How the cult of shareholder value has reshaped corporate America

REUTERS/Brendan McDermid

AS STOCK BUYBACKS REACH HISTORIC LEVELS, SIGNS THAT CORPORATE AMERICA IS UNDERMINING ITSELF

By Karen Brettell, David Gaffen and David Rohde

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Part 1: Combined stock repurchases by U.S. public companies have reached record levels, a Reuters analysis finds, but as the recent history of such iconic businesses as Hewlett-Packard and IBM suggests, showering cash on shareholders may exact a long-term toll.

NEW YORK – When Carly Fiorina started at Hewlett-Packard Co in July 1999, one of her first acts as chief executive officer was to start buying back the company's shares. By the time she was ousted in 2005, HP had snapped up $14 billion of its stock, more than its $12 billion in profits during that time.

Her successor, Mark Hurd, spent even more on buybacks during his five years in charge – $43 billion, compared to profits of $36 billion. Following him, Leo Apotheker bought back $10 billion in shares before his 11-month tenure ended in 2011.

The three CEOs, over the span of a dozen years, followed a strategy that has become the norm for many big companies during the past two decades: large stock buybacks to make use of cash, coupled with acquisitions to lift revenue.

All those buybacks put lots of money in the hands of shareholders. How well they served HP in the long term isn't clear. HP hasn't had a blockbuster product in years. It has been slow to make a mark in more profitable software and services businesses. In its core businesses, revenue and margins have been contracting.

HP's troubles reflect rapid shifts in the global marketplace that pressure most large companies. But six years into the current expansion, a growing chorus of critics argues that the ability of HP and companies like it to respond to those shifts is being hindered by billions of dollars in buybacks. These financial maneuvers, they argue, cannibalize innovation, slow growth, worsen income inequality and harm U.S. competitiveness.
"HP was the poster child of an innovative enterprise that retained profits and reinvested in the productive capabilities of employees. Since 1999, however, it has been destroying itself by downsizing its labor force and distributing its profits to shareholders," said William Lazonick, a professor of economics and director of the Center for Industrial Competitiveness at the University of Massachusetts-Lowell.

HP declined to comment for this article.

CEO Meg Whitman has just overseen one of the largest corporate breakups ever attempted, creating one company for the PC and printer business, called HP Inc, and one for the corporate hardware and services business, called HP Enterprise. Ultimately, HP's turnaround efforts and restructuring will cost 80,000 jobs.

A Reuters analysis shows that many companies are barreling down the same road, spending on share repurchases at a far faster pace than they are investing in long-term growth through research and development and other forms of capital spending.

Almost 60 percent of the 3,297 publicly traded non-financial U.S. companies Reuters examined have bought back their shares since 2010. In fiscal 2014, spending on buybacks and dividends surpassed the companies' combined net income for the first time outside of a recessionary period, and continued to climb for the 613 companies that have already reported for fiscal 2015.

In the most recent reporting year, share purchases reached a record $520 billion. Throw in the most recent year's $365 billion in dividends, and the total amount returned to shareholders reaches $885 billion, more than the companies' combined net income of $847 billion.

The analysis shows that spending on buybacks and dividends has surged relative to investment in the business. Among the 1,900 companies that have repurchased their shares since 2010, buybacks and dividends amounted to 113 percent of their capital spending, compared with 60 percent in 2000 and 38 percent in 1990.

And among the approximately 1,000 firms that buy back shares and report R&D spending, the proportion of net income spent on innovation has averaged less than 50 percent since 2009, increasing to 56 percent only in the most recent year as net income fell. It had been over 60 percent during the 1990s.

COMPLEX LEGACY: During her tenure as Hewlett-Packard CEO, Carly Fiorina, now seeking the Republican presidential nomination, spent $14 billion on buybacks and nearly doubled the company's registered patents, but had no big, innovative successes. REUTERS/Brian C. Frank

"Even the Wall Street analyst crowd at some point will say, "When are you going to grow?""

David Melcher, chief executive, Aerospace Industries Association

Share repurchases are part of what economists describe as the increasing "financialization" of the U.S. corporate sector, whereby investment in financial instruments increasingly crowds out other types of investment.

The phenomenon is the result of several converging forces: pressure from activist shareholders; executive compensation programs that tie pay to per-share earnings and share prices that buybacks can boost; increased global competition; and fear of making long-term bets on products and services that may not pay off.

It now pervades the thinking in the executive suites of some of the most legendary U.S. innovators.

IBM Corp has spent $125 billion on buybacks since 2005, and $32 billion on dividends, more than its $111 billion in capital spending and R&D during the same period. Pharmaceuticals maker Pfizer Inc spent $139 billion on buybacks and dividends in the past decade, compared to $82 billion on R&D and $18 billion in capital spending. 3M Co, creator of the Post-it Note and Scotch Tape, spent $48 billion on buybacks and dividends, compared to $16 billion on R&D and $14 billion in capital spending.

At Thomson Reuters Corp, owner of Reuters News, capital spending last year totaled $968 million, more than half of which went toward R&D, according to the company's annual report. Buybacks and dividends for the year were more than double that figure, at a combined $2.05 billion. The company had 53,000 full-time employees last year, down from 60,500 in 2011. So far this year, capital spending is at $743 million, while buybacks and dividends total $2.02 billion.

"From a capital allocation perspective, we will always prioritize re-investments in our growth priorities over share buybacks," said David Crundwell, senior vice president, corporate affairs, at Thomson Reuters.

"A SCARY SCENARIO"

In theory, buybacks add another way, on top of dividends, of sharing profits with shareholders. Because buybacks increase demand and reduce supply for a company's shares, they tend to increase the share price, at least in the short-term, amplifying the positive effect. By decreasing the number of shares outstanding, they also increase earnings per share, even when total net income is flat.

Companies say buybacks are warranted when demand for their products and services isn't enough to justify spending on R&D, or when they deem their shares to be undervalued, and therefore a better investment than new projects.

Spreading the Wealth

The top 50 non-financial U.S. companies in terms of cumulative amounts spent on stock repurchases since 2000 are now often giving more money back to shareholders in buybacks and dividends than they make in profits – the first time that's happened outside of recessionary periods.

But if those buybacks come at the expense of innovation, short-term gains in shareholder wealth could harm long-term competitiveness. "The U.S. is behind on production of everything from flat-panel TVs to semiconductors and solar photovoltaic cells," said Gary Pisano, a professor at Harvard Business School and author of "Producing Prosperity: Why America Needs a Manufacturing Renaissance."

If U.S. companies continue to dole out their cash to investors, he said, economic investment "will go where it can be used well. If a company in Germany, India or Brazil has something to do with the money, it will flow there, as it should, and create growth and activity there, not in the United States. It's a scary scenario."

Even national security could be threatened as a shrinking defense budget has made it more difficult for contractors to justify research spending.

David Melcher, chief executive of the Aerospace Industries Association, said companies have turned to buybacks because of a dearth of new weapons programs and under pressure from Wall Street.

"Their investment community and the analysts that cover them are all saying, 'We want a better return and we want EPS to grow,' " Melcher said. "That's not a sustainable long-term strategy unless all these companies are going to go private. … Even the Wall Street analyst crowd at some point will say, 'When are you going to grow?' "

Among the largest U.S. defense contractors, Northrop Grumman Corp has spent more than $12 billion on share repurchases since 2010, even as revenue has declined in each of the past five years. Lockheed Martin's revenue has been flat since 2010; it has spent almost $12 billion on buybacks in that time.

In recent months, as the 2016 election campaigns have gathered momentum, concern about the long-term effects of the buyback craze has crept into public discourse and caught the attention of politicians.

Democrat Senators Elizabeth Warren and Tammy Baldwin have called on the Securities and Exchange Commission to investigate buybacks as a potential form of market manipulation.

Democratic presidential candidate Hillary Clinton has made shifting companies' short-term focus to the long term a key plank of her campaign. In July, she proposed increasing taxes on short-term investments and more rigorous disclosure of share repurchases and executive compensation. These moves, she said, will foster longer-term investment, innovation and higher pay for workers.

Fiorina, now a Republican presidential contender running on her record as a corporate executive, declined multiple requests for comment.

INVESTOR FAVORITE: Mark Hurd spent even more on buybacks than his predecessor while he also improved operating results, but managers said his cost-cutting disrupted product development. REUTERS/Stephen Lam

"HP had plenty of cash to buy back as much stock as it wanted to... It's a good use of capital."

Mark Hurd, forrmer CEO, Hewlett-Packard Co

Hurd, now a co-chief executive at Oracle Corp, told Reuters that repurchases were an appropriate use of capital. "HP had plenty of cash to buy back as much stock as it wanted to," he said in an interview. Operating cash flow during his tenure was$62 billion, a third more than he spent on buybacks. "It's a good use of capital," he said.

HP's revenue and share price rose while Hurd was in charge. He said decisions about the size of stock buybacks and investment in R&D, which totaled $17 billion during his tenure, were not related.

A spokesman for Apotheker, Hurd's successor, declined to comment.

Until 1982, companies were largely prohibited from buying their own shares. That year, as part of President Ronald Reagan's broad moves to deregulate financial markets, the SEC eased its rules to allow companies to buy their own shares on the open market.

At the time, free-market reformers argued that corporate America had become fat and wasteful after decades of postwar growth, with no checks on how managers spent cash – or didn't.

"The boards you had were managers themselves and their friends," said Charles Elson, finance professor and director of

John L. Weinberg Center for Corporate Governance at the University of Delaware. "It was basically managerial power, unchecked."

Over the years, however, a belief has taken hold that companies' primary objective is to maximize shareholder value, even if that means paying out now through buybacks and dividends money that could be put toward long-term productive investments.

"Serving customers, creating innovative new products, employing workers, taking care of the environment … are NOT the objectives of firms," Itzhak Ben-David, professor of finance at Ohio State University's Fisher College of Business and a buyback proponent, wrote in an email response to questions from Reuters. "These are components in the process that have the goal of maximizing shareholders' value."

That goal has come to the fore in some high-profile cases of late as activist investors have demanded that executives share the wealth – or risk being unseated.

In March, General Motors Co acceded to a $5 billion share buyback to satisfy investor Harry Wilson. He had threatened a proxy fight if the auto maker didn't distribute some of the $25 billion cash hoard it had built up after emerging from bankruptcy just a few years earlier.

DuPont early this year announced a $4 billion buyback program – on top of a $5 billion program announced a year earlier – to beat back activist investor Nelson Peltz's Trian Fund Management, which was seeking four board seats to get its way. Even so, CEO Ellen Kullman stepped down in October after sales slowed and the stock slid.

In March, Qualcomm Inc, under pressure from hedge fund Jana Partners, agreed to boost its program to purchase $10 billion of its shares over the next 12 months; the company already had an existing $7.8 billion buyback program and a commitment to return three quarters of its free cash flow to shareholders. Still, the stock had been underperforming the S&P 500 for most of the past 10 years.

Jana wasn't satisfied, and in July, Qualcomm announced it would shed nearly 5,000 workers, among other moves to cut costs. R&D spending, it said, would stay at around $4 billion a year.

Managers ignore shareholder demands at their own risk, especially when the share price is under pressure. "None of it is optional. If you ignore them, you go away," said Russ Daniels, a technology and management executive who spent 15 years at Apple Inc and then 13 years at HP, where he was chief technology officer for enterprise services when he left in 2012. "It's all just resource allocation. … The situation right now is there are a lot of investors who believe that they can make a better decision about how to apply that resource than the management of the business can."

POLITICAL INTEREST: Democratic presidential candidate Hillary Clinton has recently decried companies' focus on the short term and voiced support for measures to foster long-term growth and innovation. REUTERS/Jonathan Ernst

Maximizing shareholder value has "concentrated income at the top and has led to the disappearance of middle class jobs."

William Lazonick, professor of economics, University of Massachusetts-Lowel

IBM Corp, once the grande dame of U.S. tech companies, spent $5.43 billion on R&D in the most recent year. It has been spending a lot more on buybacks.

For decades, the computer hardware, software and services company has linked executive pay in part to earnings per share, a metric that can be manipulated by share repurchases. Since 2007, IBM's per-share earnings have surged 66 percent, though total net income has risen only 15 percent. (The company says in regulatory filings that it adjusts for the impact of buybacks on EPS when determining pay targets.

IBM has been among the most explicit in its pursuit of higher per-share earnings through financial engineering. In 2007, in communications with shareholders, it laid out the first of its "road maps" for boosting EPS, this time to $10 a share by 2010. It would do so, under the plan, through equal emphasis on improved margins, acquisitions, revenue growth, and share repurchases. It easily met its expectations.

In 2010, then-CEO Sam Palmisano doubled down, pledging to boost earnings by more than 75 percent to $20 a share by 2015. This time, more than a third of that increase was expected to come from buybacks. Palmisano left in 2011, having received more than $87 million in compensation in his last three years at the company.

For a while, the plan worked. Shares surged to an all-time high of $215 in March 2013. But the company's operating results have lagged.

Revenue has declined for the past three years. Earnings have fallen for the past two. The stock is down a third from its 2013 peak, while the S&P 500 has risen 34 percent. To rein in costs, IBM has cut jobs. It now employs 55,000 fewer workers than it did in 2012.

"Morale is not too good when you see these cuts," said Tom Midgley, a 30-year veteran of IBM's Poughkeepsie, New York, plant. In recent years, he said, his wage increases have shrunk, as has the company's contribution to 401(k) retirement savings.

IBM spokesman Ian Colley said that the company's results have been hurt by currency shifts and business divestitures. He said that the company continues to grow, and that its buybacks have not affected research, development and innovation efforts. "IBM prioritizes investment in the business," he said, citing recent acquisitions in cloud and other areas.

WEALTH BENEFIT

Share repurchases have helped the stock market climb to records from the depths of the financial crisis. As a result, shareholders and corporate executives whose pay is linked to share prices are feeling a lot wealthier.

That wealth, some economists argue, has come at the expense of workers by cutting into the capital spending that supports long-term growth – and jobs. Further, because most most U.S. stock is held by the wealthiest Americans, workers haven't equally from rising share prices.

Thus, said Lazonick, the economics professor, maximizing shareholder value has "concentrated income at the top and has led to the disappearance of middle-class jobs. The U.S. economy is now twice as rich in real terms as it was 40 years ago, but most people feel poorer."

Paul Bloom, who was an executive at IBM for 16 years, including chief technology officer for telecom research before leaving in 2013, is among the optimists who argue that venture capital and other alternative channels of R&D investment will take up some of the slack, supporting innovation and economic growth.

Now a consultant to venture capital firms, Bloom expects large companies to shift away from investing directly in R&D, focusing instead on acquiring startups and spinning off experimental projects that will be less constrained by bureaucracy and Wall Street demands. "You are going to see more and more corporate investing in the startups than you have in the past," he said.

Many of the transformative breakthroughs of the past century – light bulbs, lasers, computers, aviation, and aerospace technologies – were based on innovations coming out of the labs of companies that could afford rich funding, like IBM, Apple, Xerox Corp and HP.

Some say a technological shift at companies like HP and IBM away from traditional manufacturing, which requires large investments in buildings and equipment, and toward data-based products is also changing the calculation of how much investment is needed in innovation.

"The way these companies spend dollars is different, the type of investment is hard to count. While you might think their spending is flat, I think it's better utilized," said Mark Dean, who worked in R&D for 34 years at IBM and was a member of the team that created the first personal computer in 1981. "Innovation is changing."

THE HP WAY

For years, HP adhered to "the HP way," a widely admired egalitarian corporate philosophy. Operating divisions were given broad autonomy to develop their businesses. Employees were encouraged to think creatively in a nurturing environment. R&D spending regularly topped 10 percent of revenue.

When Fiorina arrived in 1999, she upended that, implementing companywide layoffs, shifting jobs overseas and centralizing control.

Bill Mutell, a former HP senior vice president who joined from Compaq Computer Corp after HP paid $25 billion for it in 2001, spoke to Reuters at the suggestion of Fiorina's presidential campaign. He said that changes she implemented were needed because the company had become sluggish at innovation. HP would "aim, aim, and aim, and there was never any implementation and execution," he said.

Fiorina joined soon after the company had spun off what is now Agilent Technologies, the arm that housed much of the company's high-tech expertise.

In R&D, she focused on winning patents as a measure of the effectiveness of spending. The number of HP-registered patents rose from 17,000 in 2002 to 30,000 when she left in 2005, according to regulatory filings.

Even so, all of those new patents failed to yield any enduringly successful innovations. R&D efforts were scattered, and some projects overlapped.

Fiorina's compensation was linked in part to earnings per share when she joined in 1999. And from 2003, it was also linked to something called total shareholder return, a measure of performance, including stock-price appreciation plus dividends, that was then compared to returns for the S&P 500 Index.

Fiorina's buybacks failed to stop HP's share price slide after the dot-com bubble burst in 2000. Uneven earnings and concern about the Compaq acquisition whipsawed the share price during her tenure, helping lead to her ouster in 2005.

IN AND OUT: Leo Apotheker, Hurd's successor at HP, presided over a disastrous acquisition and $10 billion in stock buybacks during his brief 11-month tenure as CEO. REUTERS/Stephen Lam

Some managers struggling to meet Hurd's targets implemented spending freezes as the end of a quarter neared, halting procurement of supplies, according to former HP engineers.

Hurd streamlined the company's structure, which had ballooned after the Compaq acquisition. He slashed the number of research projects, from 6,800 to about 40, and cut costs across the company's PC and printer divisions, focusing instead on building higher-margin software and services businesses.

Market share in each division grew. But in the PC and printer divisions, researchers said, new limits on spending disrupted project timelines. Some managers struggling to meet Hurd's targets implemented spending freezes as the end of a quarter neared, halting procurement of supplies, according to former HP engineers.

"You can't turn it on and off like a faucet, turn it off one quarter to make the quarterly results look good, then turn it back on next quarter and have great products coming out the other end," said a former HP engineer.

Engineers at HP who had previously created prototypes at U.S. facilities were also now relying on Asian manufacturing sites tobuild them. Travel to these regions was on occasion delayed due to spending pressures. Workers at the company's labs werealso moved off the more experimental projects and realigned to work on existing product lines.

In the interview, Hurd said he wasn't aware of any spending freezes or project disruptions.

The changes he implemented led to sparkling results: From 2005 to 2010, net income rose 265 percent on a much smaller 45percent increase in revenue. HP's stock price more than doubled, from $20 to $50, during his tenure.

Thanks to hefty stock buybacks, earnings per share did even better, increasing 350 percent. HP increased share repurchases from $3.51 billion in 2005 to $7.78 billion in 2006, and again to more than $9 billion a year in four of the next five years. (Roughly 20 to 30 percent of annual repurchases offset dilution from employee stock-purchase plans.

Hurd said improving revenue and market share during his term was always his first concern.

"The share price is the result that occurs if the company is performing well," he said. "Short-term tricks to try to improve EPS,and eventually share prices, usually don't work. ... Going out and saying I'm going to cut a dividend, make a one-time buyback,these are sort of like parlor tricks, they aren't sustainable." He said he declined shareholder requests that ranged fromincreasing dividends to adopting a specific EPS plan like IBM's "road map."

Because he nearly always met per-share earnings and other targets, his pay mostly rose, too. In 2008, for example, it jumpedto $42 million from $25 million the year before. (It fell in 2009 to $30 million when he failed to meet targets.

Investors were impressed by the turnaround. Operating margins, which had dropped below 5 percent under Fiorina, rose as high as 9 percent under Hurd, and the share price soared 200 percent.

Hurd resigned in August 2010 amid a scandal involving his relationship to an HP contractor.

His successor, Leo Apotheker, spent just shy of a year at the helm, marked by his decision to buy software firm Autonomy for$11 billion in October 2011. A year later – after Apotheker left – HP said an investigation had uncovered accounting fraud atAutonomy before the purchase. It took a charge against earnings of nearly $9 billion.

CEO Whitman has attempted to strike a balance with HP's plans to move into a growth mode from a turnaround effort. R&D spending rose slightly to $3.45 billion in 2014, the highest since 2008, even as revenue declined. At the same time, share repurchases rose to $2.7 billion, from $1.5 billion in 2013.

Post breakup, her immediate challenge is to build the higher-margin HP Enterprise. Both companies will continue with generous buyback programs. HP Enterprise said in September that it expects to give shareholders at least 50 percent of free cash flow next year through buybacks and dividends. HP Inc said it will give back 75 percent.

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The Cannibalized Company

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REUTERS/Brendan McDermid

STOCK BUYBACKS ENRICH THE BOSSES EVEN WHEN BUSINESS SAGS

By Karen Brettell, David Gaffen and David Rohde

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Part 2: Most major U.S. companies tie part of executive pay to earnings per share and other metrics to align the interests of management and shareholders. The trouble is, these numbers can be - and often are - influenced by buybacks and other maneuvers that have little to do with operating performance.

NEW YORK – When health insurer Humana Inc reported worse-than-expected quarterly earnings in late 2014 – including a 21 percent drop in net income – it softened the blow by immediately telling investors it would make a $500 million share repurchase.
In addition to soothing shareholders, the surprise buyback benefited the company's senior executives. It added around two cents to the company's annual earnings per share, allowing Humana to surpass its $7.50 EPS target by a single cent and unlocking higher pay for top managers under terms of the company's compensation agreement.

Thanks to Humana hitting that target, Chief Executive Officer Bruce Broussard earned a $1.68 million bonus for 2014.

Most publicly traded U.S. companies reward top managers for hitting performance targets, meant to tie the interests of managers and shareholders together. At many big companies, those interests are deemed to be best aligned by linking executive performance to earnings per share, along with measures derived from the company's stock price.

But these metrics may not be solely a reflection of a company's operating performance. They can be, and often are, influenced through stock repurchases. In addition to cutting the number of a company's shares outstanding, and thus lifting EPS, buybacks also increase demand for the shares, usually providing a lift to the share price, which affects other performance markers.

As corporate America engages in an unprecedented buyback binge, soaring CEO pay tied to short-term performance measures like EPS is prompting criticism that executives are using stock repurchases to enrich themselves at the expense of long-term corporate health, capital investment and employment.

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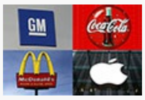


Part 1: Is buyback binge undermining corporate America?

Video: A popular way to higher pay

"We've accepted a definition of performance that is narrow and quite possibly inappropriate," said Rosanna Landis Weaver, program manager of the executive compensation initiative at As You Sow, a Washington, D.C., nonprofit that promotes corporate responsibility. Pay for performance as it is often structured creates "very troublesome, problematic incentives that can potentially drive very short-term thinking."

A Reuters analysis of the companies in the Standard & Poor's 500 Index found that 255 of those companies reward executives in part by using EPS, while another 28 use other per-share metrics that can be influenced by share buybacks.

In addition, 303 also use total shareholder return, essentially a company's share price appreciation plus dividends, and 169 companies use both EPS and total shareholder return to help determine pay.

EPS and share-price metrics underpin much of the compensation of some of the highest-paid CEOs, including those at Walt Disney Co, Viacom Inc, 21st Century Fox Inc, Target Corp and Cisco Systems Inc.

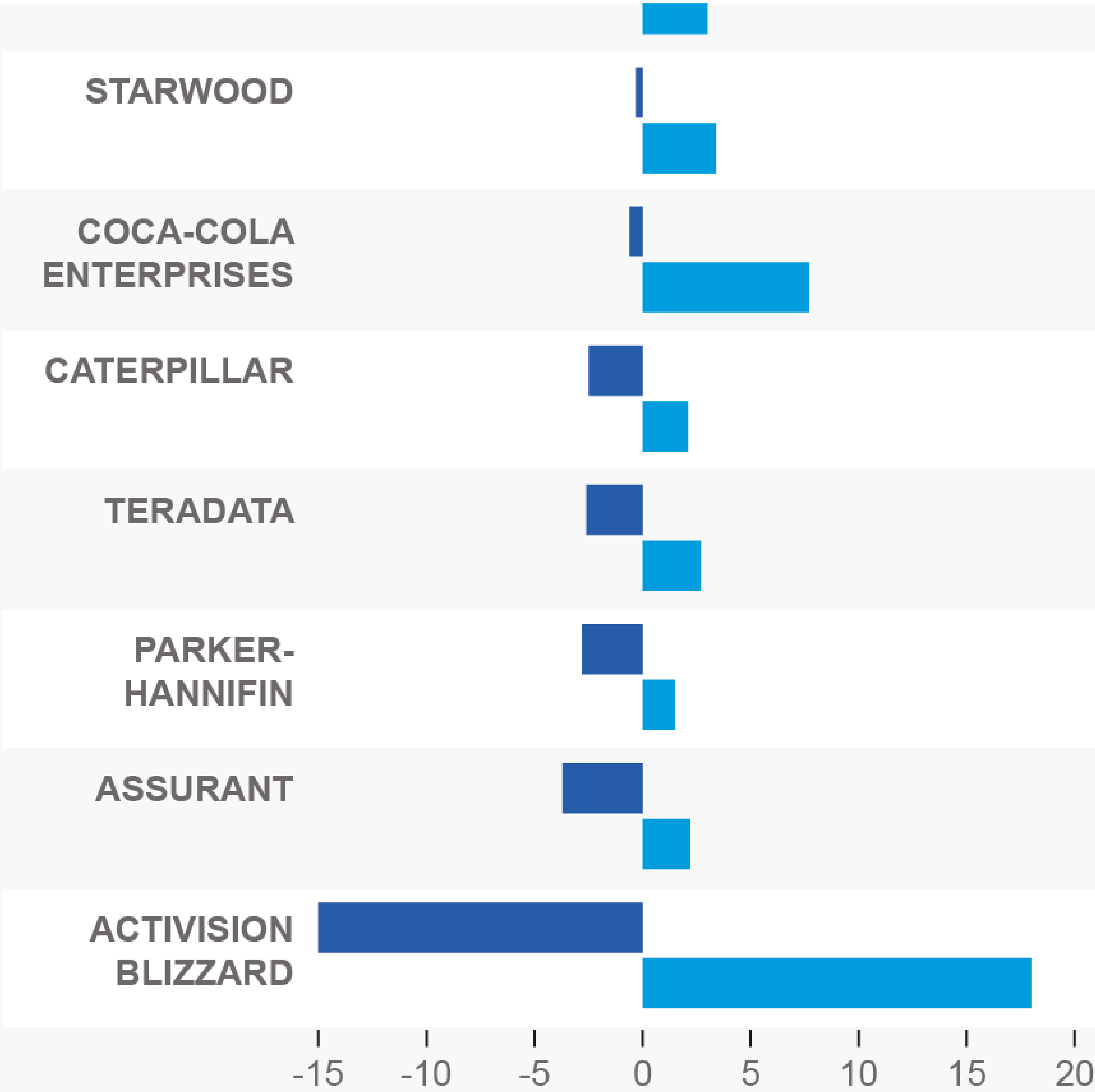
Fewer than 20 of the S&P 500 companies disclose in their proxies whether they exclude the impact of buybacks on per-share metrics that determine executive pay.

Humana would not say whether it adjusted targets to account for its buyback last year. In a statement to Reuters, the company said it sets annual per-share targets for executives that take into account the company's "capital allocation strategy," which includes buybacks, dividends, acquisitions and investments.

Down becomes up

S&P 500 companies that use earnings per share as a performance metric that boosted 2014 EPS as net income fell

Net income, percent change   EPS, percent change



Note: Data excludes extraordinary items.
Sources: Thomson Reuters; company reports

Experts said Humana would not have reached the target without the $500 million buyback. The company told analysts at the time of the repurchase announcement in November 2014 that it expected to report annual earnings per share of between $7.40 and $7.60 for the full year.

“Given the magnitude of the repurchase, the EPS would have been below $7.50 had it not been for the repurchase,” said Heitor Almeida, a professor of finance with the College of Business at the University of Illinois in Champaign.

As reported in the first article in this series, share buybacks by U.S. non-financial companies reached a record $520 billion in the most recent reporting year. A Reuters analysis of 3,300 non-financial companies found that together, buybacks and dividends have surpassed total capital expenditures and are more than double research and development spending.

Companies buy back their shares for various reasons. They do it when they believe their shares are undervalued, or to make use of cash or cheap debt financing when business conditions don’t justify capital or R&D spending. They also do it to meet the expectations of increasingly demanding investors.

Lately, the sheer volume of buybacks has prompted complaints among academics, politicians and investors that massive stock repurchases are stifling innovation and hurting U.S. competitiveness -- and contributing to widening income inequality by rewarding executives with ever higher pay, often divorced from a company's underlying performance.

"There's been an over-focus on buybacks and raising EPS to hit share option targets, and we know that those are concentrated in the hands of the few, and that the few is in the top 1 percent," said James Montier, a member of the asset allocation team at global investment firm GMO in London, which manages more than $100 billion in assets.

The introduction of performance targets has been a driver of surging executive pay, helping to widen the gap between the richest in America and the rest of the country. Median CEO pay among companies in the S&P 500 increased to a record $10.3 million last year, up from $8.6 million in 2010, according to data firm Equilar.

At those levels, CEOs last year were paid 303 times what workers in their industries earned, compared with a ratio of 59 times in 1989, according to the Economic Policy Institute, a Washington-based nonprofit.

SALARY AND A LOT MORE

Today, the bulk of CEO compensation comes from cash and stock awards, much of it tied to performance metrics. Last year, base salary accounted for just 8 percent of CEO pay for S&P 500 companies, while cash and stock incentives made up more than 45 percent, according to proxy advisory firm Institutional Shareholder Services.

Thomson Reuters Corp, owner of Reuters News, used EPS to determine half of the performance awards in the three-year pay cycle ended in 2014 for CEO Jim Smith and other executives. Smith last year took home $6.6 million in compensation. The company's three-year performance awards going forward are based on both EPS and free cash flow per share. A company spokesman said Thomson Reuters does not adjust for the impact of stock buybacks on those metrics.

Share repurchases can make the difference in meeting preset targets, according to a Reuters review of corporate proxies.

At Xerox Corp, revenue, net income and spending on research and development all declined last year. But the printer and copier maker's EPS target of $1.12 was unchanged from the prior year, and managers hit it exactly after $1.1 billion in share repurchases.

PRINTING MONEY: Buybacks helped Xerox Corp CEO Ursula Burns receive a bonus of $1.98 million last year, even though revenue, net income and research spending declined. REUTERS/Eduardo Munoz/Files

SMART PLAY: Video game company Activision Blizzard's net income dropped last year, while CEO Robert Kotick received about $22 million in performance pay after the company hit targets for total shareholder return and EPS. REUTERS/Danny Moloshok/Files

"Despite 20 years of trying, we have still failed to come up with an objective performance metric that can't be gamed."

Lynn Stout, professor, Cornell Law School

Half of CEO Ursula Burns's annual bonus target was predicated on hitting that EPS level; ultimately, she received a bonus of $1.98 million out of a possible $2.2 million. EPS is also a major determinant of even bigger bonuses for a three-year performance cycle ending this year.

Xerox repurchased $1.35 billion of its shares in the first three quarters of this year. The company declined to comment. Its proxy statement does not indicate whether it adjusts targets to account for buybacks.

Managers at information technology company EMC Corp hit their EPS target for 2014 of $1.90 with the help of $3.7 billion in share repurchases. Based on the share count before the buybacks, EPS last year would have been only $1.81, little changed from $1.80 a year earlier, according to a Reuters calculation.

The EPS target accounted for half of CEO Joseph Tucci's annual $1.01 million bonus. It also is used to determine 45 percent of bonus share awards for the company's future three-year targets.

EMC declined to comment. Its proxy statement does not address whether it makes adjustments to account for buybacks. It has bought back $3.11 billion in shares so far this year.

Buybacks can boost a company's share price to benefit executives whose shares vest over a period of years. Activision Blizzard Inc, purveyor of "Guitar Hero," "Call of Duty" and other well-known video games, signed Chief Executive Robert Kotick to a contract in 2012 that included $56 million in share awards that vest over time, depending in part on the share price and EPS.

Last year, Kotick ended up getting about $22 million in performance-based cash and stock awards, about the same as the prior year, even as net income dropped 17 percent. How? The stock rose substantially, meeting goals for total shareholder return and increasing the value of share awards.

Total shareholder return was helped by an $8.2 billion repurchase made in late 2013 – when the company and a group of investors led by Kotick and Activision Chairman Brian Kelly bought out a stake held by then-majority shareholder Vivendi. The company said the deal allowed Activision to operate with more flexibility.

The shares rose 33 percent from the date of the buyback announcement in July 2013 through the end of 2014. The share price has continued to rise this year, making the awards even more valuable.

Activision declined to comment.

In 1992, Congress changed the tax code to curb rising executive pay and encourage performance-based compensation. It didn't work. Instead, the shift is widely blamed for soaring executive pay and a heavier emphasis on short-term results.

Companies started tying performance pay to "short-term metrics, and suddenly all the things we don't want to happen start happening," said Lynn Stout, a professor of corporate and business law at Cornell Law School in Ithaca, New York. "Despite 20 years of trying, we have still failed to come up with an objective performance metric that can't be gamed."

Shareholder expectations have changed, too. The individuals and other smaller, mostly passive investors who dominated equity markets during the postwar decades have given way to large institutional investors. These institutions tend to want higher returns, sooner, than their predecessors. Consider that the average time investors held a particular share has fallen from around eight years in 1960 to a year and a half now, according to New York Stock Exchange data.

"TOO EASY TO MANIPULATE"

Companies like to use EPS as a performance metric because it is the primary focus of financial analysts when assessing the value of a stock and of investors when evaluating their return on investment.

But "it is not an appropriate target, it's too easy to manipulate," said Almeida, the University of Illinois finance professor.

In 2011, Amgen Inc CEO Kevin Sharer oversaw $8.32 billion of buybacks, by far the largest in the pharmaceutical maker's history. More than $5 billion of those repurchases came in the fourth quarter of the year.

Soon after, Amgen reported that net income was lower than it had been in the three preceding years. At the same time, the buybacks lifted EPS far above the target level that determined 30 percent of Sharer's bonus, doubling the amount he earned for that portion of his $4.88 million annual bonus. Without the buyouts, EPS would have fallen below the target level.

Sharer left the company in May 2012 and is now on the faculty of Harvard Business School. He did not respond to requests for comment.

The Amgen board's compensation committee removed EPS as a performance metric the next year. It opted, instead, to begin using net income, saying in a 2012 proxy statement that doing so would "align compensation with a measure that more directly correlates with the underlying performance of our operations."

Members of Amgen's 2011 compensation committee declined to comment.

Some companies, including software developer Citrix Systems Inc and kidney dialysis company DaVita Inc, say they avoid EPS in pay calculations because it is too vulnerable to manipulation.

Most companies that use per-share metrics for executive awards, however, say little about whether they adjust results to account for buybacks. A select few, including Johnson & Johnson, FedEx, Time Warner Inc and IBM, do disclose that they strip out the potential effect of buybacks on performance metrics.

FedEx, in its most recent filing, said it excluded the effect of buybacks because the positive effect on EPS "did not reflect core business performance." Time Warner Inc said it adjusts for buybacks "so that payouts were not advantaged" if the media company repurchased more shares than it initially anticipated when setting performance goals.

Steve Pakela, managing partner at Pay Governance LLC in Pittsburgh, Pennsylvania, which advises more than 40 S&P 500 companies on executive pay, said some directors "believe you shouldn't strip out the effect" because share buybacks may be the best use of capital.

In addition to EPS, there is total shareholder return, which typically comprises a company's share price appreciation plus dividends over time. Total return, often used to compare performance among peer companies, has also become a popular performance measure for executive pay.

By providing a lift to a stock's price, buybacks can increase total shareholder return to target levels, resulting in more stock awards for executives. And of course, the higher stock price lifts the value of company stock they already own.

"It can goose the price at time when the high price means they earn performance shares … even if the stock price later goes back down, they got their shares," said Michael Dorff, a law professor at the Southwestern Law School in Los Angeles.

Exxon Corp, the largest repurchaser of shares over the past decade, has rejected shareholder proposals that it add three-year targets based on shareholder return to its compensation program. In its most recent proxy, the energy company said doing so could increase risk-taking and encourage underinvestment to achieve short-term results.

The energy giant makes half of its annual executive bonus payments contingent on meeting longer-term EPS thresholds. Since 2005, the company has spent more than $200 billion on buybacks.

ADDITIONAL TWEAKS

While performance targets are specific, they aren't necessarily fixed. Corporate boards often adjust them or how they are calculated in ways that lift executive pay.

Humana specifies EPS ranges to determine annual bonuses paid to its executives. For the past three years, buybacks of more than $500 million a year increased EPS. That wasn't all, however. For each of those years, the board altered calculations in ways that also bumped EPS higher.

COVERED: Insurer Humana Inc. paid then-CEO Michael McCallister a bigger bonus than it otherwise would have after adjusting its EPS calculation. REUTERS/Shannon Stapleton/Files

SITTING PRETTY: Humana's current CEO, Bruce Broussard (center right, in orange tie), received his target EPS-based bonus for 2014 after the company made an accelerated stock repurchase. REUTERS/Larry Downing/Files

"I can't think of a good reason" for an accelerated stock repurchase..

Susan Young, associate professor of acccounting and taxation, Fordham University

For 2012, then-CEO Michael McCallister received a higher bonus than he otherwise would have -- $1.63 million -- after Humana's board removed litigation expenses from its EPS calculation.

He was succeeded as CEO at the start of 2013 by Broussard. For that year, Broussard's annual bonus was lifted into the maximum range, for a payment $2.44 million, after accounting for the cost of posting additional reserves against long-term insurance policies.

For 2014, Humana discounted from its EPS calculation losses from paying down some bonds, even as its overall debt levels increased. That adjustment brought the company just below its EPS target of $7.50.

The $500 million buyback the company announced late last year, part of its total $872 million in buybacks in 2014, was an accelerated share repurchase. In this sort of deal, a company buys all the stock from an investment bank in a single transaction. That allows it to book the reduction in shares outstanding immediately, and the bank then buys the shares on the open market over the ensuing months.

Humana's accelerated share repurchase lifted EPS to $7.51, just above the target.

Susan Young, an associate professor of accounting and taxation at Fordham University in New York, said accelerated buybacks are commonly used to reach compensation targets. "I can't think of a good reason for this form of repurchase," she said, noting that the programs restrict a company's flexibility to reduce or stop buybacks if shares become too expensive.

benefit of accelerated repurchases is to, “in a controlled way, buy a significant slice of available shares early in the program,” before an announced buyback pushes up the share price and increases the cost to the company.

He also said an accelerated program allows shareholders to see immediate action, which is “important to signal a higher degree of confidence in something shareholders care a great deal about.”

In general, he said, “effective compensation committees are aware of impact of share repurchases on EPS, particularly when EPS is part of the equity compensation of management.”

In July, Aetna Inc announced that it would acquire Humana in a deal that at the time valued Humana at $37 billion. If Broussard leaves after the deal, he won’t go empty-handed.

Just before the Aetna deal was announced, Broussard’s compensation agreement was modified to accelerate equity awards and remove restrictions on exercising some stock options if he leaves or is terminated within two years of any acquisition, a regulatory filing shows.

At the end of last year, Broussard held unvested share awards valued at around $12.8 million, which have since increased in value as Humana’s share price has climbed 18 percent.

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The Cannibalized Company

By Karen Brettell, David Gaffen and David Rohde

Data: Karen Brettell and David Gaffen

Graphics: Christine Chan

Video: Kavitha Shastry

Edited by John Blanton

CHANGING COURSE: Matt Happel, who was laid off from his job at a Deere & Co factory in April, is now studying to become an actuary at the University of Northern Iowa. REUTERS/Mark Kauzlarich

BUYBACKS FUELED BY CHEAP CREDIT LEAVE WORKERS OUT OF THE EQUATION

By Karen Brettell and Timothy Aeppel

Filed Dec. 23, 2015, 3 p.m. GMT

The story of two Iowa cousins - one a retired teacher, the other a laid-off Deere & Co worker - shows who benefits, and who doesn't, in the vast money-go-round powered by the chase for higher investment yields.

WATERLOO, Iowa—Matt Happel and Pam Egli are first cousins, part of a sprawling family so big it rents a church hall for Christmas parties.

They grew up close. Egli often babysat Happel and later loved going to his football games. He's a natural athlete, she says, noting that he was quarterback all four years of high school.

The cousins have another connection that has nothing to do with their stolid Midwestern roots -- one that runs straight through Wall Street.

Happel, now a 40-year-old divorced father of three, was laid off in April from Deere & Co.'s transmission factory in

Waterloo, where he earned $21 an hour on the assembly line.

The Moline, Illinois-based tractor maker, hit hard by a slumping farm economy, has shed hundreds of workers as sales and profit have fallen. As conditions worsen, Deere has been raising record amounts of debt, helping to finance loans to buyers of its farm equipment, while also spending billions of dollars on share buybacks.

Egli, 16 years older, retired two years ago from teaching elementary school. The state pension fund that sends her a monthly check is among the many such funds that have gobbled up Deere's debt, as well as riskier investments, chasing the higher returns they need to keep paying retirees.

The Iowa cousins' Wall Street connection is a single, small strand in a vast web of massive financial flows, woven in the easy-money environment the U.S. Federal Reserve has maintained for years.

It begins with pension funds like the one Egli relies on. These big institutional investors are in a bind. To keep sending checks to rising numbers of retiring baby boomers, they are chasing higher returns than they can get from traditional fixed-income investments like U.S. Treasury securities. At the same time, they are wary of relying heavily on stocks after the market rout during the financial crisis bit deep into their reserves.

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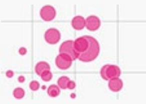
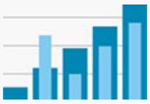
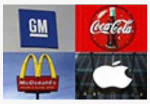


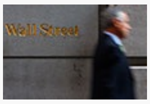
Interactive: Debt machine



Interactive: Corporate debt rises along with share repurchases



Part 1: Is buyback binge undermining corporate America?



Part 2: Buybacks juice executive pay

So they are turning to fixed-income investments. More than buying bonds directly, they are investing in private equity and hedge funds, which use borrowed money to increase returns on debt while also chasing higher-risk, higher-return investments such as junk bonds. Egli's retirement fund, the Iowa Public Employees' Retirement System, or IPERS, is among the many pension funds that have emerged as major investors in these alternative investments.

The demand from pension funds is helping to finance record levels of corporate debt. The low interest rates that have crimped returns on investments also make it dirt cheap for companies to borrow, and many of them are doing just that, often to buy back their own shares.

As reported in earlier installments in this series, corporate America is pouring unprecedented amounts into buybacks. Using debt to finance buybacks can produce tax or accounting benefits. The buybacks provide an alternative to capital investment or research spending when business conditions don't justify making long-term bets. Instead, buybacks return profits to shareholders – and often enhance executive pay – even when a company hits lean times and is laying off workers.

In fact, buybacks have become the fuel powering the more-than twofold increase in the stock market since the depths of the financial crisis in 2009. Together, U.S. non-financial companies have spent $2.24 trillion on buybacks since 2009, while borrowing an extra $1.9 trillion to help finance those purchases, according to a Reuters review of Federal Reserve data.

During the same period, mutual and exchange traded funds have bought less stock, at $1.24 trillion. Pension funds, meanwhile, have been net sellers to the tune of $1.05 trillion since 2009, while households and hedge funds have dumped an additional $558 billion.

“We are in a massive bull market that is being generated by credit-led financial engineering,” said Brian Reynolds, chief market strategist at brokerage firm New Albion Partners, who analyzes pension fund allocations for signals of stock market values.

Since 2008, Deere's total debt has risen by $2.72 billion to $4.93 billion -- and those figures don't include regular bond issues by the compangy’s financing arm to help underwrite customer purchases. During the same period, Deere has repurchased $12.33 billion of its shares.

Deere said that money for the buybacks came from strong cash flow, not borrowing, and that the company gives priority to spending on research and development over buybacks. The company increased debt in fiscal 2012 as a protective measure, Chief Financial Officer Rajesh Kalathur said, in case the impasse in Washington over raising the nation’s debt ceiling roiled markets. After that threat faded, he said, it would have been “unreasonable” to hold excess cash.

Many other companies have been borrowing heavily to help pay for buybacks.

IN GOOD SHAPE: Retired teacher Pam Egli, a cousin of Matt Happel, receives regular checks from a pension fund that has cut its weighting in publicly traded stocks in recent years. REUTERS/Scott Morgan

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“Basically what you’re seeing in the stock market is a slow-motion leveraged buyout of the entire market.”

Ed Yardeni, founder, Yardeni Research

St. Louis, Missouri-based agrochemical giant Monsanto Co, for example, is caught in the same commodities downturn as Deere. It said in October that it would slash 2,600 jobs as commodity prices slump. But it has increased debt by $7 billion since 2013, helping to fund $8 billion in share buybacks in the same time frame.

San Diego-based chip maker Qualcomm Inc said in July that it would cut 4,500 full-time staff, or 15 percent of its workforce, as foreign competition pinches sales. The company raised $11 billion in debt this year, helping to finance $11.25 billion in buybacks for the year.

And Atlanta-based beverage maker Coca-Cola Co said in January that it would cut at least 1,600 white-collar jobs as it faced sluggish soda sales. It has added $9 billion in debt since the end of 2013 and bought back $6.13 billion of its shares in that time.

“Basically what you’re seeing in the stock market is a slow-motion leveraged buyout of the entire market,” said Ed Yardeni, founder of Yardeni Research.

Deere for a decade was riding high on a global surge in commodities. Farmers from India to Iowa eagerly snapped up Deere’s machines — many of which can sell for $250,000 or more — as they rushed to meet the world’s growing demand for corn and soybeans. The company also makes construction and forestry equipment.

But that boom has gone bust as growth in China and other emerging economies cooled over the past several years. Deere said in January that it would cut more than 900 workers in Iowa and Illinois, including 565 in Waterloo, as it rushes to curb output. The layoffs came on top of 1,100 job cuts last year.

In Waterloo, the layoffs hit like a tornado. Deere operates four factories in this city of 68,000 people and is by far the largest private employer around. The company’s roots here reach back to the early part of the last century, when the company started by an Illinois blacksmith named John Deere, who had invented a plow that worked well in the Midwest’s dense soil, decided to diversify into a new device called a “tractor.”

Rather than develop its own machine, Deere bought the company that made the Waterloo Boy tractor, establishing this city’s role as a production hub. Before the farm crisis of the 1980s, Deere employed 16,000 in Waterloo. Those numbers were down to about 4,000 before the most recent wave of cuts.

“We’re about as close as America still has to a one-company town,” said Dave Nagle, a local attorney who represented the area in Congress as a Democrat in the late 1980s and early 1990s.

Debt machine

Companies are borrowing record amounts as low interest rates make it cheap to raise funds, which is helping to finance the share repurchase boom. These companies have increased their total debt obligations since the financial crisis while also buying back shares.

Deere has outsourced much of the work once done in its Waterloo plants, he noted, including to some smaller operations in the area that pay much lower wages. “So the wage bracket of the whole community has taken a significant hit,” he said. “We really never came back from the farm crisis.”

Deere’s Waterloo workers are unionized — and proud of their American roots. A sign outside the United Autoworkers local union hall warns visitors to park foreign-built cars out of sight at the back of the lot.

Union president Tom Ralston said Deere offered laid-off workers generous support — as well as the opportunity to get retrained or go back to college for up to two years through a federal grant that covers all costs, including commuting in some cases. “But at the end of the day,” he said, “it’s hard to be laid off and out of work.”

Happel agrees. He came to Deere after he got laid off from a local printing company during the depths of the last recession. Deere was one of the few places hiring at the time, and he thought he landed well. He figured he might eventually retire from there, like many of members of his extended family.

But the stress of that previous layoff still haunts him. He was having troubles in his marriage at the time, he said, and the “financial pressures of that definitely added to them.” The couple divorced in 2010.

He initially ruled out going back to school after Deere cut him, he said, because he knew it would mean at least two years of financial hardship — and he worried what that would do to his current relationship (he’s now engaged to be married) and his children.

His fiancée’s daughter lives with them, and his own three teenagers split their time between his home and their mother’s. All he could see were mounting bills. His oldest daughter heads to college in the fall, he said, and they have no savings set aside for that.

“We’re meeting with a financial adviser this week on that,” he said, after settling into a booth at a diner across the street from the University of Northern Iowa’s starkly modern campus, just a few miles up the road from Deere’s transmission plant.

Happel is now studying at the University of Northern Iowa to become an actuary — someone who helps insurance companies and others measure and manage risk and uncertainty.

COMMAND CENTRAL: Deere, with headquarters in Moline, Illinois, has spent $12.33 billion on share buybacks since 2008. REUTERS/Eric Thayer

A study this year by consultants Towers Watson found that pensions accounted for 33 percent, or $1.14 trillion, of total assets of the world’s 100 largest alternative asset managers.

He still worries. His fiancée is an information technology specialist for an insurance company. A few days earlier, he said, she was called in for a meeting where the company announced cutbacks. Her job is safe, he said, “but it’s a scary thing.”

He paused for a moment, and then asked: “We’re not supposed to be in a recession now, are we?”

Many laid off Deere workers end up across town, at the Displaced Worker Transition Center — a glass-walled building on the edge of Waterloo’s community college campus — where counselors help Deere workers pilot their retraining or college options.

Longtime Deere workers said it can be hard to jump into other factory jobs. Other local employers know that the workers— who can be recalled to their old jobs for a period equal to however long they worked there — are unlikely to stick with lower-paying jobs if Deere beckons them back. For that reason, some employers refuse to even consider Deere workers for job openings.

Robbie Hadaway, who was laid off in April, now works as a counselor at the displaced worker center. “I just think they could have impacted fewer people's lives — if they'd done a better job of projecting sales," he said.

Deere said the last six years have seen the most rapid fluctuation in demand for its products in the company's history. "Recently, there have been layoffs as Deere balances the size of its manufacturing workforce with market demand for products," said Ken Golden, a Deere spokesman. "Even so, Deere employs several thousand more people today than in 2009."

When local employers slash jobs, the hardships of people like Happel and Hadaway reverberate through the entire community.

Michelle Weidner, Waterloo's chief financial officer, said the town never fully recovered from the massive 1980s downturn in the U.S. farm economy. The town gets most of its income from property taxes, which tank when there are big layoffs and a sudden rush of people trying to sell houses at the same time. The latest cuts at Deere have yet to hit their budget, she said, "but we know it is coming."

The town has shed a few fire and police personnel as it absorbs the impact of new tax rules mandated by the state, which limit how much they can collect on property taxes from businesses. The library has maintained hours, Weidner said, but it's "become a very heated budget conversation every year." The library now gets by with the help of donations and bequests to help preserve services.

The town contributes to teacher pensions, as well as those for about half of the town's employees through the Iowa Public Employees' Retirement System, or IPERS, which manages retirement funds for public employees throughout the state.

IPERS owns two bonds sold by Deere's financing arm in 2012, part of the $28 billion fund's allocation to lower-risk fixed income investments. The fund also invests 11 percent of its portfolio in private equity and debt, and 5 percent in higher-yield, high-risk credit such as junk bonds.

It has reduced the weighting of publicly traded stocks to 41 percent from 48 percent in 2005.

That pattern has been repeated at many pension funds. A study this year by consultants Towers Watson found that pensions accounted for 33 percent, or $1.14 trillion, of total assets of the world's 100 largest alternative asset managers.

Corporate debt rises along with share repurchases

U.S. companies are selling record amounts of debt, in many cases to help finance share repurchases. Pension funds, which are struggling to meet aggressive investment targets, are helping to finance the share buybacks by increasing investments in debt and alternative investments, even as they sell stocks.

"Pension funds are the single most important investor base," said Oliver Wriedt, co-president of CIFC Asset Management, which has $14.2 billion under management and specializes in corporate loans.

Cities and states across the country have been cutting jobs and services as they devote more money to pension plans. Illinois, which is more than $100 billion behind on its obligations, is in the worst shape with a funding ratio of assets to liabilities of only 39 percent. It is followed by Kentucky, Connecticut and Alaska.

Mr. Reynolds, the market strategist at New Albion Partners, said: "There is a cash call on cities and towns. Instead of hiring cops or teachers, more money gets diverted to the pensions from the city."

The hunt for higher returns can make a pension fund more vulnerable to losses if markets seize up. Their recent emphasis on leveraged investments – those made with borrowed money to boost potential returns -- can create contagion across markets because fund managers often need to sell assets to meet margin and redemption calls.

Illiquid debt can also pose dangers when fund managers face a wave of redemptions. Just this month, a Third Avenue Management LLC fund that invested in risky and illiquid loans collapsed, leading to losses across the junk bond market as investors fretted over whether the damage would spread.

Based on similar concerns, some pensions have switched out of higher-risk strategies. That's what the San Diego County pension fund did this year, only a year after boosting leverage and investing in less liquid assets.

“We’ve gone from a levered position to an unlevered position,” said Stephen Sexauer, chief investment officer at the fund, who was hired in May to reallocate the pension’s resources.

Egli said she is not worried about the durability of IPERS. She taught and still lives in Waverly, Iowa, about 21 miles north of Waterloo, and she said her town weathered both the recession and a natural disaster that made life tough for everyone. In 2008, a flood inundated the area – damaging 700 homes and 100 businesses.

Wage increases were meager to nonexistent for nearly five years, said the 56-year-old, and teachers had to pay more for their insurance. There were also changes to the retirement plan that meant slightly smaller checks for retirees like her. One change: The pension switched from calculating retirement pay based on the average of her three highest-earning years to the five highest, which nudged down the number.

“But my sense is that IPERS has done a really good job,” she said. “They took a little bit more from us to be sure they could cover it.”

She’s right. The IPERS pension is 84 percent funded — up from a low of 80 percent in 2011, though it remains below the 89 percent level it was at a decade ago.

Egli is secure. Her husband, a self-employed attorney, is still working and she now substitute teaches about half of the school days each month.

Her cousin is having a tough time making ends meet. Happel will collect unemployment insurance as long as he is enrolled in classes, but the $400 a week he receives is only a fraction of what he earned at Deere. The family has cut out extras: no movies, no dinners out. He dipped into his 401(k) retirement savings account to pay off credit cards, but notes ruefully that those card balances are now drifting back up as he scrambles to cover expenses.

Being part of a big family eases the strain. His family still owns the 1,200-acre farm that was homesteaded by his great-grandfather and is now operated by his father and brother. “I go over there when they need a hand,” he said. “That extra money helps, but it doesn’t get us caught up by any means.”

An earlier version of this article incorrectly attributed Deere & Co’s expansion into tractors to the company’s founder.

Additional reporting by David Gaffen and Sam Forgione.

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The Cannibalized Company

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