

Antonino Iero, Giorgio Tassinari

Attitudes towards insurance: the role of
propensity to hold liquid asset

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ALMA MATER STUDIORUM
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Dipartimento di Scienze Statistiche “Paolo Fortunati”

Empirical evidence on the relationship between Italian families' attitudes toward insurance and their propensity to hold liquid assets

Antonino Iero¹, Giorgio Tassinari²

Abstract

There's a lack of research on the relationship between families' attitudes toward insurance and their financial behavior. The Italian insurance market appears weak with regard to non life and non motor insurance: Italy ranks only 18th in Europe in terms of the ratio between non life and non motor premiums and GDP. The propensity to subscribe to an insurance contract appears largely to depend on geographical area, qualification and job activity. Regardless of their wealth, families subscribing to a non life and non motor insurance policy show a significantly lower propensity for financial liquidity. This relationship suggests an opportunity: selling insurance products to high liquidity families offers financial industry the possibility to sell them new financial assets too. There is a final benefit for Italian families, whose high liquidity indicates risk adversity while their propensity not to buy insurance exposes them to great real risks: buying more insurance products they will be less exposed to real risks and have a better return on their financial investments.

1 Introduction

The process of financialization that has affected the main developed economies in recent decades has led, among other effects³, the increase of intertwining

¹ Research Department, Unipol, Bologna

² Dipartimento di Scienze statistiche "Paolo Fortunati", Università degli Studi di Bologna

³ Kumhof M. and Rancière R. (2010)

between operators once considered separated, such as banks and insurance companies. In a report commissioned by the OECD you can read *“It is our firm belief that the combination of banking and insurance products, as is now done through bancassurance and assurfinance, is just the first step of a more profound development. The complementarity in time and space between different financial and insurance products not only creates natural incentives for cross-selling and packaging but also for innovative product integration.”*⁴

The development of the “bancassurance” phenomenon, namely the sale of life insurance policies by the postal and bank branches, which in 2010 accounted for 70% of the production of new individual life policies in Italy⁵, represents a successful strategy that was able to seize the business side of these trends.

However, less explored are the behaviors of consumers-savers in between the insurance and financial sectors. This analysis begins from a not very common concept in our country: the optimization of the allocation of household savings embedded in insurance damage coverage. The current view tends to consider damage insurance as an expense. Actually, such policies offer the household a guarantee to protect their wealth, which is nothing but savings accumulated over time. In the absence of insurance coverage, recovering from financial losses, including family members’ health and physical integrity among the family assets, requires the mobilization of shares from both the current income and from savings specifically designed to cover such risks. With an appropriate insurance coverage, the family will not only have more security in the use of their future income, but also savings could be allocated in ways that are less related to contingency and thus more oriented to seize medium-long term objectives. As a potential result, insured households should have a lower propensity to hold liquid assets for precautionary purposes.

The purpose of this analysis is to find an empirical confirmation of this hypothesis⁶. In specific, we intend to test the hypothesis that, as a consequence of a higher insurance cover in the non motor insurance area, it would be possible to allocate one’s assets more efficiently, reducing the amount of liquid assets held for reasons other than strictly financial ones. This is because insured families,

⁴ Van den Berghe L.A.A., Verweire K. and Carchon S.W.M. (1999)

⁵ Ania, Ania Trends, January 2011.

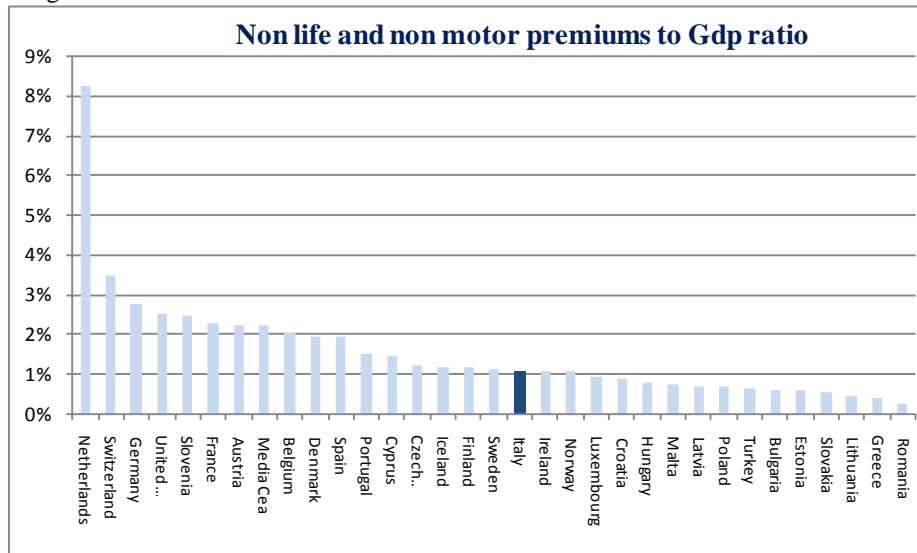
⁶ Within the damage insurance policies category are not considered those connected to motor vehicle civil liability insurance, as, given their mandatory nature, they are linked to the mere ownership of a vehicle and not to the family’s choice.

through insurance mutuality, have an umbrella that protects them against a wide range of adverse events⁷, making less compelling the need to hold immediately available forms of savings (liquidity).

2 International comparisons

In 2009, the Italian insurance market held the 4th position, in size, in Europe, behind Germany, the United Kingdom and France. However, the ranking among European countries according to the ratio between non life premium and gross domestic product (GDP) sees Italy in a lower position⁸: at the 14th position (Image 1).

Image 1



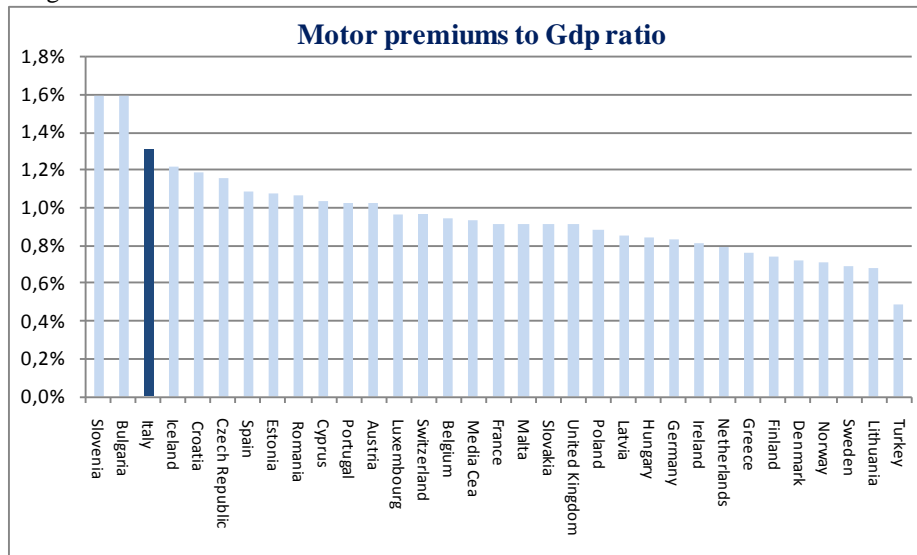
By dividing the non life market into two broad categories (coverage related to motor traffic and other classes), the picture of Italy regarding insurance is further

⁷ See also: Murray E. J. (2006).

⁸ Cea, (2010).

delineated. Our country is third in Europe with reference to motor premium income on GDP (Image 2), due the great amount of cars owned by the Italians, and a higher average premium compared to other European countries⁹.

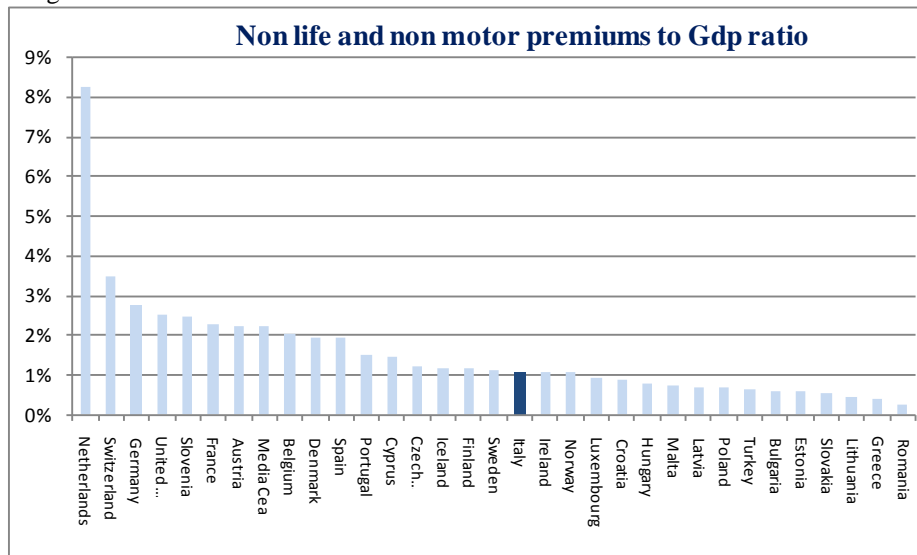
Image 2



On the contrary, in the European ranking for non motor premium income on GDP (Image 3) Italy ranks 18th.

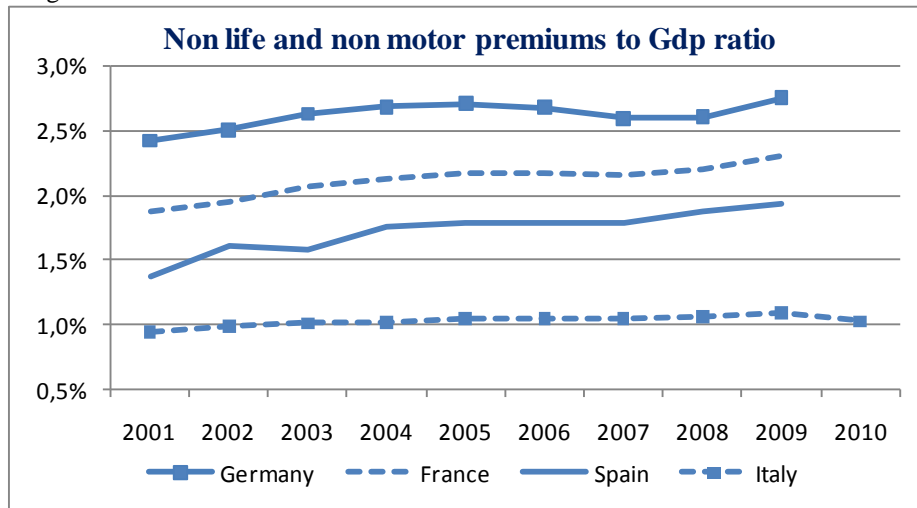
⁹ In Italy there is about one motor vehicle for each two people, indicating that our country is one of the nations with the highest distribution of motor vehicles in the world.

Image3



Therefore, our country's economy (both regarding businesses and families) operates within a system of structural under-insurance compared to the main continental counterparts (Germany, France and Spain). On the other hand, it seems that in Italy the dynamics of non motor insurance did not develop in a way that enables its convergence on the GDP towards the average values found in other economic systems (Image 4).

Image 4



In particular, although similar data are not available from other countries, the component of non motor insurance that refers to the private segment shows an impact on GDP equal to 0.42% versus 0.67% of the companies segment¹⁰. It is reasonable to assume that companies, even within a framework of overall lack of confidence in the insurance world, are nevertheless inclined to become insured as a result of risk assessments related to the activities they perform. This does not happen, most likely, in the case of families.

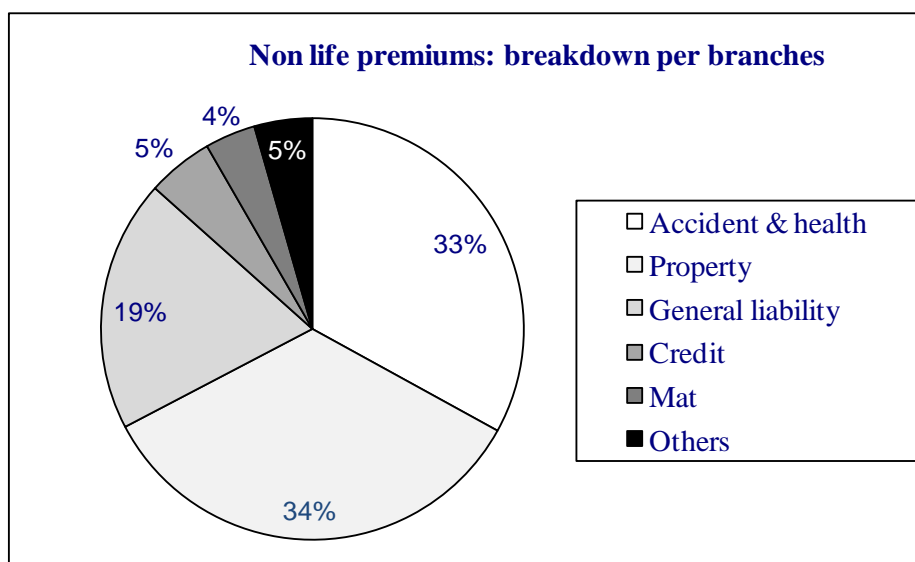
3 Non motor insurance

The insurance policies for such branches, take into account different types of risk. Image 5 shows the premium income composition in Italy for 2010¹¹.

Image 5

¹⁰ Prometeia estimates, July 2010.

¹¹ Isvap (2010).



As mentioned earlier, Italian families often consider such forms of insurance as pure costs, deriving such attitude from the motor vehicle civil liability insurance (Responsabilità Civile Auto - RCA) that, because of its mandatory nature, is commonly (and erroneously) regarded as a tax. This discourages Italians from subscribing to insurance damage policies. Hence, low level of individual insurance, which is affecting the Italian low ratio between non motor insurance expenditure and GDP.

4 The sample

This research is based on data obtained from the biennial survey conducted by the Banca d'Italia "Italian households' budgets". The reference year is 2008, the latest available when compiling this essay.

It is a representative sample of the universe of Italian families, consisting of 7,977 households, on which were collected various information of social, demographic, economic and patrimonial nature.

In processing data, it was taken into account, as suggested by the institute that conducted the survey, the sampling weight (PESOFIT), supplied by the archives made available to the public. However, there is a significant default bias in the information resulting from this type of questionnaire, caused mainly by a

widespread reticent behavior¹². Table 1 shows the comparison between the relative weights for the main net wealth components per household¹³:

Table 1

	La ricchezza delle famiglie italiane ¹⁴	Italian households' budgets
Real Assets	69.0%	94.9%
Financial Assets	40.7%	9.8%
Financial Liabilities	-9.7%	-4.7%
Net Wealth	100.0%	100.0%

It can be noticed, in the data from the questionnaire, a significant shift in size from financial to real assets. Proof of such distortion is obtained by comparing the average values for such sizes per family obtained from the two sources cited:

Table 2

euro	A = La ricchezza delle famiglie italiane	B = Italian households' budgets	% B / A
Real Assets' Average	239,951	233,099	97.1%
Financial Assets' Average	141,671	24,067	17.0%
Financial Liabilities'	33,813	11,473	33.9%
Net Wealth's Average	347,809	245,693	70.6%

While real assets appear to be fully represented in the questionnaire statements, the same does not happen in relation to wealth invested in financial assets (and, to a lesser extent, also for financial liabilities). Of course, at the end of 2008, the

¹² (Cesari R. and Iero A. 2001).

¹³ Net wealth consists of the sum of real assets, financial assets and financial liabilities, the latter considered with the minus sign.

¹⁴ Banca d'Italia, La ricchezza delle famiglie italiane 2008, Supplementi al Bollettino Statistico, Indicatori finanziari e monetari, numero 67, anno XIX, 16 dicembre 2009.

extremely negative performance of the worldwide financial markets could justify an underestimation of the real value of the wealth invested in financial assets. Nevertheless, it seems unlikely that it could escape 83% of one's financial wealth.

Therefore, in order to minimize misinterpretations caused by the processing of microeconomic data obtained from the sample, we have opted for a limitation in the use of absolute data in favour of arguments based on relative measurements (ratios, percentages, etc.) or on comparisons.

5 Non motor insured and uninsured

We have considered the types of non motor insurance identified by a positive reply to the questions in section F (insurance forms) in the questionnaire:

- F06 – presence of policies related to accident and sickness insurance;
- F19 – presence of insurance policies related to theft, fire, hail, civil liability (with the exception of the compulsory motor vehicle civil liability insurance - RCA).

Although the amount of annual expenditure for such insurance coverage (questions F09 and F21 in the same section) is also available, it was deemed that such information is affected by the income as well as by the family wealth. For the aim of this research, it is more important to identify the household attitude toward insurance, best represented by the presence (and number) of subscribed policies.

The amount of households in the sample that have bought at least one insurance policy other than motor vehicle civil liability (23.9%) confirms the low prevalence of these kinds of insurance.

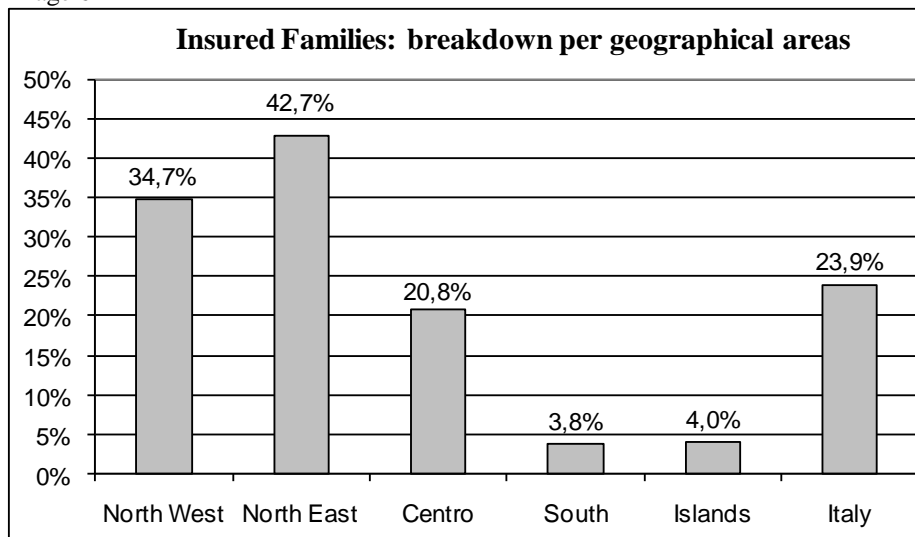
Before we continue with the details of the analysis, it is useful to give a general outline of the modalities in which the characteristic “presence of non motor insurance” is deployed in terms of specific socio-demographic criteria¹⁵. Further investigations, obtainable by crossing the various socio-demographic characteristics, do not represent the objective of this work.

A look at the geographical distribution of the propensity to subscribe to an insurance policy shows a considerable differentiation between the various areas

¹⁵ For further information: Ania Trends, research department newsletter, April 2010.

of the country (Image 6). In the North East, more than 40% of the households subscribed to at least one insurance policy other than the RCA. High values are also found in the North West. The Centre is just below national average. The percentage of policy holders in the South¹⁶ and the Islands is surprisingly low: only a small minority of respondents (only 4%) report having an insurance policy not tied to private means of transport.

Image 6



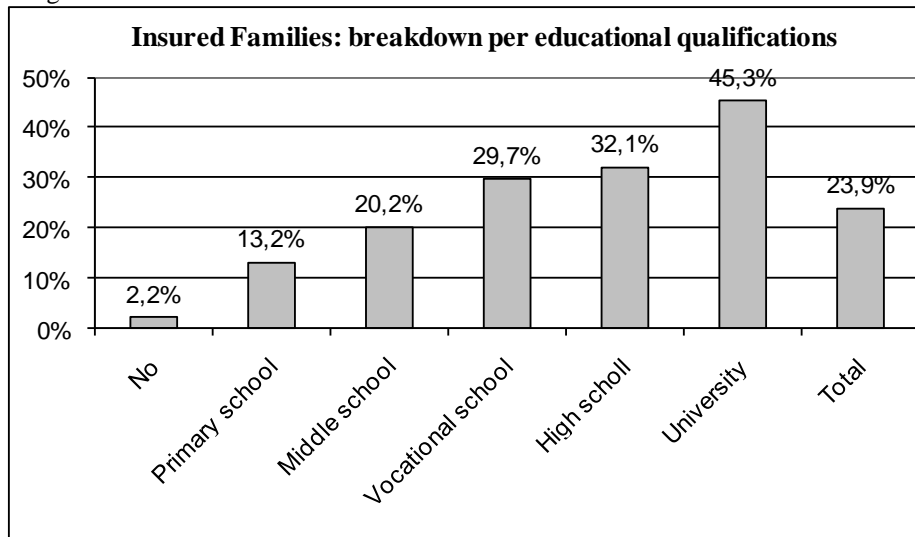
With reference to educational qualifications¹⁷, the percentage of households covered by non motor insurance policies follows an increasing progression according to education. People with no formal qualifications show a propensity to get insured equal to almost zero (Image 7). At the other extreme, there are those

¹⁶ For an update on insurance trends in Southern Italy see: Giancarlo Giannini, “Le problematiche del settore assicurativo, con particolare riferimento alla aree del Mezzogiorno”, Audizione alla Commissione Finanze della Camera dei Deputati, 11th February 2010.

¹⁷ It was taken into account the educational qualification of the member indicated with the number 1 (i.e. the head of the households), identified in the questionnaire by the Banca d’Italia as the “person responsible for the family economy”.

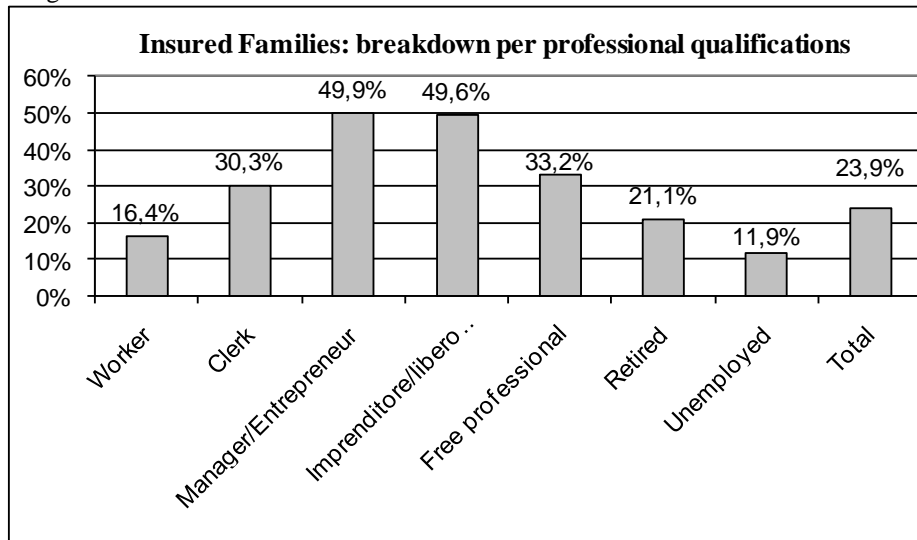
households whose head has obtained a university degree (diploma, bachelor, graduate, postgraduate degree), which show a great tendency (more than 45%) to get insurance coverage. In the middle there are those families whose “breadwinner” has an intermediate qualification.

Image 7



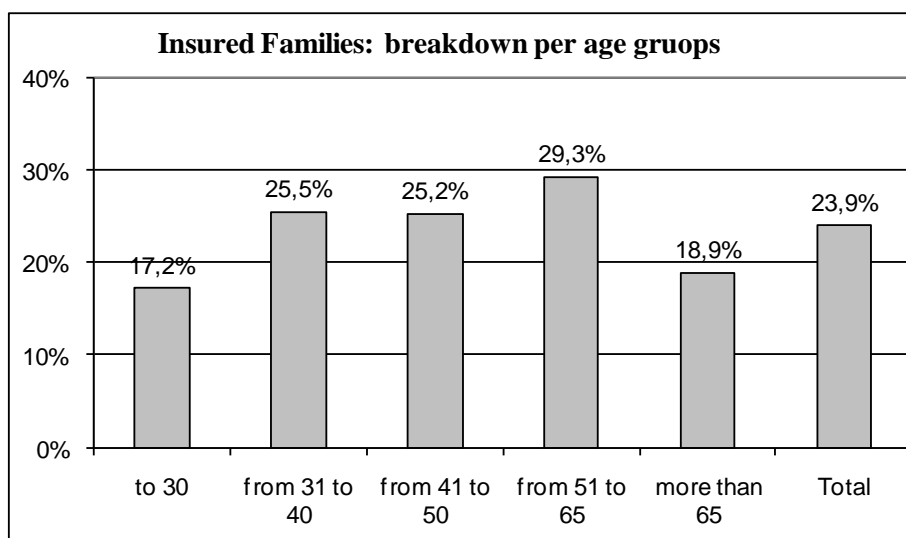
The distribution between insured and uninsured households according to the breadwinner’s professional qualification shows a rather high propensity to get insured among executives, managers, entrepreneurs and professionals (Image 8). In the last two categories mentioned, it comes into play, in all probability, the need to provide coverage in connection with professional activity, a factor that causes some misinterpretation that might overestimate their attitudes towards insurance.

Image 8



Finally, a further perspective is related to the head of the household's age. Using the age groups in the questionnaire, we obtain the distribution shown in Image 9. It does not emerge a specific characterization of the propensity to get insured according to the head of the household's age. We observe a maximum in the age group between fifty and sixty-five, probably the result of a stage in life in which the commitment to productive activities and responsibility towards one's family is higher. However, in this breakdown are not to be found neither particularly high nor particularly low values, a symptom of the low discriminating power of such characteristic.

Image 9



6 A logistic model

In order to verify the findings illustrated in the previous section, we created a logistic regression model. The dichotomous dependent variable is the ownership (or not) of at least one non motor insurance policy. The starting set of explanatory variables consists of:

- AR - real wealth (quantitative variable);
- AF - financial wealth (quantitative variable);
- AF1 - amount of deposits (quantitative variable);
- PF - financial liabilities (quantitative variable);
- AREA5 - area of residence (five geographical divisions, qualitative variable);
- STUDIO - Head of the household's educational qualifications (ordinal variable);
- QUAL - Head of the household's work status (qualitative variable);
- CLETA - Head of the household's age (ordinal variable).

The procedure with backward elimination resulted in the exclusion of three variables: financial wealth, amount of deposits and head of the household's age.

After having simplified the model in such way, the test of joint significance of coefficients allowed to reject the null hypothesis $H_0: \beta_1 = \beta_2 = \dots = \beta_5 = 0$.

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	1847.3097	13	<.0001
Score	1637.5832	13	<.0001
Wald	1149.6607	13	<.0001

This analysis was also confirmed by the high number of matches found (82.5%):

Association of Predicted Probabilities and Observed Responses

Percent Concordant	82.5	Somers' D	0.652
Percent Discordant	17.3	Gamma	0.654
Percent Tied	0.3	Tau-a	0.224
Pairs	10915142	c	0.826

The estimate of the regression parameters is represented below:

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.9912	0.1118	715.8726	<.0001
AR	1	1.279E-6	1.116E-7	131.4160	<.0001
PF	1	4.025E-6	8.955E-7	20.2025	<.0001
STUDIO	1	0.2270	0.0219	107.0657	<.0001
AREA5	1	0.6821	0.0652	109.3623	<.0001
AREA5	2	1.6449	0.0639	663.5712	<.0001
AREA5	3	0.3836	0.0702	29.8509	<.0001
AREA5	4	-1.3091	0.1086	145.4287	<.0001
QUAL	1	-0.4533	0.0832	29.7119	<.0001
QUAL	2	0.0897	0.0777	1.3325	0.2484
QUAL	3	0.4783	0.1257	14.4682	0.0001
QUAL	4	0.1878	0.1252	2.2492	0.1337
QUAL	5	-0.0120	0.1138	0.0111	0.9161
QUAL	6	0.00855	0.0628	0.0185	0.8917

Regarding the first two quantitative independent variables (AR and PF,

respectively, the household's real wealth and financial liabilities), there was a positive relationship, i.e. at the increasing of the value of the dependent variable, the odds ratio increases¹⁸. The third explanatory quantitative variable of ordinal nature (STUDIO, which is the educational qualification obtained by the head of the household), also shows a significant impact on the dependent variable: by increasing the period of schooling, the likelihood to get insured increases. Moving on to analyze the qualitative variables, we refer to the estimates of odds ratios produced with reference to one of the modalities assumed by the dependent variables.

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
AR	1.000	1.000	1.000
PF	1.000	1.000	1.000
STUDIO	1.255	1.202	1.310
AREA5 1 vs 5	8.033	5.479	11.779
AREA5 2 vs 5	21.038	14.371	30.799
AREA5 3 vs 5	5.960	4.043	8.786
AREA5 4 vs 5	1.097	0.706	1.704
QUAL 1 vs 7	0.857	0.634	1.159
QUAL 2 vs 7	1.475	1.093	1.991
QUAL 3 vs 7	2.176	1.490	3.177
QUAL 4 vs 7	1.627	1.115	2.375
QUAL 5 vs 7	1.333	0.934	1.901
QUAL 6 vs 7	1.360	1.037	1.784

Regarding the geographical area, taking as a reference unit those families residing on the Islands, we have a very similar value in the Southern geographic area (1.097), while the households residing in the Centre, North West and North East show higher propensities to get insured. With regard to the head of

¹⁸ The relationship between probabilities associated to a dichotomy is called odds. Given the event x , its odds is the result of the relationship $\pi(x) / [1-\pi(x)]$, where $\pi(x)$ is the probability of the event x and $[1-\pi(x)]$ is the probability that x did not manifest. The odds ratio is the relationship between two odds values. For a quantitative independent variable, the odds ratio is equal to e^{β} and, in the case of a variation c of the independent variable, it is equal to ec^{β} , where β is the coefficient of such independent variable in the regression equation.

household's work status, the reference unit is represented by "other unemployed". It is evident a peak of positive variation for managers (2.176) and higher values for all other groups, with the exception of unskilled workers, whose odds ratio shows a decrease compared to the category of comparison.

7 The weight of liquidity

With reference to the two sample sub-categories (insured and uninsured), we calculated the average of the amount of the family assets and of the deposits component (AF1 variable¹⁹), identifying with the latter the liquidity kept available to deal with unexpected contingencies. Table 3 shows this data.

Table 3

euro	Insured	Uninsured	Total
Deposits' Average	18,287	11,832	13,378
Financial Wealth's Average	44,097	17,762	24,067
Deposit / Financial Wealth	41.5%	66.6%	55.6%
Real Wealth's Average	414,325	176,051	233,099
Financial Liabilities' Average	22,469	8,012	11,473
Net Wealth's Average	435,953	185,802	245,693

Those families that have subscribed to at least one non motor insurance showed an incidence of deposits on total financial wealth (41.5%) of 25.1 percentage points lower than the average for those households without insurance (66.6%)²⁰.

¹⁹ This cluster includes: Overnight Deposits, Deposits with agreed maturity up to 2 years, Deposits redeemable at notice up to 3 months, Repos.

²⁰ The correspondent data in the 2006 sample of the same survey show an incidence of deposits on financial wealth equal to 37,5% for insured households and to 58,6% for uninsured ones, with a general average equal to 48,9%. In December 2008, reference date for the survey used in this paper, was a time characterized by a situation of heavy stress on financial markets. It is not surprising then to find an increasing in the incidence of deposits on financial wealth, both due to the effect of a clear preference for liquidity and the effect of a decrease in the value of financial wealth for other instruments, both phenomena

However, there is a factor to be taken into account: the significant difference between insured and uninsured families' average household financial wealth, which is close to 2.5.

The propensity to buy insurance could be a result of an increased availability of assets for wealthy families. A logical insight, given that a part of the non motor insurance covers family wealth: for example the policy that provides protection against theft or fire. However, such insurance policies refer to not so much financial wealth, but also real property (home, valuables, etc.). Real wealth too highlights a gap in favour of who is covered by at least a non motor insurance policy. The relationship between average real wealth of insured and uninsured households, however, is slightly lower (2.35), compared to what is found for financial wealth (2.48).

The average amount of insured households' financial liabilities is significantly higher than in families without insurance. It can be deduced that, as a whole, the families of non motor insurance subscribers have a more developed financial literacy, and therefore are able to seize also the indebtedting opportunities offered by the system in order to optimize their cash flow. This may be true, in particular, as regards the existence of a loan aimed at the purchase of the house.

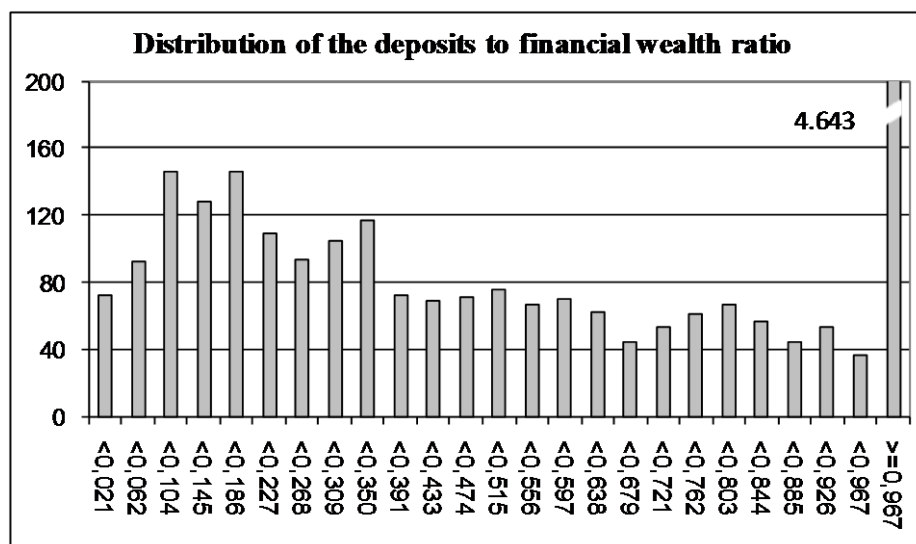
Data in Table 3 show the presence of an average net wealth 2.37 times higher for insured households compared to those without insurance.

In conclusion, there is a significant difference in the impact of liquidity on financial wealth between the two subcategories of families. Prior to investigating its possible causes, it is necessary to verify whether this difference is large enough to indicate the presence of significantly different behaviours. We analyze the distribution²¹ of the variable amount of deposits on financial assets (Image 10).

Image 10

caused by the fall of shares' quotes on financial markets. However, it should be emphasized how the increase of the weight of deposits on financial wealth, recorded from 2006 to 2008, was averagely of 5,7%, with a +8% for uninsured households and only a +4% for insured households.

²¹ The intervals have been calculated in function of the average weight (55,6%) +/- the multiples of a tenth of the root mean square deviation (41,1%). From the calculation have been excluded families having a financial wealth equal to zero, i.e. 1238 families whose sampling weight (PESOFIT) is equal to 1224 units.



The modal value falls into the last class (weight of liquidity higher than 96.7% of financial wealth): there is a large number of families that, for various reasons, does not hold (or does not declare) financial instruments other than a simple deposit. The shape of the empirical distribution indicates that the variable in question is not distributed according to a Gaussian law. Therefore, we opted for using a nonparametric tool, the Smirnov test, which let us understand whether two samples belong to the same population. This test is based on the maximum difference that can be found between the homologous values of two empirical distribution functions. Table 4 shows data on the distribution functions²² of the variable “weight of deposits on financial wealth” for the two sets of families (insured and uninsured).

Table 4

Financial	Insured Number	Families F(x)	Uninsured Number	Families F(x)	Dm,n
<0.05	62	0.0356	76	0.0159	0.0197

²² The number of families in the table is calculated by using the sampling weight allocated by the Banca d’Italia to each household. In the table are not included those families lacking wealth, for which the relationship between deposits and financial wealth does not have any meaning.

<0.10	73	0.0772	80	0.0326	0.0446
<0.15	76	0.1205	92	0.0518	0.0687
<0.20	86	0.1698	75	0.0673	0.1025
<0.25	54	0.2010	69	0.0816	0.1194
<0.30	59	0.2347	52	0.0925	0.1422
<0.35	92	0.2876	62	0.1053	0.1823
<0.40	42	0.3116	37	0.1129	0.1987
<0.45	44	0.3367	50	0.1232	0.2135
<0.50	42	0.3608	36	0.1307	0.2301
<0.55	45	0.3867	52	0.1416	0.2452
<0.60	31	0.4043	51	0.1521	0.2522
<0.65	29	0.4210	44	0.1613	0.2598
<0.70	22	0.4338	32	0.1680	0.2658
<0.75	20	0.4455	43	0.1769	0.2686
<0.80	37	0.4667	46	0.1864	0.2802
<0.85	25	0.4812	46	0.1960	0.2853
<0.90	24	0.4950	37	0.2036	0.2914
<0.95	14	0.5033	44	0.2126	0.2906
>=0.95	867	1.0000	3,786	1.0000	0.0000

In the last column is reported the difference between the counterparts of the two distribution functions. The maximum value reached by this difference is equal to 0.2914 (third item from the bottom). The threshold value for the one-sided test with alpha (error of first kind) equal to 1% is, according to the size of this sample, 0.0414. As $0.2914 > 0.0414$, the hypothesis of structural difference is confirmed, as regards the weight of liquidity, between the sets of insured and uninsured families.

8 Analysis of classes of financial wealth

Insured families show a significantly lower burden of liquidity on financial wealth than households without non motor insurance. The hypothesis that this gap is the result of the fact that insurances are able to free the family from the need to allocate a greater share of family wealth in liquid assets, clashes with the doubts generated by the systematic higher wealth detected among non motor insurance holders. A different interpretation could argue that the presence of

insurance policies is simply a reflection of a greater family wealth to be preserved.

The analysis of variance, performed on the weights of liquidity in relation to a dual classification (presence of non motor insurance and class of financial wealth) with multiple measurements per class, generates the following result:

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	Chi-Square	Valore F	Pr > ChiSq	Pr > F
ASS	1	15.8	57.44	57.44	<.0001	<.0001
CL_AF	16	6538	2859.01	178.69	<.0001	<.0001

Indicating the significance of both factors taken into account in determining the value of the variable examined²³.

Therefore, it is necessary to analyze the burden of liquidity by comparing insured and uninsured families' attitudes within equal intervals of wealth. We have therefore defined a segmentation of the households on the basis of their financial wealth; for this purpose intervals of five percentiles were calculated²⁴. Within each interval liquidity and family wealth were added up and the families were counted, distinguishing between insured and uninsured ones. The results are reported in Table 5:

²³ The result of such test is to be considered with some reservations, given the distribution of the observed variable doesn't fit with the Gaussian one (burden of liquidity on financial wealth).

²⁴ Percentiles have been calculated, to simplify, on the basis of the non weighed distribution of the values of family wealth.

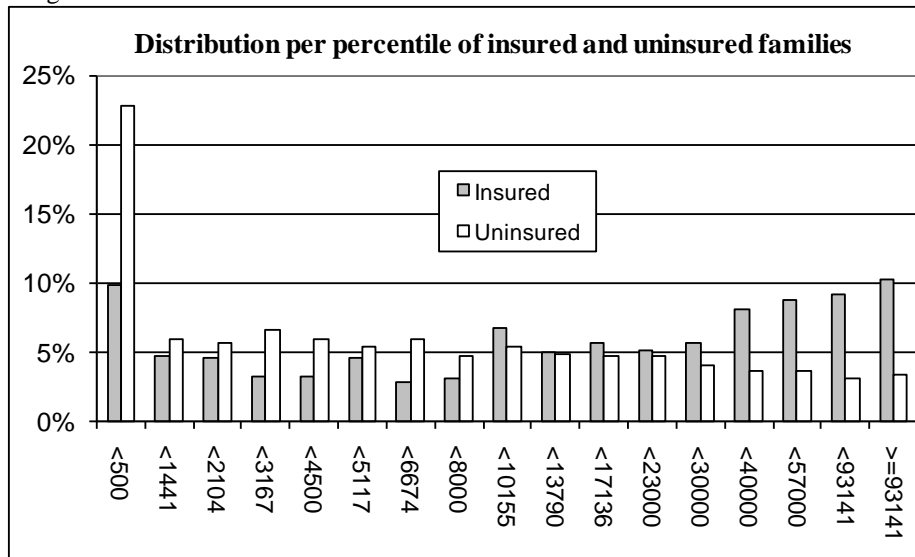
Table 5

Perc.	Insured				Uninsured		
	AF	Num ber	Deposits	Financial Assets	Num ber	Deposits	Financial Assets
0.05	<0	0	0	0	0	0	0
0.1	<0	0	0	0	0	0	0
0.15	<0	0	0	0	0	0	0
0.2	<500	186	7,963	7,963	1,379	37,277	37,843
0.25	<1441	89	80,107	80,721	360	334,785	340,163
0.3	<2104	87	149,524	158,516	345	605,350	608,151
0.35	<3167	62	169,855	175,836	399	1,122,737	1,144,074
0.4	<4500	61	215,427	233,833	361	1,366,255	1,384,632
0.45	<5117	87	415,203	427,038	327	1,602,710	1,608,461
0.5	<6674	53	262,640	314,047	356	1,974,006	2,063,251
0.55	<8000	58	389,398	416,584	285	2,013,218	2,061,730
0.6	<10155	128	1,022,618	1,193,795	328	2,798,549	3,051,147
0.65	<13790	96	912,818	1,123,230	290	2,993,408	3,439,997
0.7	<17136	108	1,225,093	1,650,128	285	3,725,381	4,385,013
0.75	<23000	97	1,270,519	1,918,871	285	4,335,208	5,705,861
0.8	<30000	108	1,498,593	2,795,896	243	4,283,109	6,292,462
0.85	<40000	155	2,776,575	5,312,651	216	4,882,997	7,297,826
0.9	<57000	166	3,690,483	7,970,660	222	6,838,878	10,526,728
0.95	<93141	174	5,120,313	12,633,514	185	7,821,527	13,139,271
1	>=93141	195	15,717,768	47,804,919	201	25,052,274	44,678,914

Total	1,910	34,924,898	84,218,202	6,067	71,787,669	107,765,525
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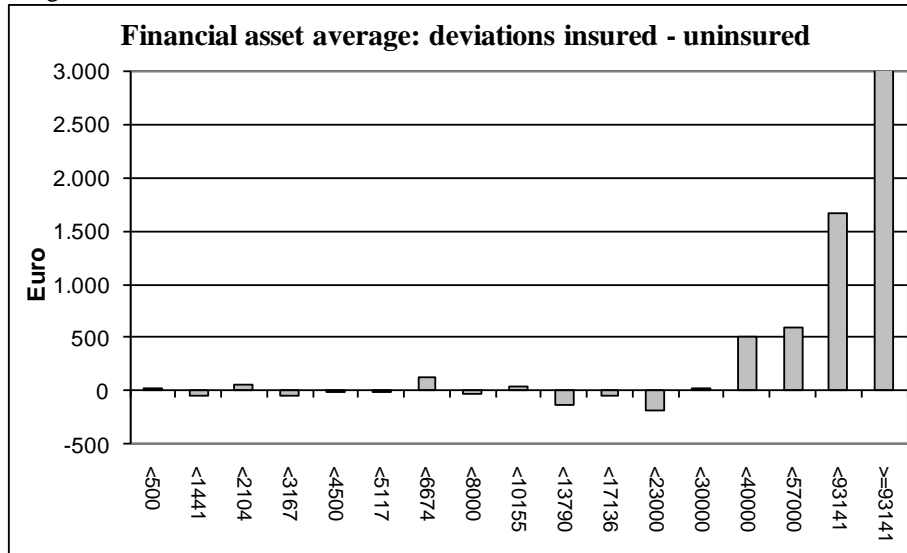
Obviously, the first three “vigintiles” are empty because a negative gross financial wealth cannot be hypothesized. Image 11 shows the distribution per vigintile of uninsured (white) and insured (gray) families. It is apparent the higher frequency of insured households among holders of higher financial assets.

Image 11



We check the degree of homogeneity within the classes by comparing the average wealth of insured and uninsured households. Image 12 shows, for each vigintile, such deviations. Positive values indicate greater wealth by insured households, negative values reflect an opposite situation. With the exception of the extreme class, the differences are very limited and of variable sign.

Image 12



It could be argued that, by excluding the class of holders of financial assets above € 93,141 from the calculation, the average difference between the weight of liquidity between insured and uninsured families would change. By calculating the means again and excluding the higher vigintile, we obtain the following values on the incidence of deposits on financial wealth: insured households 52.7%, uninsured families 74.1%. Between these two values there are 21.4 percentage points, which is not an excessively lower value than the one obtained previously in the calculation including all observations (41.5% insured families, 66.6% uninsured families). It can be concluded that the data in the extreme vigintile do not distort the comparison between the two groups.

Table 6 shows the values of the incidence of deposits on financial wealth for each vigintile, broken down between insured and uninsured families. The last column (Diff) contains the differences, calculated as the weight of insured families' deposits minus the weight of those of the uninsured ones. Thus, the positive values indicate a greater burden of liquidity for insured households and the negative values indicate the opposite situation. The clear prevalence of negative values (except the first two vigintile that are not empty) indicates that, given equal financial wealth, households with non motor insurance policies hold

lower levels of liquidity than their active financial assets. Of course, the intensity of the lower possession of liquid assets differs from vigintile to vigintile and is always less than the overall average (25.1%), on which impacts the different distribution of households among vigintiles. However, this result confirms that the presence of non motor insurance policies, given equal financial wealth, leads to reduce the amount of wealth tied up in liquid assets, a result that was found in earlier studies²⁵.

Table 6

AF	% Deposits		
	Insured	Uninsured	Difference
<0			
<0			
<0			
<500	100.0%	98.5%	1.5%
<1441	99.2%	98.4%	0.8%

²⁵ (Focarelli, Savino and Zanghieri 2010: 11).

<2104	94.3%	99.5%	-5.2%
<3167	96.6%	98.1%	-1.5%
<4500	92.1%	98.7%	-6.5%
<5117	97.2%	99.6%	-2.4%
<6674	83.6%	95.7%	-12.0%
<8000	93.5%	97.6%	-4.2%
<10155	85.7%	91.7%	-6.1%
<13790	81.3%	87.0%	-5.8%
<17136	74.2%	85.0%	-10.7%
<23000	66.2%	76.0%	-9.8%
<30000	53.6%	68.1%	-14.5%
<40000	52.3%	66.9%	-14.6%
<57000	46.3%	65.0%	-18.7%
<93141	40.5%	59.5%	-19.0%
>=93141	32.9%	56.1%	-23.2%
Total	41.5%	66.6%	-25.1%

9 An analysis by total net total wealth

Previously we have analyzed the behavior of households on the basis of their financial wealth. However, financial wealth is only part of the family wealth. The attitudes of families, with reference to the preference for liquidity, could be related to total wealth. Moreover, the liabilities payable by the households could play an important role in guiding the choice of asset allocation, thus affecting the definition of the optimal amount of liquidity to be held. Therefore, we perform again the above analysis, this time, by net wealth.

The analysis of variance, performed on the amounts of liquidity in relation to a dual classification (presence of non auto insurance and class of net wealth owned by the family) with multiple measurements per class, generates the following result:

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	Chi-Square	Valore F	Pr > ChiSq	Pr > F
ASS	1	60.5	64.41	64.41	<.0001	<.0001
CL_W	19	6535	747.56	39.35	<.0001	<.0001

Here too, both factors are significant in determining the value of the variable examined²⁶.

We calculate the weight of deposits on total financial wealth²⁷, by analyzing the families grouped according to similar classes of net wealth. We apply the same steps mentioned earlier, this time with reference to net wealth, and we observe in Table 7, the percentile distribution of households according to whether they are insured or not:

Table 7

Percentiles	W	Number	Insured		Number	Uninsured	
			Deposits	Financial Wealth		Deposits	Financial Wealth
0.05	<100	29	46,387	51,105	390	420,806	473,359
0.1	<2000	48	44,562	49,065	409	194,732	198,613
0.15	<5104	30	72,645	72,645	412	906,556	922,225
0.2	<11594	46	233,306	239,066	374	2,024,483	2,083,264

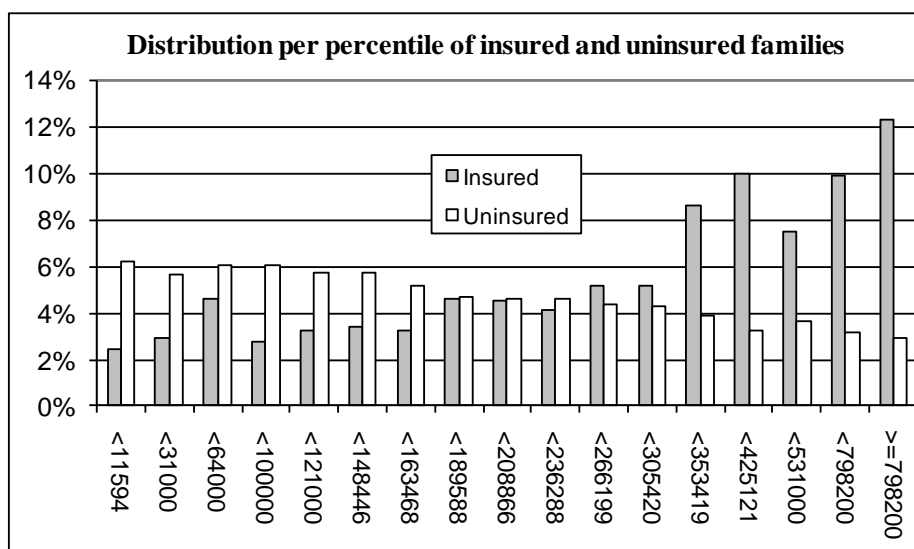
²⁶ The result of such test is to be considered with some reservations, given the distribution of the observed variable doesn't fit with the Gaussian one (burden of liquidity on financial wealth).

²⁷ Calculating the amount of liquidity with reference to total or net wealth would not make sense.

0.25	<31000	56	458,128	708,113	342	2,975,808	3,556,789
0.3	<64000	88	819,118	1,090,134	367	3,343,305	4,450,574
0.35	<10000	53	480,706	788,895	369	2,109,505	2,666,026
0.4	<12100	62	456,797	680,426	349	2,210,657	2,948,284
0.45	<14844	65	626,190	1,431,487	349	2,564,055	3,674,246
0.5	<16346	62	601,791	1,472,718	315	2,326,622	2,666,650
0.55	<18958	88	885,856	1,674,628	283	2,787,690	3,744,786
0.6	<20886	87	844,071	1,595,910	282	2,295,108	2,773,262
0.65	<23628	78	619,398	1,243,263	280	4,021,161	5,300,766
0.7	<26619	98	1,333,268	2,849,643	264	3,974,893	5,471,987
0.75	<30542	99	1,074,483	2,612,529	259	2,765,141	4,244,532
0.8	<35341	164	2,330,141	5,702,203	235	3,573,879	6,127,838
0.85	<42512	191	3,883,266	6,293,861	198	5,048,346	7,491,969
0.9	<53100	143	2,590,065	6,574,562	220	6,992,879	9,914,071
0.95	<79820	189	5,879,410	13,411,311	194	7,883,732	13,319,770
1	>=7982	235	11,645,307	35,676,638	177	13,368,311	25,736,513
Total		1,910	34,924,898	84,218,202	6,067	71,787,669	107,765,525

By analyzing the distribution of the number of households within each vigintile (Image 13), it is confirmed the highest concentration of households with insurance coverage among the classes with higher net wealth.

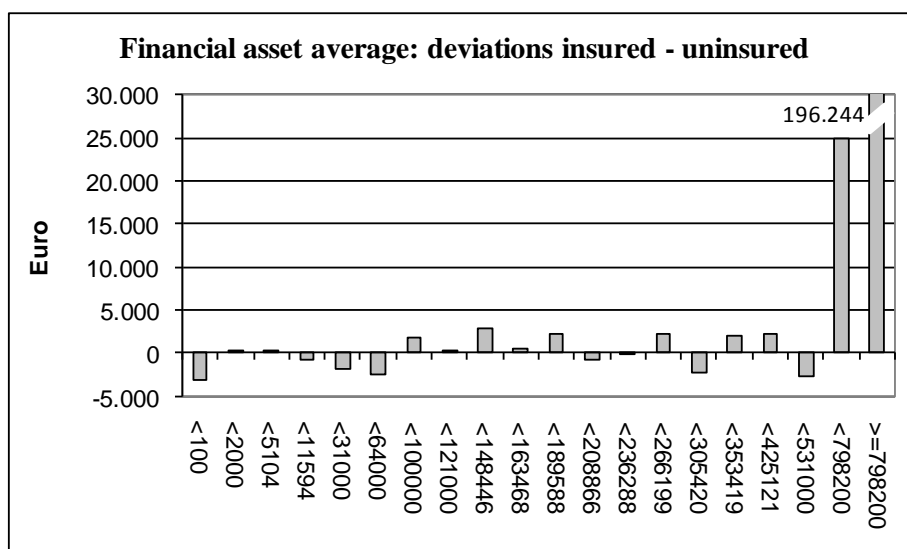
Image 13



We compare the average net wealth for insured and uninsured households within each vigintile. Image 14 shows such deviation for each class. Positive values indicate greater wealth by insured parties, negative values reflect an opposite situation. Again, with the exception of the extreme class, the differences are limited and variable in sign²⁸.

Image 14

²⁸ For the last but one class, characterized by a net wealth between 531,000 and 798,000 Euros, the net wealth difference (nearly 25,000 Euros) could appear high in absolute value. However, in the context of the vigintile values, there is a difference lower than 4% of average wealth for insured families.



Excluding the last class, we obtain the following values of the incidence of deposits on financial wealth: 48% for insured families, 71.2% for families without insurance. The difference between the two groups (23.2 percent) does not differ too much compared to what is obtained by performing calculations on all observations (respectively 41.5% and 66.6% for a difference of 25.1 points). Therefore, the data included in the extreme vigintile do not alter the overall result.

Finally, we calculate the weight of liquidity by comparing insured and uninsured families for each vigintile. Data are reported in Table 8. The last column (Diff) shows the difference of the weight of liquidity on the financial wealth between insured and uninsured families: the former shows lower values in almost all groups. We can derive a substantial confirmation of what has been demonstrated earlier: insured households show a tendency to hold lower levels of liquidity than households without insurance.

Table 8

W	% Deposits		
	Insured	Uninsured	Difference

<100	90.8%	88.9%	1.9%
<2000	90.8%	98.0%	-7.2%
<5104	100.0%	98.3%	1.7%
<11594	97.6%	97.2%	0.4%
<31000	64.7%	83.7%	-19.0%
<64000	75.1%	75.1%	0.0%
<100000	60.9%	79.1%	-18.2%
<121000	67.1%	75.0%	-7.8%
<148446	43.7%	69.8%	-26.0%
<163468	40.9%	87.2%	-46.4%
<189588	52.9%	74.4%	-21.5%
<208866	52.9%	82.8%	-29.9%
<236288	49.8%	75.9%	-26.0%
<266199	46.8%	72.6%	-25.9%
<305420	41.1%	65.1%	-24.0%
<353419	40.9%	58.3%	-17.5%
<425121	61.7%	67.4%	-5.7%
<531000	39.4%	70.5%	-31.1%
<798200	43.8%	59.2%	-15.3%
>=798200	32.6%	51.9%	-19.3%
Total	41.5%	66.6%	-25.1%

10 Conclusions

Among the main factors affecting the probability of subscribing to a non motor insurance are not the geographical area of residence (variable that is related to the level of economic and social development of the various territorial divisions), educational qualifications, professional status, amount of real wealth and, to a lesser extent, the presence of financial liabilities. The factors that have a major impact are, therefore, economic and financial ones, and aspects related to the cultural and social position of family members.

From the analyzed data, it emerges a close link between the propensity to get insured and the tendency to hold a lower amount of liquid assets on total financial wealth. Evidence shows that this relationship is expressed consistently given an equal amount of wealth, both financial and real, held by the households. This

work supports the hypothesis of a longer-term direction in the management of one's assets by those households that have seized the benefits of insurance coverage. Further analyses, carried out in the appendix of this study, show another interesting phenomenon: the percentage (on financial wealth) of held liquid assets decreases as the number of insurance policies taken by the family increases. The high value taken by the linear correlation coefficient (more than 99% in the calculation with the corrected figures) summarizes the close relationship between the two attitudes.

Although further studies would be needed (for example, on the influence of family income or a more in-depth analysis of the composition of financial assets), the verification of the connection between insurance penetration and the lengthening of the time-span with which one's financial wealth is managed, opens, from an operative point of view, new useful scenarios for banks and insurance companies. There is the prospect of an area of common action, where the benefits appear to be reciprocal. A wider distribution of non motor insurance policies (characterized by a high technical profitability for insurers) would favor a broadening of the range of financial instruments that can be offered successfully, primarily by lenders, to insured savers. For this purpose, branch office activities could be enhanced with adequate means of customer relationship management. On this basis, the adoption by a bank of a strategy for the sale of non motor insurance through its branches would enable to seize, in addition to profit from the sale of the insurance policies, also the goal of higher efficiency in offering financial instruments to its customers. This analysis shows how such option could have a great impact on the families with high financial wealth.

From a more general point of view, a higher spread of non motor insurance policies, thanks to the protection against unpredictable events from current family "bank-insurance" to professional companies appropriately equipped to manage such risks, would let Italian families to count on solid guarantees against negative events, thus raising the level of safety among the population.

Finally, in the light of the dimension of financial wealth of Italian families, estimated of over 3,565 billion Euros²⁹, a deviation of just 10% of such resources from liquidity to instruments with a higher time horizon, would result in a more efficient use of nearly 350 billion Euros. This would be advantageous for Italian households, thanks to the higher return obtainable by longer-term investments, particularly those managed by professionals (asset management).

²⁹ Banca d'Italia, La ricchezza delle famiglie italiane 2009, supplemento al Bollettino Statistico, 20 December 2010.

Therefore there are positive reasons of general interest in favour of the spread of insurance policies against the risks encountered by Italian families, both when performing occupational activities and when leading daily life.

Appendix 1: relationship between liquidity and number of insurance policies

Established the relationship between the presence of non motor insurance policies and weight of liquidity on financial wealth, we want to verify if the latter decreases as the number of insurance policies decreases.

In order to verify such hypothesis, insured families have been classified according to the number of non motor insurance policies subscribed to (Image15)³⁰. Families holding more than 6 policies have been grouped into one class.

Image 1

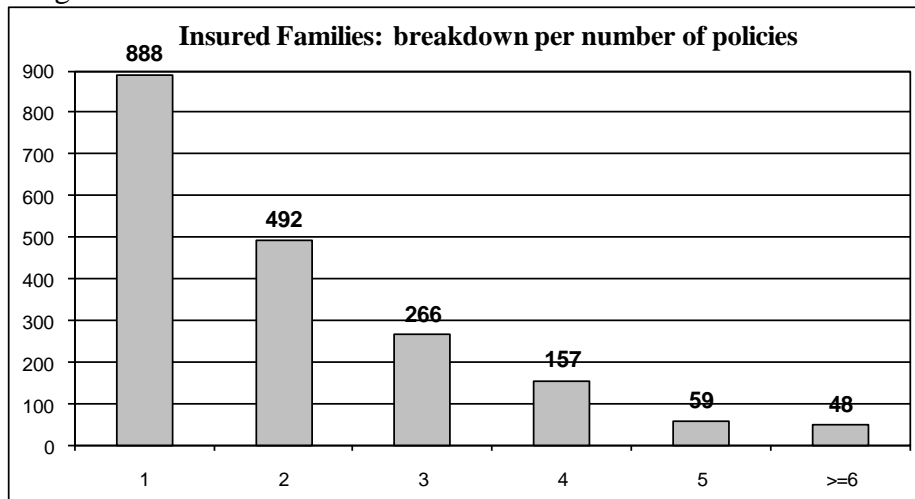


Table 9 also shows total deposits and total wealth per class. The last column shows the weight of liquidity on financial wealth calculated for each group.

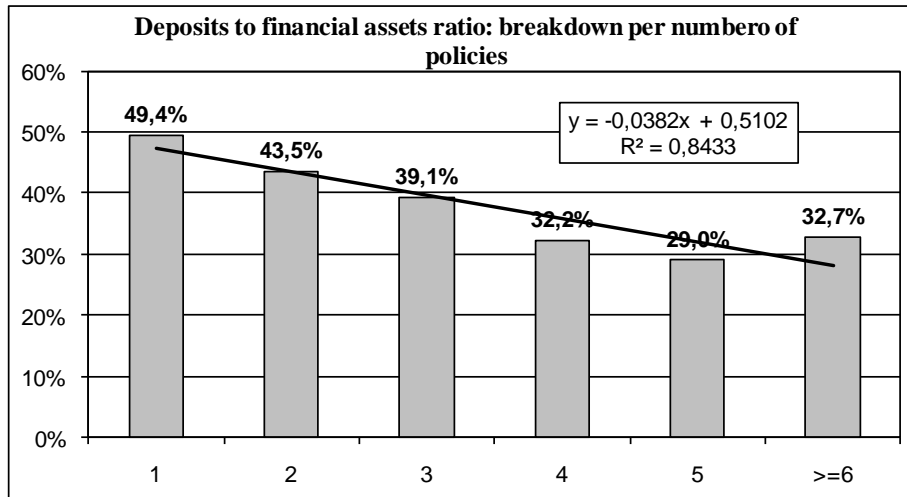
³⁰ In this occasion too we have excluded from the analysis those families that, even if they subscribed to at least one non motor insurance policy, have a financial wealth equal to zero.

Table 2

Number of contracts	Number of families	Deposits	Financial Wealth	% Deposits
1	888	13,431,234	27,212,871	49.4%
2	492	8,926,367	20,522,450	43.5%
3	266	5,530,159	14,126,460	39.1%
4	157	3,567,587	11,095,840	32.2%
5	59	1,656,632	5,716,665	29.0%
>=6	48	1,812,919	5,543,916	32.7%
Total	1,910	34,924,898	84,218,202	41.5%

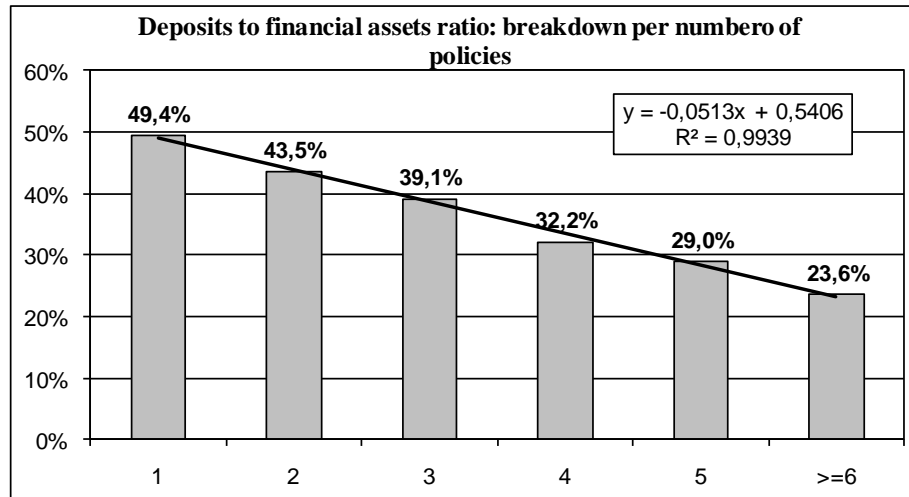
These data are shown in Image 16.

Image 16



The general tendency shows a decreasing of the weight of liquidity on financial wealth as the number of non motor insurance policies increases. An exception is the class of the households that hold six or more policies, for which there is an incidence of deposits on financial wealth higher than for the two previous categories. Actually, to such results contributes in a determining way a single family, which shows an anomalous attitude compared to the class to which it belongs. Excluding such observation from the calculation, we obtain the graph in Image 17:

Image 17



The relationship thus established appears particularly close (the linear correlation coefficient is close to 100%). The analysis shows that from the initial value of 54% circa, it is obtained a decreasing of 5,13% in the weight of deposit on financial wealth for each subscribed policy.

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