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Key Questions:

- Is the CEO pay process is broken?
  - Do boards pay CEOs too much or too little?
    - Is CEO pay a result of “managerial power” not market outcomes?
  - Do boards pay CEOs for performance?
  - Do we need more regulation?

- Did poorly designed top executive compensation at financial firms fuel the financial crisis?
  - Should pay practices be reformed?

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My answers:

- Do boards overpay CEOs?
  - Depends on whom you are comparing CEOs to.
- Is CEO pay a result of agency / managerial power?
  - CEO pay is more market and technology driven.
- Do boards pay CEOs for performance?
  - The typical CEO is paid for performance.
- Did poorly designed top executive compensation at financial firms fuel the financial crisis?
  - CEO pay does not appear to have played a significant role, particularly relative to other factors.

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What are CEOs paid?

- Two ways to look at pay:
  - Estimated or Ex Ante. What boards give CEOs.
    - » Salary + Bonus + Restricted stock + Expected value of options (calculated using Black-Scholes).
    - » More relevant for evaluating what boards are doing.
  - Actual or Realized. What CEOs actually get.
    - » Salary + Bonus + Restricted stock + Value of options exercised / realized.
    - » More relevant for evaluating pay-for-performance.

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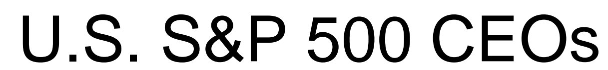
U.S. S&P 500 CEOs



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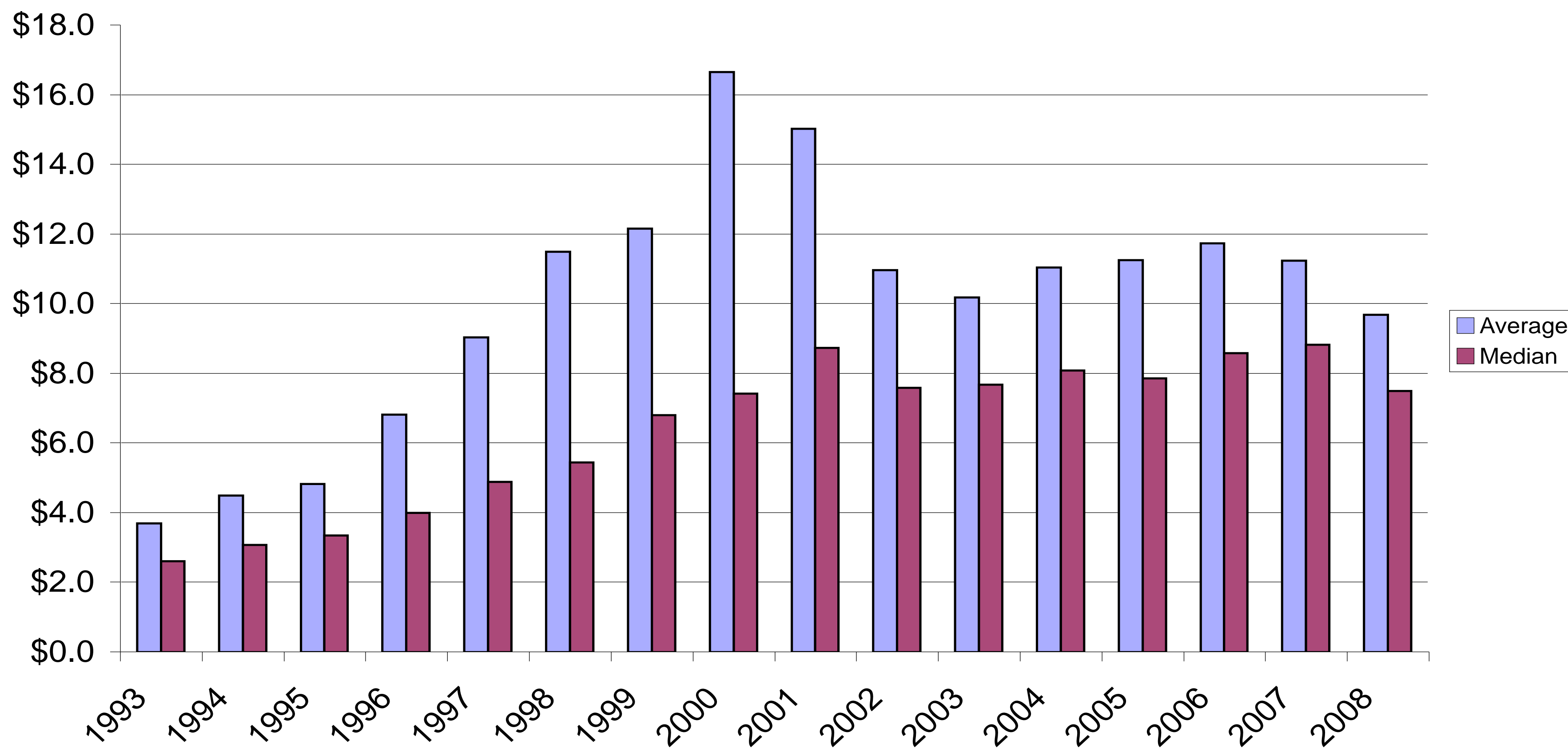
Real CEO Pay (estimated / ex ante)



Source: ExecuComp, Steven Kaplan

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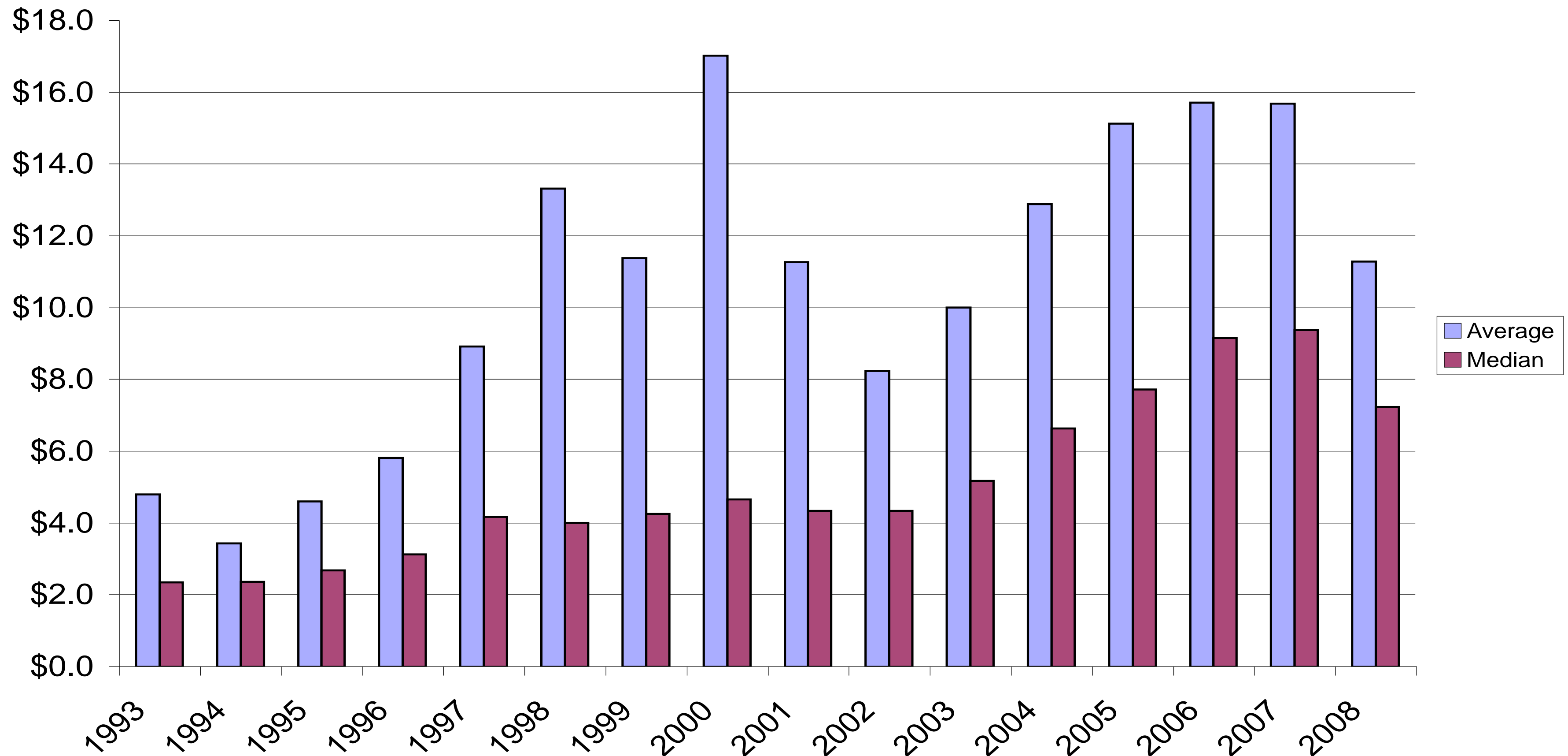
Real CEO Pay (actual)



Source: ExecuComp, Steven Kaplan

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While criticism continues as if CEO pay keeps increasing, in fact, U.S. CEO pay peaked in 2000 / 2001

- For estimated or ex ante pay (measure of what boards believe they have paid):
  - Average pay in 2008 is lower than it was in 1998.
  - Median pay is about the same in 2008 as in 2000.
  - Pay likely to decline again for 2009.

- For actual / realized pay:
  - Average pay peaked in 2000.
  - Median pay higher, but not comparable because of move to restricted stock instead of options.

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Rest of world is catching up / has caught up to U.S.

- Fernandes, Murphy et al. (2008) find U.S. CEO pay premium over other countries has declined significantly from 2000 to 2006.
  - Use ex ante measure of pay.
  - Controlling for firm characteristics, premium drops from 187% to 43%.
  - Controlling for pay structure as well, premium drops from 52% to 12%.

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In the U.S., CEOs are not the only ones who earn a lot.

- Income inequality at the top has increased substantially in the last 15 to 20 years.

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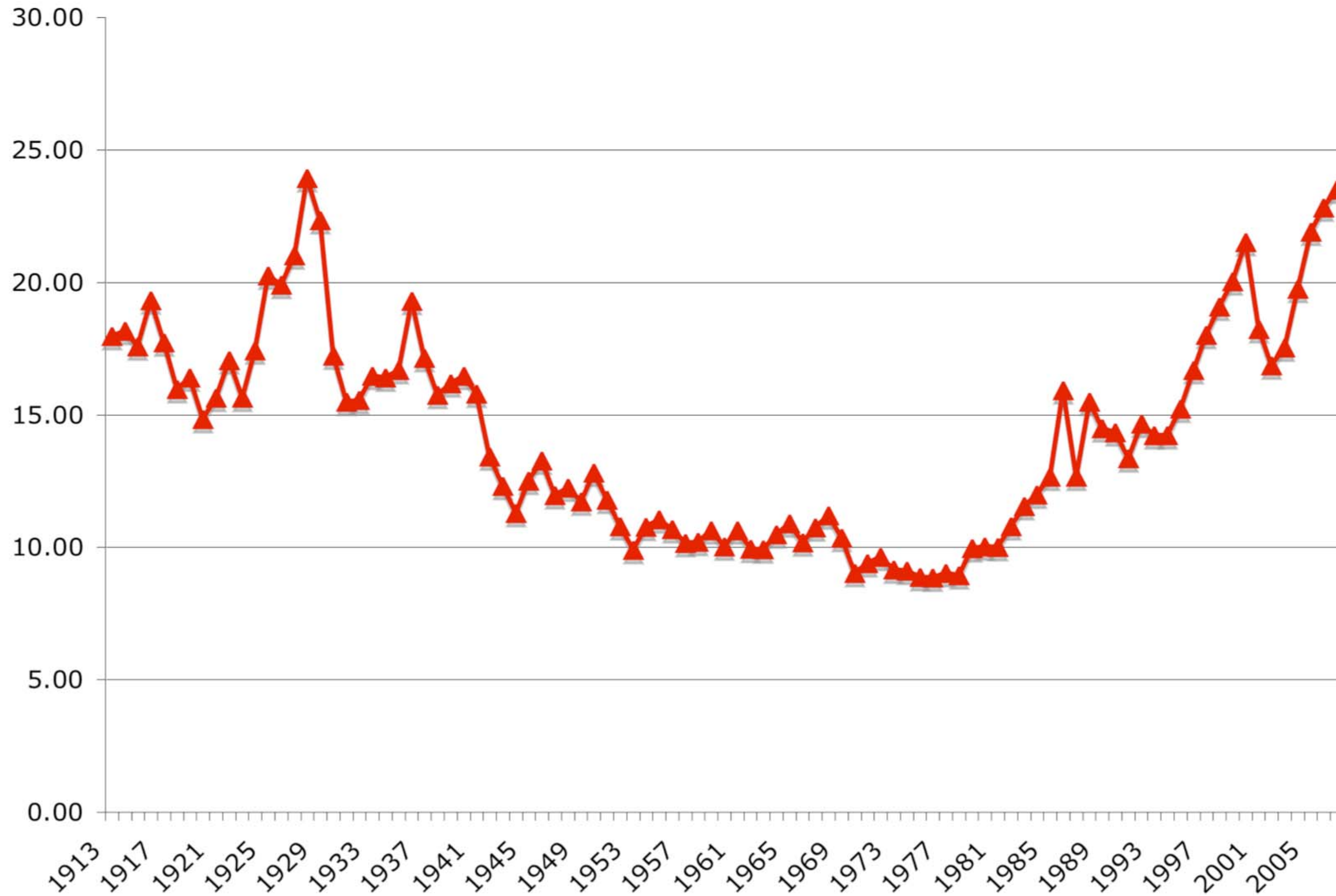

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- Can measure CEO pay as a fraction of the very top brackets.
  - S&P 500 CEO pay to pay of all income in top 1%.

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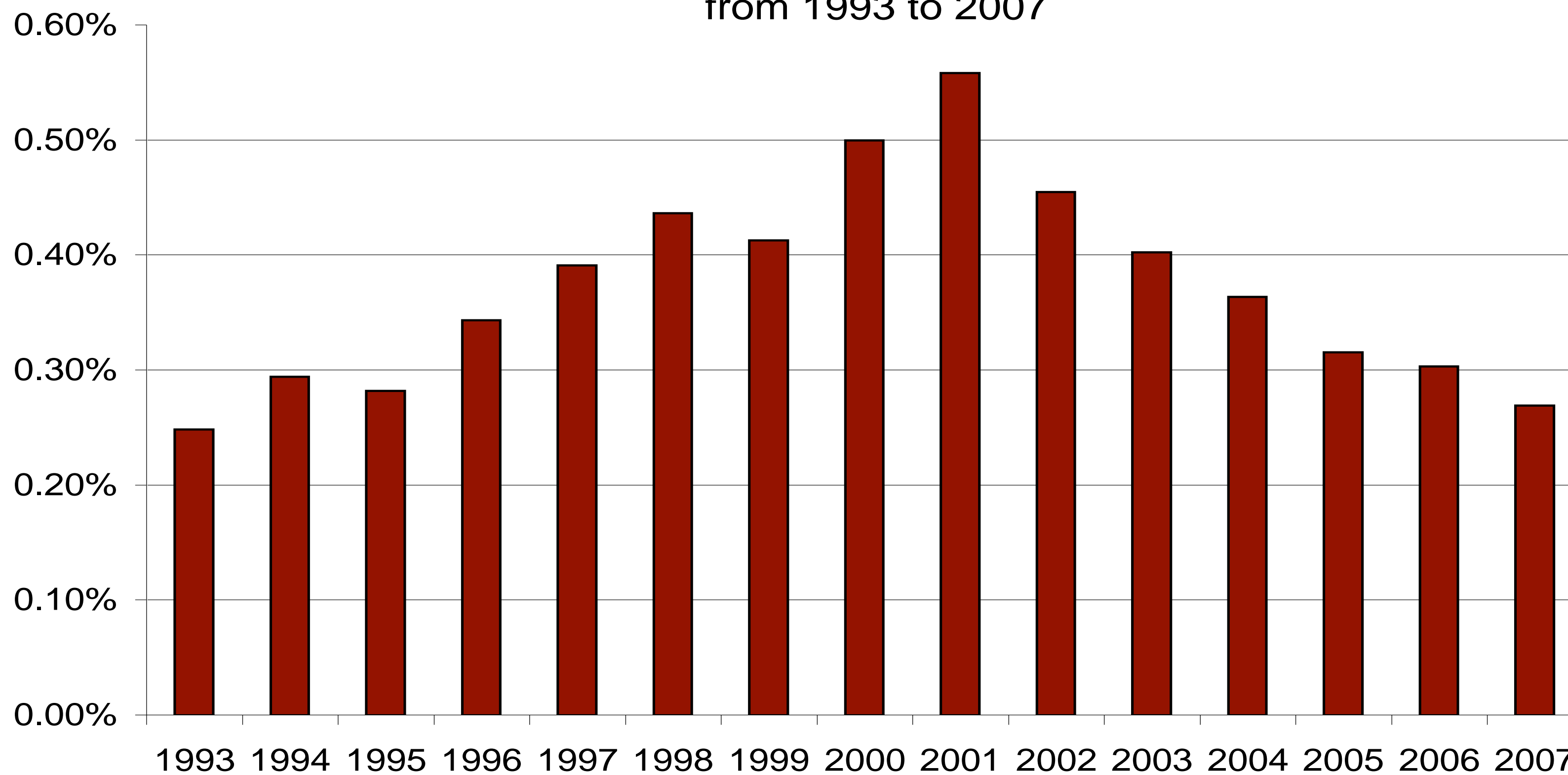
CEO pay (ex ante) represents small fraction of top 1% AGIs And, that fraction has declined since 1993



Source: ExecuComp, Saez (2008), Steven Kaplan

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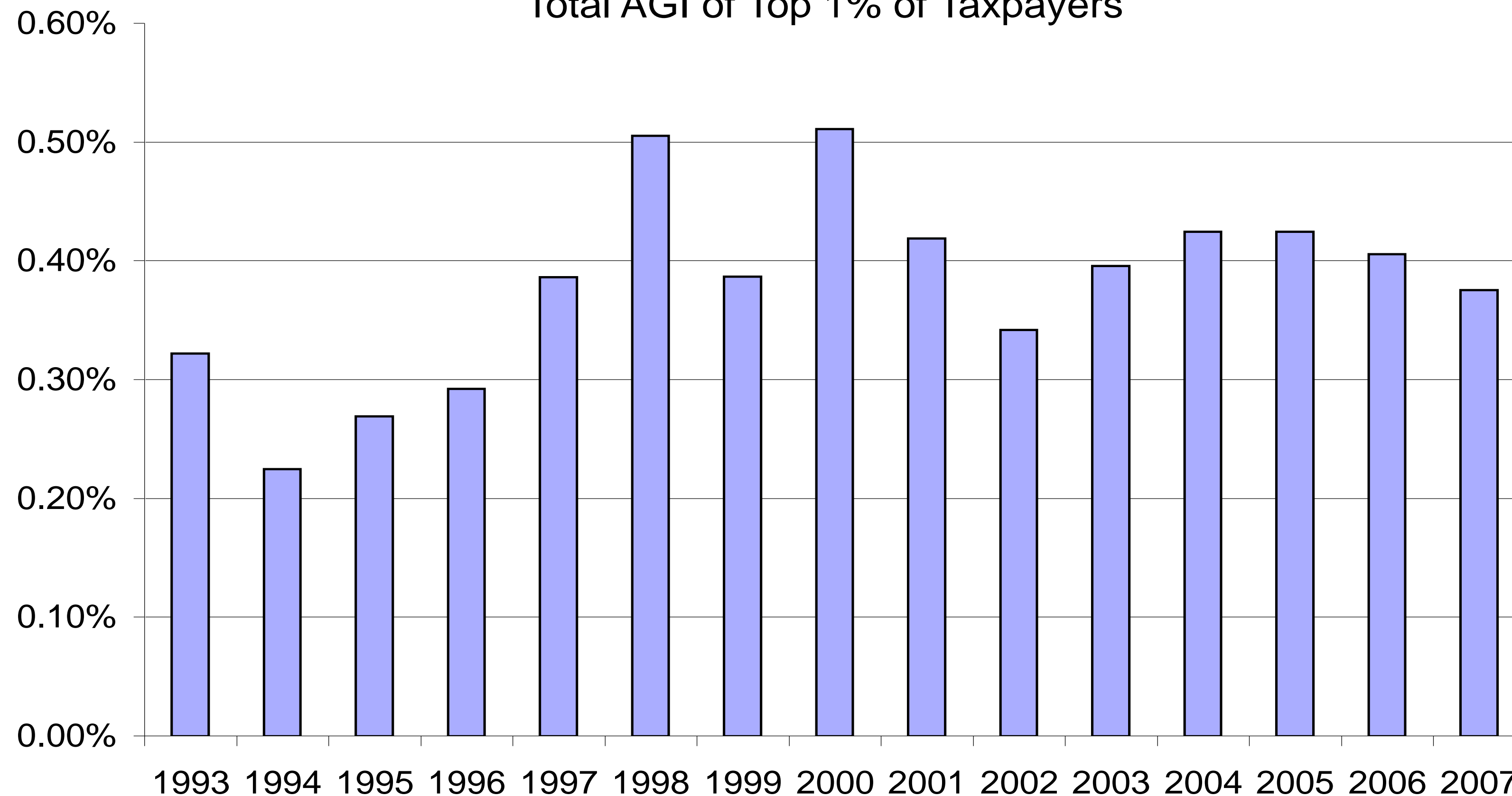
Similar, but more constant picture with realized pay



Source: ExecuComp, Saez (2008), Steven Kaplan

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CEOs are not the only ones who earn more / earn a lot

- Hedge funds:
  - In 2007, top 20 earned over $20 B.
  - In 2007, combined S&P 500 CEOs earned $5.6 B or $7.5 B.

John Paulson	$3,700
George Soros	$2,900
James Simons	$2,800
Philip Falcone	$1,700
Kenneth Griffin	$1,500
Steven Cohen	$900
Timothy Barakett	$750
Stephen Mandel Jr.	$710
John Griffin	$625
O. Andreas Halvorsen	$520
John Arnold	$480
James Dinan	$470
Joseph DiMenna	$450
David Slager	$450
Seth Klarman	$425
Lawrence Robbins	$420
William von Mueffling	$410
Charles (Chase) Payson Cc	$400
Raymond Dalio	$400
Israel Englander	$400

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Not to mention

- Private Equity Investors
- Investment Bankers
- Athletes
- Entertainers
- Lawyers (when they have to disclose):
  - Thomas Donilon, O'Melveny and Myers, $3.9 M in 2008.
  - Eric Holder, Covington and Burling, $3.3 M in 2008.

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What does this mean?

- Pay increases have been systemic at the top end.
  - Other groups -- investors, athletes, lawyers, etc. have seen significant pay increases where no agency problems exist.
    - » Pay is arms length / negotiated.
    - » Increases are at least as large as for CEOs.
  - Hard to understand why one would conclude CEO pay increases are driven by managerial power / agency problems.

- In other words, market forces, not weak corporate governance, appear to have bid up the pay of successful individuals in many sectors.
    - » Note, this is not a fairness argument.

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- Most recent examples: new CEOs of quasi-govt. owned AIG and RBS.
  - Robert Benmosche of AIG - a package worth over $10 M.
  - Stephen Hester of RBS - a package worth up to £ 9.6 M ($15 M).

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– Most plausible explanation:
  - » Technological change and greater scale increase the returns / productivity at the top end.
    - Can manage / apply talent to much greater assets / larger companies than in the past.
    - Can trade large sums much more efficiently.
    - Can access much larger audiences.

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Are CEOs Paid for Performance?

- Compare stock performance of most highly paid CEOs relative to least highly paid CEOs.
  - Look within similar sized firms (because pay increases with size).

- Realized pay is highly related to performance.
  - I.e., there is strong pay-for-performance.

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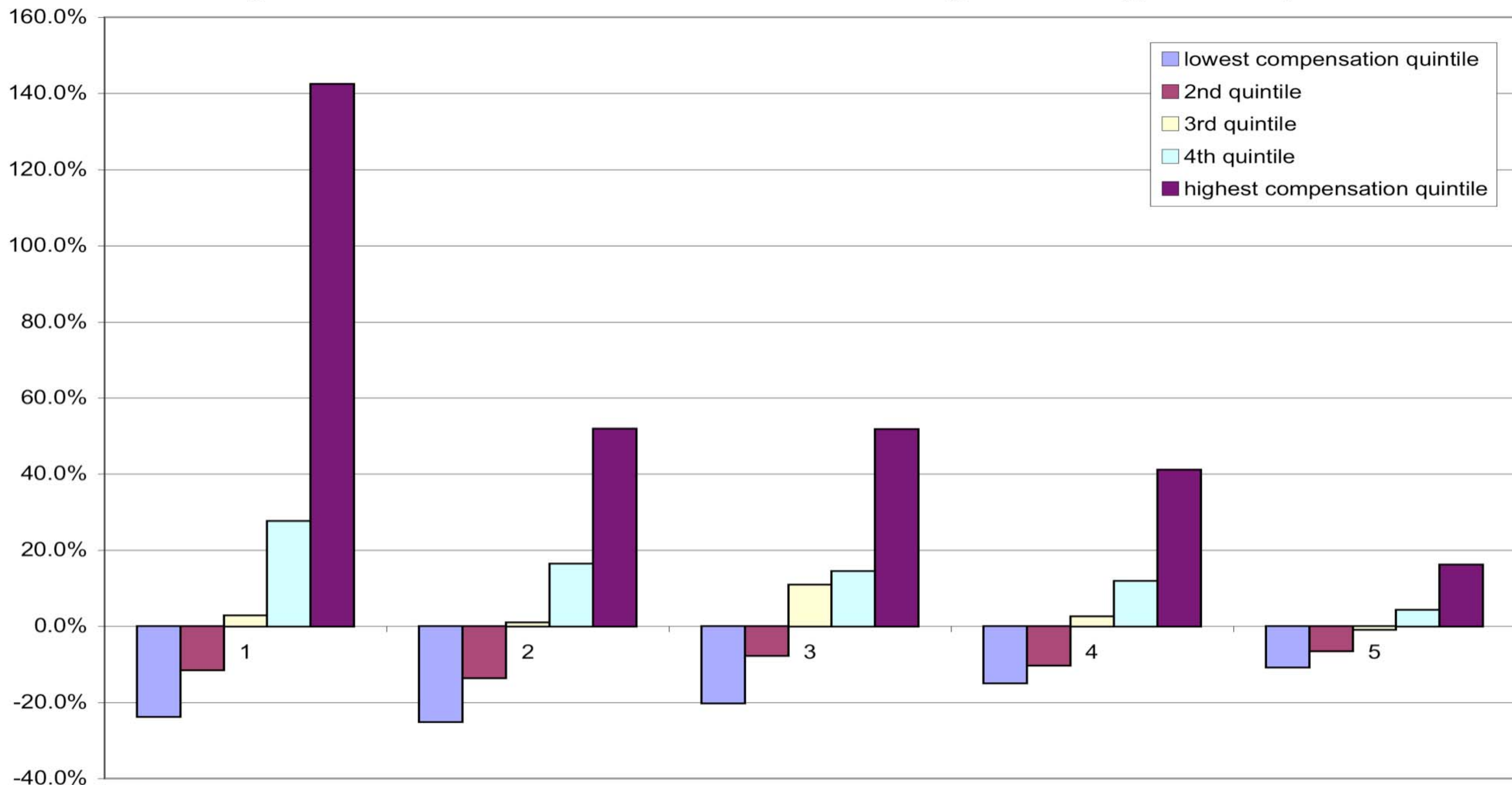

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- Drop in the stock market has made this clear:
  - Equilar (a leading executive pay data provider) estimated that accumulated wealth of S&P 500 CEOs dropped by 43% in the crisis.
  - "There you see a very strong link with the shareholder."
    - » Alexander Cwirko-Godycki of Equilar

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- Some of confusion (or obfuscation) over pay is that critics focus on ex ante or estimated pay rather than realized pay.
  - Much of realized pay = exercise of in-the-money options.
    - » CEOs tend to receive large payoffs when stock up substantially.
  - Ex ante pay may be less related to stock performance.
    - » But that is not the point.
    - » CEOs cannot walk away with ex ante / Black-Scholes values.

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Summary to this point

- Pay of other talented individuals with arms-length compensation arrangements up at least as much since 1994.
  - CEO pay has gone down / been flat since 2000 / 2001.
  - CEOs occupy same or lower place in income distribution vs. 1997.
- Realized CEO pay strongly related to performance.
- Also,
  - CEO turnover up substantially.
  - CEO pay (ex ante) likely to decline again in 2009.
    - » Most pay packages set in spring of 2009 before rally.

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Patterns are consistent with market outcomes

- CEO pay patterns no different from those of others who are highly paid.
  - Hard to see that managerial power / agency / poor governance explains much.

- High pay likely driven by:
  - Market scale, globalization, technology.

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What Does This Mean for Pay Regulation?

- Do not see the need for new / greater regulation.
  - Typical CEO does not appear overpaid.
  - For outliers / egregious examples, shareholders in the U.S. already have solutions:
    - » Can propose say-on-pay resolution.
      - Interestingly, even in these “egregious” cases, most resolutions fail to get 50% of the votes.
      - In April 2008, proposals rejected for Citi, Merrill, B of A.
    - » Market forces have reduced outliers and backdating.
    - » E.g., see Kahan and Rock (2009).

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- Mandated “Say-on-Pay” would impose costs with no benefits.
  - No benefits.
    - » Already have this available in U.S.
    - » After Say-on-Pay in U.K., pay went up more in U.K. than in U.S. From 2002 to 2007:
      - Average CEO pay up by 72% in U.K.
      - Average CEO pay up by 18% in U.S.
        - See Alissa (2009). Also, see Ferri and Maber (2008).
  - But real costs.
    - » Like a physical search at the airport on everyone’s luggage even after the luggage has gone through the x-ray machine with no problems.

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- Greater regulation will further increase attractiveness of alternatives for most talented executives.
  - Private equity funded companies?
    - » See continental Europe.
  - Consulting?
  - Hedge funds?
  - Retirement?
  - Have seen this in financial services.
    - » Hard to find top senior people to work at TARP / govt. run institutions.
    - » Better people have left (and will continue to leave) most compromised firms.

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Did poorly designed top executive compensation at financial firms fuel the financial crisis?

- What forces led to the financial crisis?

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- Excessive credit:
  - Accommodative monetary policy.
    - » Greenspan and Fed kept interest rates low when all indications were they should have been higher.
    - » Strong credit growth = Asset prices up, especially housing.
    - » Similar effects in other countries.
      - Not just US – Ireland, Spain, UK…
  - Global mismatch between desired savings and realized investment.
    - » “Capital Glut.”
    - » Emerging markets and developing countries have lots of $ relative to investment needs.

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- Accommodative regulatory policy.
  - Political system wanted to make housing available to more lower income borrowers (even if they could not really afford it).
    - » Fannie and Freddie mandated to have 56% of loans to lower income borrowers.
  - SEC allowed investment banks to take on too much leverage.

- Financial innovation: Originate-to-securitize.
  - Mortgages pooled together and then sold in the capital market.
  - Then pools broken up into different tranches with different seniority.
  - Based on past returns and housing prices, senior tranches were considered safe.
    - » Broadened market of potential purchasers.
    - » Distributed globally.
  - Ok in stable markets, but problematic in defaulting markets.

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- Rating agencies provided ratings that were too high.
  - Just got it wrong by extrapolating historical housing prices.
  - Just got it wrong by not understanding systemic risk / correlations.
  - Had incentives to get it wrong because fees paid by relatively few issuers?

- Accommodative incentives.
  - Incentives for individuals to package loans.
    - » Up front fees, annual bonuses, etc.
  - Incentives for some banks to make iffy mortgage loans.
    - » Annual bonuses, earnings pressure.
  - Incentives to sell mortgage backed securities.
    - » Annual bonuses, etc.
  - Incentives for individuals to buy loans / mortgage backed securities.
    - » Annual bonuses, etc.

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- Poor risk management at the top.
  - CEOs and top executives of banks did not understand what was going on below.

- BUT, not clear CEO pay / incentives were meaningful part of problem.
  - Fahlenbrach and Stulz (2009)
    - » Study bank CEO incentives in crisis.
    - » No evidence that banks with CEOs with more aligned incentives performed better.
      - Performance not positively related to higher CEO stock ownership.
        - In fact, performance worse for higher ownership.
      - Performance not negatively related to higher option holdings.

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- Several well-known CEOs had a large fraction of their net worth in company stock.
  - » Cayne at Bear Stearns lost almost $1 billion in Bear Stearns stock.
  - » Fuld at Lehman lost almost $1 billion in Lehman stock.
  - » O'Neal at Merrill lost tens, maybe hundreds of millions in Merrill stock.

- Seems unlikely the CEOs knowingly took bad bets.
  - » Crisis would have happened if CEOs:
    - had been paid much less.
    - had been paid all in bank equity.
  - » In fact, financial crisis happened in late 1980s / early 1990s with different pay structures.
    - Citi almost failed then as well.

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Right Solution?

- Do a better job of monitoring bank capital / bank leverage.
  - Set higher capital requirements.
  - Make capital requirements pro-cyclical.
    - » Over reserve in booms.
  - Make some capital contingent.
    - » Put more equity in when system is tottering.
    - » Automatic conversion of long-term debt to equity.
  - Treasury has proposed these changes.

- Do a better job on risk management.

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- Pay regulations for top bank executives counterproductive.
  - Not clear pay regulations will reduce likelihood of next crisis.
  - Pay regulations likely to be inefficient -- one size fits all.
    - » Same for traders and investment bankers.
  - Pay regulations also are susceptible to political incentives for politicians to put limits on pay rather than designing efficient or optimal pay.
    - » Appeal to voter anger.
  - Likely to benefit hedge funds and boutiques.

- That said, does not hurt to encourage banks to defer payouts / impose clawbacks, particularly for traders.

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- TARP provides an instructive and cautionary example.
  - Pay restrictions imposed on TARP banks by Dodd amendment to stimulus package.
  - Clearly problematic.
    - » Best employees leave for unrestricted banks and financial institutions.
    - » Very difficult to hire in top talent.

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Conclusion

- Are U.S. CEOs are overpaid?
  - Pay of other groups has increased substantially and by same order of magnitude as CEOs, **despite the arms-length nature of their compensation arrangements**.
- Is CEO pay a result of agency / managerial power?
  - For the most part, CEO pay is market and technology driven.
- Do boards pay CEOs for performance?
  - The typical CEO is paid for performance.
  - CEOs lost 40%+ of net worth in 2008.
- Did poorly designed top executive compensation at financial firms fuel the financial crisis?
  - They do not appear to have played a significant role, particularly relative to other factors.

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What does this mean for regulation?

- More regulation of CEO pay in general likely to be ineffective, unnecessary or counterproductive.

- More regulation of top bank executive pay will not avert the next crisis, but risks driving talent elsewhere, hurting the banks.
  - There are better choices available to reduce the likelihood of the next crisis.

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