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Summary

Trust is a key determinant of any financial transaction. Exchanges in insurance markets are a particular type of financial transaction where a current payment – the premium – is exchanged for a promise of a future, contingent payment – the indemnity due when the casualty occurs. We argue that trust is key in fostering these types of exchanges. Trust enters two ways: because it affects the willingness of the company to supply insurance when the insured can cheat by claiming indemnities that are not due. Because it discourages people from purchasing insurance if they do not trust the company promise of readily paying the indemnity when due. We prove theoretically and empirically the relevance of trust in insurance exchanges and discuss policies to foster it.

Keywords: Trust, financial contracts, insurance

JEL: A1, A12, D1, O15, Z1

1. Introduction

It has long been recognized that trust is a key ingredient in fostering economic and financial transaction and achieving business success. Years ago, Nobel prize Kenneth Arrow (1972), after recognizing the pervasiveness of mutual trust in commercial and non-commercial transactions, went so far as to state that “it can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence”. Since then plenty of evidence has shown that aggregate trust and aggregate economic performance are linked by a strong positive relationship. In addition, in high trust countries corporations can grow larger (La Porta et. al. (1997)) and stock markets and financial markets can prosper (Guiso et. al., 2009). As Arrow noticed, trust, while being an ingredient in most exchanges, it is likely to be particularly important in those transactions that involve an element of time. Financial transaction, being all exchanges of money over time, should be particularly dependent on trust. In fact any financial transaction, being it a loan, a purchase of a stock of a listed company, the investment in the bond of a corporation or a government or the purchase of an insurance policy, has a fundamental characteristic: its is an exchange of money today against a *promise* of (more) money in the future. But what leads one to believe that promise and make the exchange actually possible? This is trust. The trust of a person who has invested in the stock of a company that his money will not be appropriated by the company’s managers. The trust that a bank has that a borrower will repay his loan as promised. The trust that an individual that subscribes the bond of a Government will not see his investment vanish because the Government – abusing authority - cooks the books (as we are taught by the recent Greek scandal). Or the trust a person purchasing a casualty insurance policy has that the insurance company will pay readily the indemnity were the casualty actually to occur and the money be needed by this person.

While trust enters all financial transactions, in this paper I will investigate more closely the link between trust and insurance. I will start by defining trust and discuss how it is related to reputation and reputation risk – the main reason why insurance companies, financial intermediaries and organizations more broadly are interested in trust (Section 2). I will then look at the link between trust and insurance demand. I will do so by discussing the link in principle (Section 3.1) and demonstrating it empirically by showing evidence of the importance of trust in insurance transactions (Section 3.2). Next I will discuss what can affect people’s trust in insurance companies and markets, distinguishing between elements that are specific to the company and others that are common to the whole industry (Section 4). Finally in Section 5 I will present some policy implications that follow from this discussion.

2. What is trust

An individual (let’s call her the trustor or investor) trusts if she voluntarily places resources at the disposal of another party (the trustee) without any *legal* commitment from the latter. In addition, the

act of trust is associated with an *expectation* that the act will pay off in terms of the investor's goals. In particular, if the trustee is trustworthy the investor is better off than if trust were not placed, whereas if the trustee is not trustworthy the investor is worse off than if trust were not placed. This definition of trust is based on Coleman (1990) and defines trust as a behavior.

But this behavior is guided by a *belief* such that the trusting person reveals his willingness " ...to accept vulnerability (risk) based upon positive expectations of the intentions or behavior of the other person (or representative of an organization)" (Rousseau et. al. (1998)). That is the act of trusting is driven by the expectation the a person – such as a customer of a trader - has that the trader (e.g. the seller of a good or a financial product) will not take advantage of him by selling scam, passing over to him misleading information, abusing of his good faith. In other words the act of trusting is guided by the belief that the seller will behave in a fair and honest way when dealing with his customer. Hence trust is people willingness to accept *social risk*. Social risk is the risk of being “betrayed” by another human being and because of this incur a loss. It needs to be distinguished from the risk that arises from bad luck - the risk that is intrinsic in life because events are subject to chance. This is the standard type of risk we are normally used to and that we know people dislike.

Recent research has shown that human beings are particularly averse to losses caused by betrayal, more than they are to losses that are due to chance. Betrayal aversion as documented in the work of Bohnet and coauthors seems to play a particularly important role in trusting behavior. Betrayal aversion indicates an important departure from how decision-making under risk has been viewed in the past because it suggests a fundamental distinction between risk constituted by random factors due to nature and risk arising from interpersonal interactions and uncertainty about the actions of human beings, some of which can be harmful. Intuitively speaking, people are more willing to take risk when facing a given probability of bad luck than to trust when facing an identical probability of being cheated. Betrayal aversion is thus a major additional inhibitor of trusting behavior that adds importance to property rights and contract enforcement institutions – regardless of whether they are legally or informally constituted.

Furthermore, how much averse they are to betrayal has a strong cultural component. For instance, Bohnet et. al. (2008) run a trust game using a sample of people in 6 different countries – Brazil, Oman, China, Switzerland, Turkey, and the US - and find that: a) people in each of these countries are more averse to betrayal than they are to risk; b) how much they are averse to betrayal differs systematically across countries: individuals from countries that rely relatively more on formal institutions to enforce contracts are less averse to betrayal than people from countries where intense interpersonal relations carry a larger weight in the enforcement of agreements among people.

These features have two important implications for the relations of an organization - such as an insurance company – with its customers. First, disappointing a customer's trust in the company can

have more severe consequences than inflicting him a loss of equal value but due to chance. For instance, an investor whose investment in a pension fund loses 10% of its value because of adverse market conditions that the company experts have not been able to counteract will be disappointed and possibly upset and may, if this is not too costly, even leave the company. But an investor who suffers a loss of the same size because the company (or better one of its representatives) has *intentionally* abused of his good faith not only will be disappointed but he will also be angry and very likely to be willing to stop the customer relation. In fact, when the trust in the company is lost the most likely consequence is that this stops trading.

Secondly, these responses can be particularly severe in countries that attach a lot of value to betrayal – typically those where people receive low legal protection and have thus to rely heavily on personal relations. Put differently, in a country with strong legal institution an individual that has been betrayed can hope in these institutions to obtain revenge and punishment of the opponent misbehavior, which attenuates its aversion to betrayal. This option is less valuable in countries with weaker formal institution exacerbating sensitivity to betrayal. Hence, in countries that cannot grant people efficient legal protection a person's (organization's) reputation is a more valuable asset but also a more fragile one.

To sum up trust can be defined as the act of empowering another person about the management of some of the resources owned by the agent expressing trust. This willingness to act in a trusting way is, not surprisingly, affected both by the beliefs about the trustworthiness of the person empowered and by a person's willingness to bear risk. But there is an important distinction between preferences for standard risks – as those that arise because of natural randomness in outcomes – and preferences for risks that originate from the possibility of human manipulation of outcomes, what is called betrayal aversion. What seems really to matter for trust is the latter more than the former.

2.1 Trust and reputation

Individuals and companies care about trust because they care about their own reputation. Reputation is public information regarding a person/company's trustworthiness. A trader's (company's) reputation reflects the information that third parties, in particular his customers, have on how trustworthy his behavior has been in the past. From this definition it follows that there is an intimate relationship between trust and reputation. Reputation – being a collection of honest and fair behaviors that have been accumulated over the years sustains the trust that people currently have on the trader/company. Indeed the accumulation of this intangible asset is meant to *signal* to the market that the trader/company that has accumulated it deserves to be trusted. And this trust is going to guide people's willingness to make business with the person/company. Losing one reputation leads to a loss in trust - a downward revision in the belief people have about the

trustworthiness of their counterpart in a transaction – and a loss of business. The important feature of this link, as Warren Buffet once noticed, is that “It takes twenty years to build a reputation and five minutes to destroy it.” That is reputation is fragile and asymmetric. It is hard to build and it is easy to lose once it is built. Why is it so? The reason is that learning about a person/company trustworthiness mainly takes place through experimentation. If a customer does not trust a company he is not going to trade and make business with that company. But if he does not trade he is also unable to learn about the reliability of the person/company even when the latter actually deserves to be trusted. Mistrusting people do not trade and because of this they do not learn, which perpetuates their mistrust. A person/company may react to the loss of reputation by disseminating information or advertisement just arguing about his reliability. But this is unlikely to be an effective strategy to re-gain trust once it is lost: if one does not trade with the company because he does not believe its reliability, it is unlikely to believe its information. Mistrust fosters skepticism and suspicion and because of this it is hard to contradict and even more so, to reverse. Thus, starting from low trust rebuilding a reputation and recovering trust may be very hard. One telling example of the slowness of this process is the recent financial crisis. Trust in banks, according to the Financial Trust Index constructed at the University of Chicago has dropped to its historical low after the collapse of Lehman Brothers and as a consequence of the information about financial scandals that the unfolding of the crisis has brought to light (Guiso, 2010). But since then there has been no recovery in trust, despite many economic indicators, including banks profitability, have steadily improved. How long will take for trust to return back to its pre-crisis level? While this is hard to tell, some hints may come from the drop in trust towards financial markets that occurred following the Savings & Loans crisis in the early 1990 when it took 10 years to resume the pre crisis trust levels. On the other hand, trust falls rapidly: as soon as a mis-behavior is observed and a person/organization departs from its past sound behavior, its reputation (and the trust that goes with it) can vanish rapidly. Again, the financial crisis is a good and recent example. The share of people trusting banks and intermediaries a lot was around 30% in early 2008 and falls to 5% at the end of the year: most of the accumulated reputation vanished in a lapse of time.

2.2. Why has trust in insurance fallen during the financial crisis?

The described properties of trust and reputation can help understand one apparently puzzling feature of the current crisis. One may ask why also trust in insurance companies and insurance product has declined during the financial crisis. Wasn't the crisis a banking crisis? Why it has hit also insurance companies and made people more skeptical about insurance products besides raising their skepticism about stock markets and banking products?

The belief component of trust and the way trust beliefs are updated and reputation changes can help us understand. When misbehavior is detected in one unit of a corporation or in one segment of an

industry not only that unit or segment that are directly involved in the misbehavior suffers a loss of trust and reputation but also the corporation and the industry at large. If a car driver is cheated by a car repair who charges more than what is due for the work done, the car driver will mistrust not only that specific mechanic – which is obvious he will do – but will tend to revise downwards his beliefs about *all* car mechanics more generally since the behavior of that car repairer probably reveals something about the average honesty of the whole category. Hence mis-behavior by one agent threatens the reputation of other agents to whom the first is related. Since insurance companies are part of the financial industry, even though most of the scandals that have been uncovered during the crisis and that led to the fall in trust did not involve the insurance industry directly, the drop in trust has extended through this mechanism to insurance companies and products. In other words, there are *spillovers* in trust and reputation that make the latter particularly fragile and thus important to protect ex-ante.

Since people form their beliefs about the trustworthiness of a given counterpart often relying on whatever is publicly known about the *category* that counterpart belongs to, this implies that reputation is always, to some extent, at risk even when important defenses to pre-empt misbehavior from occurring are taken within a corporation. This justifies the definition of reputation risk provided by the Federal Reserve in relation to the financial industry: “Reputation risk is the potential loss that negative publicity regarding an institution’s business practices, whether true or not, will cause a decline in the customer base, costly litigation, or revenue reductions (financial loss).” The only thing to add is that when the negative publicity is false it is easy to re-establish reputation and regain trust by providing information that negative publicity is undeserved and due to mistakes. But when the negative publicity is based on facts that actually occurred the only strategy to regain reputation is through a sequence of repeated, visible behaviors that communicate to the public the commitment of the person\organization to rebuild its reputation.

3. Trust and financial exchanges

As we have argued trust is likely to be an important ingredient in all transactions that involve an element of time, that is exchanges for which the time of settlement of the exchange and that of the delivery of the good are distinct. This is for instance the case in international transaction, where payment is often made after the delivery of the good, or – in modern times - in internet transactions where again the good is often delivered after the payment takes place. All these exchanges involve an exchange of money now for a promise of a good at some future date in a specified location. Interestingly all financial transactions have this feature: they are the exchange that par-excellence involve a transfer of money today and a promise of money tomorrow at some specified time, location and state of nature. But for all these exchanges to be possible it must be the case that the person that provides the money today and receives the promise in exchange believes that promise. This belief entails trust. Trust is indeed the credibility of that promise and reflects the perceived

trustworthiness of the person issuing the promise. Not surprising, trustworthiness and creditworthiness have come to mean the same thing.

There are two important points to make. The first concerns the belief about the ability of the counterpart that currently receives the money to *be able* to repay in the future, i.e. that he will have the means to honor the promise. We call this belief *confidence*. Confidence attains to the quality of the activity the user of the money is engaged with. For instance, with reference to a bank, it is related to the belief that the bank is solid and able to repay deposits to its customers. Trust instead is a belief related to the *willingness* to repay or to actions that the counterpart can take to appropriate more than it should of the surplus created with the money. Needless to say the two concepts are related: for instance, a temporary inability of a company – such as a bank – to repay may increase the incentives of its top management to adopt actions to cheat depositors in hopes of being able to obtain resources to overcome the crisis. Similarly, a loss of trust may trigger a crisis (e.g. because of a flight of customers away from the company) and induce an inability to repay that results in a drop of confidence.

The second point is that the viability of these contracts can be enhanced by legal protection. Financial exchanges are all supported by legal contracts that specify the terms of the exchange and legal enforcement makes sure that the party that breaks the contract receives a punishment and the other some indemnity. One can argue that the existence of legal institutions that offer legal protection makes trust – beliefs about promises in the *absence* of a legal protection – irrelevant. This is not true for at least three reasons. First, legal protection is only obtained with respect to what is written in the contract. Contracts are normally incomplete whenever contracting parties cannot foresee all possible future contingencies. Second, legal protection is never perfect but rather it is limited. In particular enforcement of contracts is neither free nor perfect. It is costly to enforce a contract as it requires legal assistance. Secondly, it is never perfect; for instance in all countries it takes a significant amount of time to obtain a judicial judgment and time is valuable particularly in financial markets. In Italy it takes more than 650 days to recoup a bounced check and even in the UK – a country with high quality institutions and high legal protection – it takes not less than 101 days. Third, in many instances a court may have a hard time enforcing a contract because results are not observable by a third party. These imperfections in legal enforcement imply that without trust many financial transactions would never occur, even in countries with sound legal institutions.

3.1 Trust and insurance

Since insurance exchanges are financial exchanges, also these exchanges are trust dependent. In insurance contracts trust is entailed in two ways. First, the insurer when entering the contract and paying the insurance premium upfront has to trust that the insurance company will pay the indemnity promptly in the case the casualty actually occurs at some time in the future. Second, the insurance company has to trust that the insurer, once the premium is paid, does not act so as to raise

the risk of the casualty by adopting a more risk-taking behavior. This type of risk falls under the name of moral hazard and may be cautioned against by pricing it into the premium. Trust is entailed also because the insurer can cheat the company by pretending that a casualty actually has occurred when it did not, or by shamming a casualty or by aggravating its consequences. The possibility of frauds together with limited legal enforcement imply that the willingness of an insurance company to offer insurance to a certain pool of customers depends also on its beliefs about these pool average trustworthiness.

In sum, insurance exchanges require trust on two sides. Most importantly, as will argue the two types of trust may interact in important ways; in particular limited trust on the side of the insurance company vis-à-vis its customers can result in limited trust in the latter towards the company. I will discuss this issue latter.

For now on I will be mostly focusing on the trust that insurers have towards the company and how this affects their willingness to by insurance.

3.2. A non participation result

What are the consequences of limited trust on the demand for insurance? It is useful to start from a standard result in insurance theory since Mossin (1968). Provided insurance is fair, all risk averse individuals should be fully insured; that is all should a) participate in the insurance market; b) the amount of the premium should be such as to provide full coverage. This result hinges on various assumptions: the assumption that there is perfect competition which drives insurance profits to zero; the absence of intermediation costs; the absence of information problems; the existence of a third party that enforces these contracts, and, last but not least, the belief that the insurance company behaves honestly and pays the indemnity promptly when the casualty arises – i.e. that people have full trust in it. Most of these assumptions have been relaxed and their consequences widely studied in the literature: all but the last one, which has received surprisingly little attention. One reason is that – as said – it is often assumed (and the assumption taken so seriously as to think of it as a property of the real world) that insurance contracts can be perfectly enforced so that trust is not needed.

To understand the consequences of mis-trust consider the following standard insurance model where a consumer has initial endowment y which is certain. Let p be the probability of a loss of size L and $u(\cdot)$ the utility of consumption. The consumer optimization problem is

$$\begin{aligned}
 & \max_a pu(y - (1 - a)L - a\Pi) + (1 - p)u(y - a\Pi) \\
 & s.t. \quad (i) \Pi = \mu pL \\
 & \quad \quad (ii) a \geq 0
 \end{aligned} \tag{1}$$

where Π denotes the full insurance premium and a the coinsurance rate, so that $a\Pi$ is the total insurance premium, i.e. the amount of insurance purchased. The first constraint states that the total insurance premium is proportional to μ times the expected value of the loss: μ is the mark-up over the fair insurance premium, which obtains when $\mu=1$ ($\Pi = pL$). The second constraint states that the agent can purchase insurance but cannot sell it.

It is convenient to write the problem in a slightly different way. Letting $\mathfrak{I} = a\Pi$, the optimisation problem reduces to

$$\begin{aligned} \max_{\mathfrak{I}} \quad & pu\left[y - L + \left(\frac{1 - \mu p}{\mu p}\right) \mathfrak{I}\right] + (1 - p)u(y - \mathfrak{I}) \\ \text{s.t.} \quad & \mathfrak{I} \geq 0 \end{aligned} \tag{2}$$

A standard result is that if insurance is fair (the mark up $\mu = 1$) than the consumer chooses full insurance – that is $\mathfrak{I}^* = pL$, so that the consumer endowment is equalized in the two states. Let us stick to this case. The full insurance result is obtained under the assumption that the consumer, after paying the premium, fully believes the promise made by the insurance company that it will pay an indemnity equal to the expected size of the loss pL if the loss occurs. Suppose instead that the consumer mistrusts the insurance company and attaches a positive probability $1 - \tau$ to the event that after a loss is suffered the company refuses to payout the indemnity. This may happen, for instance, because the company argues that the indemnity is not due and observation of the loss by a third party is subject to noise, so that that there is room for interpretation about the actual occurrence of the loss on the side of the company. On the other hand, with probability τ the company behaves according to what was promised and pays the indemnity. Hence τ measures people's trust in the trustworthiness of the company.

More generally, we define trust as the subjective probability individuals attribute to the possibility of being cheated. This subjective probability is partly based on objective characteristics of the insurance industry or and perhaps of the financial system more generally (the quality of investor protection, its enforcement, etc.) that determine the likelihood of frauds such as those at Enron and Parmalat. But trust reflects also the subjective characteristics of the person trusting. Differences in educational background rooted in past history (Guiso, Sapienza, and Zingales, 2004) or in religious upbringing (Guiso, Sapienza, and Zingales, 2003) can create considerable differences in levels of trust across individuals, regions, and countries. These individual priors play a bigger role when individuals are unfamiliar with the insurance product they are deciding about or lack data to assess it. But they are unlikely to fade away even with experience and data.¹

¹ Guiso et. al (2008) argue that it takes 81 years of data to convince an individual who has a 4 percent probability of being cheated to invest in the stock market. Without considering the fact that when mistrust is deeply rooted, people may be doubtful about any information they obtain and disregard it in revising their

The fact that the insurance company deserves limited trust is reflected in the consumer problem which now becomes:

$$\begin{aligned} \max_{\mathfrak{S}} \quad & \tau pu[y-L+\left(\frac{1-p}{p}\right)\mathfrak{S}] + (1-\tau)pu[y-L-\mathfrak{S}] + (1-p)u(y-\mathfrak{S}) \\ \text{s.t.} \quad & \mathfrak{S} \geq 0 \end{aligned}$$

Where the first two terms reflect now the cases where a loss occurs and the insurance company pays out according to what was promised and the case where it cheats the consumer by paying nothing, respectively. This simple modification has important reflections for the demand for insurance. In particular, there is threshold level of trust that we denote $\bar{\tau}$ such that if the individual has a level of trust $\tau > \bar{\tau}$ it will buy insurance; but coverage will be below full insurance in spite of the fact that, conditional on paying out, insurance is fair.² Furthermore, this level is increasing with trust so that individuals who trust insurance companies less buy less insurance.³

Secondly and perhaps most importantly, if trust falls short of the threshold no insurance will be purchased. Hence individuals who have little faith in insurance companies will choose to stay out of the insurance market all together breaking the implication of the fair insurance model that all risk averse individuals should participate in the insurance market.

Using this model we now elaborate to single out some features of the role of trust in insurance demand.

The source of mistrust in insurance contracts. One may wonder why individuals may mistrust insurance companies. In other words how can a company “cheat” its customers? The model illustrates the case were a company or the sellers of insurance products take advantage of the fact that losses may not be clearly observed and may abuse interpretation arguing that no loss actually occurred when it actually did. Since insurance contracts are conditional contracts – that is they pay out only conditional on the realization of a risk - they are by construction open to these type of problems, perhaps more than other types of financial contracts. One has to establish that the loss

priors. For example, data from a 2002 Gallup poll show that roughly 80 percent of respondents from some Muslim countries (Pakistan, Iran, Indonesia, Turkey, Lebanon, Morocco, Kuwait, Jordan, and Saudi Arabia) do not believe that Arabs committed the September 11 attacks (Gentzkow and Shapiro, 2004).

² The threshold level is $\bar{\tau} = 1/(1-p)$ and is increasing in the probability that a loss occurs. Thus, the higher the probability of a loss the more likely is that a person with a given level of trust will not buy insurance. The reason is that a person is cheated only when a loss occurs and thus a higher chance of a loss expands the regions where cheating may occur.

³ The effect of trust on insurance demand, conditional on buying insurance, is:

$$\frac{\partial \mathfrak{S}}{\partial \tau} = \left(\frac{(1-p) + u'(B)/u'(A)}{R_A \tau (1-p)^3 p^2 + R_B (1-\tau)(u'(B)/u'(A))} \right) \text{ where } R_A \text{ and } R_B \text{ denote absolute risk aversion}$$

measured at $A = y - L + \left(\frac{1-p}{p}\right)\mathfrak{S}$ and $B = y - \mathfrak{S}$ respectively and the marginal utilities are similarly defines. It

is clear that $\frac{\partial \mathfrak{S}}{\partial \tau} > 0$.

has occurred; once this is done, one has to agree about its size; given occurrence and size, often insurance contracts specify under which conditions one can claim the indemnity which makes the definition of what a risk is not obvious ex post. In fact, insurance contracts are often a source of litigation. This is particularly so when contracts are complex and contingencies contain a certain degree of ambiguity which leaves ample room to interpretation. This ambiguity can be a powerful source of mis-trust particularly when insurance companies have strong incentives to exploit the room offered by ambiguity for opportunistic behavior. Lack of competition in insurance markets and capture of the customers by the companies tend to strengthen this type of behavior: if switching from one company to another is costly or made cumbersome by legal provisions, then the loss of reputations from mis-behavior has a lower cost and is thus opportunistic behavior is exercised more widely. This implies that people should mistrust insurance companies more in less competitive markets and when they buy more complex products – such as complicated life insurance products with attached not-easy to understand saving schemes. Hence, liberalization of entry should drive trust towards insurance providers up.

Mistrusts and fraud. Mistrusts can emerge among the customers of insurance companies even when companies behave is perfectly honest when fraud is a possibility that needs to be rule out before the company proceeds with the payment of the indemnity. Often establishing whether a claim is legitimate or not requires time and this unavoidable delays the payment of the indemnity even when the company is not just taking its time. It is not difficult to imagine that a person that has truly suffered a loss gets annoyed and irritated if the indemnity is not paid out quickly. Losses due to damages are a primary source of problems and people count on being refunded by the insurance company. That is indeed why they buy insurance policies. Any delay or unanticipated complication in obtaining the indemnity can induce mistrust in the company has te suspicion that this is done intentionally to avoid repayment may arise. The important point to notice is that the reason why mistrust emerges is because insurance companies face a risk of fraud. To protect against this risk they may end up adopting practices that actually harm their best customers – the ones that would not try to fraud the company. Given the previous non-participation result, the existence of fraud may crowd result in a novel type of adverse selection: the exit of the honest segment of customers from the market even when the insurance companies act fairly.

Mistrusts and competition. Limited trust towards an insurance company can result in non participation in insurance markets even when insurance is offered on fair terms. Limited participation can result, as is well known, when insurance is unfair. Some risk-averse consumers may give up the insurance policy if this is too costly compared to the amount of risk protection that it offers, which happens if mark ups are too high. Only the high risk averse will hold insurance. Limited trust amplifies the effect of imperfect competition in insurance markets. That is, the effect

of a diminished trust on the demand for insurance is stronger when there is less competition in the market. Thus, increasing competition, not only fosters insurance purchases directly, but it also increases the demand for insurance because the disincentive to buy insurance companies for lack of trust becomes weaker. Intuitively, greater competition provides consumers with limited trust with a stronger weapon to punish any insurance company misbehavior, actually discouraging them to adopt opportunistic practices. This is anticipated by consumers making them more willing to purchase insurance.

Mistrusts and risk aversion. One may argue that mistrust is not much different from risk aversion and that more mistrusting people are indeed people who are more risk averse. However, the two concepts are conceptually distinct and, in the case on insurance, have indeed opposite implications than the ones one should obtain if they reflected the same thing. As a matter of principle, trust is a belief (or at least it has a strong belief component) and measures the probability that one is cheated if entering into a trade. Risk aversion is the dislike people have for variance in consumption across states of the world. Most importantly, while a higher risk aversion increases the demand for insurance because the value of smoothing consumption across states increases, more mistrust has the opposite effect on the demand of insurance.

Two-sided cheating and social acceptance. As already argued, in insurance exchanges individuals can cheat the insurance company by, for instance, claiming an indemnity when it is not due; on the other hand insurance companies can cheat individuals by not recognizing an indemnity when it is honestly claimed. The first type of behavior is socially condemned and disapproved; but the second type is socially perceived as much worse than the first. The reason is that insurance companies are much more powerful and “wealthier” than an individual and causing harm to a weaker agent is perceived as being socially less acceptable than causing harm to a powerful, wealthy agent. There is significant recent evidence pointing in this direction. For instance, Gneezy (2005) shows that people are discouraged by deceiving a counterpart when the size of the loss that deception may cause becomes larger though deception in this case yields also larger pecuniary benefits. The reason for this behavior is that people moral preferences are affected by the magnitude of damage that immorality inflicts on others. That is, when deciding whether to cheat or not a given counterparty, individuals weight the benefit that cheating entails to them against the loss that their behavior causes. Moral norms will refrain them from cheating and this discouragement effect is stronger when – given the benefit – the damage from cheating is larger, for instance (Butler et. al, 2010). This has two implications: first, if an individual cheats on an insurance company – a strong agent - social reproach will be present but will not normally be particularly strong; hence just relying on honesty and cultural norms of morality to prevent fraud may be a weak mechanism. This suggests that fraud should be mostly discouraged through legal punishment and strong enforcement of legal rules. Secondly, if an insurance company deceives a customer, particularly a “weak” one, social

reproach will be much stronger and possibly lead to a significant drop in the insurance company reputation. The reaction to the Madoff's fraud by US investors was particularly severe not only because he was broken a moral norms – do not deceive other people – but even more so because most of Madoff's victims were retired individuals, often widows who put most of their assets in the hands of Madoff's, that is particularly vulnerable people. Hence, moral reproach may be a more important mechanism in preventing dis-honest behavior in insurance markets. Against this, however, one has to recognize that when deception is practiced on a large scale – as can actually do a large corporation - the payoff from it can be large enough to bypass any moral constraint that may be present.

4. Trust and insurance demand: proving the link

Recent evidence has shown that limited trust can be an effective barrier to the adoption and spread of financial contracts. In an initial contribution, Guiso et. al. (2004) show that lack in areas characterized by low social capital and thus by low level of mutual trust in the community where people live, individuals tend to hold much safer financial portfolios and tend to invest less in stocks; in addition in these markets credit is more limited and many transactions involving promises take place within the restricted family circle rather than in the market, for instance through informal loans. More recently these authors (Guiso et.al. 2008) show more direct evidence that lack of trust is a primary force in discouraging people to participate in the stock market. They use data on a sample of Dutch consumers that has both information on peoples trust beliefs towards other people in general as well as data on their portfolio allocations. They find that investors who trust other people in general are more likely to be stockholders and to invest larger shares of their wealth in stocks conditional on holding them. Furthermore, even among the wealthy, lack of trust results in a refusal to invest in stocks. There are two important points to notice. First, since this effect is obtained for people in a country with fairly efficient institutions, the effect of trust on the demand for financial is likely to pervasive and even stronger in places where institutions are likely to be weaker. Second, what they measure is an effect of trust in other people in general not of trust in the stock market per se. This excludes the possibility that the result is driven by reverse causality – people who hold stocks trust the stock market more for instance because they are more familiar with it – a result that would not be particularly surprising. Second, since the difference in trust beliefs are difference among people that live and decide in the same country facing the same type of institutions and legal rules, the effect of trust on this people willingness to hold stocks cannot reflect differences in legal protection –because they are equal across individuals –but the effect of genuine differences in trust beliefs.

Interestingly for the purpose of this work, Guiso et. al (2008) document in their study that individuals who trust more not only invest more in stocks but also are more likely to hold an

insurance policy. This is the first paper to document an empirical link between trust and insurance. Since then a few other works have addressed the importance of trust for insurance demand. De Meza et al (2010) find in an experiment that more trusting people are willing to pay larger insurance premium to sellers that advertize the policy and interpret the finding as suggesting that trusting people are easier to persuade about the qualities of the policy. In an interesting paper that relies on a field experiment in Indian villages, Cole et al. (2009) show that overcoming mistrust by having a new insurance product proposed to a sample of peasants endorsed by a reputable person who peasants in the village trust can result in a significant increase in peasants' adoption of insurance contracts.

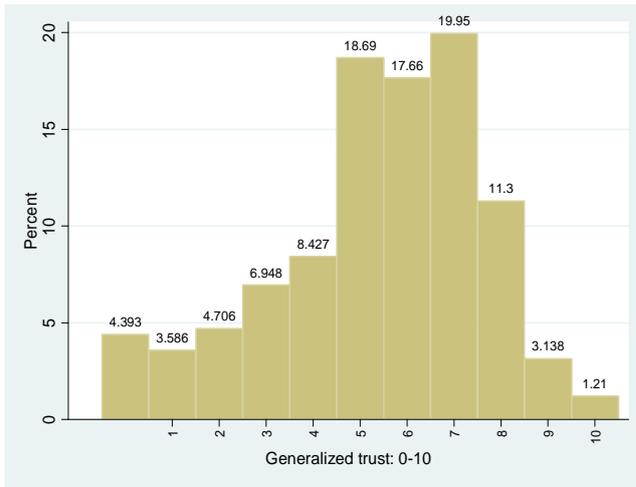
Here we prove the link between how much people trust and their demand for insurance in a sample of Italian entrepreneurs running small businesses that have been interviewed in order to study in detail their insurance behaviour. The sample was collected by ANIA and a detailed description of the data is available in Guiso and Schivardi (2010).

4.1 The entrepreneur's trust

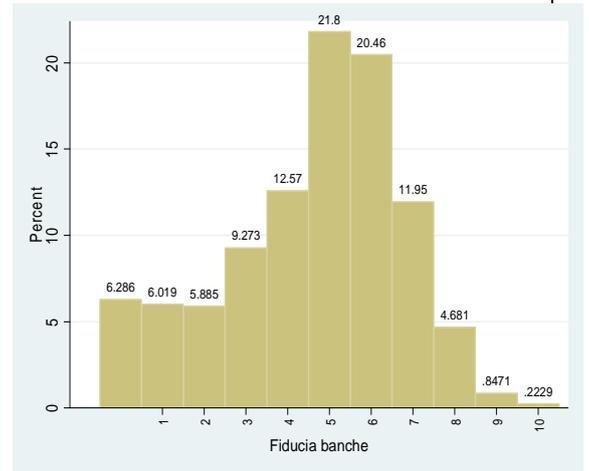
The entrepreneurs interviewed in the ANIA sample were asked to report their level of trust towards various entities, including: towards other people in general, other entrepreneurs, insurance companies, banks, and the stock exchange. Answers were given from a scale of zero to 10 where zero means no trust and 10 implies complete trust.

There is great dispersion in the answers regarding the measurement of trust. On average, the entrepreneurs have a high level of trust towards other people in general than towards either banks or insurance companies. Average trust towards people in general is equal to 5.6 (median 6), slightly less than 13% of those interviewed had a very low trust level (not more than 2), and 15.5% had a high level of trust (equal to or more than 8)- see Figure 1, A. Trust towards other entrepreneurs has a similar average (5.7) but a lower frequency in the low levels of trust as well as the high levels; it is less probable that an entrepreneur completely distrusts or trusts another entrepreneur rather than a regular individual.

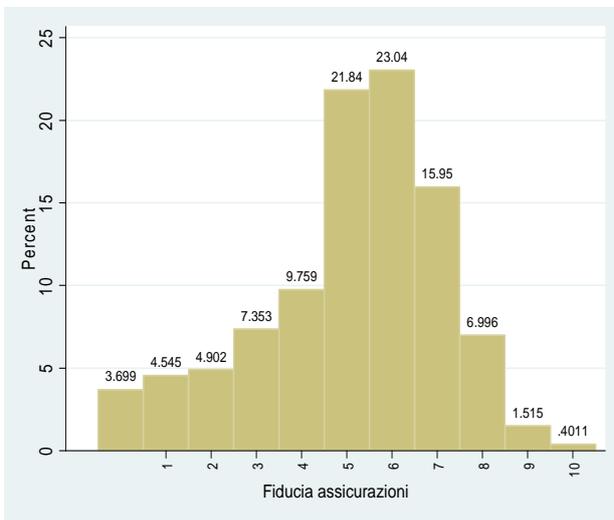
A: Trust towards other people in general



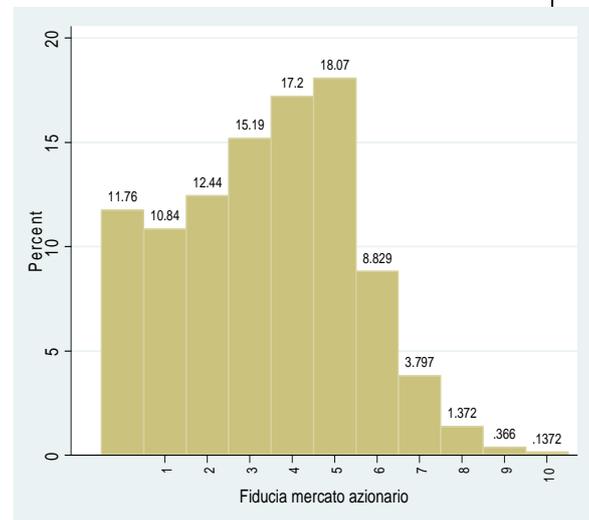
B: Trust towards banks



C: Trust towards insurance companies



D: Trust towards the stock market



The level of trust towards banks (Figure 1,B), instead, is much lower (4.6), while trust towards the stock market is even lower (3.4; Figure 1, D), even among entrepreneurs whose companies are on the stock market the level of trust towards the latter is only slightly higher (3.7). Insurance companies enjoy a higher level of trust than banks (Figure 1., C), equal to 5.1 and the distribution is less concentrated in the lower levels of trust (below 2). In general, these various measure are correlated as shown in Table 1, indicating that distrust is a personal characteristic that is reflected in the evaluation of trustworthiness of any type of entity, ranging from people to financial institutions.

Table 1: Correlation between levels of trust towards various entities

Trust towards	Other people in general	Entrepreneurs	Banks	Insurance companies	Stock market
Others people in general	1				
Entrepreneurs	0.49	1			
Banks	0.45	0.48	1		
Insurance companies	0.42	0.47	0.68	1	
Stock market	0.34	0.36	0.54	0.48	1

The survey also collects many other measures regarding the entrepreneurs' traits and preferences which are potentially important determinants of their demand for insurance, such as indicators of obstinacy, overconfidence, and optimism. Most importantly, it collects indicators of these people risk attitudes which theory suggest drive insurance decisions. For our purpose, it is important to control for risk aversion when testing the role of trust for insurance demand to make sure that the second is not just a reflection of the first. A detailed description of the measures as well as of measures of the size of risks faced by these entrepreneurs are provided in Guiso and Schivardi (2010).

4.2 Results

Figure 2 shows a simple correlation between and index of insurance demand given by the number of risks each firm in the sample is insured against and its level of trust towards insurance companies. The figure documents that a strong positive correlation: firms that have more faith

towards insurance companies tend to be more insured and, as the figure suggest, the strength of the correlation is quite strong. Raising the level of trust from 1 to 9 doubles the number of risk insured. Of course, this is just a partial correlation and may reflect many underlying forces that matter for the demand for insurance and that happen to be correlated with people's trust.

Figure 2: Trust and insurance coverage

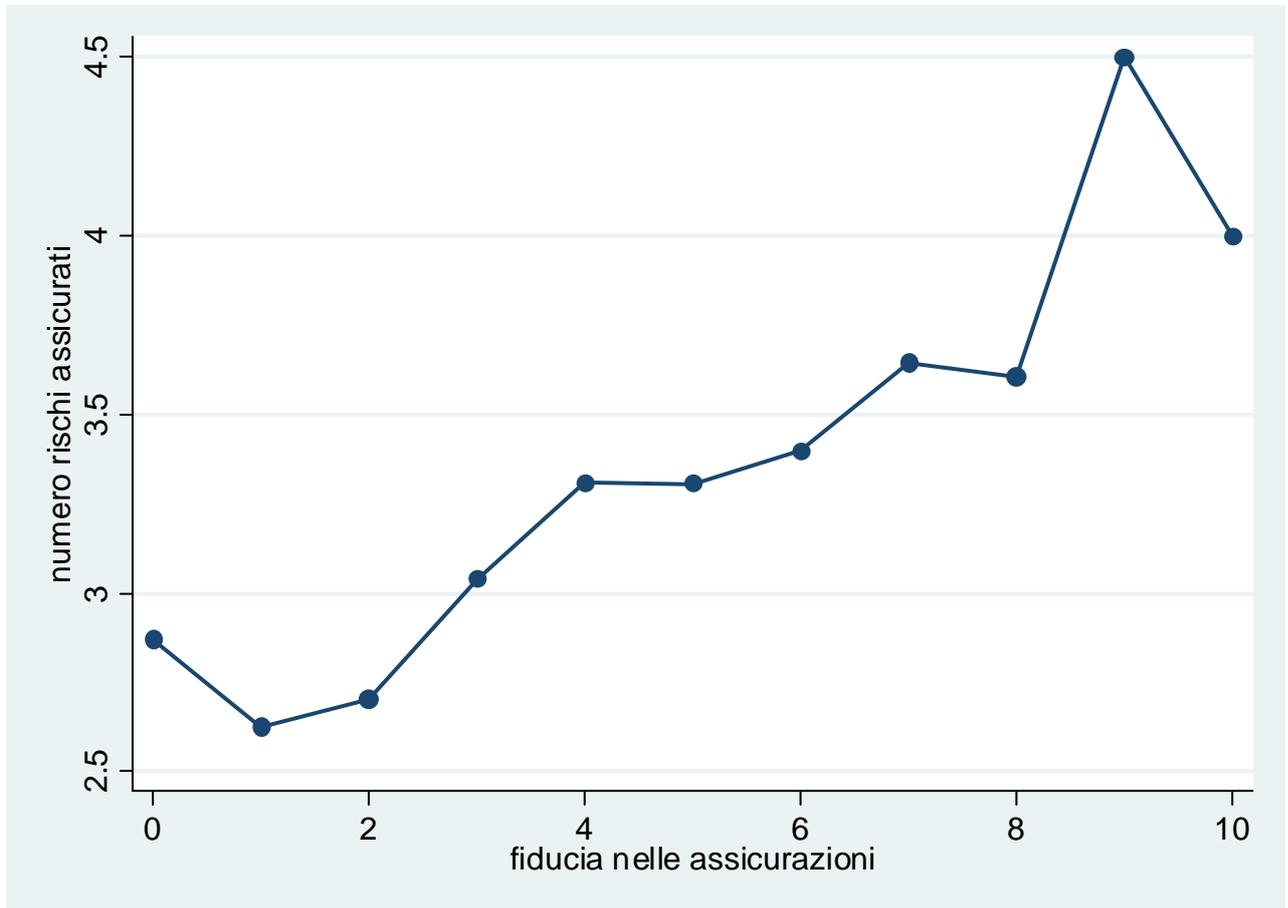


Table 2 runs multiple regression that deal with this issue as they control for a large number of potentially important factors such as the size of the firm and the other traits of the entrepreneurs including its optimism and risk aversion. The first column to a standard specification that includes these controls the degree of trust towards insurance companies. The estimate shows a positive effect, significant, and economically relevant which confirms the visual correlation shown in Figure 1. Increasing the level of trust in insurance companies from the fifth to the 90th percentile, the insurance coverage increases by 0.7, equal to 20% of the sample average. This effect does not capture either optimism or obstinacy since they are controlled for. Furthermore, if the last two variables are excluded from the estimate, the trust effect would increase only very slightly. This suggests that the effect of trust does not reflect the degree of optimism and obstinacy, even though optimism and obstinacy are partially correlated (0.15 correlation) and these variables influence the choice of insurance through independent channels. Neither it reflects risk aversion which is also already taken into account..

An important aspect to consider is whether the effect of trust actually captures the trust people have towards insurance companies or rather, the fact that people who do not trust in general, tend to also mistrust insurance companies irrespective of the latter's actual trustworthiness (perceived or real). This possibility exists because the various measures of trust are correlated as shown in Table 11. To investigate this possibility, in the second column, the degree of trust towards other people, is also inserted. While this indicator has no effect on the demand for insurance, the degree of trust towards insurance companies maintains its effect, excluding therefore the possibility of it capturing diversity in peoples' tendency to trust in general rather than their trust in insurance companies in particular. Finally, the third column adds a degree of trust towards banks to verify if the effect of trust towards insurance companies does not reflect just a scarce trust towards financial institutions in general. Adding this variable leaves the results unvaried: only the specific measure of trust towards insurance companies is relevant for insurance decisions, while trust towards banks or towards people in general, has no significant, independent effect.

Table 2. Determinants of the demand for insurance: the role of trust

Trust in insurance companies: (0, 10)	0.029*** (0.008)	0.027*** (0.009)	0.031*** (0.011)
Trust in people in general: (0, 10)		0.006 (0.008)	0.007 (0.009)
Trust in banks: (0, 10)			-0.007 (0.011)
Risk aversion	0.046* (0.025)	0.046* (0.025)	0.047* (0.025)
No regret	-0.078* (0.044)	-0.081* (0.044)	-0.080* (0.045)
Ambiguity aversion	-0.002 (0.012)	0.000 (0.012)	0.000 (0.012)
Obstinacy (0/10)	0.026** (0.011)	0.026** (0.011)	0.025** (0.011)
Optimism	0.020* (0.010)	0.019* (0.010)	0.019* (0.010)
Overconfidence	-0.030 (0.040)	-0.024 (0.041)	-0.023 (0.041)
Share of personal wealth invested in the firm	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Age of entrepreneur	-0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)
Male	0.041 (0.036)	0.040 (0.036)	0.039 (0.037)
Education	-0.001 (0.006)	-0.001 (0.006)	-0.001 (0.006)
Married	-0.039 (0.040)	-0.040 (0.040)	-0.039 (0.040)
Firm size (log employment)	0.135*** (0.019)	0.135*** (0.019)	0.135*** (0.019)
Firm age	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Probability of a casualty...	0.040** (0.016)	0.038** (0.016)	0.038** (0.017)
Probability of causing a casualty	0.021 (0.017)	0.022 (0.017)	0.022 (0.017)
Experienced a casualty	-0.142*** (0.045)	-0.137*** (0.045)	-0.137*** (0.045)
Firma has caused a casualty	-0.123** (0.055)	-0.114** (0.056)	-0.116** (0.056)
Listed firm	0.079 (0.128)	0.076 (0.128)	0.075 (0.128)
Share owned by largest three owners	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Probability similar firms fails	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Probability this firm fails	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Share exported	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
N. establishments	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Observations	1126	1121	1120

4.3 What determines trust in insurance companies?

These results indicate that once the degree of trust towards insurance companies is accounted for, trust towards others and towards people does not have an additional direct effect on the choice of being insured or not. But, what determines trust towards insurance companies? If this also reflects the trust that a person has in others, then this effect is not direct but indirect because it influences the trust in insurance companies. Similar reasoning can be applied also to trust towards banks and towards financial institutions in general. It is plausible that trust in insurance companies reflects the perception people have in the trustworthiness of banks and that a low level of trust in banks can translate into a low level of trust in insurance companies. Generally, it is useful to distinguish between determinants of trust in insurance companies which reflect *specific actions* and behaviors of the latter from external determinants - such as the tendency of a person to trust others in general or the trust they may have in financial intermediaries in general. For this reason, we isolate a series of variables which capture aspects of the relationship between the firms and the insurance, and those that may influence the trust of the former in the latter. In particular we consider the degree of satisfaction of the firm regarding the policies that has stipulated and the two indicators of risks experienced and caused in the past. The firms which are satisfied by the insurance are such partly because the insurance adhered to the contractual obligations and respected the client's interests, by giving fair advice on the insurance policy and its structure, for example. The damages experienced in the past are an opportunity to assess the behavior and trustworthiness of the insurance company. In addition to these variables we take into account the effect of the tendency of the entrepreneur to trust others in general as well as banks.

Table 3 shows the results. The first column considers the specific insurance variables. The satisfaction of the company regarding the level of trust in the insurance company: using these estimates, an increase in satisfaction from 5 (the value in correspondence of the fifth percentile) to 9 (the 90th percentile) raises the level of trust by 1.7 points, equal to 35% of the sample average. Firms which have experienced damages or fires in the past tend to trust less currently, but the effect is small and not statistically significant. With one exception, the characteristics of the entrepreneur do not have significant effects on the level of trust towards insurance companies. The exception is gender: males tend to trust insurance companies less than female entrepreneurs. When the degree of trust towards others is inserted in column 2, this has a strong effect on the trust towards insurance companies suggesting that part of the variability observed in the data reflects different attitudes towards trust in general. However, the effect of satisfaction, though slightly decreased, maintains its economic and statistical relevance. Trust in banks has a strong, positive effect on the level of trust towards insurance companies, and when this is considered, the effect of trust towards others in general decreases considerably suggesting that this measure captures mostly the effect of trust towards banks. Furthermore, the effect of the degree of satisfaction, though slightly lower, remains high and is statistically significant.

Overall, these results suggest that: a) the tendency to trust others influences the level of trust towards insurance companies; b) behavior of the insurance companies that influence the degree of satisfaction of the insured are an important determinant of the entrepreneur's disposition to trust insurance companies in addition to the policies he/she would normally stipulate; c) trust in banks has a significant spillover effect on insurance companies (and probably vice versa) suggesting that when formulating their ideas on the level of trustworthiness of banks and insurance companies, companies tend to think of these two types of intermediaries as one.

Table 3. Determinants of trust in insurance

Degree of satisfaction with insurance policies	0.423***	0.381***	0.286***
	(0.034)	(0.032)	(0.026)
Trust in people in general: (0, 10)		0.348***	0.121***
		(0.019)	(0.016)
Trust in banks: (0, 10)			0.569***
			(0.017)
Age of entrepreneur	0.004	0.001	0.003
	(0.005)	(0.004)	(0.004)
Male	-0.235**	-0.226**	-0.053
	(0.097)	(0.089)	(0.072)
Education	-0.004	-0.013	-0.010
	(0.018)	(0.016)	(0.013)
Married	0.038	-0.048	-0.048
	(0.109)	(0.101)	(0.080)
Firm size (log employment)	0.093*	0.087*	-0.016
	(0.049)	(0.045)	(0.036)
Firm age	0.000	-0.000	-0.000
	(0.002)	(0.002)	(0.002)
Experienced a casualty	0.220*	0.168	-0.034
	(0.128)	(0.119)	(0.095)
Firma has caused a casualty	-0.011	-0.090	-0.067
	(0.161)	(0.149)	(0.119)
Observations	1956	1932	1924
R-squared	0.112	0.249	0.522

5. Discussion and policy implications

We have argued that an insurance contract, being just a particular financial contract, are as such exposed to the possibility of abuse and are thus trust sensitive. In the literature, the importance of trust has been overlooked, partly because of an implicit assumption that mis-behavior in insurance markets receives full legal protection. We have argued that legal protection is never likely to be perfect even in setting with particularly efficient legal institutions. When this is the case, exchanges in insurance markets are affected by trust. Trust is required on the side on the company that has to trust the insurer not to commit insurance frauds by manipulating ex-post the amount of damage (or lying about its very existence), or behaving in such a way as to alter the risk faced by the company.

However, trust is required on the side of the insured who has to believe that is that the insurance company complies with its contractual obligations in case of damages. We have argued and documented that the trust people on the player in insurance markets has relevant effects on peoples decisions to insure and how much to insurance to buy. Hence, in high trust communities insurance markets are more likely to prosper.

This leads us naturally to asking what sort of policies can help sustain a high level of level in insurance markets. We distinguish two types of trust-enhancing policies. The first type refers to company-level policies and is meant to raise the trust people have in that company, being them existing customers or perspective customers. The second type of policies pertains to the industry and are meant, among other, to avoid the negative spillovers that misbehavior by one component of the industry has on the perceived trustworthiness of the pother members.

5.1 Interventions to increase trust in insurance companies

5.1.1 Improving the quality of services offered to the insured

The estimates in Table 2 show that the level of satisfaction of clients has a significant effect on the level of trust towards the insurance company. A revision of the marketing strategy aimed at increasing the client's satisfaction is a way of increasing the level of trust the entrepreneur/client has towards the insurance company. Adopting remuneration policies based on indices of client satisfaction, as already occurs in some banks, acts as an incentive to improve the relationship with the client, and would also increase the client's trust in the insurance company.

5.1.2. Better discriminating between honest and (potentially) dis-honest customers.

As argued, one channel through which people lose trust in the insurance company is when, faced with a risk, the company delays paying the indemnity even when due, because of the need of monitoring that the claim is correct and their no underlying fraud. If the claim is a honest one, the customer may start suspecting the company of opportunistic behavior and loose faith in it. This loss of trust is particularly worrying as it hits the most honest segment of the clientele. Policies that treat differently customers with a clear honest record at time of claiming an indemnity and customers that may be suspected of cheating would help maintain a high level of trust. The *motto* should be: serve quickly and kindly the customers that are highly likely to be honest and be picky only with the others.

5.1.3 Improve the quality of the match between the insured and the policy distributor

An interesting result emerging past research and a from the ANIA survey is that trust tends to increase with the degree of affinity between who expresses and to whom the trust is directed. People tend to trust others that are more similar to them, that is have a high degree of affinity with

(Butler and Guiso, 2010). Improving the matching between who sells and who buys insurance, choosing people to whom one feels akin and building stable relationships is a way of increasing the level of trust of the insured.

5.1.4 Protect the company reputation from internal abuses

Misbehavior by one member of a company can affect the trust that customers and non- customers have towards the company in general. A serious episode of dishonest behavior by one employee can affect the belief that people have towards the company. Insurance companies should adopt preemption policies that discourage such type of behavior. Behaviors of this sort are more likely to emerge when: a) the company management has very short run objectives and is thus less attentive to long-term reputational risks; b) when employees feel little attachment to the company and little loyalty. Policies to raise loyalty have a desirable side effect: they act as an antidote against behavior that provokes reputational losses.

5.2. Industry- level policies to rekindle trust

The policies illustrated can be adopted by single companies. Also, some of these policies work only towards people that are already insured to strengthen their trust in the company. These can only be implemented if the company is already insured and the service offered or the quality of the relationship is improved. At first glance they do not have any effects on those who have decided not to insure because of a lack of trust. In order to reach these potential clients, one must act through different channels. Furthermore, as the results in Table 2 show, there is a significant effect on the trust towards insurance companies based on the level of trust that people have towards banks and more general towards other financial intermediaries.

5.2.1. Adopt joint policies to raise trust with other intermediaries

The entrepreneurs seem to pass on to insurance companies the same low level of trust they have in banks (and vice versa). Such an externality in determining the level of trust implies that: 1) there is complementarity between the trustworthiness and the reputation of banks and that of the insurance companies; a loss/gain in reputation and trustworthiness of one has an effect on the reputation/trustworthiness of the others; 2) for this reason, policies aimed at rekindling the trust of one segment of the industry are unlikely to be implemented because the benefits are not entirely internalized by who makes the policy and by who bears the costs; 3) vice versa, combined policies aimed at increasing the level of trust in the entire industry has a much more powerful effect. Furthermore, these policies can reach those who are insured but refer to themselves as being outside of the market due to a lack of trust.

5.2.2 Promote enforcement of punishment of insurance fraud

A better legal enforcement of insurance frauds lessens the need for the company to be attentive to frauds and thus to be speedier in paying out indemnities that are correctly claimed. Hence promoting fraud enforcement results in a higher trust towards insurance markets through this channels. Though this aspect is relatively general, it is of particular importance to the Italian context. In fact, the Italian judicial system is very slow and therefore does not give encouraging signs in resolving this type of crime.

5.2.3 Support the enforcement of punishment of single companies misbehavior

Misbehavior by one industry member destroys the trust that people have in the other members of the industry. These spillovers imply that there is a role for industry level policies meant to set high standards of behavior and punish deviants, well and above any punishment that may follow from existing legal norms. Codes of conduct and strict rules of behavior that are shared by the industry members and hared procedures to punish deviation would greatly contribute to keeping high levels of trust towards each single insurance company.

5.2.4 Support policies that raise industry competition.

A high level of competition among insurance companies is highly likely to have a very strong effect on the trust people have on insurance companies. This happens because a highly competitive market is one where the insured can switch company, if not fully satisfied, at a very low cost and little effort. Competition empowers consumers and because of this tends to make them more willing to run the risk of being betrayed: they have a powerful weapon to punish any misbehavior. Anticipating the high cost of reputation loss, insurance companies receive stronger incentives to behave fairly in high competitive environments, thus confirming the high trust beliefs. Recent research shows that indeed there is a positive link between people trust beliefs and competition.

Francois et. al (2010) show that increases in (firm-level) competition positively impact (individual level) trust. Using US states' banking de-regulation from the mid 1970s, they find that the increase in competition that resulted from deregulation had a causal impact on trust and develop a model which explains why increased competition within a state increases trust.

Limited trust towards insurance companies in markets with traditionally limited entry are consistent with this argument. Hence policies that foster competition among insurance companies within the industry would result in a trust benefit.

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