stock repurchases have increased. The measure, dividends plus stock repurchases to revenue fell to .52% in 2009 from 1.33% in 2008. However, in 2014, the metric has increased to 1.86%. Further, cash plus short-term investments to revenue increased to 11.01% in 2009 from 7.50% in 2008 and in 2014, at 9.46%, is still running at above pre-recession levels.

The results are presented in a series of graphs. These graphs depict the findings for the overall sample of non-financials and for each of nine sectors. Tabular results are presented in an appendix.

ENDNOTES

[1]Bryan, B. 2015, 'America's Big Companies Are Sitting on A Record $1.82 Trillion in Cash', *Business Insider*, Jun 11th, 2015.
[2]Valetkevitch, C. 2015, 'U.S. Capital Spending Seen Falling to Four-year Low in 2015', Thomson*Reuters*, May 14th, 2015.
[3]Ibid.
[4]Harder, C. 2016, 'Big Companies Pull Back After Rough Quarter', *The Wall Street Journal,* February 8, 2016.
[5]Monga, V., Benoit D. and Francis T., 'As Activism Rises, U.S. Firms Spend More on Buybacks Than Factories', *The Wall Street Journal,* May 26th, 2015.
[6]Ibid.
[7]Renick, O., 'Record U.S. Capital Spending Is Last Thing the Market Wants', *Bloomberg Business*, April 7th 2015.
[8]Ibid.

APPENDIX

CapEx / Revenue

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	4.94%	4.55%	3.90%	3.70%	3.78%	3.92%	4.18%	4.32%	4.25%	3.43%	3.60%	4.15%	4.39%	4.36%	4.50%
10 Energy	14.58%	18.41%	16.97%	13.72%	14.73%	18.15%	21.31%	22.75%	22.74%	19.09%	18.61%	21.97%	25.11%	24.32%	27.09%
15 Materials	5.39%	4.65%	3.88%	3.86%	3.80%	4.28%	4.36%	4.69%	4.97%	4.85%	4.69%	5.61%	6.12%	6.32%	6.18%
20 Industrials	3.68%	3.31%	2.74%	2.48%	2.53%	2.72%	2.78%	2.96%	2.80%	2.37%	2.34%	2.74%	2.85%	2.88%	2.83%
25 Cosumer Discretionary	3.85%	3.30%	3.14%	3.15%	3.48%	3.42%	3.44%	3.58%	3.50%	2.42%	2.71%	3.13%	3.26%	3.22%	3.31%
30 Cosumer Staples	2.97%	2.89%	2.70%	2.67%	2.82%	2.78%	3.08%	3.04%	2.94%	2.58%	2.64%	2.85%	2.78%	2.90%	2.90%
35 Healthcare	4.19%	4.23%	4.08%	3.94%	3.88%	3.50%	3.92%	3.61%	3.50%	3.03%	3.15%	3.06%	3.13%	3.29%	3.38%
45 Information Technology	5.35%	4.59%	3.07%	2.85%	2.77%	2.98%	3.03%	3.06%	2.95%	2.45%	2.86%	3.31%	3.38%	3.23%	3.32%
50 Telecommunication	29.98%	25.29%	15.92%	12.09%	12.70%	13.40%	13.69%	14.55%	15.07%	13.34%	13.65%	15.46%	15.40%	15.01%	15.68%
55 Utilities	10.24%	10.16%	12.97%	10.68%	10.76%	11.60%	13.04%	15.84%	17.22%	16.67%	16.01%	17.56%	19.94%	20.20%	21.36%

CapEx / OCF

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	50.14%	43.44%	39.56%	38.81%	41.43%	41.51%	43.37%	43.09%	43.23%	30.61%	36.33%	42.37%	42.78%	42.46%	44.31%
10 Energy	76.30%	84.39%	80.16%	70.27%	71.12%	74.85%	92.37%	95.82%	93.19%	82.59%	85.61%	104.92%	110.31%	102.01%	112.40%
15 Materials	59.72%	50.09%	43.66%	44.03%	45.64%	48.42%	51.00%	48.77%	60.21%	39.78%	43.38%	58.78%	63.86%	61.48%	58.81%
20 Industrials	51.29%	38.83%	33.34%	31.95%	38.24%	38.61%	38.45%	38.04%	34.42%	22.61%	27.87%	32.47%	35.66%	36.57%	36.41%
25 Cosumer Discretionary	48.18%	42.97%	37.74%	39.70%	43.71%	38.73%	41.25%	43.21%	39.31%	26.12%	32.78%	35.10%	36.84%	36.97%	38.45%
30 Cosumer Staples	50.46%	38.59%	36.39%	39.52%	37.11%	40.30%	40.93%	42.52%	44.19%	30.55%	33.60%	37.61%	38.11%	35.28%	37.07%
35 Healthcare	35.18%	31.65%	29.14%	30.05%	27.74%	25.38%	27.11%	25.64%	22.60%	19.52%	20.53%	23.88%	22.47%	22.71%	21.34%
45 Information Technology	30.61%	21.67%	21.01%	18.77%	19.90%	20.55%	22.33%	20.61%	20.53%	16.30%	19.11%	20.05%	20.93%	22.35%	20.41%
50 Telecommunication	72.74%	62.84%	51.99%	45.06%	51.97%	52.43%	56.13%	53.79%	58.52%	51.66%	50.80%	57.13%	61.95%	60.43%	65.48%
55 Utilities	69.90%	70.36%	71.59%	70.24%	70.66%	85.37%	85.42%	97.68%	117.32%	86.01%	81.84%	82.77%	92.54%	90.03%	94.51%

Div+Stock Rep / Revenue

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	0.58%	0.38%	0.39%	0.47%	0.69%	0.95%	1.15%	1.42%	1.33%	0.52%	0.85%	1.30%	1.57%	1.56%	1.86%
10 Energy	0.84%	1.00%	0.87%	0.67%	1.10%	1.73%	2.76%	2.63%	2.41%	1.81%	1.57%	1.50%	2.10%	2.86%	3.53%
15 Materials	1.50%	0.78%	0.67%	0.74%	0.79%	0.93%	1.07%	1.25%	1.11%	0.36%	0.28%	0.81%	1.16%	1.38%	1.58%
20 Industrials	0.55%	0.31%	0.25%	0.36%	0.38%	0.62%	0.94%	1.19%	1.01%	0.49%	0.61%	0.91%	1.09%	1.05%	1.54%
25 Cosumer Discretionary	0.39%	0.22%	0.22%	0.39%	0.53%	0.72%	0.83%	1.05%	0.75%	0.14%	0.39%	0.88%	1.18%	0.91%	1.42%
30 Cosumer Staples	0.69%	0.59%	0.62%	0.89%	0.96%	0.99%	1.34%	1.39%	1.14%	0.91%	1.53%	1.14%	1.29%	1.84%	1.66%
35 Healthcare	0.13%	0.02%	0.08%	0.22%	0.23%	0.20%	0.08%	0.13%	0.34%	0.05%	0.31%	0.53%	0.49%	0.60%	0.57%
45 Information Technology	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.14%	0.52%	1.35%	0.17%	0.22%	1.24%	1.26%	1.15%	1.29%
50 Telecommunication	1.26%	0.92%	0.65%	1.03%	2.22%	4.07%	4.43%	5.39%	5.74%	4.49%	5.26%	5.02%	3.40%	4.99%	3.95%
55 Utilities	5.67%	4.18%	5.22%	4.61%	4.62%	4.45%	4.08%	4.05%	3.62%	4.43%	5.04%	5.48%	5.46%	5.56%	5.63%

CapEx / PP+E Gross

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	10.92%	9.37%	7.85%	7.49%	8.09%	9.01%	9.96%	10.07%	10.21%	7.29%	7.81%	9.17%	**9.48%**	**9.03%**	**9.09%**
10 Energy	9.61%	11.01%	8.83%	8.68%	8.83%	10.72%	14.63%	14.22%	14.82%	7.93%	9.43%	12.49%	12.06%	11.23%	12.01%
15 Materials	6.21%	5.32%	4.47%	4.47%	5.09%	6.00%	6.62%	6.98%	8.06%	5.48%	6.16%	7.50%	8.00%	7.34%	6.64%
20 Industrials	10.16%	8.33%	6.69%	6.43%	7.46%	8.73%	9.63%	9.52%	9.28%	6.32%	6.85%	8.32%	8.57%	8.22%	8.18%
25 Cosumer Discretionary	12.21%	9.92%	9.20%	8.97%	9.36%	10.30%	10.89%	10.39%	10.12%	6.75%	7.33%	8.63%	9.18%	9.41%	9.20%
30 Cosumer Staples	8.97%	7.72%	7.37%	7.39%	7.57%	7.83%	8.20%	8.60%	8.58%	7.27%	7.26%	8.03%	8.27%	7.94%	8.74%
35 Healthcare	12.49%	12.74%	12.75%	12.12%	12.65%	12.83%	12.83%	12.79%	12.21%	10.02%	9.89%	10.81%	10.83%	10.65%	10.94%
45 Information Technology	21.72%	15.57%	9.86%	8.84%	10.50%	11.17%	12.73%	12.71%	12.11%	8.98%	11.39%	13.19%	12.28%	11.86%	12.19%
50 Telecommunication	16.35%	12.79%	7.74%	6.60%	7.29%	7.93%	7.73%	8.18%	8.43%	7.45%	7.23%	7.88%	8.15%	7.98%	8.11%
55 Utilities	4.96%	5.40%	5.17%	4.76%	4.81%	5.36%	5.88%	6.81%	7.21%	6.19%	5.97%	6.13%	6.37%	6.44%	6.44%

CapEx / Depreciation

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	102.41%	86.30%	83.19%	81.70%	90.21%	98.93%	107.21%	106.28%	102.38%	73.90%	84.06%	102.24%	105.50%	98.46%	101.38%
10 Energy	155.14%	174.73%	144.12%	132.98%	143.20%	179.46%	229.39%	219.54%	217.23%	134.65%	148.34%	194.08%	191.80%	175.99%	178.20%
15 Materials	95.55%	75.37%	70.10%	70.71%	80.43%	95.12%	104.24%	110.41%	117.98%	82.13%	90.95%	122.22%	129.17%	114.87%	106.04%
20 Industrials	93.82%	80.93%	77.93%	73.90%	83.64%	95.93%	106.91%	105.78%	98.55%	64.23%	71.51%	89.47%	95.30%	88.64%	88.29%
25 Cosumer Discretionary	100.96%	78.06%	86.88%	86.53%	94.73%	102.36%	104.73%	101.78%	93.23%	63.25%	71.92%	87.92%	89.25%	92.21%	96.78%
30 Cosumer Staples	95.41%	88.61%	95.84%	95.69%	101.36%	103.13%	115.58%	123.02%	121.25%	97.15%	101.75%	113.90%	110.89%	106.58%	110.58%
35 Healthcare	83.21%	84.55%	101.03%	98.46%	95.03%	92.02%	95.15%	87.55%	82.60%	69.98%	72.44%	74.19%	72.16%	71.50%	74.49%
45 Information Technology	92.49%	66.09%	52.09%	52.45%	65.56%	70.16%	78.66%	73.00%	66.84%	49.38%	64.03%	73.85%	72.96%	68.30%	68.97%
50 Telecommunication	145.80%	115.16%	72.57%	64.28%	70.39%	79.63%	87.98%	86.24%	89.33%	82.32%	85.50%	86.74%	97.36%	90.91%	98.52%
55 Utilities	120.42%	137.01%	132.88%	120.54%	123.20%	140.29%	163.58%	183.75%	202.37%	183.37%	165.34%	181.08%	190.26%	195.72%	204.11%

Cash+ST-Investments / Revenue

GIC	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Non-financials	3.53%	4.55%	5.89%	6.87%	7.65%	7.44%	6.93%	7.38%	7.50%	11.01%	11.21%	9.70%	9.70%	10.01%	9.46%
10 Energy	3.07%	3.18%	3.95%	4.72%	4.65%	3.81%	3.28%	3.98%	3.88%	5.56%	5.89%	4.63%	4.80%	5.44%	4.50%
15 Materials	1.88%	2.58%	3.45%	3.66%	4.98%	4.92%	5.25%	5.57%	5.17%	11.18%	11.21%	10.10%	10.30%	9.68%	8.50%
20 Industrials	2.17%	3.09%	3.83%	4.73%	5.32%	5.08%	4.74%	5.37%	5.81%	9.39%	9.43%	7.66%	7.29%	7.78%	6.94%
25 Cosumer Discretionary	2.56%	3.58%	4.54%	5.35%	6.38%	5.98%	5.78%	5.71%	6.14%	9.20%	9.50%	8.78%	8.66%	8.82%	8.35%
30 Cosumer Staples	1.71%	2.11%	2.37%	2.86%	3.25%	3.27%	3.12%	3.05%	3.53%	4.50%	4.80%	4.60%	4.89%	5.55%	4.78%
35 Healthcare	7.40%	10.35%	12.10%	14.90%	16.74%	17.23%	15.24%	15.03%	13.72%	17.17%	16.86%	16.12%	16.41%	17.70%	19.73%
45 Information Technology	22.14%	26.13%	32.24%	32.27%	32.27%	30.73%	30.26%	30.94%	26.35%	36.06%	31.27%	29.36%	29.32%	33.55%	34.60%
50 Telecommunication	12.66%	9.42%	11.81%	14.98%	15.57%	12.36%	11.67%	11.51%	11.48%	13.19%	11.17%	12.59%	13.44%	13.28%	12.48%
55 Utilities	1.63%	1.72%	3.27%	2.59%	2.27%	2.34%	1.92%	1.86%	2.34%	2.95%	3.07%	2.21%	2.49%	2.22%	2.20%

PP+E Net / T-Assets

GIC		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	All Non-financials	28.39%	29.18%	28.95%	28.02%	26.19%	24.77%	24.27%	23.44%	24.52%	24.75%	23.56%	24.34%	24.05%	23.82%	24.13%
10	Energy	65.14%	67.71%	67.07%	66.69%	66.70%	64.21%	67.33%	68.66%	70.51%	70.73%	70.27%	70.22%	71.69%	71.93%	73.17%
15	Materials	46.63%	46.87%	45.47%	44.79%	41.16%	40.34%	40.79%	40.00%	40.24%	42.85%	41.33%	41.18%	44.00%	43.97%	45.11%
20	Industrials	25.62%	26.15%	25.04%	23.57%	21.57%	19.32%	19.83%	19.00%	19.20%	20.39%	18.35%	17.91%	18.92%	18.55%	18.80%
25	Cosumer Discretionary	24.22%	25.05%	23.91%	23.42%	23.37%	22.08%	21.71%	21.59%	22.50%	21.57%	20.00%	19.79%	20.03%	19.62%	19.48%
30	Cosumer Staples	35.49%	33.59%	31.86%	30.04%	29.12%	28.76%	27.39%	26.98%	28.73%	28.92%	26.99%	26.13%	25.62%	25.27%	24.95%
35	Healthcare	15.85%	15.37%	15.53%	15.36%	14.43%	13.09%	12.50%	10.93%	12.06%	12.00%	11.09%	11.24%	11.71%	11.22%	10.30%
45	Information Technology	11.05%	12.06%	10.93%	9.92%	8.65%	8.17%	8.03%	7.49%	8.16%	8.29%	8.07%	8.32%	8.08%	8.00%	7.61%
50	Telecommunication	50.39%	52.48%	53.76%	51.20%	45.81%	45.95%	44.13%	43.87%	44.47%	45.28%	44.37%	39.96%	40.31%	38.46%	39.53%
55	Utilities	63.69%	64.54%	64.93%	67.65%	66.63%	65.51%	66.01%	66.83%	64.99%	67.69%	68.30%	68.76%	69.49%	71.60%	71.29%