

CFR working paper NO. 20-05

**the decline of trust across the
U.S. finance industry**

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The Decline of Trust Across the U.S. Finance Industry

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Journal of Economic Behavior and Organization, forthcoming

Abstract

We provide evidence on the evolution of generalized trust among finance professionals using data from the General Social Survey over the period 1978-2016. Accounting for demographic, regional, and socioeconomic characteristics, we document a significant decline in the level of trust among finance professionals relative to the decline of trust in the U.S. population. This decline is unique to the finance industry and is particularly strong in the early years of the sample when finance professionals initially exhibited a higher level of trust than the average American. The decline occurs across all subsectors in finance and at all hierarchy levels.

Keywords: Finance industry, Generalized trust, Implicit incentives, Professional environment, Socialization

JEL codes: G20, G21, G22, G24, L14, A14

Acknowledgements: We thank Sue Denim, Luigi Zingales, and seminar participants at the Cambridge Judge Business School, the Centre for Financial Research, and the Schumpeter School of Business and Economics for helpful comments. For the purpose of open access, the author has applied a Creative Commons Attribution (CC BY) license to any Author Accepted Manuscript version arising from this submission. Send correspondence to P. Raghavendra Rau, r.rau@jbs.cam.ac.uk.

1. Introduction

The financial sector plays a crucial role for the economy. Better developed financial systems exhibit faster economic growth (Calderón and Liu, 2003) and more entrepreneurial activity (Guiso, Sapienza, and Zingales, 2004). A well-functioning financial system depends on the reliability of contracts and contractors. This reliability is achievable via explicit mechanisms, mainly regulation, or via implicit mechanisms, such as generalized trust (i.e., trust in anonymous others). Given that contracts tend to be incomplete (e.g., Hart and Moore, 1988) and financial services are difficult to regulate, the level of trust prevailing among finance professionals is likely to play a pivotal role in determining the price, quantity, and quality of the services the finance industry supplies.

In particular, every contract involves both explicit and implicit terms. While explicit terms are contractible, implicit terms are not. Hence, the less finance professionals trust others, the more they will consider as many explicit contingencies as possible when drawing up contracts with their industry peers and clients. As a result, the level of generalized trust finance professionals exhibit can be expected to influence contract costs and even the number of contracts written. Recent empirical work suggests that trust affects contract design and costs and has real effects on financial services.¹ D’Acunto, Xie, and Yao (2022) provide evidence that when parties are less trusting, they incur higher costs *ex ante* to complete contracts. Specifically, using data on U.S. consulting contracts, they find that contracts between firms and consultants become more complex and cover more verifiable states of the world after negative shocks to trust. This finding is consistent with economists arguing that generalized trust discourages opportunistic behavior (Guiso, Sapienza, and Zingales, 2011; Hasan et al., 2017), such as exploiting uncontracted contingencies, and acts as an informal contracting mechanism (Gennaioli et al., 2022; Xie, Zhang, and Zhang, 2022).

Generalized trust is also likely to be reciprocal. Simply put, when finance professionals generally trust more, they are likely to also act in a more trustworthy fashion. The literature

¹ As an example of how lack of trust increases contract complexity, in late 2020, Citibank, an administrative agent for a loan to Revlon Inc., accidentally sent \$1 billion to Revlon’s distressed creditors. The next day, when Citibank realized its error and asked for the payment back, several lenders refused to return the cash. Citibank filed a lawsuit to claw it back. Yet, in 2021, a New York federal court sided with the creditors, applying a doctrine known as the “Discharge for Value” defense. Though the decision was reversed on appeal, Talley (2022) documents a rapid trend towards writing and/or amending debt contracts to nullify the Citibank opinion in its entirety, manifested in a variety of “Revlon blocker” provisions, explicitly saying that if the administrative agent for a loan sends money in error, then the lenders must return the money and not just keep it, that have appeared in hundreds of publicly disclosed contracts.

suggests that the prevailing level of trust determines people's trustworthiness (Abdulkadiroğlu and Bagwell, 2013; Berg, Dickhaut, and McCabe, 1995). Particularly, the more trust is the norm, the greater is the accountability for norm-deviant cheating behavior (Dupont and Karpoff, 2020) that results from psychological and social costs to those who cheat. Such costs include guilt, remorse, lack of reciprocation, and ostracism (Knack and Keefer, 1997; Fehr and Gächter, 2000; Francois and Zabojnik, 2005), and may sustain trust as an equilibrium phenomenon (e.g., Anderlini and Terlizzese, 2017). Gennaioli et al. (2022) provide a model and empirical evidence on how trust affects the functioning of the financial system. Studying the insurance industry, they argue that people are more trustworthy in countries with higher levels of generalized trust and hence it is costlier for companies and their clients to act opportunistically. They find that trust is associated with fewer disputes over claims, lower insurance premia, and lower costs to insurance companies. Furthermore, Hagendorff, Lim, and Nguyen (2022) find that banks whose CEOs exhibit higher levels of generalized trust are less likely to include financial covenants in their loan contracts and charge lower interest rates, particularly when they are not protected by contract provisions.

Hence, it can be expected that the level of generalized trust is important for the efficient functioning of financial markets, such as the cost of financial services. This is particularly true since interactions between unfamiliar people and conflicts of interest are common in the financial industry (Bolton, Freixas, and Shapiro, 2007; Nannestad, 2008). Higher costs for contracting and more costly monitoring (e.g., Lesmeister, Limbach, and Goergen, 2022) resulting from insufficient trust may also lead to some people being excluded from financial services as they cannot afford them. Furthermore, the U.S. finance industry has experienced almost half a century of deregulation (Philippon and Reshef, 2012), which makes the role of trust even more important.² Both theoretical and empirical studies (Aghion et al., 2010; Carlin, Dorobantu, and Viswanathan, 2009; Fukuyama, 1995; Zak and Knack, 2001) suggest that when formal regulation and governance are less established or efficient, trust is more valuable as an implicit mechanism that substitutes for regulation, thereby limiting fraudulent actions. It is thus plausible that a simultaneous decline of trust and regulation may adversely affect the functioning of financial markets.

² Examples include the relaxations and repeal of the Glass-Steagall Act in 1987, 1989, 1997, and 1999, the removal of interest rates ceilings in the 1980s, and the repeal of the Bank Holding Company Act in 1999. An exception is the 2010 Dodd-Frank Act. However, several requirements of the Act have already been repealed or are planned to be repealed.

Against this background, understanding trends in the trust levels of finance professionals is important for financial institutions and their clients, policymakers, and academics. However, the literature focuses almost exclusively on people’s trust in the finance industry (Adams, 2021; Fungáčová, Hasan, and Weill, 2019; Sapienza and Zingales, 2012) rather than finance professionals’ trust in others. Also, despite the general erosion of trust in American society (Putnam, 2000), nothing is known about the evolution of trust across finance professionals.

In this paper, we use data from a representative survey, the General Social Survey (GSS), spanning four decades to show how generalized trust across U.S. finance professionals has evolved. We use responses from 25 cross-sectional waves spanning 39 years (covering about 1,500 respondents each year from 1978 through 1993 and around 2,800 respondents every second year from 1994 through 2016)³ to the question: “*Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?*” This measure of generalized trust is frequently used in the literature and has been shown to be a valid predictor for individuals’ actual level of trust (e.g., Fehr et al., 2003; Johnson and Mislin, 2012).⁴

We document three novel empirical findings. First, consistent with the importance of trust for the finance industry, the level of generalized trust of finance professionals has been higher than that of the general U.S. population. However, accounting for demographic, regional, and socioeconomic differences across GSS survey respondents, we find that the level of trust of finance professionals was only higher until the late 1980s. Second, generalized trust of professionals working in the finance industry has declined substantially over the last almost four decades, both in absolute terms and relative to the general U.S. population. Across virtually all industries covered by the GSS, the relative decline in trust is unparalleled and unique to finance. Even other industries that are also heavily dependent on trust, such as healthcare, do not experience a similar decline in generalized trust. Third, we document rather unexpected patterns in the trust decline across the finance industry. In particular, the decline in trust is stronger in the early years of our sample period

³ We note that while the GSS provides a long time series of data, which we need to study the evolution of trust, it does not provide a large cross-section of finance professionals per wave. In general, we rely on survey data because archival data does not allow us to accurately measure the level of trust of finance professionals and counterfactual individuals.

⁴ Sapienza, Toldra-Simats, and Zingales (2013) show that responses to the survey question we use here are driven by what they call the “belief-based component of trust”. In other words, responses strongly correlate with the sender’s expectations about the receiver’s behavior in a standard trust game (Berg, Dickhaut, and McCabe, 1995).

leading up to the mid-1990s, i.e., long before the 2008 global financial crisis. In these early years, trust fell across all finance subsectors, i.e., banking, insurance, and investment. A significant trust decline in more recent years appears to be driven by the investment sector, while trust within the banking industry has not eroded any further. In addition, we find a similar decline in trust across younger and older finance professionals and across high and low hierarchy levels, implying that it occurs for both those who set the tone and relative newcomers into the industry. Lastly, we discuss potential reasons for the decline in generalized trust across the U.S. finance industry. Those reasons include, for example, witnessing misbehavior by industry colleagues, changes in demographics and socialization habits of finance professionals, and changes in organizational forms.

Our findings have the potential to inform financial institutions, who should be aware that the level of generalized trust of their employees has declined. Despite the existence of fiduciary obligations and ethical codes, the finance industry is still often criticized for its allegedly low moral standards and often viewed by the public as a rent-seeking activity (Zingales, 2015). Hence, to the extent that these issues may be driven by the declining level of trust across financial professionals, financial institutions may seek to restore their employees' trust through novel workplace practices (e.g., participation in community activities), as proposed by Putnam (2000). Further, though technologies such as blockchain may appear to offer a technological solution to the lack of trust among finance professionals, Blackburn et al. (2022) notes that although bitcoin was designed to rely on a decentralized, trustless network of anonymous agents, its early success rested on cooperation among a small group of altruistic founders.

Our study may also inform policymakers on the ongoing debate on ethics and values in the finance industry. The official report by the Financial Crisis Inquiry Commission (2011) concludes that before and during the 2008 financial crisis “[...] we witnessed an erosion of standards of responsibility and ethics that exacerbated the financial crisis” (p. xxii). We provide evidence that with regard to generalized trust, this erosion of standards did not arise in recent years but has been a continuous trend over the past four decades, especially over the period towards the end of the last century. In that regard, our study complements van Hoorn (2015) who finds no evidence that self-enhancement and self-transcendence values of finance professionals were substantially different from the general population before the global financial crisis.

Overall, we extend a limited body of mixed evidence on the values of finance professionals. For example, while Cohn, Fehr, and Maréchal (2014) provide experimental evidence indicating

that bankers become considerably more dishonest as soon as they are reminded of their professional identity, Rahwan, Yoeli, and Fasolo (2019) fail to replicate this result. Huber and Huber (2020) find that relative to a control group of students in their experiment, finance professionals act more honestly in a financial context. Using data on the values held by almost 39,000 employees of a multinational bank, Ashraf, Bandiera, and Delfino (2020) suggest that it is the values in which bankers differ from society that determine their performance and potential for promotion. Our study complements this ambiguous literature by providing novel evidence on generalized trust across finance professionals.

More broadly, by providing evidence on the evolution of trust, an important informal mechanism in finance, we contribute to research on long-term trends in the U.S. finance industry. Extant studies investigate, for example, the trends in wages and education in finance (e.g., Goldin and Katz, 2008; Philippon and Reshef, 2012) as well as the development of the cost of financial intermediation, which have increased over our sample period (Philippon, 2015). Although a causal interpretation is impossible, this increase in intermediation costs is consistent with increasing costs (e.g., more contracting) due to the decline in generalized trust across the U.S. finance industry.

2. Data and methodology

2.1 Data

We examine generalized trust of individuals working in the finance industry and the general U.S. population using data from the GSS. The GSS is a nationally representative survey administered by the National Opinion Research Center at the University of Chicago that is designed to track attitudes, preferences, political views, and social behavior in American society. We use data from 25 cross-sectional waves spanning the 39-year period from 1978 to 2016. The survey contains about 1,500 respondents each year from 1978 through 1993 (except 1979, 1981, and 1992), and continues with around 2,800 respondents every second year from 1994 through 2016. Our study generally relies on a subset of the total sample due to the availability of respondents' demographic and socioeconomic information and questions that were not asked in every survey wave.

Generalized trust is measured in the GSS by the question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" This question was asked in all but two survey waves (1982 and 1985) and is the most common measure used in the literature to assess individuals' level of generalized trust (e.g., Gennaioli et al., 2022;

Guiso, Sapienza, and Zingales, 2004, 2006, 2008; Knack and Keefer, 1997; Zak and Knack, 2001). We construct our main dependent variable, *Most people can be trusted*, as an indicator that equals one for a person who responds to the above question that “most people can be trusted” and zero for a person who responds that either it “depends” or that you “can’t be too careful.” We exclude from our analyses all individuals who did not respond to the question.

The long duration of the GSS and the use of consistent language to measure attitudes and preferences make it ideally suited for analyzing long-term trends. A few changes to the survey over time, however, require researchers to make some adjustments (see Smith, 1990). Three changes are particularly relevant in our context: (1) an oversample of blacks in the 1982 and 1987 survey; (2) from 2006 onwards, surveys that could not have been completed by respondents in English were administered in Spanish; (3) until 1988, the order of questions preceding the trust question was not the same in all interviews. To create a consistent data set, we adjust the data as suggested by prior studies that use the GSS (e.g., Ifcher and Zarghamee, 2014; Stevenson and Wolfers, 2008a, 2008b, 2009). Further, to ensure representativeness of our data, we weight all estimates using the GSS weight variable WTSSALL. After these adjustments, the GSS is well suited to studying trends in generalized trust. We motivate and describe the adjustments and weighting of estimates in Appendix 1.

We use the 2010 Census industry classification to classify respondents as workers in the finance industry. Following Philippon and Reshef (2012) and Greenwood and Scharfstein (2013), we define the finance industry as a combination of the credit intermediation, insurance, and securities subsectors. The corresponding industry codes are 6870-6990. This classification yields a proportion of around five percent of respondents who work in the finance industry in a given year. We verify this figure using data from the March supplement of the Current Population Survey (CPS) for the same period. The CPS data provide similar yearly proportions, and the average yearly difference between the two datasets is only 0.032%.

2.2 Empirical methodology

To analyze the time trends in generalized trust for workers in the finance industry and the U.S. population in a more formal fashion, we follow the methodology in Stevenson and Wolfers (2009). Formally, we estimate a regression of the form:

$$(1) \quad Trust_{i,t} = \alpha + \beta_1 InFinance_i \times (Year_t - 1978)/100 \\ + \beta_2 NotInFinance_i \times (Year_t - 1978)/100 + \beta_3 InFinance_i + \Gamma Controls_i + \varepsilon_{i,t}$$

where i denotes an individual and t denotes the year in which that individual was surveyed by the GSS. The coefficients on the time trend variables report the change in trust per 100 years. Our dependent variables are measures of generalized trust based on the GSS trust question. To estimate regressions on the level (instead of the time trend) of trust, we estimate regressions similar to equation (1) omitting the time trend variables. We include region fixed effects in our regressions using information about the U.S. Census Bureau divisions in which interviews were conducted because social capital varies across U.S. regions (e.g., Hasan et al., 2017; Lesmeister, Limbach, and Goergen, 2022). All regressions are estimated with standard errors clustered at year level.

We rely primarily on OLS estimation (i.e., limited probability models) because both logit and probit estimations with fixed effects suffer from several estimation problems, particularly the incidental parameter problem (Neyman and Scott, 1948) and separation (Zorn, 2005). In addition, such models can lead to incorrect estimations of interaction effects (e.g., Ai and Norton, 2003). However, for robustness, we re-estimate our main results using probit regressions. The results, which we do not tabulate for brevity, remain qualitatively similar.

In our regressions, we account for demographic and socioeconomic characteristics that have been shown to affect generalized trust (see, e.g., Alesina and La Ferrara, 2002; Mewes, 2014; Putnam, 2007; Uslaner, 2008). Demographics include decadal age categories, indicators for gender and race (black, white, and other), and an indicator for whether a respondent was born in the U.S. Socioeconomic characteristics include controls for education, employment status, income, marital status, the respondent's number of children, religious denomination, and whether the respondent lives in a rural area. Education is measured using indicators for a respondent's highest degree (i.e., less than high school, high school, associates/junior college, bachelor's, or graduate degree) and employment status via indicators for full- and part-time employment, keeping house, temporary illness/vacation/strike, unemployed, retirement, in school, and other. Because the GSS does not provide a consistent measure of income across survey years (Hout, 2004), we manually construct

a consistent income measure for our sample as described in Stevenson and Wolfers (2008b).⁵ We take the quartic of the logarithmic equivalized measure as our income controls to also allow for a non-linear association between income and trust. We control for marital status using indicators for whether the respondent is married, widowed, divorced, separated, or has never been married and for a respondent's religious denomination with indicators for Protestant, Catholic, Jewish, none, and other denominations. Finally, we construct an indicator for whether a respondent lives in a rural area, which equals one if she lives in a place with less than 2,500 inhabitants.

Table 1 shows summary statistics on the trust measure and control variables for the subperiods 1978-1990, 1991-2003, and 2004-2016 (to allow inspection of time trends), while Appendix Table A1 provides summary statistics for the full sample.

3. Trust of individuals in finance

3.1 Graphical representation of trust levels and trends

Figure 1 shows the level of generalized trust and how it has trended over time for people working in finance and the general U.S. population. Since demographic and socioeconomic characteristics of individuals in finance have significantly changed over time, and differently so when compared to the average population (see Table 1), we adjust the level of trust for characteristics that have been shown to be associated with individuals' trust levels. Specifically, the left panel plots the residuals from an OLS regression of generalized trust, i.e., the variable *Most people can be trusted*, on demographic, regional, and socioeconomic controls (see Section 2.2 for a description of the control variables). The right panel shows the differences in the residuals as bars and plots a linear time trend as a dashed line.

As has been documented by both scholars and the press (e.g., Putnam, 2000; Twenge et al., 2014; and Lins, Servaes, and Tamayo, 2017), generalized trust among all U.S. Americans has eroded over the past several decades. Importantly for our study, the graphs show that individuals

⁵ First, we convert a respondent's categorical family income in the previous year to a continuous measure by fitting interval regressions to the data on the assumption that income follows a log-normal distribution. We then translate income to 2005 dollars using the Consumer Price Index provided by the U.S. Bureau of Labor Statistics. Lastly, we use the OECD-modified equivalence scale to make family incomes of different household types comparable by accounting for shared consumption benefits (Hagenaars et al., 1994). Household needs, e.g., housing space and electricity, do typically not grow proportionally with the number of household members due to economies of scale. The OECD-modified scale assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child. For details see <http://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf>.

who work in the finance industry historically reported higher levels of trust, even after accounting for various characteristics that affect trust, consistent with the important role that trust should play in finance. However, this gap reverses over time as the trust level of finance professionals declines more than that of the general U.S. population. Since the beginning of the 1990s, residual generalized trust of individuals in finance has been below that of the general population in most survey years. The figure also suggests that the relative trust decline among finance professionals was particularly strong in the first half of the sample, i.e., in the period from 1978 to at most the mid-1990s, and weakened slightly in the second half. We inspect both the level of trust and its time trend in more detail in the remainder of this section.

3.2 *The level of trust of individuals in finance*

To better understand the level of trust that finance professionals exert over time, we regress the variable *Most people can be trusted* on the *In Finance* dummy variable together with demographic and socioeconomic controls as well as region and year fixed effects for three different subperiods of our sample, i.e., 1978-1990, 1991-2003, and 2004-2016. Table 2 presents the results of these regressions. For each subperiod, the first column shows regression results when we only control for regional and year fixed effects, the second column shows results when we additionally include demographic controls, and the third column shows results with all controls (i.e., further including socioeconomic controls). In the early years of our sample period, 1978-1990, we find that the coefficient on the *In Finance* dummy is positive and statistically significant across all three columns, indicating that finance professionals' level of generalized trust was higher than the level of trust of the average American. For the later years of our sample, however, we find that the level of trust of finance professionals is no longer significantly different from that of the average American once we control for socioeconomic characteristics (see columns 6 and 9) or even if we only control for demographic characteristics in the 2004-2016 subperiod (in column 8).

The above results are consistent with Figure 1 and with the variable *Residual Most people can be trusted* reported in the subperiod summary statistics in Table 1 where we show that the difference in residual trust for finance professionals is only significantly higher than that of the general U.S. population for the subperiod 1978-1990. They suggest that only in the early years of our sample were finance professionals more trusting than the average American with similar demographic and socioeconomic characteristics. This evidence raises the question of why finance professionals were initially more trusting but apparently lost trust in a disproportional manner. The

literature suggests that lower levels of homogeneity, such as racial fragmentation or income inequality, are associated with less generalized trust (e.g., Alesina and La Ferrara, 2002; Costa and Kahn, 2003; Putnam, 2007). Hence, one possibility may be that the finance industry was initially relatively homogenous (as evidenced by the low standard deviations for ages, gender diversity, and racial diversity in the 1980s) but gradually lost its cohesiveness over time (as evidenced by the increase in standard deviation across these dimensions in the later periods in the sample, see Table 1). We examine this issue further in section 4.

3.3. *The trust trend of individuals in finance*

Table 3 reports results from regressions estimating equation (1), providing evidence on the time trends of generalized trust for finance professionals and the general U.S. population. The first two columns report results with *Most people can be trusted* as the dependent variable. The coefficient on the *In Finance* dummy, which equals the starting year in the time trend regressions, is positive and significant in both columns (1) and (2), in line with the evidence presented previously. Importantly, the coefficients on the time trend variables show that generalized trust of both individuals in finance and the general population has declined significantly over our almost four-decade sample period. We compare the decline in trust between the two groups in the fourth row of the table by estimating the difference between the *In Finance* and *Not In Finance* time trends. This difference is significant at the 10% level when we control for demographics in column (1) and at the 1% level when we additionally include socioeconomic controls in column (2). The results hence suggest that generalized trust of individuals working in the finance industry has not only declined in absolute terms, but also relative to the U.S. population over our sample.

We note that the results on the control variables we use in our regressions are in line with the literature, supporting the reliability of our data. Panel A of Appendix Table A2 reports the coefficients on the control variables. We find that older (e.g., Mewes, 2014), male (e.g., Norris and Inglehart, 2006), white (e.g., Alesina and La Ferrara, 2002), native-born (e.g., Putnam, 2007), and more educated (e.g., Uslaner, 2008) people, as well as Protestants compared to Catholics (e.g., Traunmüller, 2011) are more trusting. Furthermore, our estimates suggest that divorced and separated individuals are less trusting than married people (e.g., Alesina and La Ferrara, 2002), whereas people who work part-time are more trusting than full-time workers (e.g., Lee, 2013). The results on the time trends for finance professionals and the average American, and the difference between the two, remain qualitatively similar when we estimate a less saturated regression model,

as shown in Panel B of Appendix Table A.2.⁶ We also apply the test proposed by Oster (2019), which indicates that the difference in trust time trends appears robust to omitted variable bias.⁷

When evaluating the estimates reported in column (2), we find that individuals in finance begin the sample around seven percent more likely than others to report that most people can be trusted. Relative to the mean likelihood with which a person trusts others, this is a substantial variation of 18 percentage points and is hence likely to be economically important. From 1978 to 2016, the propensity of individuals who work in the finance industry to report that most people can be trusted fell relative to the U.S. population by $(\beta_1 - \beta_2)\Delta t = (-0.864 - (-0.559)) \times (2016 - 1978)/100 \approx 12\%$. This shift amounts to about one-fourth of the cross-sectional standard deviation of the *Most people can be trusted* indicator. Because the level of trust that is prevalent in a society is relatively persistent over short time periods (e.g., Knack and Keefer, 1997; Mackie, 2001), the cross-sectional standard deviation is typically larger than the intertemporal variation, and so the same shift is 2.3 times the standard deviation of the annual population proportion that responded that most people can be trusted. Finance professionals end the sample in 2016 with a five percent lower conditional likelihood of responding that most people can be trusted, relative to the average U.S. American.

For robustness, in column (3) of Table 3 we change the dependent variable to *Can't be too careful*, which equals one for a person who responded that “you can't be too careful” when dealing with people, and zero if the person responded that either it “depends” or that “most people can be trusted.” This specification allows us to analyze whether the decline in generalized trust reflects both changes in the propensity of people to report that most people can be trusted as well as

⁶ In the less saturated regression model, we use (1) a continuous measure for respondent age (instead of decadal dummies), (2) a count variable for the highest degree (instead of dummies for each possible degree, e.g., bachelor's), (3) fewer labor force dummies (i.e., just full-time, part-time, and other), (4) $\ln(\text{income})$ and its squared term instead of a 4th degree polynomial, and (5) a count variable for the number of children (instead of a dummy for each number).

⁷ The method by Oster (2019) tests the importance of unobserved covariates for selection into treatment. Since she analyzes a linear regression model, we base the robustness test on our OLS estimates (column 2 of Table 3). As suggested in Oster (2019), we assume that the share of variation in the outcome that could be explained if all covariates were observed equals 1.3 times the R-squared of the original regression. We consider different levels of the importance of unobserved covariates for selection into treatment (denoted δ). We increase δ stepwise until a value of 0.5, which assumes that unobserved covariates are “half as important” for selection into treatment as the large set of covariates we already control for. As we increase δ , the coefficient on the variable *In Finance time trend* increases, while the coefficient on *Not in Finance time trend* remains relatively stable. Hence, the test suggests that unobserved covariates are likely to matter for selection into treatment, but that the omission of the unobserved covariates runs against us finding a significant difference between the trust time trends for finance professionals and the average American.

changes in the propensity of people to report that you can't be too careful. We also find a relative decline in the proportion of individuals in finance who are less trusting, although this shift is slightly lower.

To illustrate the economic magnitude of the relative decline in generalized trust of people in the finance industry, we compare it with another important determinant of trust, namely the level of income inequality (e.g., Knack and Keefer, 1997; Uslaner, 2002). Analyzing U.S. data, Alesina and La Ferrara (2002) find that an increase in the Gini coefficient by one percent in people's local environment decreases their likelihood of reporting that most people can be trusted by 0.96 percent. The ratio between this estimate and the relative decline in trust for individuals in finance that we find suggests that their relative trust decline over the past 39 years is roughly comparable to a 13 percent increase in the Gini coefficient, for example, from its nation-wide value of 48 percent in 2016 to 61 percent (almost the level of South Africa).

Is the trend in generalized trust in the finance industry different from the trend in other industries? To answer this question, we investigate the trust trend of individuals working in three other industries for which scholars have argued that trust is fundamental: the healthcare industry, the legal service industry, and the tech industry. We motivate and describe this analysis in detail in Appendix 2 and show the respective results in Appendix Table A2.1. Across all three industries, generalized trust of workers has declined significantly over the past decades, albeit only marginally so for the tech industry. However, in none of the regressions is the time trend significantly larger than among the general U.S. population, neither for the full sample nor in one of the subperiods. Importantly, we also find that the decline in trust in the finance sector is significantly more pronounced than the decline in trust in the healthcare or tech sector but not statistically different from the decline in trust in the legal services industry. Overall, there appears to be little evidence that the decline in generalized trust that we observe for the finance industry is shared by other industries that also depend heavily on trust. We also investigate the time trend in generalized trust across *all* other industries in the sample in further untabulated tests. Regardless of the industry, there is no significant relative decline in trust for workers in any of these, except finance. Taken together, our results suggest that the relative decline in generalized trust among workers in finance that we find is unparalleled in any other industry and hence unique to the finance industry.

3.4 Heterogeneity in the trust trend

To explore why trust has declined so much among finance professionals, we divide the generalized trust trend by industry subsector as well as hierarchy level and seniority. While we acknowledge that focusing on subgroups of our data may yield small sample issues, we believe that the evidence based on subgroups is informative. However, we caution against any causal interpretation of the following results. We begin our analysis by comparing major subsectors of the finance industry, namely banking, insurance, and investment. The latter often criticized in public for its allegedly low ethical standards. In general, given the different scandals that occurred in these subsectors during different periods of time (e.g., the Savings and Loans crisis of the 1980s), trust across finance professionals may have developed differently over time. Table 4 reports results from OLS regressions estimating equation (1) separately for individuals working in banking, insurance, and investment. The estimates in Panel A suggest an absolute and relative decline in generalized trust compared to the U.S. population in all three subsectors. The difference in time trends between finance and the general population in the fourth column appears to be slightly larger in the investment sector than in banking and insurance, though this difference is not significant. We thus conclude that the erosion of trust is not driven by one particular industry subsector but rather is a prevalent trend across finance professionals working in all subsectors.

Panel B of Table 4, however, documents the presence of heterogeneity across subsectors with regards to the timing of the trust decline. Specifically, the estimates suggest that generalized trust in banking and insurance only declines significantly in the early sample years (1978-1996), which does not support the standard claims that trust and ethics declined in the years preceding the financial crises of the late 2000s. Rather, generalized trust has already declined much earlier and has remained at a low level. This result appears particularly noteworthy since the allegedly low moral standards in the finance industry, which, for example, was cited by the 2008 Financial Crisis Inquiry Commission (2011), did not arise only in recent years but has actually been a trend over the past four decades, at least with respect to trusting behavior. In contrast, the trust trend in the investment subsector is significantly negative for both the first and second half of our sample period, indicating that trust across investment professionals has declined across all sample periods.

The investment sector hence appears to be the key driver for the relative decline in generalized trust in more recent years.⁸

We next turn to studying the trend in generalized trust for individuals in higher hierarchy levels of the finance industry, which we refer to as the *upper echelons*. A decline in trust of individuals in higher hierarchy levels should be most interesting, since they set the tone in the industry. Additionally, we examine heterogeneity in the trust trend for junior vs. senior cohorts. A decline in trust only among senior finance professionals would perhaps be likely to self-correct as these individuals retire and hence drop out of the industry. To classify respondents as belonging to the upper echelons, we use the latest International Standard Classification of Occupations (ISCO-08) provided in the GSS. The ISCO-08 divides jobs into ten major groups depending on the skill level required to perform the duties of these jobs. We classify a worker in the finance industry as member of the upper echelons if he or she belongs to one of the top three major groups, i.e., managers, professionals, or associate professionals. These jobs typically require workers to perform tasks that need an extensive body of knowledge, complex problem-solving, and decision-making (International Labour Office, 2012). About 60 percent of individuals in the finance industry and 40 percent of the general population belong to these groups.

To formally test whether trust trended differently for individuals in the upper echelons, we re-estimate our baseline OLS regression from column (2) of Table 3. Columns (1) and (2) of Table 5 present the results from these regressions. In the first column, we divide our *In Finance* trend variable into two variables: one for finance professionals who belong to the upper echelons of the industry and one for finance professionals who belong to the lower echelons. The results show a positive and highly significant coefficient on both time trend variables, suggesting that individuals in either hierarchy level experienced a substantial decline in generalized trust. Comparing the two coefficients, we also find that trust erosion is equally strong for both groups in finance, and they are both highly significant when compared to the time trend of the general U.S. population.

⁸ The above results are generally consistent with historical events that may have shaped the three financial subsectors in different ways. For example, in the first half of our sample, the banking and insurance sectors were particularly affected by the savings and loans crisis of the 1980s and the lifting of interstate branching restrictions. The dot-com bubble in the early 2000s, the 2003 mutual fund scandal, and the Global Research Analyst Settlement have arguably had an impact on the investment industry where trust has declined also in the second half of our sample period.

Column (2) presents estimates from a regression in which we restrict the respondents to cover only individuals in upper echelons across all industries. This analysis is interesting as it reveals whether the relative decline in generalized trust is a phenomenon that is just generally shared among individuals in higher hierarchies irrespective of their profession. The results in column (2) do not support this conjecture. The relative trust decline is significant at the 1% level and amounts to nearly 14 percent. Thus, the propensity of individuals working in the upper echelons of the finance industry to report that most other people can be trusted has also declined substantially relative to people working in the upper echelons in other industries.

Since our controls include decadal age categories, the relative loss of generalized trust by the upper echelons in finance is unlikely to be merely an age effect. Notwithstanding this control, it is still interesting to examine how generalized trust trended for individuals of different age groups. Hence, we divide the *In Finance* trend variable into one time trend variable for seniors and one for juniors in the finance industry. We define seniors as those respondents who are above the median age of all people who work in the finance industry in a year. Column (3) of Table 5 reports the regression results, which indicate that, in line with the results in the first two columns, generalized trust declined equally strongly for both junior and senior cohorts in finance. Column (4) shows that the trust decline among senior finance professionals is significantly larger than the decline among seniors in the rest of the U.S. population.

Overall, the analyses on the hierarchy level and seniority of individuals in finance suggest that the relative erosion of generalized trust has not taken place only in the lower or higher ranks. We document the trend both among current decision-makers who set the tone in the industry as well as among future generations of decision-makers. It is therefore unlikely to self-correct when senior finance professionals retire.

4. Discussion of potential reasons for the trust decline

Our results suggest that the relative decline in generalized trust among workers in finance that we find is unparalleled in any other industry and hence unique to the finance industry. This finding raises the question of why trust has decreased so substantially, specifically in the finance industry. While it is virtually impossible to provide causal evidence on the determinants of the decline in trust we observe among finance professionals, we nevertheless discuss several non-mutually exclusive reasons for the decline in trust.

We explicitly study two of the potential reasons, which we describe in detail in Appendix 3. Appendix Tables A3.1 and A3.2 provide results of empirical tests of these explanations. First, we argue that socialization habits of workers in finance have changed over time, resulting in fewer opportunities for human interactions, which have made the formation of generalized trust more difficult. Consistently, we document that finance professionals are less likely to participate in social groups than they used to. The propensity of workers in finance to be a member of a Putnam-type group, i.e., a group that is unlikely to act as a distributional coalition focused on rent-seeking, has declined disproportionately. In addition, we document a relative increase in working hours in finance. These two trends are unobserved in any other industry apart from finance. Second, we argue that changes in economic conditions in the U.S. may have differential effects on finance professionals. We find that proxies for economic conditions in the U.S. are disproportionately strongly correlated with trust among finance professionals than the average American. In particular, income inequality in the U.S. is strongly negatively related to trust, while economic growth is strongly positively related to trust for people working in finance. Income inequality also exhibits a significant and positive time trend over our sample, suggesting that a widening income gap in American society, which is caused to a significant degree by the finance industry itself (Philippon and Reshef, 2012), may be a potential reason for the trust decline.

There are various other potential reasons for the decline in trust across the finance industry. For example, trust may have declined because the type of individuals entering the finance industry has changed over time. A change towards a more heterogeneous workforce of the finance industry (e.g., more racial fragmentation or within-industry income inequality), which is consistent with the increasing standard deviations in Table 1, may have led to a decline in trust, as suggested by extant work (e.g., Alesina and La Ferrara, 2002; Putnam, 2007). Also, trust may have declined because finance professionals have witnessed misbehavior by colleagues in the industry or because organizational forms have changed over the past few decades, with partnerships being replaced by large publicly traded financial institutions. In a partnership, individual trust and reputation are relatively closely bound to the success of the partnership, unlike in large publicly traded institutions. Another reason for the decline in generalized trust across finance professionals may be that the level of trust prevailing in the finance industry in the early years of our sample period was significantly higher than in other industries and has just converged towards the average population level during the 1980s and 1990s. However, this reason leaves unanswered the question

of why the decline in trust has been significantly steeper for finance professionals. Identifying the reasons why generalized trust has declined in the finance industry is difficult due to lack of data and endogeneity concerns and is beyond the scope of our paper. We leave this empirical challenge for future research.

5. Conclusion

This study is one of the first that seeks to develop our understanding of the social mechanisms that determine the behavior of professionals working in the U.S. finance industry. It provides novel insights into the long-term evolution of the trusting behavior of finance professionals. Specifically, we document that the level of generalized trust among finance professionals has uniquely declined over the past decades, significantly more so than the decline of trust in the general U.S. population or comparable industries. This finding aligns with broader trends observed in the finance industry and its perceived integrity. The relative trust decline in finance was particularly strong until the mid-1990s, i.e., significantly in advance of the global financial crisis, but is still significant in more recent years for the investment subsector. The decline in trust is prevalent in different age cohorts and among different levels of seniority.

While we cannot ultimately identify what has caused the decline in generalized trust across finance professionals, our study provides a novel perspective on an informal but important mechanism in the U.S. finance industry. This perspective has potential consequences for the efficiency of financial activities. As Putnam (2000) argues, and consistent with Knack and Keefer (1997), if we do not sufficiently trust others, resources may be wasted on monitoring and legal services, developing ever more granular contracts and subsequently enforcing them. In addition, by comparing trust levels in the finance industry with those of other industries, our study provides a benchmark for evaluating the trustworthiness of the finance sector. While the trust levels may not be drastically different from other industries in recent years, the fact that trust in finance remains lower compared to historically high levels observed in the early 1980s raises questions about the sector's reputation and the impact of trust on its functioning.

Our results are also likely to have important societal implications. Recognizing the decline in trust over time, policymakers, industry regulators, and financial institutions should pay attention to rebuilding and maintaining trust through increased transparency, ethical practices, and effective governance mechanisms. Our results highlight the need for further research and analysis to

understand the factors contributing to diminishing trust across the finance industry. In particular, understanding the factors behind the initial high trust levels can inform policy decisions aimed at fostering trust in other industries or during specific time periods.

References

- Abdulkadiroğlu, A., and Bagwell, K., 2013. Trust, reciprocity, and favors in cooperative relationships. *American Economic Journal: Microeconomics* 5, 213-259.
- Adams, R.B., 2021. Trust in finance: Values matter. *Journal of the Japanese and International Economies*, Forthcoming.
- Aghion, P., Algan, Y., Cahuc, P., and Shleifer, A., 2010. Regulation and distrust. *Quarterly Journal of Economics* 125, 1015–1049.
- Ai, C., and Norton, E.C., 2003. Interaction terms in logit and probit models. *Economics Letters* 80, 123.129.
- Alesina, A., and La Ferrara, E., 2000. Participation in heterogenous communities. *Quarterly Journal of Economics* 115, 847-904.
- Alesina, A., and La Ferrara, E., 2002. Who trusts others? *Journal of Public Economics* 85, 207-234.
- Ashraf, N., Bandiera, O., and Delfino, A., 2020. The distinctive values of bankers. *American Economic Review Papers and Proceedings* 110, 167-171.
- Anderlini, L., and Terlizzese, D., 2017. Equilibrium trust. *Games and Economic Behavior* 102, 624-644.
- Axelson, U. and Bond, P., 2015. Wall Street occupations. *Journal of Finance* 70, 1949-1996.
- Berg, J., Dickhaut, J., and McCabe, K., 1995. Trust, reciprocity and social history. *Games and Economic Behaviour* 10, 122–42.
- Blackburn, A., Huber, C., Eliaz, Y., Shamim, M.S., Weisz, D., Seshadri, G., Kim, K., Hang, S., and Aiden, E.L., 2022. Cooperation among an anonymous group protected Bitcoin during failures of decentralization. *arXiv preprint arXiv:2206.02871*.
- Bolton, P., Freixas, X., and Shapiro, J., 2007. Conflicts of interest, information provision, and competition in the financial services industry. *Journal of Financial Economics* 85, 297-330.
- Brown, S., Gray, D., McHardy, J., and Taylor, K., 2015. Employee trust and workplace performance. *Journal of Economic Behavior and Organization* 116, 361-378.
- Calderón, C., and Liu, L., 2003. The direction of causality between financial development and economic growth. *Journal of Development Economics* 72, 321-334.
- Carlin, B.I., 2009. Strategic price complexity in retail financial markets. *Journal of Financial Economics* 91, 278-287.
- Carlin, B.I., Dorobantu, F., and Vishwanathan, S., 2009. Public trust, the law, and financial investment. *Journal of Financial Economics* 70, 321-341.
- Clance, P.R., and Imes, S.A., 1978. The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice* 15, 241-247.
- Cohn, A., Fehr, E., and Maréchal, M.A., 2014. Business culture and dishonesty in the banking industry. *Nature* 516, 86-89.
- Costa, D., and Kahn, M., 2003. Civic engagement and community heterogeneity: An economist's perspective, *Perspective on Politics* 1, 103-111.
- D'Acunto, F., Xie, J., and Yao, J., 2022. Trust and contracts: Empirical evidence. CESifo Working Paper No. 8714.
- Dupont, Q., and Karpoff, J.M., 2020. The trust triangle: Laws, reputation, and culture in empirical finance research. *Journal of Business Ethics* 163, 217-238.
- Fehr, E., and Gaechter, S., 2000. Fairness and retaliation: The economics of reciprocity. *Journal of*

- Economic Perspectives* 14, 159-181.
- Fehr, E., Fischbacher, U., Schupp, J., Von Rosenbladt, B., and Wagner, G.G., 2003. A nationwide laboratory examining trust and trustworthiness by integrating behavioral experiments into representative surveys. CEPR Discussion Paper 3858.
- Financial Crisis Inquiry Commission, 2011. The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States. Washington, D.C.: Government Printing Office.
- Francois, P., and Zabojnik, J., 2005. Trust, social capital, and economic development. *Journal of the European Economic Association* 3, 51-94.
- Fukuyama, F., 1995. Trust: The social virtues and the creation of prosperity. New York, NY: The Free Press.
- Fungáčová, Z., Hasan, I., and Weill, L., 2019. Trust in banks. *Journal of Economic Behavior and Organization* 157, 452-476.
- Gennaioli, N., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A., 2022. Trust and insurance contracts, *Review of Financial Studies* 35, 5287-5333.
- Goldin, C., and Katz, L.F., 2008. Transitions: Career and family life cycles of the educational elite. *American Economic Review* 98, 363-369.
- Goldstein, L.R., 2005. A view from the bench: Why judges fail to protect trust and confidence in the lawyer-client relationship - An analysis and proposal for reform. *Fordham Law Review* 73, 2665-2709.
- Guiso, L., Sapienza, P., and Zingales, L., 2004. The role of social capital in financial development. *American Economic Review* 94, 526-556.
- Guiso, L., Sapienza, P., and Zingales, L., 2006. Does culture affect economic outcomes? *Journal of Economic Perspectives* 20, 23-48.
- Guiso, L., Sapienza, P., and Zingales, L., 2008. Trusting the stock market. *Journal of Finance* 63, 2557-2600.
- Guiso, L., Sapienza, P., and Zingales, L., 2011. Civic capital as the missing link. In Benhabib, J., Bisin, A., and Jackson, M.O. (Eds.): *Handbook of Social Economics*, 417-480. Amsterdam, Netherlands: North Holland.
- Hagenaars, A., de Vos, K., and Zaidi, M.A., 1994. Poverty statistics in the Late 1980s: Research based on micro-data. Luxembourg: Office for Official Publications of the European Communities.
- Hagendorff, J., Lim, S., and Nguyen, D.D., 2022. Lender trust and bank loan contracts. *Management Science*, Forthcoming.
- Hart, O., and Moore, J., 1988. Incomplete contracts and renegotiation. *Econometrica* 56, 755-785.
- Hasan, I., Hoi, C.K., Wu, Q., and Zhang, H., 2017. Social capital and debt contracting: Evidence from bank loans and public bonds. *Journal of Financial and Quantitative Analysis* 52, 1017-1047.
- Hout, M., 2004. Getting the most out of the GSS income measures. Methodological Report No. 101, Chicago, Il: University of Chicago, NORC.
- Huber, C., and Huber, J., 2020. Bad bankers no more? Truth-telling and (dis)honesty in the finance industry. *Journal of Economic Behavior and Organization* 180, 472-493.
- Ifcher, J., and Zarghamee, H., 2014. The happiness of single mothers: Evidence from the General Social Survey. *Journal of Happiness Studies* 15, 1219-1238.
- International Labour Office, 2012. International Standard Classification of Occupations: Structure, group definitions and correspondence tables. Geneva, Switzerland.

- Johnson, N.D., and Mislin, A., 2012. How much should we trust the World Values Survey trust question? *Economics Letters* 116, 210-212.
- Knack, S., and Keefer, P., 1997. Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics* 112, 1251-1288.
- Lee, C.-S., 2013. Welfare states and social trust. *Comparative Political Studies* 46, 603-630.
- Lesmeister, S., Limbach, P., and Goergen, M., 2022. Trust and monitoring. *Journal of Banking and Finance* 143, 106587.
- Loughran, T., and Ritter, J.R., 2004. Why has IPO underpricing changed over time? *Financial Management* 33, 5-37.
- Mackie, G., 2001. Patterns of social trust in Western Europe and their genesis. In Cook, K. (Ed.): *Trust in Society*, 245-282. New York, NY: Russell Sage Foundation.
- Mewes, J., 2014. Gen(d)eralized trust: Women, work, and trust in strangers. *European Sociological Review* 30, 373-386.
- Nannestad, P., 2008. What have we learned about generalized trust, if anything? *Annual Review of Political Science* 11, 413-436.
- Neyman, J., and Scott, E., 1948. Consistent estimates based on partially consistent observations. *Econometrica* 16, 1-32.
- Norris, P., and Inglehart, R., 2006. Gendering social capital: bowling in women's leagues? In O'Neill, B., and Gidengil, E. (Eds.): *Gender and Social Capital*, 73-98. New York, NY: Routledge.
- Oster, E., 2019. Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business and Economic Statistics* 37, 187-204.
- Philippon, T., and Reshef, A., 2012. Wages and human capital in the U.S. finance industry: 1909-2006. *Quarterly Journal of Economics* 127, 1551-1609.
- Philippon, T., 2015. Has the US finance industry become less efficient? On the theory and measurement of financial intermediation. *American Economic Review* 105, 1408-38.
- Pickett, K., and Wilkinson, R., 2010. *The spirit level: Why greater equality makes societies stronger*. New York, NY: Bloomsbury Press.
- Putnam, R.D., 1993. *Making democracy work*. Princeton, NJ: Princeton University Press.
- Putnam, R.D., 1995. Bowling alone: America's declining social capital. *Journal of Democracy* 6, 65-78.
- Putnam, R.D., 2000. *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster.
- Putnam, R.D., 2007. E pluribus unum: Diversity and community in the twenty-first century: The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies* 30, 137-174.
- Rahwan, Z., Yoeli, E., and Fasolo, B., 2019. Heterogeneity in banker culture and its influence on dishonesty. *Nature* 575, 345-349.
- Sapienza, P., and Zingales, L., 2012. A trust crisis. *International Review of Finance* 12, 123-131.
- Sapienza, P., Toldra-Simats, A., and Zingales, L., 2013. Understanding trust. *The Economic Journal* 123, 1313-1332.
- Smith, T.W., 1988. Context effects in the General Social Survey. Methodological Report No. 55, Chicago, IL: University of Chicago, NORC.
- Smith, T.W., 1990. Timely artifacts: A review of measurement - Variation in the 1972-1989 GSS. Methodological Report No. 56, Chicago, IL: University of Chicago, NORC.

- Stevenson, B., and Wolfers, J., 2008a. Economic growth and subjective well-being: Reassessing the Easterlin Paradox. *Brookings Papers on Economic Activity* 2008(1), 1-87.
- Stevenson, B., and Wolfers, J., 2008b. Happiness inequality in the United States. *Journal of Legal Studies* 37, 33-79.
- Stevenson, B., and Wolfers, J., 2009. The paradox of declining female happiness. *American Economic Journal: Economic Policy* 1, 190-225.
- Talley, E.L., 2021. Discharging the discharge-for-value defense. *New York University Journal of Law and Business* 18, 147-220.
- Traunmüller, R., 2011. Moral communities? Religion as a source of social trust in a multilevel analysis of 97 German regions. *European Sociological Review* 27, 346-363.
- Twenge, J.M., Campbell, W.K., and Carter, N.T., 2014. Declines in trust in others and confidence in institutions among American adults and late adolescents, 1972-2012. *Psychological Science* 25, 1914-1923.
- Uslaner, E.M., 2002. *The moral foundations of trust*. Cambridge, UK: Cambridge University Press.
- Uslaner, E.M., 2008. *Corruption, inequality, and the rule of law: The bulging pocket makes the easy life*. Cambridge, UK: Cambridge University Press.
- Van Hoorn, A., 2015. The Global Financial Crisis and the values of professionals in finance: An empirical analysis. *Journal of Business Ethics* 130, 253-269.
- Xie, F., Zhang, B., and Zhang, W., 2022. Trust, incomplete contracting, and corporate innovation. *Management Science* 68, 3419-3443.
- Zak, P.J., and Knack, S., 2001. Trust and growth. *The Economic Journal* 111, 295-321.
- Zingales, L., 2015. Presidential address: Does finance benefit society? *Journal of Finance* 70, 1327-1363.
- Zorn, C., 2005. A solution to separation in binary response models. *Political Analysis* 13, 157-170.

Figure 1: Residual trust of finance professionals and the rest of the U.S. population, 1978-2016

This figure illustrates how residuals of trust have trended over time for individuals in finance and the general U.S. population after accounting for a wide range of personal characteristics. The left panel plots the residuals from an OLS regression of *Most people can be trusted* on demographic and socioeconomic controls as well as region fixed effects for both groups (see Appendix Table A2 for details). The right panel shows the differences in the residuals as bars and plots its linear time trend as a dashed line.

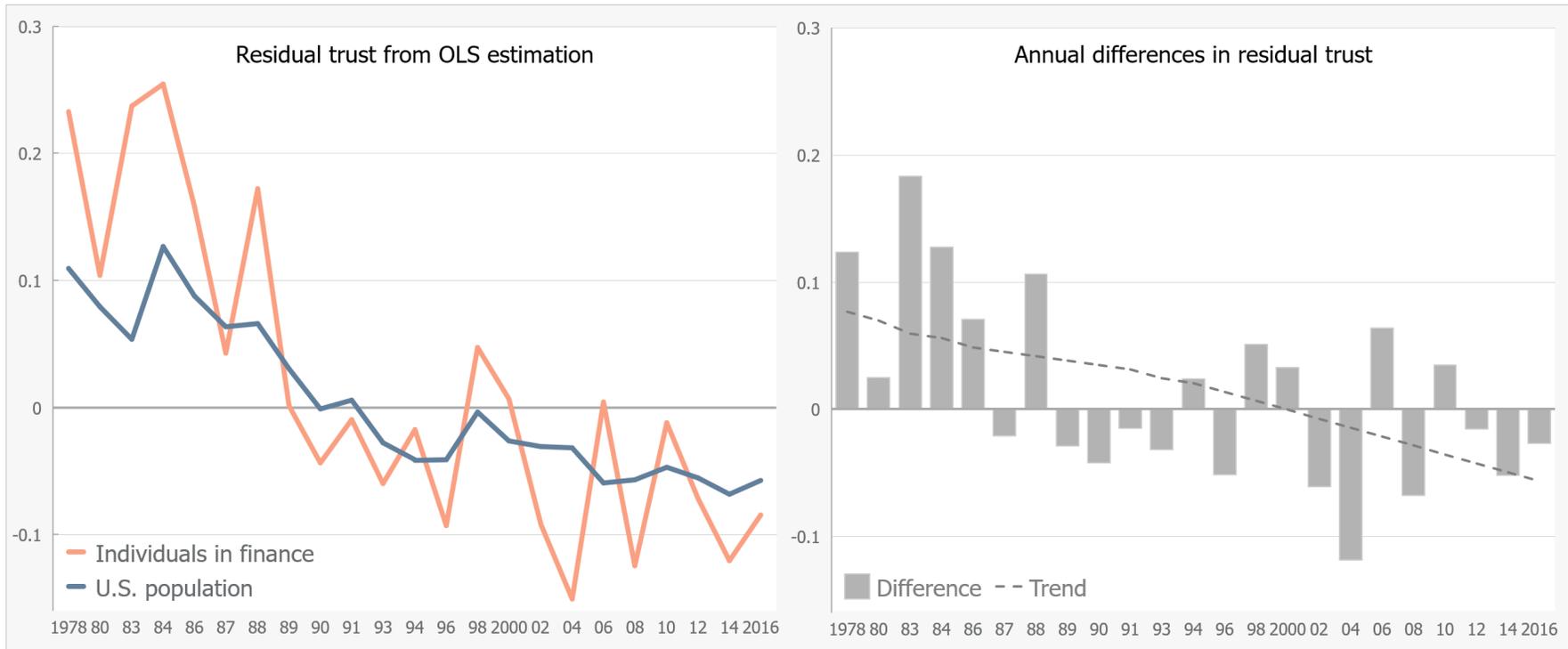


Table 1: Summary statistics over time for finance professionals and the rest of the U.S. population

This table reports summary statistics by time period (i.e., 1978-1990, 1991-2003, and 2004-2016) for the variables used in our baseline regression models in Section 3. The full estimation results including the coefficients on all control variables are reported in Appendix Table A2. Summary statistics are shown separately for the subsamples of people working in finance and the rest of the U.S. population. Variables are weighted using the weight variable provided in the GSS. The variable *Residual Most people can be trusted* is the residual from an OLS estimation of equation (1) without the *In Finance* dummy and the time trend variables, i.e., it is the level of generalized trust after accounting for demographic, regional, and socioeconomic differences across people (see Section 2.2 for variable definitions). The last column (per time period) shows the difference in the mean values between finance professionals and the U.S. population. ***, **, * denote statistical significance of a difference at the 1%, 5% and 10% level, respectively.

Variable	1978-1990					1991-2003					2004-2016				
	In Finance		Not in Finance		Difference	In Finance		Not in Finance		Difference	In Finance		Not in Finance		Difference
	Mean	StD	Mean	StD		Mean	StD	Mean	StD		Mean	StD	Mean	StD	
Most people can be trusted	0.533	0.499	0.456	0.498	0.077***	0.416	0.493	0.358	0.480	0.057**	0.400	0.490	0.332	0.471	0.068***
Residual Most people can be trusted	0.058	0.475	-0.001	0.467	0.058**	-0.001	0.462	0.000	0.453	-0.001	-0.011	0.451	-0.000	0.443	-0.011
Age	39.267	14.598	44.048	16.934	-4.781***	43.332	15.227	44.672	16.388	-1.340*	47.101	15.488	46.886	16.963	0.215
Female	0.701	0.458	0.510	0.500	0.192***	0.655	0.476	0.529	0.499	0.126***	0.652	0.477	0.529	0.499	0.122***
Race = White	0.889	0.314	0.865	0.342	0.024	0.821	0.384	0.819	0.385	0.002	0.788	0.409	0.762	0.426	0.026
Race = Black	0.096	0.295	0.107	0.309	-0.011	0.115	0.319	0.124	0.330	-0.009	0.079	0.270	0.140	0.347	-0.061***
Race = Other	0.015	0.120	0.028	0.166	-0.014**	0.064	0.245	0.057	0.231	0.007	0.134	0.341	0.098	0.297	0.036*
Born outside the U.S.	0.057	0.232	0.063	0.243	-0.006	0.098	0.297	0.085	0.279	0.012	0.107	0.310	0.113	0.317	-0.006
Highest degree = Less than high school	0.051	0.220	0.247	0.431	-0.196***	0.021	0.143	0.148	0.355	-0.127***	0.033	0.178	0.116	0.321	-0.083***
Highest degree = High school	0.658	0.475	0.540	0.498	0.118***	0.516	0.500	0.549	0.498	-0.033	0.455	0.498	0.515	0.500	-0.061**
Highest degree = Junior college	0.053	0.224	0.041	0.198	0.012	0.085	0.279	0.068	0.251	0.017	0.061	0.240	0.084	0.278	-0.023**
Highest degree = Bachelor's degree	0.196	0.398	0.119	0.323	0.078***	0.307	0.462	0.162	0.368	0.145***	0.332	0.471	0.183	0.387	0.149***
Highest degree = Graduate degree	0.042	0.200	0.054	0.225	-0.012	0.071	0.256	0.073	0.261	-0.003	0.119	0.325	0.101	0.302	0.018
Labor force status = Working full time	0.625	0.485	0.532	0.499	0.093***	0.645	0.479	0.562	0.496	0.083***	0.609	0.489	0.514	0.500	0.095***
Labor force status = All other	0.375	0.485	0.468	0.499	-0.093***	0.355	0.479	0.438	0.496	-0.083***	0.391	0.489	0.486	0.500	-0.095***

Ln(Income)	10.432	0.669	10.069	0.829	0.363***	10.492	0.792	10.125	0.915	0.367***	10.577	0.854	10.137	1.052	0.440***
Marital status = Married	0.669	0.471	0.651	0.477	0.018	0.652	0.477	0.587	0.492	0.064***	0.635	0.482	0.540	0.498	0.095***
Marital status = Widowed	0.042	0.200	0.070	0.254	-0.028***	0.055	0.228	0.064	0.245	-0.009	0.050	0.218	0.057	0.232	-0.007
Marital status = Divorced	0.072	0.259	0.080	0.272	-0.008	0.086	0.281	0.116	0.321	-0.030***	0.104	0.306	0.130	0.337	-0.026*
Marital status = Separated	0.018	0.132	0.024	0.154	-0.007	0.020	0.140	0.026	0.160	-0.007	0.015	0.121	0.026	0.160	-0.011**
Marital status = Never married	0.200	0.400	0.175	0.380	0.025	0.188	0.391	0.206	0.404	-0.018	0.196	0.397	0.246	0.431	-0.050**
Number of children	1.622	1.501	2.028	1.850	-0.406***	1.547	1.440	1.859	1.660	-0.312***	1.687	1.396	1.831	1.629	-0.145**
Religion = Protestant	0.597	0.491	0.624	0.485	-0.027	0.539	0.499	0.570	0.495	-0.030	0.480	0.500	0.492	0.500	-0.013
Religion = Catholic	0.308	0.462	0.261	0.439	0.047**	0.306	0.461	0.251	0.434	0.055**	0.304	0.460	0.229	0.420	0.075***
Religion = Jewish	0.027	0.162	0.019	0.137	0.008	0.033	0.179	0.019	0.138	0.014	0.022	0.147	0.017	0.129	0.005
Religion = None	0.056	0.231	0.076	0.265	-0.020*	0.083	0.277	0.112	0.315	-0.028**	0.138	0.345	0.188	0.391	-0.051***
Lives in rural area	0.091	0.288	0.175	0.380	-0.083***	0.070	0.256	0.102	0.303	-0.032**	0.052	0.223	0.105	0.306	-0.052***

Table 2: The level of generalized trust over time for individuals in finance and the U.S. population

This table reports coefficients from OLS regressions of the form described in equation (1) without time trend variables. The dependent variable *Most people can be trusted* is an indicator that equals one for a person who responds that “most people can be trusted” and zero for a person who responds that either it “depends” or that you “can’t be too careful”. Demographic controls include indicators for decadal age categories, gender and race (black, white, and other), and an indicator for whether a respondent was born in the U.S. Socioeconomic characteristics include controls for education, employment status, income, marital status, a respondent’s number of children, his religious denomination, and whether he lives in a rural area. Income is a quartic in log real family income per equivalent = 1 + 0.5 (other adults) + 0.3 children. See Section 2.2 for variable definitions. All specifications include region fixed effects using the U.S. region in which an interview was conducted as well as year fixed effects. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Dependent variable</i>	<i>Most people can be trusted</i>								
	1978-1990			1991-2003			2004-2016		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
In Finance dummy	0.072** (3.01)	0.077*** (3.61)	0.049* (1.89)	0.055** (2.49)	0.059** (3.01)	0.002 (0.09)	0.059* (1.96)	0.057 (1.84)	-0.003 (-0.11)
Demographic controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Socioeconomic controls	No	No	Yes	No	No	Yes	No	No	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,355	10,296	9,488	10,537	10,463	9,294	10,225	10,200	9,110
Adj. R-squared	0.0272	0.0678	0.123	0.0113	0.0562	0.116	0.0110	0.0591	0.128

Table 3: Generalized trust trends for individuals in finance and the U.S. population, 1978-2016

This table reports coefficients from OLS regressions of the form described in equation (1) with different measures of generalized trust based on the GSS question “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” The coefficients on the time trend variables report the change in trust per 100 years. The dependent variable *Most people can be trusted* (in specifications 1 and 2) is an indicator that equals one for a person who responds that “most people can be trusted” and zero for a person who responds that either it “depends” or that you “can’t be too careful”. *Can’t be too careful* (in specification 3) equals one for a person who responds that “you can’t be too careful” when dealing with people and zero if he responds that either it “depends” or that “most people can be trusted”. Demographic controls include indicators for decadal age categories, gender and race (black, white, and other), and an indicator for whether a respondent was born in the U.S. Socioeconomic characteristics include controls for education, employment status, income, marital status, a respondent’s number of children, his religious denomination, and whether he lives in a rural area. Income is a quartic in log real family income per equivalent = 1 + 0.5 (other adults) + 0.3 children. See Section 2.2 for variable definitions. All specifications include region fixed effects using the U.S. region in which an interview was conducted. The full regression model is shown in Panel A of Appendix Table A2. Robust t and z-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Generally speaking, would you say that most people can be trusted or that you can’t be too careful with people?</i>			
[3] Most people can be trusted; [2] Depends; [1] Can’t be too careful			
<i>Dependent variables</i>	<i>Most people can be trusted</i>		<i>Can’t be too careful</i>
	(1)	(2)	(3)
In Finance time trend	-0.575*** (-5.48)	-0.864*** (-7.08)	0.822*** (5.68)
Not in Finance time trend	-0.411*** (-9.20)	-0.559*** (-12.14)	0.540*** (12.68)
In Finance dummy	0.096*** (4.74)	0.074*** (3.16)	-0.076*** (-3.22)
<i>Difference in time trends</i>	-0.164*	-0.306***	0.283**
<i>p-value of difference</i>	0.0877	0.00289	0.0197
Demographic controls	Yes	Yes	Yes
Socioeconomic controls	No	Yes	Yes
Region FE	Yes	Yes	Yes
Observations	30,959	27,892	27,892
Pseudo / Adj. R-squared	0.0671	0.127	0.132

Table 4: Heterogeneity in the trust trend across finance subsectors and time

This table reports results exploiting variation in the generalized trust trend by breaking it apart by finance industry subsector, i.e., banking, investment, and insurance. In Panel A, each specification shows the coefficients from an OLS regression of *Most people can be trusted* on time trend variables of generalized trust along with demographic and socioeconomic controls. Panel B reports results of the same regressions separately for the first and second half of the sample, i.e., 1978-1996 and 1997-2016. See Section 2.2 for a description of the control variables. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

Panel A: Trust trend per finance subsector

<i>Dependent variable</i>	<i>Most people can be trusted</i>		
	Banking	Investment	Insurance
	(1)	(2)	(3)
In Finance time trend	-0.847*** (-4.47)	-1.180*** (-3.84)	-0.873*** (-4.84)
Not in Finance time trend	-0.558*** (-12.24)	-0.556*** (-12.22)	-0.557*** (-12.27)
In Finance dummy	0.065* (1.75)	0.096 (1.18)	0.089* (2.62)
<i>Difference in time trends</i>	-0.290*	-0.624**	-0.317*
<i>p-value of difference</i>	0.0950	0.0320	0.0741
Demographic controls	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Observations	27,074	26,756	27,089
Adj. R-squared	0.127	0.127	0.127

Panel B: Trust trend per finance subsector in subperiods

<i>Dependent variable</i>	<i>Most people can be trusted</i>					
	Banking		Investment		Insurance	
	1978-1996	1997-2016	1978-1996	1997-2016	1978-1996	1997-2016
	(1)	(2)	(3)	(4)	(5)	(6)
In Finance time trend	-2.249*** (-8.82)	-0.423 (-1.05)	-3.330*** (-3.28)	-1.473** (-2.96)	-1.083** (-2.52)	-0.955 (-1.69)
Not in Finance time trend	-1.043*** (-7.88)	-0.396*** (-5.27)	-1.039*** (-7.79)	-0.397*** (-5.31)	-1.040*** (-7.78)	-0.395*** (-5.41)
In Finance dummy	0.133*** (3.64)	0.023 (0.24)	0.227* (1.92)	0.260 (1.75)	0.052 (1.21)	0.166 (0.94)
<i>Difference in time trends</i>	-1.205***	-0.0270	-2.291**	-1.076**	-0.0435	-0.561
<i>p-value of difference</i>	2.96e-09	0.938	0.0187	0.0315	0.905	0.288
<i>z-score for difference between periods</i>	-3.830***		-1.644		-0.179	
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,114	12,960	13,915	12,841	14,107	12,982
Adj. R-squared	0.123	0.128	0.124	0.127	0.123	0.127

Table 5: Heterogeneity in the trust trend by hierarchy level and seniority

This table reports results exploiting variations in the generalized trust trend by breaking it apart by hierarchy level and seniority. All specifications report coefficients from OLS regressions of *Most people can be trusted* on time trend variables of trust along with demographic and socioeconomic controls. In odd-numbered specifications, we compare people in finance with the entire U.S. population, while in even-numbered specifications, we compare a specific group of finance professionals to its corresponding group in the U.S. population. Specifically, specification 1 shows how trust trended in the upper and lower echelons in finance compared to the population, while specification 2 compares the upper echelons in finance with the upper echelons in the rest of the population. Analogously, specification 3 shows how trust trended for juniors and seniors (based on age) in finance compared to the population, while specification 4 compares seniors in finance with seniors in the rest of the population. See Section 2.2 for a description of the control variables. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Dependent variable</i>	<i>Most people can be trusted</i>			
	Hierarchy		Seniority	
	(1)	(2)	(3)	(4)
(1) Upper echelons in Finance time trend	-0.807*** (-7.27)	-0.917*** (-9.88)		
(2) Lower echelons in Finance time trend	-1.059*** (-5.35)			
(1) Seniors in Finance time trend			-0.799*** (-6.44)	-0.808*** (-4.70)
(2) Juniors in Finance time trend			-0.918*** (-6.55)	
(3) Not in Finance time trend	-0.558*** (-12.17)		-0.558*** (-12.11)	
(3) Upper echelons Not in Finance time trend		-0.552*** (-8.11)		
(3) Seniors Not in Finance time trend				-0.486*** (-9.63)
In Finance dummy	0.079*** (3.44)	0.081*** (4.11)	0.074*** (3.15)	0.080* (1.87)
<i>Difference in time trends</i>	<i>(1)-(2)</i>	0.252	0.119	
<i>p-value of difference</i>		0.121	0.230	
<i>Difference in time trends</i>	<i>(1)-(3)</i>	-0.249***	-0.365***	-0.241**
<i>p-value of difference</i>		0.008	0.000	0.021
<i>Difference in time trends</i>	<i>(2)-(3)</i>	-0.500***	-0.360***	
<i>p-value of difference</i>		0.005	0.004	
Demographic controls	Yes	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
Observations	27,852	11,973	27,892	15,080
Adj. R-squared	0.127	0.101	0.127	0.126

Appendices

Appendix 1: Correcting for changes in the General Social Survey

For decades, the General Social Survey (GSS) has followed a simple mantra: “The way to measure change is not to change the measure” (Smith, 1990, p. 1). Strict replication of question wording, survey structure, and measurement procedures have made the survey well suited for social scientists and other researchers to analyze long-term trends in attitudes and feelings on a vast range of subjects. This replication ideal resulted in the GSS becoming the second most cited survey in the academic and popular press behind the U.S. Census (Gibson, 2013). In some cases, however, the survey departed from its replication ideal in the past and implemented measurement variations for a variety of reasons. These variations and their effects on survey outcomes have been studied extensively by scholars. Results have been published, for instance, in Methodological Reports by the National Opinion Research Center at the University of Chicago that administers the GSS.

To create the sample for our study, we closely follow this extensive literature and adjust the GSS to ensure representativeness of the sample as well as consistency of measures across years. In this regard, three changes to the survey over our 39-year sample period from 1978 to 2016 are particularly relevant in our context:

(1) an oversample of blacks in the 1982 and 1987 survey;

(2) from 2006 onwards, surveys that could not have been completed by respondents in English were administered in Spanish;

(3) until 1988, the order of questions preceding the trust question was not the same in all interviews.

The first adjustment we need to make to the raw sample is due to an oversampling of black adults in the GSS in 1982 and 1987. These oversamples allowed researchers to obtain improved estimates for this subgroup, for example, to study racial differences in specific attitudes (see, e.g., Hall and Ferree, 1986). However, researchers that seek to study long-term trends must adjust for these oversamples to maintain the representativeness of affected survey waves. Thus, as suggested by Marsden and Smith (2016) and in line with previous studies (e.g., Ifcher and Zarghamee, 2014), we exclude the black oversamples in 1982 and 1987.

The second required change relates to interviews conducted in Spanish from 2006 onwards. In 2006, survey administrators added a Spanish version of the survey besides the standard English version. The Spanish version has allowed the GSS to expand its target population to non-English speaking respondents. However, prior studies indicate that the newly added respondents differ from English-only respondents in several notable ways, such as their demographic characteristics and attitudes (see, e.g., Smith, 2007). Consequently, Marsden and Smith (2016) state that trend studies using the GSS after 2004 must take

measures to ensure that their samples are comparable across years. Therefore, to maintain consistency with previous waves of the survey, we follow Stevenson and Wolfers (2008b, 2009), among others, and remove any interviews from 2006 onward that were conducted in Spanish and could not have been completed if English had been the only option. This way, we remove exactly those Spanish-speaking respondents who would not have been interviewed in the pre-2006 samples and thus ensure comparability with previous survey waves.

The third required adjustment relates to the order of questions in the General Social Survey. Smith (1988) provides evidence that responses to the trust question and other questions are sensitive to the immediately preceding set of questions. In particular, respondents report a lower level of generalized trust when the question follows questions on crime compared to questions on life and job values. We apply the methodology described by Stevenson and Wolfers (2008b) to account for the varying order of questions in the affected years 1978, 1983, 1986, and 1988 for respondents who were assigned survey form 2. Specifically, we assess the effect induced by changing the questions preceding the trust question by regressing generalized trust on an indicator variable equal to one for those respondents affected by the change while controlling for year fixed effects. The dependent variables are indicators corresponding to each of the three possible responses to the trust question. We adjust the sampling weights for the generalized trust variable for those respondents subject to the varied order of questions using the predicted values from the regressions.

Furthermore, to ensure representativeness of the GSS data, one has to apply sampling weights using the GSS weight variable WTSSALL, as suggested, for example, in the FAQs of the GSS (see <https://gss.norc.org/Lists/gssFAQs/DispForm.aspx?ID=11>). After applying the above adjustments, our sample is well suited to studying long-term trends in generalized trust.

Appendix Table A1: Summary statistics for the full sample

This table reports summary statistics for the variables used in our baseline regression models in Section 3. The sample period is 1978-2016. Summary statistics are shown for the total sample as well as separately for the subsamples of people working in finance and the rest of the U.S. population. See Section 2.2 for a description of the variables. Variables are weighted using the weight variable provided in the GSS. The variable *Residual Most people can be trusted* is the residual from an OLS estimation of equation (1) without the *In Finance* dummy and the time trend variables, i.e., it is the level of generalized trust after accounting for demographic, regional, and socioeconomic differences across people. The last column of the table shows the difference in the mean values between finance professionals and the U.S. population. ***, **, * denote statistical significance of a difference at the 1%, 5% and 10% level, respectively.

Variable	Total		In Finance	Not in Finance	Difference in means
	N	Mean	Mean	Mean	In Finance - Not in Finance
In Finance	31,117	0.048			
Most people can be trusted	31,117	0.386	0.450	0.382	0.068***
Residual Most people can be trusted	27,892	0.000	0.016	-0.000	0.016
Age	31,039	45.095	43.238	45.188	-1.950***
Female	31,117	0.530	0.669	0.523	0.147***
Race = White	31,117	0.817	0.833	0.816	0.017
Race = Black	31,117	0.122	0.097	0.124	-0.027***
Race = Other	31,117	0.061	0.071	0.061	0.010
Born outside the U.S.	31,034	0.087	0.087	0.087	0.000
Highest degree = Less than high school	31,061	0.164	0.035	0.171	-0.136***
Highest degree = High school	31,061	0.535	0.543	0.535	0.008
Highest degree = Junior college	31,061	0.064	0.067	0.064	0.002
Highest degree = Bachelor's degree	31,061	0.160	0.278	0.154	0.124***
Highest degree = Graduate degree	31,061	0.076	0.077	0.076	0.001
Labor force status = Working full time	31,116	0.541	0.626	0.536	0.090***
Labor force status = Other, e.g., part-time and temporary not employed	31116	0.459	0.374	0.464	-0.090***
Ln(Income)	28,156	10.129	10.499	10.110	0.389***
Marital status = Married	31,112	0.596	0.652	0.593	0.059***
Marital status = Widowed	31,112	0.063	0.049	0.064	-0.015***
Marital status = Divorced	31,112	0.108	0.087	0.109	-0.022***
Marital status = Separated	31,112	0.025	0.017	0.026	-0.008**
Marital status = Never married	31,112	0.208	0.194	0.209	-0.014
Number of children	31,042	1.892	1.618	1.906	-0.288***
Religion = Protestant	30,997	0.561	0.539	0.562	-0.024
Religion = Catholic	30,997	0.250	0.306	0.247	0.059***
Religion = Jewish	30,997	0.019	0.028	0.019	0.009*
Religion = None	30,997	0.123	0.092	0.125	-0.032***
Religion = Other	30,997	0.047	0.035	0.047	-0.012**
Lives in rural area	31,117	0.125	0.071	0.127	-0.056***

Appendix Table A2: Detailed regression model – Generalized trust trends for individuals in finance and the U.S. population, 1978-2016

Panel A of this table reports the OLS results from Table 3 showing the coefficients on all demographic and socioeconomic control variables used in the regressions. If we use indicators for each level of a categorical variable, the first category is omitted. The omitted categories are *Aged between 18 and 19* for age, *White* for race, *Less than high school degree* for education, *Working full time* for labor force status, *Married* for marital status, *No children* for number of children, and *Protestant* for religious denomination. Panel B shows the results from a less saturated model. Robust t and z-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

Panel A: Saturated model – Generalized trust trends for individuals in finance and the U.S. population

<i>Generally speaking, would you say that most people can be trusted or that you can't be too careful with people?</i>			
<i>Dependent variables</i>	<i>Most people can be trusted</i>		<i>Can't be too careful</i>
	(1)	(2)	(3)
In Finance time trend	-0.575*** (-5.48)	-0.864*** (-7.08)	0.822*** (5.68)
Not in Finance time trend	-0.411*** (-9.20)	-0.559*** (-12.14)	0.540*** (12.68)
In Finance dummy	0.096*** (4.74)	0.074*** (3.16)	-0.076*** (-3.22)
<i>Difference in time trends</i>	-0.164*	-0.306***	0.283**
<i>p-value of difference</i>	0.0877	0.00289	0.0197
Age between 20 and 29	-0.028 (-0.99)	-0.090*** (-2.92)	0.058 (1.53)
Age between 30 and 39	0.046 (1.59)	-0.041 (-1.37)	0.004 (0.12)
Age between 40 and 49	0.113*** (3.59)	0.022 (0.69)	-0.059 (-1.51)
Age between 50 and 59	0.123*** (3.71)	0.045 (1.35)	-0.074* (-1.77)
Age between 60 and 69	0.130*** (3.85)	0.081** (2.23)	-0.117** (-2.65)
Age between 70 and 79	0.091*** (3.03)	0.078** (2.32)	-0.122*** (-2.98)
Age between 80 and 89	0.098*** (3.34)	0.100*** (2.91)	-0.145*** (-3.37)

Female	-0.037*** (-4.74)	-0.027*** (-3.27)	0.032*** (3.92)
Race = Black	-0.217*** (-21.39)	-0.163*** (-13.14)	0.171*** (12.81)
Race = Other	-0.131*** (-11.82)	-0.095*** (-8.92)	0.092*** (9.03)
Born outside the U.S.	-0.032** (-2.79)	-0.032*** (-2.83)	0.008 (0.55)
Highest degree = High school		0.117*** (12.69)	-0.119*** (-11.95)
Highest degree = Junior college		0.153*** (15.85)	-0.166*** (-12.72)
Highest degree = Bachelor's degree		0.279*** (26.27)	-0.293*** (-27.44)
Highest degree = Graduate degree		0.352*** (29.38)	-0.376*** (-37.80)
Labor force status = Working part-time		0.045*** (4.56)	-0.049*** (-4.80)
Labor force status = Temp. not working		0.020 (0.93)	-0.011 (-0.55)
Labor force status = Unemployed		-0.015 (-0.80)	0.015 (0.76)
Labor force status = Retired		-0.008 (-0.83)	0.001 (0.11)
Labor force status = In school		0.063*** (3.35)	-0.088*** (-6.24)
Labor force status = Keeping house		-0.012 (-1.08)	0.005 (0.55)
Labor force status = Other		-0.043* (-1.97)	0.041 (1.70)
Ln(Income)		1.503 (0.65)	-1.130 (-0.57)
Ln(Income)^2		-0.278 (-0.71)	0.209 (0.63)
Ln(Income)^3		0.022 (0.78)	-0.017 (-0.69)
Ln(Income)^4		-0.001 (-0.82)	0.000 (0.73)

Marital status = Widowed		-0.021 (-1.46)	0.022 (1.44)
Marital status = Divorced		-0.046*** (-3.79)	0.038** (2.74)
Marital status = Separated		-0.067*** (-4.56)	0.060*** (3.91)
Marital status = Never married		-0.015 (-1.44)	0.010 (0.95)
Number of children = 1		-0.034*** (-3.60)	0.040*** (3.84)
Number of children = 2		-0.001 (-0.14)	0.006 (0.53)
Number of children = 3		-0.004 (-0.31)	0.011 (0.87)
Number of children = 4		0.009 (0.60)	0.001 (0.06)
Number of children = 5		0.010 (0.59)	0.003 (0.14)
Number of children = 6		0.009 (0.31)	-0.023 (-0.75)
Number of children = 7		0.030 (0.77)	-0.024 (-0.55)
Number of children \geq 8		-0.079** (-2.56)	0.089*** (3.26)
Religion = Catholic		-0.025*** (-3.79)	0.029*** (4.70)
Religion = Jewish		-0.042 (-1.67)	-0.010 (-0.44)
Religion = None		-0.010 (-0.68)	-0.008 (-0.68)
Religion = Other		-0.010 (-0.58)	-0.001 (-0.08)
Lives in rural area		0.001 (0.06)	-0.003 (-0.31)
Region FE	Yes	Yes	Yes
Observations	30,959	27,892	27,892
Pseudo / Adj. R-squared	0.0671	0.127	0.132

Panel B: Less saturated model – Generalized trust trends for individuals in finance and the U.S. population

Generally speaking, would you say that most people can be trusted or that you can't be too careful with people?

<i>Dependent variables</i>	<i>Most people can be trusted</i>		<i>Can't be too careful</i>
	(1)	(2)	(3)
In Finance time trend	-0.554*** (-5.24)	-0.865*** (-7.15)	0.825*** (5.73)
Not in Finance time trend	-0.404*** (-9.56)	-0.556*** (-12.31)	0.541*** (13.55)
In Finance dummy	0.096*** (4.73)	0.076*** (3.24)	-0.077*** (-3.19)
<i>Difference in time trends</i>	-0.150	-0.309***	0.284**
<i>p-value of difference</i>	0.128	0.00243	0.0198
Age	0.003*** (10.17)	0.004*** (9.61)	-0.004*** (-10.01)
Female	-0.037*** (-4.78)	-0.026*** (-2.99)	0.030*** (3.56)
Race = Black	-0.216*** (-20.27)	-0.165*** (-12.53)	0.174*** (12.45)
Race = Other	-0.132*** (-11.78)	-0.097*** (-9.22)	0.094*** (9.04)
Born outside the U.S.	-0.029** (-2.46)	-0.034*** (-2.94)	0.008 (0.60)
Highest degree (count)		0.084*** (32.62)	-0.090*** (-46.65)
Labor force status = Working part-time		0.048*** (4.58)	-0.051*** (-4.68)
Labor force status = Neither working full-time nor part-time		-0.011 (-1.34)	0.006 (0.79)

Ln(Income)		-0.109**	0.094*
		(-2.13)	(2.03)
Ln(Income)^2		0.008***	-0.007***
		(2.96)	(-2.93)
Number of children		0.003	-0.001
		(1.08)	(-0.52)
Marital status = Widowed		-0.040***	0.039**
		(-2.84)	(2.70)
Marital status = Divorced		-0.043***	0.035**
		(-3.53)	(2.53)
Marital status = Separated		-0.070***	0.062***
		(-4.64)	(3.93)
Marital status = Never married		-0.006	0.000
		(-0.64)	(0.04)
Religion = Catholic		-0.026***	0.030***
		(-3.92)	(4.84)
Religion = Jewish		-0.046*	-0.007
		(-1.85)	(-0.31)
Religion = None		-0.012	-0.007
		(-0.82)	(-0.61)
Religion = Other		-0.010	-0.003
		(-0.59)	(-0.15)
Lives in rural area		-0.001	-0.001
		(-0.10)	(-0.11)
Region FE	Yes	Yes	Yes
Observations	30,959	27,892	27,892
Pseudo / Adj. R-squared	0.0625	0.124	0.130

Appendix 2: Trust trend in other industries

Is the trend in generalized trust in the finance industry different from the trend in other industries? To answer this question, we investigate the trend in generalized trust of individuals working in three other industries for which scholars have argued that trust is fundamental: the healthcare industry, the legal service industry, and the tech industry. Zingales notes that “the healthcare sector is a particularly good comparison for the financial [industry]” because both sectors provide services that most people need but only a few understand. Accordingly, he concludes that “both sectors depend heavily on trust” (see Zingales, 2015, p. 1342). The healthcare sector has also grown steeply relative to the overall economy in a similar manner as the finance industry and both sectors have experienced numerous abuse and fraud cases, which may have damaged the levels of generalized trust prevailing in those sectors. Consequently, the imposition of new regulatory rules to both sectors is constantly on the agenda of policy-makers while companies attempt to influence or prevent government interventions through massive levels of lobbying. Trust is also frequently cited as an essential element for the provision of legal services and as a prerequisite for effective legal representation (see, e.g., Goldstein, 2005, and the literature therein). Courts, for instance, often describe the importance of trust in a lawyer-client relationship and stress its reciprocal nature, which leads to implicit contracts between a legal advisor and his client. Hence, both industries can be viewed as valid comparisons for the finance industry regarding the value of trust. Additionally, we study the trend in generalized trust in technology firms using the definition of Loughran and Ritter (2004). Technology firms typically offer products and services that are difficult for consumers to understand but account for crucial parts of their lives.

Appendix Table A2.1 presents the results from OLS regressions estimating equation (1) for the three industries above. For each industry, we first report results for the entire sample period and then separately study the first and second half of the sample. We also compare the time trend for each industry to the time trend in finance. The respective results for the healthcare sector are reported in columns (1) to (4), the results for the legal service industry in columns (5) to (8), and the results for tech firms in the last four columns. Across all three industries, trust of workers has declined over the past decades, albeit only marginally so for the tech industry. However, in none of the reported regressions is the time trend significantly larger than among the general U.S. population – neither for the full sample, nor in one of the sub-periods. Importantly, we also find that the decline in trust in the finance sector is significantly more pronounced than the decline in trust in the healthcare or tech sector but not statistically different from the decline in trust in the legal services industry. Overall, there appears to be little evidence that the decline in generalized trust that we observe for the finance industry is shared by other industries that also depend heavily on trust.

Furthermore, we investigate the time trend in generalized trust across *all* other industries in the sample in additional untabulated tests. Regardless of the industry, there is no significant relative decline in trust for workers in any of these, except finance. This result holds irrespective of whether we include individuals working in the finance industry in the control group or not.

Appendix Table A2.1: Generalized trust trends in comparable industries

This table reports coefficients from OLS regressions estimating equation (1) with *Most people can be trusted* as dependent variable. Specifications 1 to 4 report results for the healthcare industry, specifications 5 to 8 for the legal service industry, and specifications 9 to 12 for all tech firms following the definition in Loughran and Ritter (2004). For each industry, the first specification shows results for the whole sample period, while the second and third specifications, respectively, present estimates separately for the first and the second half of the sample, i.e., 1978-1996 and 1997-2016. Specifications 4, 8 and 12 compare the finance industry to the healthcare, legal and tech industry, respectively. All specifications include demographic and socioeconomic controls as well as region fixed effects. See Section 2.2 for a description of the control variables. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Dependent variable</i>	<i>Most people can be trusted</i>											
	Healthcare				Legal				Tech firms			
	Full	1978-1996	1997-2016	Finance vs. Health	Full	1978-1996	1997-2016	Finance vs. Legal	Full	1978-1996	1997-2016	Finance vs. Tech
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
In Industry time trend	-0.613*** (-5.88)	-1.211*** (-3.49)	-0.456* (-2.25)	-0.639*** (-5.87)	-0.802** (-2.72)	-1.441** (-2.24)	-0.451 (-0.61)	-0.800*** (-3.20)	-0.345* (-1.87)	-0.934** (-2.55)	0.608 (1.77)	-0.415** (-2.09)
Not in Industry time trend	-0.569 (-12.47)	-1.073*** (-8.38)	-0.402*** (-6.25)		-0.572*** (-11.89)	-1.082*** (-7.94)	-0.411*** (-5.17)		-0.580*** (-12.63)	-1.088*** (-8.29)	-0.442*** (-5.22)	
In Finance time trend				-0.869*** (-7.27)				-0.919*** (-7.29)				-0.963*** (-7.48)
Industry dummy	-0.005 (-0.21)	0.001 (0.03)	-0.002 (-0.05)	0.063*** (2.39)	0.062 (1.09)	0.087 (1.06)	0.005 (0.02)	0.007 (0.15)	0.019 (0.53)	0.037 (0.86)	-0.225* (-2.24)	0.065 (1.59)
<i>Difference in time trends</i>	-0.0442	-0.139	-0.0539	-0.231**	-0.229	-0.359	-0.0403	-0.119	0.234	0.154	1.050***	-0.548***
<i>p-value of difference</i>	0.592	0.623	0.719	0.0318	0.437	0.549	0.958	0.620	0.143	0.593	0.004	0.00185
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,892	14,522	13,370	4,103	27,892	14,522	13,370	1,580	27,892	14,522	13,370	2,280
Adj. R-squared	0.127	0.124	0.127	0.160	0.127	0.124	0.127	0.155	0.128	0.124	0.129	0.154

Appendix 3: A closer look at two potential reasons for the relative trust decline

What has led to the relative trust decline of people working in finance? While it is almost impossible to provide a causal answer to that question, and while there are arguably many possible reasons for the trust decline, we attempt to provide some answers and consistent empirical results. More specifically, we attempt to shed some light on the above question by examining different types of transitions in people's lives over our sample that may be associated with a steeper trust decline for workers in finance relative to the U.S. population. We investigate two potential reasons: changes in socialization habits and in general economic conditions.

Socialization of finance professionals

The *socialization hypothesis* argues that changes in socialization habits of workers in finance over time have led to a decrease in generalized trust. The hypothesis is motivated by an established literature (e.g., Putnam, 1993, 1995, 2000), which suggests that social interactions are particularly conducive for generating social capital and generalized trust. Thus, if workers in the finance industry engage less in social activities in more recent years than they used to, for example, due to increasingly higher workloads, their level of generalized trust may consequently have eroded. Equilibrium contracts modeled by Axelson and Bond (2015) feature long working hours in the finance industry, consistent with the public perception of notoriously long hours in investment banking.⁹ Following prior research on the association between social activities and generalized trust (e.g., Alesina and La Ferrara, 2000; Putnam 2000), we are interested in the likelihood that individuals who work in the finance industry engage in associational activities by participating in social groups, such as recreational, religious, civic, and educational groups. Putnam maintains that participating in such a group enhances the transmission of knowledge and facilitates the development of generalized trust in a society.

Appendix Table A3.1 reports findings from regressions estimating equation (1) with two dependent variables, *Group membership* and *P-Group membership*, in columns (1) and (2), respectively. Following Alesina and La Ferrara (2000), we construct *Group membership* as an indicator that takes the value one for a respondent who belongs to at least one social group, and zero otherwise.¹⁰ Because questions on memberships were only asked in 1978 through 1994 (except 1982 and 1985) and in 2004, regressions with

⁹ Examples of complaints about the workload faced by finance industry professionals have been extensively documented in the popular press. See, for example, Kessler, S. and L. Hirsch, "[Junior Bankers Are Burning Out. What Can Be Done to Help?](#)", *New York Times*, March 29, 2021, page B6 or Cohan, W.D., "[A Grueling Pace and a Tragic End](#)", *New York Times*, October 4, 2015, page 1, Section BU.

¹⁰ Social groups include, among others, fraternities and sororities, service groups, veteran groups, political clubs, labor unions, sports clubs, youth groups, school service groups, hobby clubs, nationality groups, farm organizations, literary or art groups, professional societies, and church groups.

Group membership as the dependent variable rely on a smaller sample. The population proportion that is part of a social group varies between 72.7 percent in 1983 and 62.1 percent in 2004 and steadily decreases over time. Additionally, we explore the trends in social activeness by differentiating between types of groups following Knack and Keefer (1997). In particular, we classify groups as “Putnam-type” groups (denoted P-groups) if they are least likely to act as distributional coalitions focused on rent-seeking, but focus on social interactions allowing individuals to build trust and cooperative habits. We define *P-Group membership* as an indicator that equals one for respondents belonging to either a sports or hobby club, a (school) service club, youth groups, literary, art, discussion or study groups, or a church-affiliated group.

The significant coefficients on both *Group membership* variables in column (1) indicate that the propensity to participate in a social group has decreased over time for both workers in finance and the general U.S. population. The difference between the time trends is significant at the 10% level suggesting that the decrease in group membership was slightly larger in finance. Importantly, in column (2), the time trends in P-group memberships deviate most strongly from each other. The likelihood of workers in finance to be a member of a P-group declined six percent more over a ten-year period than the likelihood of the average American. Taken together, the results are consistent with the notion that the formation of social capital and consequently the development of generalized trust through social activities has become rarer for workers in finance than the general U.S. population.

In column (3) of Table 6, we analyze one possible reason for the relative decline in group membership among finance professionals: increasing busyness of finance professionals. The variable *Working Hours* measures the number of hours individuals worked in the past week and is constructed by clustering responses into bins of 20 hours. The trend variables for *Working hours* in column (3) indicate that working hours have increased over time for both workers in finance and the general U.S. population. The difference between the time trends is significant at the 10% level suggesting that the increase in working hours was slightly larger in the finance industry. Hence, an increased workload is one potential mechanism that leaves finance professionals with fewer chances to engage in social activities compared to the rest of the population.

Another mechanism by which the propensity to belong to a social group could be influenced is an increase in self-perceived intellectual phoniness (Clance and Imes, 1978) among finance professionals. This could be due to the increase in education among financial professionals. However, the available data do not allow us to test for this and other potential mechanisms. Nonetheless, in untabulated analyses, we test whether workers in any other industries also experienced a significantly negative trend in their likelihood of participating in social groups and simultaneously a positive trend in working hours (in absolute terms as well as relative to the average American). Our results do not provide evidence for this pattern in *any* other industry except the finance industry. The low propensity to engage socially paired with the increasing number of hours worked by individuals in the finance industry is unique to the finance industry and one potential reason for the disproportionate decline in generalized trust.

Appendix Table A3.1: Changes in socialization habits in finance and the relative trust decline

This table explores time trends in people's opportunities to associate with one another and build up generalized trust. Specifications (1) and (2) show results from OLS regressions which analyze how the propensity of individuals to participate in social groups has shifted over time. *Group membership* (specification 1) is a dummy that indicates whether a respondent belongs to any social group, while *P-Group membership* (specification 1) only considers groups least likely to act as distributional coalitions. Specification (3) presents estimates from an ordered probit regression investigating how working hours have changed over time for workers in the finance industry and the average U.S. American. The dependent variable, *Working hours*, measures the number of hours individuals worked in the past week in bins of 20 hours. All specifications include demographic and socioeconomic controls as well as region fixed effects, similar to Table 3. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Dependent variables</i>	<i>Group membership</i>	<i>P-Group membership</i>	<i>Working hours</i>
	(1)	(2)	(3)
In Finance time trend	-0.696*** (-4.70)	-0.934*** (-5.73)	0.854*** (3.09)
Not in Finance time trend	-0.514*** (-4.23)	-0.300** (-2.50)	0.318*** (3.55)
In Finance dummy	-0.050** (-2.69)	0.055* (1.80)	-0.195** (-2.45)
<i>Difference in time trends</i>	-0.183*	-0.634***	0.536*
<i>p-value of difference</i>	0.0782	0.00116	0.0564
Demographic controls	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Observations	13,589	13,589	27,928
Adj. / Pseudo R-squared	0.112	0.0927	0.228

Changing economic conditions

The *economic conditions hypothesis* argues that trends in economic conditions in the U.S. affect the level of generalized trust of workers in the finance industry significantly more than the rest of the U.S. population. The hypothesis is motivated by prior research suggesting that social capital wanes when the gap between rich and poor widens (e.g., Pickett and Wilkinson, 2010; Uslaner; 2002). In a broader sense, previous studies suggest that anything that increases the socioeconomic distance between members of a society leads to lower generalized trust. In light of this literature, one might expect that the rise in income inequality in the U.S. over the past decades has particularly affected workers in finance, as they have experienced steep relative wage increases that alone have accounted for up to a quarter of the total increase in wage inequality in the U.S. since 1980 (Philippon and Reshef, 2012). In addition, general economic conditions may affect finance professionals differently because they work in a particular position in the economy that benefits greatly from economic growth. We hence examine the relation between the economic conditions in the U.S. and the level of generalized trust.

To investigate the association of generalized trust with changing economic conditions, we obtain two different macroeconomic measures: the Gini coefficient of income inequality and the annual change in gross domestic product. Appendix Table A3.2 reports results from OLS regressions that investigate whether trust of finance professionals is associated with these macroeconomic measures in a different manner than for the U.S. population. We interact both measures with the *In Finance* and *Not in Finance* dummies to study the correlation with generalized trust. Consistent with Twenge et al. (2014), we find a negative relationship between income inequality and generalized trust in column (1). More important in our context, the difference between the coefficients for people working in finance and the general U.S. population is significant at the 1% level, indicating that generalized trust of finance professionals correlates significantly more with income inequality. Similarly, while economic growth promotes trust among both groups, which is consistent with Zak and Knack (2001), finance professionals appear to be more sensitive to GDP changes than the average U.S. American. However, only the Gini index of income inequality exhibits a significant linear and positive trend over our 39-year sample. It increases on average by 0.27 percent per year from its starting point of 36.3 percent in 1978, so it is possible that the rising income inequality in the U.S. has led to the disproportionate loss of trust among finance professionals.

Appendix Table A3.2: Changes in economic conditions and the relative trust decline

This table reports coefficients from OLS regressions of two measures of the economic conditions, the Gini coefficient of income inequality (specification 1) and the annual change in gross domestic product (specification 2) on generalized trust for people working in finance and the general population. All specifications include demographic and socioeconomic controls as well as region and year fixed effects, similar to Table 3. Robust t-statistics (in parentheses) are based on standard errors clustered by year. ***, **, * denote statistical significance at the 1%, 5% and 10% level, respectively.

<i>Dependent variable</i>	<i>Most people can be trusted</i>	
	Gini index (1)	GDP change (2)
Economic condition measure × In Finance	-0.031*** (-8.57)	0.073*** (12.19)
Economic condition measure × Not in Finance	-0.020*** (-33.68)	0.051*** (35.72)
In Finance dummy	0.489*** (3.01)	-0.052** (-2.33)
<i>Difference</i>	-0.0111***	0.0218***
<i>p-value of difference</i>	0.00358	0.000470
Demographic controls	Yes	Yes
Socioeconomic controls	Yes	Yes
Region & Year FE	Yes	Yes
Observations	27,892	27,892
Adj. R-squared	0.131	0.131



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