INTRINSIC IMBALANCE:
THE IMPACT OF INCOME DISPARITY
ON FINANCIAL REGULATION

Steven L. Schwarcz

Abstract: As part of a symposium on the administrative law of financial regulation, this article shows that there is a two-to-one income disparity between members of the financial industry and their regulators. When this income disparity—which dwarfs that between other industries and their regulators—is coupled with the complexity of financial products and markets, it creates an information asymmetry that can lead to regulatory failure. Although scholars have long observed the existence of an information asymmetry between regulators and industry due to delays in obtaining information, this income disparity creates an additional, and very different, information asymmetry: one based not on obtaining but on processing information.

I. THE INCOME DISPARITY ................................................................. 3
II. THE RESULTING INFORMATION ASYMMETRY .................................. 7
A. The Income Disparity Makes it Difficult for Regulatory Agencies to Hire .... 8
B. The Difficulty of Regulatory Agencies to Hire Creates an Information Asymmetry.. 13
III. REGULATORY CONSEQUENCES OF THE INFORMATION ASYMMETRY ...................... 15
A. Consequences to Rulemaking ................................................................. 16
B. Consequences to Monitoring ............................................................... 17
C. Consequences to Enforcement .............................................................. 18
IV. ADDRESSING THE INFORMATION ASYMMETRY ............................................ 18
A. Reducing the Income Disparity .............................................................. 19
B. Other Measures .................................................................................... 23
V. CONCLUSIONS .................................................................................. 26

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2 Stanley A. Star Professor of Law & Business, Duke University School of Law, and Founding Director, Duke Global Capital Markets Center; schwarcz@law.duke.edu. I thank Stuart M. Benjamin, Rosa Lastra, Eugene N. White, and participants in a Columbia Law School conference on “The Administrative Law of Financial Regulation” for valuable comments and Julia Boss and Baraem Nah for helpful research assistance.
“When I was young I thought that money was the most important thing in life; now that I am old I know that it is.” Oscar Wilde

From an administrative law standpoint, what, if anything, distinguishes financial regulation from other forms of regulation? In part, the answer is complexity; financial products and markets are already highly complex and becoming increasingly more so.³ But this is only a partial answer because other regulatory spheres, such as environmental and nuclear regulation, can be at least as complex as financial regulation.

This article argues that what further, and more tellingly, distinguishes financial regulation from other forms of regulation is the extraordinary income disparity between regulators and industry employees.⁴ This income disparity—coupled with the complexity of financial products and markets—creates an “information asymmetry”⁵ between regulators and industry that can lead to regulatory failure: the inability of regulators to fully understand, and thus to effectively monitor and regulate, financial innovations that might create systemic externalities.

Part I of this article demonstrates that there is at least a two-to-one income disparity between financial industry employees and their regulatory counterparts. Part II of the article argues that this income disparity makes it difficult for financial regulatory agencies to hire competitively, thereby creating an information asymmetry between regulators and industry. Part III examines the adverse consequences of that information asymmetry to administrative agency rulemaking, monitoring, and enforcement. Finally, Part IV of the article discusses potential responses to the income disparity (and resulting information asymmetry).

⁴ This article focuses on the income disparity, or gap, between individuals with relatively similar backgrounds in terms of education and experience. It does not focus on the overall distribution of income, nor does it focus on earning disparities between individuals with different backgrounds.
⁵ This article uses the term “information asymmetry” broadly, to include an asymmetry in the processing of information. Economists sometimes use the term “information asymmetry” more narrowly, confining it to facts; in that more narrow sense, an information asymmetry would exist only if one party has more or better information than another party (regardless of either party’s ability to process the information).
Scope. This article focuses on financial regulation by administrative agencies. Legislative bodies typically delegate power to administrative agencies to implement statutory law through agency rulemaking, monitoring, and enforcement of compliance. The income disparity discussed in this article is a disparity between the incomes of administrative agency financial regulators and the incomes of employees in the financial industry being regulated.

To some extent, the income disparity is driven by administrative agency budgets. If that were the only limit, an agency might have the flexibility to choose between hiring a smaller number of higher-income employees or a larger number of lower-income employees. In practice, however, this flexibility is somewhat limited. Some administrative agency incomes are subject to per-person maximum compensation caps. Moreover, an agency’s need for some minimum number of employees will ultimately limit its ability to hire a smaller number of higher-income employees.

I. THE INCOME DISPARITY

It is generally recognized that there is an income disparity between government regulators and private-sector employees in regulated industries. U.S. Bureau of Labor Statistics surveys indicate, for example, that federal government pay is around 25 percent lower than private-sector pay for similar jobs. There are various reasons for this differential. Federal

6 See infra notes 9-10 and accompanying text.
8 Gregory B. Lewis & Sue A. Frank, Who Wants to Work for the Government?, 62 PUB. ADMIN. REV. 395, 396 (2002) (discussing the income disparity generally between the public and private sector for similar jobs). Lewis and Frank also state that “economists typically find that similar workers (those of the same race and sex with the same levels of education and experience) earn much more in the federal than in the private sector.” Id. (emphasis in original). If those economist findings are accurate, the impact of the income disparity between the public and the private sector may be even more pronounced for financial jobs than for non-financial jobs.
government workers are generally paid in accordance with the General Schedule or the Executive Schedule as overseen by the U.S. Office of Personnel Management. For each pay grade, there is a maximum compensation cap. Thus, the “public sector is not usually able to compete with the salaries offered by private employers, especially those of highly educated personnel and managers.”

A much larger income disparity exists, however, between financial regulators and private-sector employees of the financial industry. This disparity can be demonstrated by comparing the incomes of representative financial industry workers and government regulators. The U.S. Bureau of Labor reports, for example, that entry-level investment bankers, who are categorized as financial analysts, had a median annual salary of $90,560 in 2012 and a mean annual salary of $111,650. Higher-level investment bankers, who are categorized as financial managers, earned an average annual salary of $160,900. These figures represent salaries but do not account for options and bonuses, which are a prevalent form of additional compensation in

because federal government pay would be more comparable to private-sector pay for similar jobs generally, whereas it would still be more than 50 percent lower than private-sector pay for similar financial jobs. Cf. infra note 34 and accompanying text (making a comparison based on the U.S. Bureau of Labor Statistics survey data).


10 Federal Salary Act of 1967, 5 U.S.C. §5333 (2006) (“New appointments shall be made at the minimum rate of the appropriate grade. . . . may be paid at one of the rates for his grade which is above the highest rate of basic pay being paid to any such prevailing-rate employee regularly supervised, or at the maximum rate for his grade as provided by the regulations.”).


the financial industry.14 Wall Street bonuses averaged $139,940 in 2010.15 Even entry-level investment bankers, with only bachelor’s degrees, earned an average bonus of $55,000 in 2013.16

Contrast these figures with public-sector salary data for reasonably comparable jobs. Although the maximum compensation cap17 does not apply to many federal financial regulatory agencies,18 those agencies are still limited by budgetary constraints.19 As a result, entry-level financial employees of the U.S. Securities and Exchange Commission (“SEC”) are paid only $51,630 in salary.20 Entry-level financial analysts at the U.S. Federal Deposit Insurance

15 Id.
17 See supra note 10 and accompanying text.
18 Some federal financial regulatory agencies are statutorily permitted to set their own pay schedule and therefore are able to offer salaries that exceed the limits of the General Schedule. Thus, the Federal Reserve System, Office of the Comptroller of the Currency, Office of Thrift Supervision, Federal Deposit Insurance Corporation, National Credit Union Administration, and Securities and Exchange Commission are exempt from those limits, although each such agency is still subject to its own internal limits. See e.g., Federal Deposit Insurance Corporation, available at http://www.fdic.gov/about/jobs/2013cgmcxem.pdf (FDIC pay scale); Federal Reserve System, available at http://www.federalreserve.gov/careers/salary.htm (FRB pay scale); Office of Comptroller of Currency, available at, http://www.occ.gov/about/who-we-are/careers/salaries.html (OCC pay scale). For the SEC, no pay plan was publicly available (but see 5 U.S.C. § 4802 for its exemption).
19 See supra note 6 and accompanying text.
20 See http://www.pmf.gov/the-opportunity/compensation/pay-and-promotions.aspx (also observing, id., that even though the SEC has permission to pay compensation exceeding the limits of the General Schedule, new graduates that take part in the employment programs administered for the SEC by the U.S. Office of Personnel Management are graded according to the General Schedule). Even if they hold a Ph.D., such employees are paid only $62,467 in salary. See id. These figures do not account for a supplementary geographical pay that can be higher, including 33% higher for New York City. See http://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/2013/general-schedule/saltbl.pdf.
Corporation ("FDIC") are paid similar salaries.\textsuperscript{21} This contrasts with the twice-as-high salary of entry-level private-sector financial analysts.\textsuperscript{22}

The compensation differential between more senior public-sector and private-sector financial jobs might appear to be smaller: the FDIC, for example, pays its senior policy analysts an initial salary of $145,757,\textsuperscript{23} compared to the $160,900 average salary paid to private-sector financial managers.\textsuperscript{24} However, that differential is probably larger because, in addition to salary, huge bonuses are prevalent in the financial industry,\textsuperscript{25} whereas bonuses are rare and smaller in size within the public sector.\textsuperscript{26} Thus, the real comparison may well be between a senior public-sector total compensation of $145,757 and a senior private-sector compensation of $300,840.\textsuperscript{27} If that comparison is accurate,\textsuperscript{28} it again represents a twice-as-high compensation of the private sector over the public sector for financial jobs.

\textsuperscript{21} See the listing on the official government job board USAJOBS, available at: https://www.usajobs.gov/GetJob/ViewDetails/356173600.  
\textsuperscript{22} See supra note 12 and accompanying text.  
\textsuperscript{23} See https://www.usajobs.gov/GetJob/ViewDetails/356716500.  
\textsuperscript{24} See supra note 13 and accompanying text. I could not corroborate, however, the extent to which public-sector senior policy analysts and private-sector financial managers are perfectly comparable jobs.  
\textsuperscript{25} See supra notes 14-15 and accompanying text.  
\textsuperscript{27} This figure is the sum of the $160,900 average salary paid to private-sector financial managers (see supra note 24 and accompanying text) and the $139,940 average private-sector bonus (see supra note 15 and accompanying text).  
This approximately two-to-one private-sector compensation advantage is mirrored in all of the available data (except at the top compensation levels, where the private sector’s compensation advantage spirals even higher29). For example, private-sector financial examiners who “ensure compliance with laws and regulations governing financial and securities institutions and financial and real estate transactions” earn a mean annual salary of $84,220,30 whereas public-sector financial examiners performing the same type of work earn only $48,500 annually.31 Moreover, the two-to-one advantage shown by the data is probably conservative because the data reflect the recent post-financial-crisis recession period32 whereas private-sector compensation for financial jobs increases even more during financial booms.33

Thus, although federal government pay is around 25 percent lower than private-sector pay for similar jobs generally,34 it appears to be more than 50 percent lower than private-sector pay for similar financial jobs.

II. THE RESULTING INFORMATION ASYMMETRY

This huge income disparity, in which financial regulators earn only (and perhaps less than) half the income of members of the financial industry, makes it difficult for regulatory

29 For example, the Chairman of the Federal Reserve receives an annual salary of $199,700 (see Board of Governors of the Federal Reserve System, available at http://www.federalreserve.gov/faqs/about_12591.htm), whereas the CEO of Bank of America earned an annual salary of $1.5 million and, with the addition of options and bonuses, received $24.8 million in total compensation (see CNN Money, “Big Bank Execs: What They Take Home,” available at http://money.cnn.com/news/specials/storysupplement/ceopay/ (reporting on 2007 compensation)).
32 All of this article’s private-sector financial-job compensation data come from the period 2010-2013. See supra notes 12, 13, 15, 16, & 30.
34 See supra note 8 and accompanying text. The above comparison may even understate the relative impact of the income disparity for financial jobs. See supra note 8.
agencies to hire competitively compared to industry. As explained below, that, in turn, creates an information asymmetry between the two groups.

A. The Income Disparity Makes it Difficult for Regulatory Agencies to Hire

Because of the income disparity, regulatory agencies cannot hire competitively compared to the financial industry.35 Consider, for example, the SEC’s staffing crisis, which is “primarily due to [an] inability to compensate [SEC] employees adequately.”36 With “few exceptions, departing [SEC] employees overwhelmingly cite[d] the higher salaries offered by private sector firms as their primary reason for resigning.”37 Salary was also cited as the major reason for prospective employees declining SEC employment offers.38 Other studies have confirmed this government-salary problem, finding that “too many of the best recruits are rethinking their commitment, either because they are fed up with the constraints of outmoded personnel systems and unmet expectation for advancement or simply lured away by the substantial difference between public and private sector salaries in many areas.”39

Other things being equal, it should not be surprising that people choosing between employment offers will select the offer paying twice as much as alternatives.40 Next examine

37 Id. at 7. Accord, U.S. General Accounting Office, supra note 28, at 6 (“By an overwhelming majority, current and former SEC attorneys, accountants and examiners we surveyed cited compensation as their primary reason for leaving the SEC.”).
40 See generally John W. Boudreau, Wendy R. Boswell, Timothy A. Judge, & Robert D. Bretz Jr., Personality and Cognitive Ability as Predictors of Job Search Among Employed Managers, 54 PERSONNEL PSYCHOLOGY 25, 44–45 (2001); Kevin M. Murphy, Andrei Shleifer & Robert W. Vishny, The Allocation of Talent: Implications for Growth (Ctr. for the Study of the Econ. & the State, Working Paper No. 65, 1990) (observing that a large income disparity may provide a
whether, in choosing between employment by a public-sector regulator and a private-sector firm, other things are truly equal.

There are two relevant frameworks by which to assess human economic decisionmaking in choosing employment. The more general framework is rational choice theory (“RCT”), which assumes that rational people will pursue the greatest net benefits. Although individuals will therefore seek, other things (again) being equal, a higher paying job over a lower paying job, other things will not necessarily be equal when choosing between public-sector and private-sector employment. RCT studies show that that choice can involve differences in workplace values, degrees of risk aversion, reward preferences, and personality types. However, the extent to which these differences outweigh income differentials is inconclusive.

Public sector motivation (“PSM”)—“an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations”—is the other relevant framework by which to assess human economic decisionmaking in choosing between public-

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41 See generally, Steven L. Green, Rational Choice Theory: An Overview (Baylor University Faculty Development Seminar on Rational Choice Theory, 2002).
42 Id. at 4-5 (net benefits meaning benefits net of costs).
43 See id. (noting RTC analysis is premised upon the assumption that individuals choose the preferred alternative).
44 Don Bellante & Albert N. Link, Are Public Sector Workers More Risk Averse than Private Sector Workers?, 34 INDUS. & LAB. REL. REV. 408, [pin-cite] (1981) (implying that a policy of intersectoral equality of pay for comparable jobs would result in an excess supply of workers to the public sector).
sector and private-sector jobs. PSM posits that some individuals will choose to earn less money in the public sector in order to work for the public good.\textsuperscript{50}

Proponents of PSM argue that “effective and well-functioning public organizations are populated by individuals with a sense of PSM, that this sense actively motivates employees in their work, and, implicitly, that such considerations do not motivate employees of private firms.”\textsuperscript{51} Thus, public-sector employees can be motivated by factors other than income,\textsuperscript{52} whereas private-sector employees place a higher value on economic rewards than public-sector employees.\textsuperscript{53}

\textsuperscript{50} Hal G. Rainey & Paula Steinbauer, \textit{Galloping Elephants: Developing Elements of a Theory of Effective Government Organizations}, 20 J. PUB. ADMINISTRATIVE RESEARCH & THEORY [pages] (1999) (referring to a “general, altruistic motivation to serve the interests of a community of people, a state, a nation or humankind.”). Other motivations contrast with PSM, such as psychopathic personalities being drawn to and thriving in turbulent workplaces, such as investment banks. Clive R. Boddy, \textit{The Implications of Corporate Psychopaths for Business and Society: An Initial Examination and a Call to Arms}, 1(2) AJBBS 31 30-40 (2005) (“Corporate Psychopaths are simply the roughly 1% of the population who are certifiably psychopathic and who work in corporations and other business organizations. Unlike the criminal psychopaths of popular imagination these people are not identifiably insane or suffering from mental delusions but are just ruthless, corporate careerists.”). Research has predicted that the incidence of “corporate psychopaths” may be as high as four percent on Wall Street. University of British Columbia, \textit{Corporate Psychopathy: Taking the Walk}, Behavioural Sciences and the Law (2010) (cautioning that this number was extrapolated from a small sample and may not be representative of the private financial sector).


\textsuperscript{52} Sue A. Frank & Gregory B. Lewis, \textit{Government Employees Working Hard or Hardly Working?}, 34 AMERICAN REV. PUBLIC ADMINISTRATION 46, 36-51 (2004). Cf. Josse Delfgaauw & Robert Dur, [Title], 94 J. PUB. ECON. 654, 655 (2010) (arguing that individuals will choose the sector that offers them the highest overall return on ability, and that income is only a minor part of that return).

The reliability of PSM is not, however, free from doubt. Although some studies find that highly educated and more experienced workers are far more likely to choose the public sector, offsetting lower wages with rewards arising from the characteristics of their jobs, other studies find no differences in the relative value of money between public-sector and private-sector employees and that compensation is a decisive factor even for workers with high PSM. One study even finds that public-sector employees value compensation more highly than private-sector employees. Still another study finds that individuals who value income would rather work for the public sector but are more likely to be employed in the private sector.

Even the notion that happiness is a dominant factor when reaching an employment decision is questionable. Recent research shows that individuals would rather pursue a higher paying job making more demands on their time than a lower paying job making only reasonable demands on their time. None of these studies suggest, even implicitly, that PSM should be sufficient to overcome the two-to-one income disparity between financial regulators and members of the financial industry.

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58 Lewis & Frank, supra note 8, at [cite].
60 Further, most research on PSM focuses only on its existence and not on actual job decisions. [Name] Christensen & Bradley E. Wright, Effects of Public Service Motivation on Job Choice Decisions, 21 J. PUBLIC ADMIN. RESEARCH & THEORY 723, 724 (2011). When assessing the impact of PSM on job decisions, it is important to distinguish between public-sector preference...
Moreover, even if PSM were, arguendo, otherwise generally sufficient to overcome that large disparity, the robustness of PSM is questionable in the context of persons interested in finance. Most studies on PSM generalize all public-sector workers, including so-called “parapublic” jobs in education and healthcare. However, because the PSM of parapublic-sector employees is considerably higher than that of employees in other public-sector jobs, those studies unjustifiably skew the PSM of public-sector workers outside of education and healthcare to appear higher than it actually is.

For persons interested in finance, the robustness of PSM is also questionable because those persons, by reason of that very interest, would be expected to inherently favor higher financial incomes. Some financial employees are, by their very nature, materialistic. Many others are taught to “focus on profit and the acquisition of wealth” by the very schools in which they receive their financial education. Moreover, persons interested in finance may be attracted to the more innovative opportunities available in the financial industry to create financial products, in contrast to financial regulatory jobs in which they would primarily monitor the

61 Id. at 204; Perry, 7 J. PUBLIC ADMINISTRATION RESEARCH & THEORY 181, 190 (1997); Frank Lewis, [Title], 62 PUBLIC ADMINISTRATION REV. 395, 400 (2002).
63 Cf. Daniel M. Cable & Timothy A. Judge, Pay Preferences and Job Search Decisions: A Person-Organization Fit Perspective, 47 PERSONNEL PSYCHOLOGY 317, 340-41 (1994) (observing that materialistic job seekers “placed greater emphasis on pay level”).
industry.\textsuperscript{65} Whatever the reason, empirical evidence indicates that the most well trained financial employees self-select into higher paying positions.\textsuperscript{66}

B. The Difficulty of Regulatory Agencies to Hire Creates an Information Asymmetry

The difficulty of regulatory agencies to hire competitively compared to the financial industry creates an information asymmetry between financial regulators and members of the financial industry. As shown below, the two-to-one income disparity drives a significant difference in employee intellect and abilities. Those attributes are critical to understand complex financial products and markets.

Although the general problem of asymmetric information has been debated at length by scholars,\textsuperscript{67} this article’s focus—on information asymmetry resulting from differences in intellect and abilities between regulators and the regulated—is new. Scholars studying information asymmetries between regulators and the regulated have focused in the past almost exclusively on information acquisition and product-development lag time.\textsuperscript{68} Thus, when regulators acquire


\textsuperscript{67} See, e.g., Glenn Blackmon & Richard Zeckhauser, \textit{Fragile Commitments and the Regulatory Process}, 9 YALE J. REG. 73, 104 (1992) (noting “the principal-agent relationship between the regulator and firm” and the firm’s “advantage of superior information”); Paul L. Joskow & Richard Schmalensee, \textit{Incentive Regulation for Electric Utilities}, 4 YALE J. REG. 1, 18 (1986) (noting that “the regulator’s information is assumed to be inferior to that of the utility’s management” and that “the assumption of asymmetric information is quite plausible”).

industry information, they do so “only with a lag, and indeed, in a rapidly changing environment, the information that they acquire may be of only limited relevance to the current situation.”\textsuperscript{69}

That focus is limited to regulators obtaining information, and the innate advantages that industry gains from developing the products to be regulated and, hence, not having to acquire information about them through third parties. It therefore only indirectly concerns differences in intellect and abilities; because industry first develops the products to be regulated, even the brightest and most able regulators would be disadvantaged and subject to lag time.

In contrast, this article’s focus on significant differences in intellect and abilities goes to the ability of financial regulators to process the information, once obtained. In order to process that information, regulators must have sufficient expertise to understand the financial transactions and their terms, the legal and financial obligations of the different parties involved, and the level of risk taken on by the regulated firms.\textsuperscript{70}

There are at least three levels of complexity in financial markets: complexities of the assets underlying investment securities traded in financial markets and of the means of originating those assets; complexities of those investment securities themselves; and complexities of those financial markets, which operate as systems.\textsuperscript{71} An understanding of these levels of complexity sometimes challenges experts at even the most sophisticated financial

\textsuperscript{69} David E.M. Sappington & Joseph E. Stiglitz, Information and Regulation, in Public Regulation 3, 6 (Elizabeth E. Bailey ed., 1987). See also Edward J. Kane, Hair of the Dog that Bit Us: The Insufficiency of New and Improved Capital Requirements, [cite,] at 5 (2013) (observing that “When it comes to controlling regulation-induced risk-taking, regulators are outcoached, outgunned, and always playing from behind.”).

\textsuperscript{70} Eric J. Pan, Understanding Financial Regulation, 2012 Utah L. Rev. 1879, 1934 & 1934 n. 167. See also id. at 1934 (observing that “Hiring and retaining knowledgeable and experienced personnel is a key component of a regulator’s efforts to manage the flow of information to the extent skilled personnel permits regulators to develop independent capacity to evaluate and analyze developments in the financial markets.”).

\textsuperscript{71} Regulating Complexity in Financial Markets, supra note 3, at 216-36.
firms. Administrative agencies that lack that expertise will be even more challenged to understand these levels of complexity.

III. REGULATORY CONSEQUENCES OF THE INFORMATION ASYMMETRY

Only two scholars have previously studied this type of information asymmetry between financial regulators and industry. Their views on its consequences have been dramatic though cursory:

Following the crisis of 1930-1933 and 2007-2008, regulators have been blamed for lax oversight. In retrospect, it is clear that regulators did not have the human capital to keep up with the financial industry, and to understand it well enough to be able to exert effective regulation. Given the wage premia that we document, it was impossible for regulators to attract and retain highly-skilled financial workers, because [regulatory agencies] could not compete with private sector wages.

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72 Cf. Steven L. Schwarcz, Disclosure’s Failure in the Subprime Mortgage Crisis, 2008 UTAH L. REV. 1109, 1113 (arguing that although the disclosure documents describing complex asset-backed securities generally complied with federal securities law, investors did not fully understand those securities or their risks); Regulating Complexity in Financial Markets, supra note 3, at 243 (observing that even the most sophisticated investors lost money in the recent financial crisis).

73 Cf. The Boston Consulting Group, U.S. Securities and Exchange Commission, Organizational Study and Reform 53-54 (Mar. 10, 2011), available at 2011 WL 830339 (observing that the SEC’s senior management considers the SEC’s staff analytical capabilities to be only average or even below, and attributing that to the SEC’s relatively flat budget and its resulting hiring difficulties); Howell E. Jackson, Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications, 24 YALE J. REG. 253, 273 (2007) (finding that the regulatory budget per staff member indicates the staff quality).

74 Thomas Philippon & Ariell Reshef, “Wages and Human Capital in the U.S. Financial Industry: 1909-2006” (Dec. 2008 working paper, on file with author), at 31 (citations omitted). Philippon and Reshef thus argue that the income disparity “provides an explanation for regulatory failures.” Id. Other scholars have not studied but merely alluded to an information asymmetry between financial regulators and industry due to intellect. See, e.g., Bond & Glode, supra note 33, at 1 (observing a criticism that, “bluntly put, financial regulators are not as smart as the bankers and traders they are charged with overseeing”).
Any explanation of consequences, however, should be more nuanced because financial regulation by administrative agencies encompasses rulemaking, monitoring, and enforcement.\(^7^5\) To understand the consequences of the information asymmetry, consider how that asymmetry could impact administrative agency rulemaking, monitoring, and enforcement.

A. Consequences to Rulemaking

In the context of financial regulation, it has been argued that “[w]here the budgets are stronger and the staffing deeper, the agency can write more nuanced, tailored rules.”\(^7^6\) The logic of that argument appears to be that the regulatory agency will then have sufficient “trained people” to apply the rules.\(^7^7\) That argument, however, can also be supported by observing that the better regulators understand financial innovations, the better they can promulgate rules to curb harmful innovations.\(^7^8\) Absent a clear understanding, regulators might not only fail to promulgate adequate rules; they also might misinterpret the innovations and promulgate rules that are harmful.\(^7^9\)

The tendency to promulgate harmful rules might be heightened if regulators lack good judgment. In that context, it might be interesting to explore whether the income disparity creates another type of “information” asymmetry: one in which some regulators have good technical

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\(^7^5\) Professor Eric Pan divides what I call “monitoring” into two functions: “supervision” and “certification.” Pan, *supra* note 70, at 1909. He defines “supervision” as a regulator’s “monitoring, assessment, and guidance of an entity’s efforts to meets its regulatory obligations.” *Id.* at 1911. He defines “certification” as “the substantive evaluation and approval of products or services by the regulator,” such as licensing and registration. *Id.* at 1914. My term “monitoring” includes these functions other than approval of financial products or services. Financial regulation in the United States does not currently enable regulators to approve or disapprove financial products per se, other than by issuing administrative rules or regulations governing those products—which would be included in the category of rulemaking.


\(^7^7\) *Id.*

\(^7^8\) *Cf.* *id.* (observing that “a higher budget and more staffing facilitate the regulatory agency being able to write, revise, and enforce better, more sophisticated rules”).

\(^7^9\) *Cf.* Hu, *supra* note 68, at 1508 (arguing that regulators who succeed in gaining current industry information on financial innovation may not be sophisticated to interpret, and thus may misinterpret, that information).
intellect but lack good judgment. In my experience, the financial industry strives to hire, and pays dearly for, employees who have both good technical intellect and good judgment. Administrative agencies might well seek to hire at least some employees with good technical intellect; but the pool of those employees who also have good judgment and are willing to work for low government pay will be small. That might help to explain why many of the bright financial regulators I’ve met tend to be very narrow and rigid, seeing problems in black and white and often lacking flexibility to try to see others’ perspectives.

B. Consequences to Monitoring

As explained, the information asymmetry can prevent regulators from fully understanding financial innovations and products. Absent that understanding, they might fail to promulgate adequate rules and might even promulgate harmful rules. That absence may also have monitoring consequences—that regulators will be unable to effectively monitor financial innovations and products. Professor Pan argues, for example, that with additional resources administrative agencies can “hire better skilled and more experienced personnel” who can “review more carefully new [financial] products and services.”

I am not claiming that reducing the income disparity between regulators and industry could eliminate information-based market failures. Not only regulators but also industry participants—including rating agencies, monoline insurance companies, and even the most sophisticated and largest institutional investors—either missed or did not adequately take into account early warning signs of the recent financial crisis. Moreover, human nature might lead some regulators to overrely on information provided by financial firms that offer, or at least

80 See supra notes 71-79 and accompanying text.
81 See text accompanying note 79, supra.
82 Pan, supra note 70, at 1932. He also observes that additional resources would enable financial regulators to “invest in more sophisticated information processing and surveillance systems.” Id.
83 Regulating Complexity in Financial Markets, supra note 3, at 243. In many cases, moreover, information failures were caused not by information asymmetry but by mutual misinformation: by retaining residual risk portions of certain complex securitization products they were selling, underwriters may actually have fostered false investor confidence, contributing to the recent financial crisis. See id. at 241-42 (discussing mutual misinformation).
purport to offer, transparency and with which the regulators have developed longstanding relationships. Nonetheless, reducing the income disparity should at least help to reduce the information asymmetry and its consequences.

C. Consequences to Enforcement

Because of the sheer number of regulatory personnel needed to pursue enforcement actions, enforcement—more than rulemaking and monitoring—turns as much on the quantity as the quality of regulators. Professor Pan argues, for example, that additional resources will also enable administrative agencies to hire personnel who can “pursue more enforcement actions.”84 Professors Jackson and Roe similarly argue that “more resources [in the form of “high budgets and staffing”] facilitate regulatory investigations, [thereby] making it easier for [an] agency to bring enforcement actions.”85

Nonetheless, “much public enforcement is done informally” by regulators, such as through “a regulator’s raised eyebrow.”86 “[I]nformal public enforcement” of this type requires highly skilled staffers.87 Furthermore, greater regulatory expertise should enable administrators to better enforce highly sophisticated rules and regulations.88

In summary, the two-to-one income disparity between the financial industry and its regulators creates an information asymmetry that can cause regulatory failures in rulemaking, monitoring, and enforcement. That helps to explain why financial regulation is so often inadequate. Next consider how the information asymmetry could be mitigated.

IV. ADDRESSING THE INFORMATION ASYMMETRY

84 Pan, supra note 70, at 1932.
85 Jackson & Roe, supra note 76, at 235.
86 Id. (referring to this type of informal enforcement in England and to informal “administrative guidance” in Japan).
87 Id.
88 Cf. id. (observing that a “higher budget and more staffing” should facilitate the “regulatory agency being able to . . . enforce . . . more sophisticated rules”).
The information asymmetry could be addressed directly by reducing the information disparity. It also could be addressed indirectly. First consider the direct approach.

**A. Reducing the Income Disparity**

The information asymmetry resulting from the income disparity between regulators and the financial industry could most directly be mitigated by reducing this disparity. That could be done in at least two ways: by increasing regulators’ compensation, and by limiting financial industry compensation.

1. *Increasing Regulators’ Compensation*

   In an ideal universe, the income disparity would be addressed directly by increasing regulators’ compensation. The ability of government to do this is, of course, highly subject to political considerations. In the United States, that not only would depend on increasing the budgets of financial regulatory agencies but also would require further exempting employees of those agencies from the General Schedule and other applicable per-person-pay limitations.89

   Some scholars argue that attracting more able workers into the public sector (whether that’s done by increasing income or otherwise) would be inefficient. Delgaauw, for example, contends that the return on talent is always higher in the private sector.90 That may or may not generally be true, but it is unlikely to be true for financial regulation so long as regulators suffer from an information asymmetry that can prevent them from effectively monitoring and regulating financial innovations that might create systemic externalities.

   It therefore ought to be efficient to increase regulators’ compensation as needed to reduce that information asymmetry. That begs the question, though, of what level of increase is needed. Although not a controlled experiment, the experience of Singapore may be instructive. Singapore

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89 Cf. supra notes 9-11 and accompanying text.
90 [Cite to Delgaauw and to any other scholars who support Delgaauw]
pays its government regulators incomes that match or exceed that of comparable private-sector workers. Its officials have publicly stated that pay should not be a reason to not join, or to leave, a Singaporean regulatory agency. Thus, the salaries for employees of the Monetary Authority of Singapore (‘‘MAS’’), the principal Singaporean supervisor and regulator of the financial industry, is pegged to financial industry salaries. This appears to be done by reviewing the top salaries of a range of financial professionals and calculating an average income to be applied to financial regulators.

The International Monetary Fund believes that the resulting high salaries have enabled MAS not only to attract and retain regulatory staff with excellent qualifications and expertise but also to achieve a high degree of compliance with the principles of the International Organization of Securities Commissions (IOSCO). The resulting effectiveness of Singapore’s regulatory system is believed to have helped establish Singapore as a regional financial center.

Singapore thus appears to be a successful example of directly addressing the income disparity, and resulting information asymmetry, by increasing regulators’ compensation.

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92 Doha Abdelhamid & Laila El Baradei, Reforming the Pay System for Government Employees in Egypt, Working Paper No. 151, 26 (June 2009). In the final published version of this paper, however, the part on Singapore was omitted.
93 See Seth Mydans, Singapore Announces 60 % Pay Raise for Ministers, N.Y. Times, April 9, 2007, at [cite] (quoting Defense Minister Teo Chee Hean).
95 Abdelhamid & Baradei, supra note 92, at 26. The citation to this working paper is again subject to the caveat in note 92, that the final published version of the paper omitted the part on Singapore.
96 International Monetary Fund, supra note 94.
97 See id. at 5; see also http://www.imf.org/external/pubs/ft/scr/2013/cr13344.pdf.
Whether the Singaporean attempt at income parity could be viable in other countries, including the United States, is unclear, though. Even given the political will to achieve that parity, the financial industry would be motivated—and so long as finance is highly profitable, it should be expected to be able—to match and exceed any public-sector raises that drew away significant talent. Singapore’s success to the contrary may be bound up with a regulatory economy-of-scale or other country-specific explanation. That would help to explain the puzzling evidence suggesting that, notwithstanding its income parity between financial regulators and industry, Singapore’s per-person regulatory costs are still slightly lower than U.S. per-person regulatory costs.99

Finally, a variant on increasing regulators’ compensation would be to pay regulators based on their performance. Professors Henderson and Tung, for example, partly blame the lack of incentive, which performance-based pay could help create, for the failure of bank examiners to act aggressively to prevent excessive risk during the recent financial crisis.100 They argue that compensating bank examiners based on performance would help to reduce future bank failures.101

Performance-based pay for regulators is an interesting idea, but whether it would work in practice is yet to be seen—although one could view bonuses paid to regulators as a form of performance-based pay.102 Henderson and Tung agree that the “key” to its success would be “finding metrics for measuring ‘good’ and ‘bad’ performance in government, and deploying

99 See, e.g., Howell E. Jackson, Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications, 24 Yale J. Reg. 253, 291 (2007) (finding no material difference between the per-person costs of U.S. and Singaporean financial regulators). Prof. Jackson found that the per-person cost of financial regulators was, at the time of his research, $146,515 in Singapore, $154,839 in the United States, and $175,644 in Ireland.
101 Id. at 1003 (arguing that the performance-based pay should be a “debt-heavy mix of phantom bank debt and equity, as well as a separate bonus linked to the timing of the decision to take over a bank”).
102 See supra note 26 and accompanying text (observing that administrative agencies pay, albeit rarely, limited bonuses to regulators). See also Henderson & Tung, supra note 100, at 1013 (observing that “[b]ank regulatory agencies have begun using bonuses ostensibly tied to performance”).
them in ways that will not make things worse."\textsuperscript{103} They argue that should be feasible, at least for compensating bank examiners.\textsuperscript{104} Even if they are correct, however, the rapid rise of disintermediation and shadow banking—in which non-banking firms and financial markets increasingly are replacing banks as the source of financial intermediation\textsuperscript{105}—is diminishing the importance of the bank examiner’s job in the overall task of financial regulation.\textsuperscript{106}

2. Limiting Financial Industry Compensation

A further way to mitigate the income disparity and, hence, the information asymmetry might be to legally limit compensation in the financial industry. A populist movement towards limiting financial industry compensation has gained momentum in recent years, reacting (among other things) to huge bonuses paid to senior financial executives while shareholders of their firms faced losses.\textsuperscript{107}

Limiting financial industry compensation might, however, have unintended consequences: “Experience has [] found that direct government control of pay creates a host of perverse and unintended consequences.”\textsuperscript{108} Furthermore, at least in the United States, there is a strong historical bias in favor of free markets and against government restriction of private-sector compensation.\textsuperscript{109} And even if there otherwise is political will to impose such restrictions, it

\textsuperscript{103} Id. at 1010.
\textsuperscript{104} Id.
\textsuperscript{107} [cite]
\textsuperscript{109} [cite and explain]
might not extend to restrictions beyond the highest paid executives; and those executives are not the ones for whom the income disparity creates the most troublesome information asymmetry.

B. Other Measures

One could also consider other measures that don’t address the income disparity per se but nonetheless might help to reduce the information asymmetry or its consequences. These measures could include increasing the non-monetary attraction of public-sector regulatory jobs, reducing the information asymmetry by blunt force, and accepting the information asymmetry and regulating to mitigate its consequences.

1. Increasing the non-monetary attraction of public-sector regulatory jobs.

The non-monetary attraction of public-sector regulatory jobs could be increased, at least in theory, by making those jobs more challenging and increasing regulatory prestige. Although “pay can be an important factor in determining person-job fit as individuals have financial needs that they expect their jobs to help satisfy,” individuals “often have to make [employment] decisions that require weighing trade-offs between financial rewards and other desired job characteristics.”

To some extent, the European training of judges might provide a model for increasing regulatory prestige. In continental Europe, “the tendency is to appoint young, easily trainable law graduates willing to accept a prestigious and stable career, if not one as well paid as that of a

Cf. supra note 107 and accompanying text (observing that the populist backlash concerns huge bonuses paid to senior financial executives).
Cf. GABRIS & SIMO, PUBLIC PERSONNEL MANAGEMENT 21, 33-53, at 49(?) (1995) (arguing that if public-sector regulatory jobs were made more challenging and monetarily appealing, they would draw good recruits). The italicized language undercuts their argument as applied to this article, however.
Christensen & Wright, supra note 60, at 728.
highly successful attorney or consultant.”¹¹⁴ French judges, for example, are recruited nationally through competitive examinations to attend the National School for the Judiciary (“ENM”), which prepares them for a lifetime civil service career.¹¹⁵ [Expand explanation why this imparts greater prestige.¹¹⁶]

2. Reducing the information asymmetry by blunt force.

There are several ways that the information asymmetry could be reduced by blunt force, including by standardizing financial products, by increasing specialization among regulators, and by paying third-party experts to try to reduce the asymmetry. The Dodd-Frank Act effectively utilizes the first approach, for example, by requiring many derivatives transactions to be cleared through clearinghouses,¹¹⁷ which generally require a high degree of standardization in the derivatives they clear.¹¹⁸

But standardization can backfire. Dodd-Frank’s clearinghouse requirement might inadvertently increase systemic risk by concentrating derivatives exposure at the clearinghouse level.¹¹⁹ And the overall economic impact of standardization is unclear because “standardization can stifle innovation and interfere with the ability of parties to achieve the efficiencies that arise when firms craft financial products tailored to the particular needs and risk preferences of investors.”¹²⁰

¹¹⁵ Id.
¹¹⁶ [Cite, and also consider other possible models, including elite military academies. Edward J. Kane, Gaps and Wishful Thinking in the Theory and Practice of Central-Bank Policymaking, SUERF Colloquium on States, Banks and the Financing of the Economy 7 (2013).]
¹¹⁷ Dodd-Frank Act sec. 723(a), § 2.
¹¹⁸ This can become a little circular, though, because Dodd-Frank includes an exception for derivatives that a clearinghouse will not accept for clearing. Dodd-Frank Act sec. 723(a), § 2(h)(3).
¹¹⁹ Iman Anabtawi & Steven L. Schwarcz, Regulating Systemic Risk: Towards an Analytical Framework, 86 NOTRE DAME L. REV. 1349, 1395 (2011) (observing that “central clearing merely shifts counterparty risk to a clearinghouse, reducing that risk only to the extent that clearinghouses can manage risk better or are more creditworthy than individual firms”).
An approach similar to standardization would be to regulate financial innovation so heavily that industry would not benefit from having more qualified workers and thus would pay them less.121 Research has found “a very tight link between deregulation and human capital in the financial sector.”122 Thus, “regulation inhibits the ability to exploit the creativity and innovation of educated and skilled workers” in the financial industry, whereas deregulation “unleashes creativity and innovation and increases demand” for those workers.123 This approach would therefore also be risky because discouraging innovation and creativity could have myriad adverse and unanticipated consequences.

Another possible way to try to reduce the information asymmetry would be to increase regulatory specialization. Specialization might lead to adverse consequences, however, potentially making regulators so narrow that, over time, they will miss the dynamically changing bigger picture; or making regulators’ jobs less interesting, thereby further increasing the information asymmetry by discouraging workers to apply for regulatory positions.

The limited experience with regulatory specialization has shown mixed results, as exemplified by the World Bank’s Financial Sector Assessment Program (“FSAP”). In 1995, the World Bank formed a team of financial specialists to try to better diagnose problems within financial systems.124 At the outset, the team was able to synergistically capitalize on the knowledge added by each individual specialist.125 Over time, however, the specialists focused increasingly on their specific sub-disciplines.126

121 [Compare this with the literature on the benefits of regulatory simplification for ease of enforcement and reducing costs of enforcing rules, including increasing bright-line rules to reduce the information asymmetry. cite1]
122 Philippon & Reshef, supra note 74, at 4.
123 Id.
125 Id.
126 Id. [Expand and explain the FSAP story. cite]
Yet another approach would be to pay third-party experts to try to reduce the information asymmetry. [Develop this discussion, including by examining the job of rating agencies and their limitations and failures.\textsuperscript{127}]

3. \textit{Accepting the information asymmetry and regulating to mitigate its consequences.}

Finally, another possible response would be to accept the reality of the income disparity, and hence the resulting information asymmetry, and to regulate in a way that mitigates its consequences. The main consequence of the information asymmetry is that financial regulation will always be insufficient to prevent financial failures. Professor Anabtawi and I have argued that ex ante (preventative) financial regulation is, for various reasons, inherently insufficient to prevent all financial failures, and thus financial failures are inevitable.\textsuperscript{128} Therefore, any financial regulatory strategy should also include ex post (ameliorative) regulation.\textsuperscript{129} That same strategy should help to address financial failures that result from the information asymmetry.

V. CONCLUSIONS

The extraordinary income disparity between financial regulators and their industry counterparts differentiates financial regulation from other forms of regulation. At each level, financial industry employees make at least twice as much as financial regulators (in contrast to non-financial industry employees, who make on average only 25\% more than their regulatory counterparts\textsuperscript{130}). This huge income disparity undermines the ability of financial regulatory

\\textsuperscript{127} [cite]
\textsuperscript{129} \textit{Id}. (and using chaos theory to explain why this two-pronged regulatory approach is needed).
\textsuperscript{130} This comparison is necessarily imprecise because it uses general-industry data to approximate non-financial industry data. \textit{See supra} note 8 and accompanying text (comparing federal government and private-sector pay for similar jobs). Among other sources of imprecision, the general-industry data already include, and thus the income disparity based on those data is increased by, financial sector data. Accordingly, the actual income disparity between non-financial industry employees and non-financial regulatory employees is probably smaller than 25\%. And that income disparity (between non-financial industry employees and non-financial regulatory employees) may be even smaller still for the reasons discussed \textit{supra} note 8.
agencies to hire competitively, in turn driving a significant difference in employee intellect and abilities.

These attributes are especially critical, however, in order to understand increasingly complex financial products and markets. The resulting information asymmetry between financial regulators and industry can lead to regulatory failures at all levels, including rulemaking, monitoring, and enforcement. These failures help to explain why financial regulation is so often inadequate.\footnote{There are of course other possible explanations of why financial regulation is so often inadequate, including other income-related explanations. Professor White suggests, for example, that “if high returns in the financial industry are associated with risk-taking[,] higher wages will attract more risk-takers to the financial industry and that may make potential problems in the industry worse.” E-mail from Eugene N. White, Professor of Economics, Rutgers University, to the author (Feb. 9, 2014). Professor Lastra and others have written of the problem of bonuses based on short-term performance, which can motivate bankers to engage in excessively risky transactions. See, e.g., Luis Garicano & Rosa M. Lastra, \textit{Towards a New Architecture for Financial Stability: Seven Principles}, J. INT’L ECON. L. 597, 618 (Sep. 2010). And I have written about conflicts of interest resulting from short-term compensation of secondary managers of financial firms. See \textit{Conflicts and Financial Collapse}, supra note 111.}

Reducing the income disparity would be a politically challenging, if not impossible, task. Even if the government were to attempt to increase the incomes of financial regulators to private-sector levels, the financial industry would be motivated—and because it is highly profitable, it may well (at least outside Singapore\footnote{See text accompanying notes 98-99, supra.}) be able—to match and exceed any income increases that drew away significant talent. Another potential response is to focus more resources on ex post financial regulation, mitigating the consequences of financial failure. That recognizes that for a range of reasons, including the income disparity, financial failures are inevitable. There are other potential responses to attempt to correct regulatory failures resulting from the income disparity (and resulting information asymmetry), but they are even more “second best.”

This article’s focus is new. Although other scholars have studied information asymmetries between regulators and the regulated, they focused almost exclusively on information acquisition and product-development lag time. That focus is limited to regulators...
obtaining information. In contrast, this article focuses on the information asymmetry that results from differences in intellect and abilities between regulators and the regulated. That focus goes not to obtaining information; instead, it goes to the ability of financial regulators to process the information, once obtained.