THE NEED TO REFORM CEO PAY

By Steven Clifford

Steven Clifford is the author of *The CEO Pay Machine*. He served as CEO for King Broadcasting Company from 1987 to 1992 and National Mobile Television from 1992 to 2000.

He has been a director of thirteen public and private companies. He holds a BA from Columbia University and an MBA with Distinction from Harvard Business School.

I was a CEO for 14 years and have served on thirteen corporate boards. A few of these boards asked mm to chair the compensation committee. These were not S&P 500 companies, but used same pay system ands hired the same executive compensation consultants and used the same CEO pay system as the larger companies.

As I saw this pay system at work I began to think it didn't make sense. It overpaid the CEO but that was a minor problem. Worse, the annual bonuses created perverse incentives and pushed the CEO in wrong directions. They compelled a short-term focus.

Bonuses motivated the CEO to concentrate on the metrics that generate the bonus. But as the same time bonuses limited curiosity, creativity, and innovation, and pleasure in a job well done-- the very things that make people perform at their best

To convince my fellow board members throw out this pay system, I began to do research. I concluded that this CEO pay system harms the companies that use it, impedes economic growth and is a principal driver of rising income inequality.

I believe in free markets and capitalism with a light regulatory touch to assure free markets. I hold that this is the best economic system known today. I criticize CEO pay because it has nothing to do with free markets and is a threat to robust capitalist economy. This system enriches the insiders who manage it--corporate executives, board members and executive compensation consultants. It swindles everyone else.

American corporations celebrate free markets, but dismiss them when paying CEOs.[*] To set CEO compensation, Corporate America applies a rigged, opaque, and self-serving internal method that has nothing to do with supply and demand.

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[*]In this paper, "CEOs" refers to the CEOs of the S&P 500, the 500 largest publicly traded companies in America, or the nearly identical Fortune 500.

CEO pay averaged $18.9 million in 2017, a 17.6% increase over 2016.[1] But athletes and movie stars also make a lot of money. Why pick on CEOs?

Because the market sets compensation for athletes and movie stars but not for CEOs. Teams and movie studios bid for athletes and movie stars because their skills are portable. LeBron James would improve any NBA team and Meryl Streep any movie.

Most CEOs would not improve another company because their competence rests on knowledge of a single company—its finances, products, personnel, culture, competitors, etc.—and a single industry. Such knowledge and skills are best gained working within the company; they are not worth much outside the company.

Corporate boards understand this. Three-quarters of corporate directors believe internal candidates are better than external ones.[2] Internal promotions account for three-quarters of all new CEOs.[3] Moreover, CEOs hired from the outside are twice as likely to be fired as opposed to internal promotions.[4]

For all these reasons, companies rarely bid for an outside CEO. Less than 2% of Fortune 500 CEOs were previously a public company CEO.[5] CEO jumps between large companies happen about once a year.[6] And when they jump, they usually fail; outside hires are twice as likely to be fired than internal promotions.[7]

Without an auction market to guide them, almost all large companies have adopted the rigged CEO pay system developed by compensation consultants. The practices embedded in the system display a superficial logic, but in combination guarantee runaway CEO pay.

The first step is to select a peer group of supposedly comparable companies and then base pay on what these companies pay their CEOs.

You will be shocked to learn that firms select peers with highly paid CEOs. Researchers have found that "compensation committees seem to be endorsing compensation peer groups that include companies with higher CEO compensation, everything else equal, possibly because such peer companies enable justification of the high level of their CEO pay."[8] Another study noted "significant structural bias in the selection of compensation peers."[9] Consider the peer group for UnitedHealth Group when its CEO was the highest paid in the United States. This peer group included American Express, Apple, Bank of America, Cisco, Citigroup, Coca-Cola, Costco, Dow Chemical, General Electric, Goldman Sachs, and Google, and we are only one-quarter of the way through the alphabet.

Before joining UnitedHealth Group, this CEO had worked only at one accounting firm. With no applicable industry experience, American Express, Apple, Bank of America, Cisco, and the rest would never consider hiring him as CEO. Whatever these so-called peers paid their CEOs is totally irrelevant.

American companies virtually never include foreign companies, even their fiercest competitors, in their peer groups, as this would dramatically lower CEO pay.[10] The high level of CEO pay in America is not a consequence of a modern, globalized economy. Other advanced economies function without bestowing vast wealth on CEOs. In America, the ratio of CEO-to-average-worker pay (CEO pay ratio) is 312 to 1.[11] In Japan it is 16 to 1.[12] It's 48 to 1 in Denmark.[13]

The adoption of peer groups was driven neither by a coherent theory, nor a compelling philosophy, nor demonstrable effectiveness. It was blessed neither by academic studies nor industry conferences. It did not reduce costs. It increased them.

Why did the use of peer groups to set CEO pay quickly achieve ubiquity? Because CEOs and boards saw it was in their self-interest. CEOs got more money and boards could hide behind supposedly objective data assembled by third-party experts.

Having selected a group of highly paid peers, the next step is to rank the CEO within the group, on the theory that excellent companies should pay more than lousy companies. Apparently, directors assume that any company that would invite them on the board must be first-class. Every board on which I've served or researched ranked itself, and therefore its CEO, at the 50th, 75th, or 90th percentile of the group.[14] Rankings below the 50th percentile almost never occur.[15] The net result of such ranking is a corporate Lake Woebegone where all CEOs are above average.

CEOs need not achieve anything to be benchmarked at the 75th percentile. The highest paid CEOs in 2010, 2011, 2012, 2013, and 2014 did not, and did not have to, perform better than 75% of their peer group; they were pegged at the 75th percentile based upon the board's presumption that they were a swell company.[16]

While peer groups and benchmarks are the foundation of the pay system, they produce only a *target* for CEO compensation. This target is then transformed into actual compensation by applying bonus metrics and bonus ranges. Typically these are a set of metrics, such as earnings-per-share (EPS), cash flow, beating a budget, or total shareholder return. In any given year, a CEO may receive multiple short-term and long-term bonuses, most with a range between the maximum and minimum bonus, a complex, and at times, divergent set of performance criteria.

The CEO is well positioned to negotiate easy bonus arrangements as he controls the company's information and planning systems, while the board, lacking staff and institutional memory, gets most of their information through the CEO.[*] Even if he misses targets, he runs the books and exercises accounting discretion to increase earnings.

A CEO who beats performance goals may make two to three times his target compensation. And they often do. For example, the highest paid CEOs in 2010 and 2011 had compensation targets of $9.1 and $20 million and actual compensation of $102 and $145 million.[17]

Such enormous CEO paydays are then fed back into the peer groups for other CEOs, increasing their compensation. In turn, their higher numbers get fed back into the first CEO's peer group generating still another increase. Since 1978, these annual rounds of CEO leapfrog have produced a 1,000% inflation-adjusted increase in CEO pay. During the same period, the median real wage for American males has declined.[18]And the CEO pay ratio has grown from 26 to 312.[19] America's most respected institution, the U.S. military, functions effectively with a CEO pay ratio of less than five.

Businesses are supposed to control expenses. CEO pay is one of the few that the board directly manages. Why don't they ignore what others pay CEOs and ask if another company is likely to bid for his services? If no one else is interested, why give more than the percentage increase that most other employees receive? In the unlikely case that another company may pursue him, the board can apply cost/benefit analysis by weighing the odds and cost of his leaving against the additional pay to keep him. This is a simple task compared to many complex business decisions.

Directors don't control CEO pay because it is not in their self-interest.

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[*]Avoiding the awkward repetition of "he or she," I will use the male pronoun when referring to CEOs since 95% are men.

The board wants to keep the CEO happy. He is the captain of the team, is often their friend, and may have invited them to join the board. Other CEOs and ex-CEOs usually constitute a majority of the board.

The CEO negotiates for himself while the directors negotiate for the shareholders. The CEO pockets what he gets, but the directors pay with the shareholders' money, not their own, a recipe for an uneven negotiation.

Director and CEO compensation are highly correlated and typically influenced by the same compensation consultant. With annual director fees averaging $288,909 why balk at a big raise for the CEO? You are likely to get one yourself next year. And you won't be asked to join other boards if the word gets out that you are tough on CEO pay.

Directors have scant incentive to rock the boat and disturb board congeniality by resisting CEO pay increases, especially when they can hide behind supposedly impartial third-party consultants. Though a vocal critic of CEO pay levels, even Warren Buffett admitted that he has voted for compensation plans with which he disagreed.[20]

Directors know they cannot be personally liable no matter how much they pay the CEO. The "business judgment rule" gives the board broad discretion.[21] Then there is safety in numbers. Directors can reassure themselves that they are doing precisely what all other boards do, and even rationalize that the profligacy of those other boards created this problem. Those boards acted irresponsibly, established ridiculous CEO pay levels, and left us with no choice but to match them.

Directors would deny that they are shills for the CEO and explain that the big bucks serve as "motivation" and justified by "pay for performance." There is no evidence to support these claims.

CEOs are intrinsically highly motivated people. This is how they got the job. The pay system can only channel this motivation. Today's system misdirects it toward short-term achievements instead of long-term growth and shareholder satisfaction.

At the CEO level, not only are immense bonuses unnecessary, they are counter-productive. "There is no evidence that massive financial incentives attract the best talent," says one expert on this issue. "[They] fill up your entire thinking space, preventing you from focusing on other things or being open to ideas."[22] Other research confirms that while financial incentives can be effective for simple, repetitive tasks, they tend to decrease motivation and performance for complex jobs such as managing a large company.[23]

Though bonuses are useless or perverse as a motivational tool, corporations are still wedded to the concept of "pay for performance." According to most company proxy statements, this is the first principle of executive compensation. But they have never been able to make "pay for performance" work. Over long periods, the more a company pays its CEO, the worse shareholders fare.[24] Companies that overpay their CEOs are usually poor investments. This is confirmed by many recent studies.[25]

Why does outsize CEO pay lead to poor performance? The millions that companies waste on executive pay is a small part of the cost. In addition, colossal CEO pay generates huge hidden costs. It hurts companies when CEOs focus sharply on goals that can earn them a bonus and ignore everything else or embark on risky business strategies because CEO stock options give them a big upside but no downside.

The effects on employee morale are much more expensive.[26] When the CEO makes more before lunch than you do in a year, it is hard to be inspired by his rallying cry, "There is no I in team."

However, the short-term thinking that the pay systems fuels is its most costly effect. Consider stock buybacks.

The average CEO serves only 4.7 years, receives 85% of total compensation in equity awards, and typically cashes out soon after vesting. Moreover, since stock price is often a metric that drives bonus levels, CEOs have a compelling incentive to push up the stock price.

There are two paths toward this. The hard path is to beat the competition by developing new products, training and fairly paying the workforce, employing new technology, increasing productivity, providing excellent customer service, and controlling costs, etc. The easy path is to buy back your own stock.

In 2018 S&P 500 buybacks topped $800 billion, 75% of earnings.[27] Since 2016, dividend plus buyback have consumed all S&P earnings leaving nothing for reinvestment.[28]

According to accepted finance theory, buybacks make sense only when a company has excess cash, poor investment opportunities, and a stock below its "intrinsic" value. But flush with cash from tax cuts, corporations announced record buybacks in 2018 and 2019 as stocks soared to all time highs.

Buybacks provide only a one-time EPS (earnings per share) boost by reducing the number of shares outstanding. Sound investments can generate decades of gains. Between 2008 and 2015, McDonald's allocated about $18 billion to stock buybacks. The reduction in shares outstanding generated a 4.4% increase in EPS. However, had McDonald's invested this amount at a measly 2.3% annual return, its EPS would have increased more.[29] The theory that business executives will allocate capital efficiently breaks down when it is in their self-interest not to do so.

But the greatest damage from CEO pay falls not upon the companies themselves, but the entire economy.

Income inequality in America has risen sharply since 1980. Economists point to multiple causes including globalization and competition from low wage countries, technological changes that reward the highly skilled, the decline of labor unions, tax cuts and other conservative economic and tax policies, free market worship and the rise of winner-take-all economics, and corporate cultures that place stock price and earnings above employees.[30]

All of the above may contribute to inequality. However, the proximate cause is quite simple. The jump in inequality is due to a small number of people, mostly business executives, who make huge amounts of money. They are the top 0.1% who averaged $6.4 million in income in 2012.[31] The 0.1%, 160,000 households, hold 22% of the nation's wealth, as much as the bottom 90%.[32] The 0.1% share has doubled since 1995.[33]

You might be surprised to learn that the majority of the 0.1% are not athletes, movie stars, and heiresses. CEOs and other business executives constitute over three-fifths of the top 0.1%.[34] As Noble Prize-winning economist Paul Krugman puts it, "Basically, the top 0.1% is the corporate suits, with a few token sports and film stars thrown in."[35]

Whether increasing inequality helps or hurts the economy is the wrong question. The right question (and an easier one) is, "Given where America is today, will greater or lesser income inequality spur economic growth?"

From 1950 to 1979, while the CEO pay ratio was relatively constant, per capital GDP increased at 2.6% annually. When the CEO pay ratio surged from 1980 through the first half of 2017, this number dropped to 2.1% a year.[36] The difference may sound small, but over the average American's lifetime, the higher growth rate results in per capita GDP that is 45% larger.[37]

Even the poorest of countries can produce growth spurts for a few years, but sustained growth, such as the United States and western European countries enjoyed from the end of World War II through the mid-70s, is rare because it's much easier to ignite growth than to sustain it.

The International Monetary Fund (IMF) demonstrated that relatively equal income distribution was required for sustained economic growth.[38] "A 10% decrease in inequality increases the expected length of a growth spell by 50%. The effect is large, but is the sort of improvement that a number of countries have experienced during growth spells."[39] Relative income equality showed a stronger effect on sustained growth than foreign investment, trade openness, exchange rate competitiveness, or the strength of political institutions.

Income inequality suppresses economic growth by restricting opportunity for a nation's biggest economic asset—an educated, motivated, and competent workforce. According to a study by the Organization for Economic Co-operation and Development (OECD), income inequality curtails growth "by hindering human capital accumulation. It undermines education opportunities for disadvantaged individuals, lowering social mobility and hampering skills development."[40] The OECD found that the 21 developed countries would have increased their GDP by 8.5% over the past 25 years if they had not experienced increased income inequality.[41] If an 8.5% loss in GDP does not sound severe, recall that the United States' GDP loss during the Great Recession of 2008–2009 was 4%.[42]

Rising income inequality also hurts growth by increasing crime and incarceration,[43] imposing higher costs on health care and education,[44] and leading to political decisions, such as biased tax and regulatory policies[45] and making the economy more vulnerable to economic shocks.

Finally it erodes trust. Americans recognize the importance of law to a flourishing economy, but trust is even more important. Trust is the lubricant of the capitalist engine.[46]

Shareholder "say-on-pay votes" have ignored the structural CEO pay problem and addressed only the most outrageous CEO pay packages. The failure rate so far in 2019 is 1.2%.[47]

America's method of paying CEOs is both corrupt and corrupting. It is rigged by corporate insiders and has nothing to do with free markets. It neither effectively motivates nor reward CEO performance. It harms companies, employees and the American economy. To date shareholder "say-on-pay" votes have When CEOs and corporate directors neglect their fiduciary duties to the detriment of almost everyone else, it is time for government to exercise regulatory oversight.

~~I support all legislation that would help constrain excessive CEO pay and buybacks so therefore I am in favor of HR XXX, XXX and XXX.~~

I support all legislation that would help constrain excessive CEO pay and buybacks so therefore I am in favor of legislation to require discloser of information first, on pay raises made to executives and non-executive employees , second on human capital management and third to study mandatory disclosure on stock repurchases.

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[1] Lawrence Mishel and Jessica Schieder, "CEO Compensation Surged in 2017," Economic Policy Institute, August 16, 2018, https://www.epi.org/publication/ceo-compensation-surged-in-2017/.

This study included gains on the exercise of stock options in CEO pay. Were these excluded, CEO pay would have averaged $13.3 million.

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[9] "Compensation Peer Groups at Companies with High Pay," IRRC Institute, June 2010, http://www.irrcinstitute.org/pdf/Final-Compensation-Peer-Groups-at-Companies-with-High-Pay_June2010.pdf.

[10] Tellingly, when companies compare performance against others, they almost always ignore their carefully selected peer group. Instead, they use a broad market index or some internally prepared bogey that they almost always exceed. Weighted for market capitalization.

[11] Mishel and Schieder, "CEO Compensation Surged."

[12] Zaid Jilani, "Average Japanese CEO Earns One-Sixth as Much as American CEOs," ThinkProgress, July 8, 2010, http://thinkprogress.org/politics/2010/07/08/106536/japanese-ceo-american-sixth/.

[13] Gretchen Gavett,"CEOs Get Paid Too Much, According to Pretty Much Everyone in the World," *Harvard Business Review*, September 23, 2014, https://hbr.org/2014/09/ceos-get-paid-too-much-according-to-pretty-much-everyone-in-the-world/.

[14] At the 50th percentile benchmark, the compensation is higher than half the peer group CEOs and lower than half. At the 75th percentile, the compensation is higher than three-quarters of the CEOs in the peer group.

[15] Thomas A. DiPrete, Gregory M. Eirich, and Matthew Pittinsky, "Compensation Benchmarking, Leapfrogs, and the Surge in Executive Pay," *American Journal of Sociology* 115, no. 6 (May 2010), http://www.jstor.org/stable/10.1086/652297.

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[17] Clifford, *The CEO Pay Machine*, 118–154.

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Bonnie Kavoussi, "CEO Pay Grew 127 Times Faster than Worker Pay Over Last 30 Years: Study," *Huffington Post*, May, 2, 2012, http://www.huffingtonpost.com/2012/05/02/ceo-pay-worker-pay_n_1471685.html.

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[21] Board decisions on the size and structure of executive compensation deserve "great deference by the courts." Brehm v. Eisner, Delaware Supreme Court, 746 A.2d 244, 262-263 (2000).

[22] Ruth Sullivan, "Excessive Executive Pay 'Bad for Business,'" *Financial Times*, June 3, 2013, http://www.theglobeandmail.com/report-on-business/careers/excessive-executive-pay-bad-for-business/article12029730/.

[23] *See* Edward L. Deci, Richard Koestner, and Richard M. Ryan, "A Meta-analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation," *Psychological Bulletin* 125, no. 6 (November 1999), http://psycnet.apa.org/journals/bul/125/6/627 and Alfie Kohn, "Why Incentive Plans Cannot Work," *Harvard Business Review,* September–October 1993, https://hbr.org/1993/09/why-incentive-plans-cannot-work.

[24] Professors Michael J. Cooper of the University of Utah, Huseyin Gulen of Purdue University, and P. Raghavendra Rau of the University of Cambridge examined the relationship between CEO pay and stock performance at the 1,500 companies with the largest market capitalization. In the three-year periods from 1994–2013, they found the more CEOs got paid, the worse their companies did.

The top 10% of CEOs in pay returned 10% less to their shareholders than did their industry peers. While these CEOs were paid an average of $21 million a year, the shareholders of these companies received $1.4 billion less than comparable companies with lower paid CEOs. The more CEOs were paid, the worse they performed. The companies in the top 5% in CEO pay did 15% worse, on average, than their peers.

The study also found that the longer CEOs were in place, the worse their firms performed. Cooper says this is because those CEOs are able to appoint more allies to their boards, and those board members are likely to go along with the bosses' bad decisions. "For the high-pay CEOs, with high overconfidence and high tenure, the effects are just crazy," he says. They return 22% worse in shareholder value over three years as compared to their peers."

Susan Adams, "The Highest-Paid CEOs Are The Worst Performers, New Study Says," June 16, 2014, https://www.forbes.com/sites/susanadams/2014/06/16/the-highest-paid-ceos-are-the-worst-performers-new-study-says/#6db264cc7e32.

[25] CEO Pay and Company Performance

- “Companies that awarded their Chief Executive Officers (CEOs) higher equity incentives had below-median returns based on a sample of 429 large-cap U.S. companies observed from 2006 to 2015. On a 10-year cumulative basis, total shareholder returns of those companies whose total summary pay (the level that must be disclosed in the summary tables of proxy statements) was *below* their sector median *outperformed* those companies where pay *exceeded* the sector median by as much as 39%.” “Has CEO pay reflected long-term stock performance?” the author asked. His answer was, “In a word, ‘no.’”

  Ric Marshall and Linda-Eling Lee, “Are CEOs Paid for Performance?” MSCI ESG Research Inc., July 2016, https://www.msci.com/documents/10199/91a7f92b-d4ba-4d29-ae5f-8022f9bb944d.

- An MSCI study of 423 companies found CEO equity awards to be negatively correlated with performance. The lowest fifth in CEO equity awards outperformed the top fifth by nearly 39% on average on a 10-year cumulative basis.

  Ric Marshall, “Out of Whack: U.S. CEO Pay and Long-term Investment Returns, MSCI ESG Research Inc., October 2017, https://www.msci.com/ceo-pay.

- In 2014, the non-profit organization As You Sow developed algorithms to identify overpaid CEOs in the S&P 500. Over the next two years, the 100 most overpaid CEOs companies underperformed the S&P 500 by 2.9 percentage points. The firms with the 10 most overpaid CEOs underperformed the S&P 500 index by 10.5 percentage points.

  “The 100 Most Overpaid CEOs 2018: Are Fund Managers Asleep at the Wheel?,” As You Sow, March 1, 2018, http://www.asyousow.org/ays_report/the-100-most-overpaid-ceos-are-fund-managers-asleep-at-the-wheel/.

- Harvard Professors Lucian Bebchuk and Jesse Fried in their book *Pay without Performance* and subsequent papers have shown that CEO pay is negatively correlated with profitability and market valuation relative to book value. Firms with high CEO pay are not the best performers.

  Lucian Bebchuk and Jesse Fried, *Pay without Performance: The Unfulfilled Promise of Executive Compensation* (Cambridge, MA: Harvard University Press, 2006).

- A 2009 study by researchers at Purdue University and the University of Utah found that the companies with the highest-paid CEOs (the top 10%, adjusted for size and type of company) fall more than 4% behind expected average stock-market returns every year.

Sarah Morgan, "10 Things CEOs Won't Tell You," MarketWatch, July 1, 2011, http://www.marketwatch.com/story/10-things-ceos-wont-tell-you-1309551879312.

- A meta-analysis (a study of 137 prior studies) calculated that performance explained less than 5% of CEO pay.

  Henry L. Tosi, Steve Werner, Jeffrey P. Katz, and Luis R. Gomez-Mejia, "How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies," *Journal of Management* 26, no. 2 (April 2000), doi: 10.1177/014920630002600207.

[26] Academic studies have found that a high CEO-to-worker-pay ratio:

- Hurts employee morale and productivity.

  Jeffrey Pfeffer, "Human Resources from an Organizational Behavior Perspective: Some Paradoxes Explained," *Journal of Economic Perspectives* 21, no. 4 (2007), http://www.aeaweb.org/articles.php?doi=10.1257/jep.21.4.115.

- Can cause high employee turnover and lower job satisfaction.

  Matt Bloom and John G. Michel, "The Relationships among Organizational Context, Pay Dispersion, and Managerial Turnover," *The Academy of Management Journal* 45, no. 1 (2002), http://www.jstor.org/stable/3069283.

- Tends to produce high turnover and low employee morale because the high CEO pay makes other employees feel undervalued.

  James B. Wade, Charles A. O'Reilly III, and Timothy G. Pollock, "Overpaid CEOs and Underpaid Managers: Fairness and Executive Compensation," *Organization Science* 17, no. 5 (2006), http://pubsonline.informs.org/doi/abs/10.1287/orsc.1060.0204.

- Can result in a lower product quality.

  Douglas M. Cowherd and David I. Levine, "Product Quality and Pay Equity between Lower-Level Employees and Top Management: An Investigation of Distributive Justice Theory," *Administrative Science Quarterly* 37, no. 2 (1992), http://www.questia.com/library/1G1-12729185/product-quality-and-pay-equity-between-lower-level.

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[35] Paul Krugman, "But The Top 0.1 Percent Isn't Diverse," The Opinion Pages, *New York Times*, January 15, 2012, https://krugman.blogs.nytimes.com/2012/01/15/but-the-top-0-1-percent-isnt-diverse/.

[36] https://fred.stlouisfed.org/series/A939RX0Q048SBEA.

[37] Real Per Capita GDP was $50,055 in 2014, $28,133 in 1980, $28,618 in 1979, and $13,411 in 1949. http://www.multpl.com/us-real-gdp-per-capita/table/by-year.

[38] Andrew G. Berg and Jonathan D. Ostry, "Equality and Efficiency," *Finance & Development* 48, no. 3 (2011), http://www.imf.org/external/pubs/ft/fandd/2011/09/berg.htm.

[39] Ibid.

[40] OECD Directorate for Employment, Labour and Social Affairs, "Focus on Inequality and Growth," December 2014, http://www.oecd.org/els/soc/Focus-Inequality-and-Growth-2014.pdf.

[41] The Gini index is a widely accepted measure of income inequality. At a Gini index of 0, everyone has the same income. At a Gini index of 1, one person garners all the income. A Gini point equals .01 or 1/100th on the scale between 0 and 1. The OECD study found that "income inequality has a negative and statistically significant impact on medium-term growth. Rising inequality by 3 Gini points, that is the average increase recorded in the OECD over the past two decades, would drag down economic growth by 0.35 percentage point per year for 25 years: a cumulated loss in GDP at the end of the period of 8.5%."

[42] GDP totaled $14.96 trillion at the end of the second quarter of 2008 and fell to $14.36 trillion one year later.

[43] In theory, increased inequality will lead to more crime, especially property crime. If your alternative is dismal poverty, stealing becomes more attractive and prison is less of a deterrent. This theory is supported by empirical evidence. Reviewing 17 relevant studies, Richard H. McAdams, Meltzer Professor of Law at the University of Chicago Law School concluded, "Many studies found a positive relationship between inequality and crime, many found no significant relationship, and virtually no study found a negative relationship." But the great increase in American income inequality occurred as crime rates were decreasing. Were both the theory and the studies wrong? No, because inequality is not the only factor that influences crime. In "What Accounts for the Decline in Crime," researchers determined that the decline in crime was due to three factors: the increased probability of apprehension, a stronger economy, and the aging of the population (a relative decline in 20- to 28-year-old males). They estimated that the crime rate would have dropped dramatically had not inequality increased. "Holding inequality constant at its 1980 level, we could have observed a 55% drop in property crime as opposed to a 17% drop."

Richard H. McAdams, "Economic Costs of Inequality," 2010 University of Chicago Legal Forum 23 (2010), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2649&context=journal_articles.

Ayse Imrohoroglu, Antonio Merlo, and Peter Rupert, "What Accounts for the Decline in Crime?" *International Economic Review* 45, no. 3 [2004], https://www.jstor.org/stable/i282692.

[44] *See The Price of Inequality: How Today's Divided Society Endangers Our Future* by Joseph E. Stiglitz; *Divided: The Perils of Our Growing Inequality* by David Cay Johnston; and *The Divide: American Injustice in the Age of the Wealth* by Matt Taibbi.

[45] *See* Torsten Persson and Guido Tabellini, "Is Inequality Harmful for Growth? Theory and Evidence" (NBER Working Paper No. 3599, January 1991), http://www.nber.org/papers/w3599.

[46] Joseph E. Stiglitz, *The Great Divide: Unequal Societies and What We Can Do About Them* (New York: W. W. Norton & Company, 2015).

[47] https://www.semlerbrossy.com/say-on-pay/