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THE FINANCIAL DECISIONS OF IMMIGRANT AND NATIVE HOUSEHOLDS: EVIDENCE FROM ITALY

Graziella Bertocchi, Marianna Brunetti and Anzelika Zaiceva

MACROECONOMICS AND GROWTH



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JEL Classification: F22, G11, D14, E21, J15

Keywords: immigrants, household finance, wealth, financial portfolios

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1 Introduction

In today's world the issue of increasing immigration has reached center stage on policy makers' agenda and is also widely analyzed in academia. There is a large literature on earnings and employment gaps, as well as on assimilation between natives and immigrants, and more recent studies on ethnic differences in well-being. The literature on the nativity differences in wealth, and financial behavior more generally, is still thinner despite wealth holdings and portfolio allocation are important components of households' economic well-being. Since wealth tends to be distributed more unequally than income, any disadvantage in the asset position of immigrants is likely to exert a persistent influence across generations, with implications for the chances of immigrants to assimilate. Wealth accumulation is determined not only by saving behavior but also by the allocation of financial portfolios. A nativity gap in the latter can therefore exacerbate the above processes. The ability to own a house is another crucial vehicle towards integration, which in turn depends on the availability of credit. Relative to natives, immigrants may have a harder time to achieve access to credit through traditional channels, even though informal networks may alleviate this disadvantage. Cultural differences may play a role as important as that of economic differences in determining a gap in financial behavior of immigrants and natives. Accumulated wealth, together with the financial diversification to minimize risks, becomes even more important in times of recessions, when immigrants often find themselves in a more vulnerable position vis-à-vis natives, since they are more likely to lose their jobs.

In this paper, we investigate native-immigrant differences in financial behavior, in particular in wealth holdings and the allocation of assets, employing data for Italy over the period 2006-2014. To this aim, we use the Bank of Italy Survey of Household Income and Wealth (SHIW) dataset. Our rich dataset allows us to present a comprehensive picture of financial portfolios by incorporating a wide range of components, for instance informal debts, which are highly important when analyzing immigrants' wealth, but due to data limitations were omitted from previous studies. Moreover, our data include a large set of information specifically on immigrants, including their immigration histories, their countries of origin, and their patterns of intermarriage, which allows us to explore potential heterogeneities along these dimensions. Furthermore, our data allow us to control for risk aversion, which is usually unobserved and yet crucial for this type of analysis. Finally, due to the length of the time period covered by our data, we can study

¹The economic well-being and the social integration of the immigrant population is equally important from a society's perspective, especially in the face of the population aging phenomenon and related fiscal burdens (for a discussion on the interaction between aging and migration and a review of related studies see, e.g., Zaiceva and Zimmermann, 2016).

the effect on nativity gaps of a large financial shock, such as the Great Recession, to identify differences in the financial response with respect to wealth and asset holdings. While parts of this information have been employed by others, it has rarely been available in its entirety.

Italy represents a particularly suitable country to study these questions. First, it has recently turned from an emigration country into an immigration country and has faced significant immigrant inflows following EU Eastern enlargements and the unrests in Africa. With its share of foreign-born amounting to 9.9% in 2015 (OECD, 2017), it is now comparable to traditional immigration countries such as Denmark or the Netherlands, and is approaching the levels of Germany, the UK and the US. Second, it is one of the most aged countries in the world. With an old age dependency ratio of 30.4 in 2010 it ranks third among the OECD countries, after Japan and Germany, and is predicted to age even more rapidly in the future. Third, Italy has experienced a severe recession post 2008, with GDP growth falling by 6% in 2009 only, and with an unemployment rate jumping from 6.7% in 2008 to 12.9% in 2014. Fourth, due to the rigidities in the country's financial markets, the reliance on informal credit channels involving relative, friends or the reference community may be even more relevant.

Our main results can be summarized as follows. With reference to wealth holdings, a quantile regression approach allows us to uncover evidence of a sizeable gap between natives and immigrants along the entire wealth distribution. The median net wealth of a foreign-born household head is €21,810 lower than that of a native. We capture asset allocation decisions using five main variables: the decision to invest in risky assets and the corresponding portfolio share, home ownership, holding a mortgage, and holding informal debts. We find a negative correlation between the immigrant status of the household head and each of these outcomes, with the only exception of informal debts. Moreover, immigrant status decreases the likelihood of investing in foreign assets, together with the corresponding portfolio share, and of owning businesses and valuables, while it increases the likelihood of being in a condition of financial fragility.

The above described results are obtained after controlling for year and macro-region fixed effects as well as a rich set of observable characteristics (demographic and labor market variables as well as household composition, income, and risk aversion), which should help to diminish the potential bias due to unobservables. To further address this issue, we also apply a propensity score matching strategy, in order to restrict the comparison to immigrant and native households sharing a broad set of characteristics. Reassuringly, the two estimation strategies present a broadly similar picture.

We proceed with the analysis by dissecting the results along several dimensions, for both wealth holdings and portfolio decisions. We find evidence that years spent in Italy, countries of origin, and patterns of intermarriage do matter. An alternative definition of an immigrant as a non-citizen, rather than a foreign-born, does not affect our conclusions. Finally, we show that following the Great Recession of 2008 the financial status of immigrants has worsened in several dimensions.

The paper is organized as follows. Section 2 contains a literature review. Section 3 documents immigration trends in Italy. Section 4 describes the data. Section 5 presents our main results on the immigrant-native gap in wealth holdings and asset allocation. Section 6 presents propensity score matching results. Section 7 extends the baseline analysis to account for cohorts of arrival, countries of origin, the influence of spouses, citizenship status, and the effects of the financial crisis. Section 8 concludes.

2 Literature review

Immigrants and immigrant households are likely to differ from natives with respect to their financial choices, including wealth and asset allocation, due to several reasons. Apart for differences in employment status and earnings, migrants' self-selection, selective immigration policies, different cultural norms and risk preferences, as well as access to benefits and to credit and financial markets, are all important channels. Indeed, existing studies document gaps in wealth, asset portfolios and their components between immigrants and natives in the US (Carroll, Rhee and Rhee, 1999; Borjas, 2002; Osili and Paulson, 2004; Cobb-Clark and Hildebrand, 2006a,b; Bauer et al., 2011; Seto and Bogan, 2013; Chatterjee and Zahirovic-Herbert, 2014), Canada (Carroll, Rhee and Rhee, 1994; Shamsuddin and DeVoretz, 1998; Zhang, 2003), Germany (Sinning, 2007; Bauer et al., 2011; Mathä, Porpiglia and Sierminska, 2011), Australia (Cobb-Clark and Hildebrand, 2009; Doiron and Guttmann, 2009; Bauer et al., 2011; Islam, Parasnis and Fausten, 2013), Luxembourg (Mathä, Porpiglia and Sierminska, 2011), and Sweden (Haliassos, Jansson and Karabulut, 2016).

Most studies find a negative wealth nativity gap, that is, immigrants tend to hold less wealth than natives. However, there is considerable heterogeneity between different immigrant groups and across arrival cohorts. For example, focusing on married households in the US, while ceteris paribus immigrants are generally found to have lower net worth relative to natives, wealth is found to be on average higher for immigrants from Europe and Asia (Cobb-Clark and Hildebrand, 2006a),² and significantly lower for those in the

²Bauer et al. (2011) find an insignificant overall effect for couple-headed immigrant households in the US. However, the data were drawn from the 2001 SIPP cross section only (while in the above study the authors employ the 1987, 1990, 1991, 1992, 1993 and 1996 SIPP waves), the effect was estimated for the median, and the estimation method was different.

latest arrival cohorts (i.e., post-1985, as found by Cobb-Clark and Hildebrand, 2006a and Bauer et al., 2011). Moreover, there is a large variation by ethnicity. For example, relative to US white couples, Hispanic couples have significantly less wealth overall, but within Hispanic couples Mexican American have significantly more wealth, while Puerto Rican and foreign-born other Hispanic couples have less wealth (Cobb-Clark and Hildebrand, 2006b). Using the 2010 Survey of Consumer Finances, Shin and Hanna (2015) document that black and Hispanic households are less likely to hold high return investments while Asian/Other households are not different from white households. Moreover, a decomposition analysis suggests that some of this gap is attributable to differences in characteristics and risk tolerance. Regarding speed of assimilation, Shamsuddin and De-Voretz (1998) report that immigrants who had been in Canada less than eight years hold a wealth level that was half that of the natives, but that this gap tend to disappear about 15 years after arrival. Using a matching approach, Ferrari (2020) confirms the presence of a nativity gap for wealth for older immigrants in Europe.

Regarding differences in asset portfolio allocation, relative to natives, immigrant households in the US allocate their wealth less to housing and real estate, business and vehicles equity but more to financial wealth (Cobb-Clark and Hildebrand, 2006a), while in contrast immigrant households in Australia allocate more of their wealth to real estate and less to vehicles and financial assets (Cobb-Clark and Hildebrand, 2009). However, there is a great diversity in portfolio choices among immigrants from different origin and across migration cohorts, with more recent immigrants holding less real estate equity and more financial wealth both in Australia and the US (Cobb-Clark and Hildebrand, 2006a, 2009). Immigrant households in the US are also less likely than natives to own financial assets such as stocks, mutual funds, bonds, or other fixed income securities. However, again, considerable heterogeneity is found across countries of origin and arrival cohorts, with immigrants from, e.g., Eastern Europe and Hong Kong having rates of asset holding that are even higher than natives (Seto and Bogan, 2013).

Previous literature also suggests that much of the wealth and financial market participation gaps is due to education, demographic composition, geographic location and sometimes income of households in the US, but not in Australia, and mainly due to education in Germany (Bauer et al., 2011; Cobb-Clark and Hildebrand, 2006a; Osili and Paulson, 2004; Sinning, 2007). Interestingly, the wealth gap between natives and immigrants is found to be larger than the home equity gap, suggesting that immigrants may prefer real assets to financial assets (Osili and Paulson, 2008; Cobb-Clark and Hildebrand, 2009).

Cultural norms may also matter. Carroll, Rhee and Rhee (1994, 1999) investigate the role of culture of the origin country on immigrants' saving behavior and find that while in Canada savings are not significantly different across origin, in the US there are statistically significant differences in immigrants' saving behavior by country of origin. However, the authors cannot reconcile the direction of this effect with the one in the countries of origin as, for example, immigrants from countries with high saving rates (such as Asian) do not save more than other immigrants. Immigrants in the US from countries with more effective institutions are also found to participate more in formal financial markets, suggesting that a country's institutional environment shapes beliefs (Osili and Paulson, 2008). For Sweden, Haliassos, Jansson and Karabulut (2016) uncover differences across cultural groups within the immigrant population in how holdings of stock, debt and housing relate to household characteristics, and show that differences diminish with exposure to host country institutions. Huber and Schmidt (2016) isolate the effect of cultural preferences regarding home ownership for immigrants in the US. Finally, social interactions and social capital are important, as immigrant participation in financial markets (i.e., the likelihood of having savings and interest-bearing checking accounts) decreases with higher levels of ethnic concentration (Osili and Paulson, 2004).

A study examining the differential impact of the Great Recession on wealth of immigrant and native households is particularly relevant for our study: Amuedo-Dorantes and Pozo (2015) investigate the impact of the 2008-2009 crisis on wealth, asset ownership and retirement plans of older households (aged 50 and above) in the US employing the 2006 and 2010 waves of the Health and Retirement Study. They find that immigrant households in the middle and top wealth quartiles prior to the crisis experienced larger wealth losses mainly due to losses in housing ownership and housing values. In addition, both native and immigrant households delayed their planned retirement. The authors, however, analyze only households aged 50 and older and do not account for migration histories.⁴

To the best of our knowledge, this is the first study that analyzes extensively the na-

³A related stream of the literature also has focused on savings, with mixed results. For instance, Bauer and Sinning (2011) find a significant savings gap between immigrants and natives in Germany which, however, disappears once the remittances of temporary migrants are accounted for. Furthermore, potential return migration has a significant positive impact on migrants' savings/remittances (Sinning, 2011). For Australia, Islam, Parasnis and Fausten (2013) find that after controlling for income immigrants save more than natives. Contrary to Carroll, Rhee and Rhee (1994, 1999), who for the US find no evidence that saving behavior can be driven by cultural factors, Füchs-Schundeln, Masella and Paule-Paludkiewicz (2019) show that second-generation immigrants from countries that put strong emphasis on wealth accumulation do save more, both in Germany and in the UK.

⁴Gassoumis (2012) examines the impact of the crisis by age, race and ethnicity in the US and finds that older Hispanic households experienced the largest wealth losses, attributable to the reduction in housing value. Wolff (2013) documents increased racial and ethnic gap in wealth in the US due to the recession. Related to this, Osili and Paulson (2014) show that financial crises have a significant detrimental effect on investors' confidence by studying immigrants in the US. They find that immigrants who have experienced a banking crisis in their country of origin are significantly less likely to have bank accounts in the US, and the effect is robust to controlling for home country characteristics.

tivity gap in financial decisions for immigrants, controlling for a large set of observables including risk aversion as well as dealing with unobserved heterogeneity using a propensity score estimator. We also shed some light on the time dimension of the phenomenon, the role of different source countries, and the impact of the financial crisis. Moreover, it focuses on Italy, a country that has experienced a recent bounce in immigration rate reaching figures comparable to those of traditional immigration countries such as Denmark or the Netherlands. The only other contributions dealing with Italian data, both based on the 2008 wave of the Survey of Household Income and Wealth, are Mathä, Porpiglia and Sierminska (2011), who compare the nativity wealth gap in Germany, Luxembourg and Italy and find a sizeable nativity wealth gap in all three countries, and Abdul-Razzak, Osili and Paulson (2015), who compare Italy with the US, to find higher financial participation in Italy. Both contributions, however, are not able – as we do – to extend the analysis to other years, to distinguish among the components of wealth, and to account for risk aversion, source countries, and intermarriages.

3 Immigration in Italy

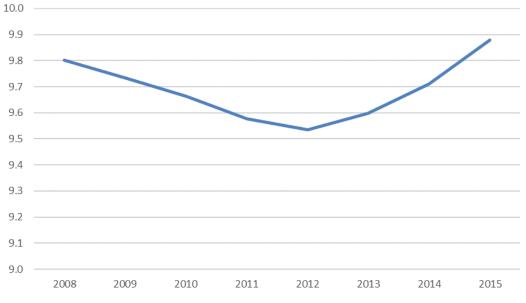
A rapid increase in immigration flows in recent years represents a common tendency in European countries. Within this broader picture, Italy has experienced particularly fast dynamics, with an almost threefold increase in the stock of foreign-born legal residents during the past fifteen years or so. According to the OECD (2017), in 2015 the foreign-born population in Italy was around 5.9 million, corresponding to 9.9% of the population (see Figure 1).⁵ While between 2008 and 2015 the share has remained relatively stable, in 2001 (not depicted in the figure due to gaps in data availability) the corresponding share was less than 4%.

In Figure 2 we show inflows of non-nationals, from 2000 until 2015. In 2015 the inflows consisted of about 250,000 units, with a huge decline with respect to the double figure of 2007, the peak year.⁶ Before 2007, immigration had been substantially increasing since the 1980s, initially in the form of managed labor migration (often recognized de jure only after it had de facto occurred), and subsequently as family migration. The financial crisis exerted a large impact on migration flows to Italy, with a substantial reduction both of labor and family migration starting after 2008. Migration flows in 2015 remained stable compared to 2014 only because of the explosion of humanitarian migration in the second half of 2015.

 $^{^5 \}rm See$ OECD (2017), available at http://www.oecd.org/migration/international-migration-outlook-1999124x.htm.

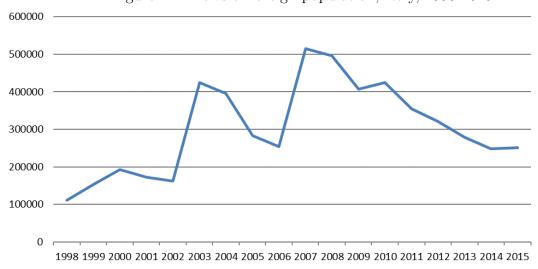
 $^{^6\}mathrm{See}$ the OECD International Migration Database, available at https://stats.oecd.org/Index.aspx?DataSetCode=MIG.

Figure 1: Share of foreign-born over total population, Italy, 2008-2015



Source: OECD.

Figure 2: Inflows of foreign population, Italy, 1998-2015



Source: OECD.

In 2015, about one third of the foreign-born came from the European Union (EU), with Romania and Albania being the most represented countries, followed by extra EU countries such as Morocco, Ukraine, and China. The composition of the source countries has also been evolving, with sub-Saharan countries representing an increasing fraction. The largest shares of immigrants settled in Lombardy (a region in the North-West of the country), Latium (in the Center, where the capital is located), and Emilia Romagna (in the North-East). The unemployment rate is higher for foreign-born and, relative to natives, they tend to be more frequently employed in jobs for which they were overqualified.

4 Data

Our dataset draws from the Bank of Italy Survey of Household Income and Wealth, which has been surveying household financial decisions since 1982.⁷ However, information about the immigrant status of the respondents, as well as years since migration and countries of origin, is only available since 2006.⁸ We can therefore comprise five waves, up until 2014 (that is, 2006, 2008, 2010, 2012, and 2014), each including about 8,000 households.⁹

The SHIW basic sample unit is the household, defined as "a group of cohabiting people who, regardless for their relationships, satisfy their needs by pooling all or part of their incomes". The head of the household is identified as the person who is responsible for the financial and economic choices of the household, as declared by the survey respondents. ¹⁰ For each household, the SHIW provides plenty of demographic information, of which we use the number of household members and, for the household head, age, gender, marital status, education, and employment status. In our sample period, information about risk aversion is also available, as the response to a subjective question in which the respondent is asked to indicate the characteristics of his/her preferred financial investments. ¹¹ On the basis of this information, we construct the dummy variable Risk Aversion, that takes

⁷See https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese.

⁸Information on immigrant status alone is available since 1998.

⁹The SHIW is organized as a rotating panel, since within each wave half of the sample is refreshed with new, i.e., non-panel, households. This implies that the number of immigrant households we could follow all along the sample period 2006-2014 is very limited (only 30).

¹⁰In contrast with household surveys for other countries, where the household head is defined on the basis of different attributes (e.g., highest income, or male gender), a useful feature of the Italian survey is that, by introducing the "declared" definition, it also provides specific information relative to the person making financial decisions, independently of her/him being, for instance, the main income earner.

¹¹In addition to financial risks, migrants are of course bearing other forms of risks. Bonin et al. (2009) show that in Germany first-generation migrants have lower risk attitudes than natives, while Jaeger et al. (2010) find that individuals who are more willing to take risks are more likely to migrate between labor markets.

value 1 if the respondent answers with the most risk-averse choice (i.e., he/she is willing to take no risk and receive low returns), 0 otherwise.¹²

Beside demographic information, the SHIW also provides economic and financial information about the households, including income, net wealth, as well as the amounts invested in a variety of assets.¹³ The survey collects information on financial portfolios at the household level, not at the individual one, and attributes financial decisions to the "declared" head of the household, as defined above.

In the following analysis, first we investigate the determinants of net wealth, defined as the sum of the household's real and financial assets, net of liabilities. Wext, we focus on the following five main financial decisions: (i) Holding Risky Assets, defined as a dummy which takes value 1 if the household holds risky assets (whereby risky assets are defined as in Bertocchi, Brunetti and Torricelli, 2011); (ii) Share of Risky Assets, defined by a continuous variable ranging between 0 and 1 and representing the share of financial assets held in risky ones; (iii) Home Ownership, defined by a dummy which takes value 1 if the household owns its primary residence; (iv) Holding Mortgage, defined by a dummy which takes value 1 if the household has mortgages; and (v) Holding Informal Debts, defined by a dummy which takes value 1 if the household has debts with relatives or friends. We also investigate the determinants of the potential financially fragile status for the household and, using the definition proposed by Brunetti, Giarda and Torricelli (2016), we define a Financial Fragility dummy which takes value 1 if the household is able to afford expected expenses but does not have a sufficient liquidity buffer to face unexpected ones, and 0 otherwise.

In order to investigate the nativity gap along the above dimensions, our variable of interest is a dummy capturing the (legal) immigrant status of the household head: namely, a household head is defined as an immigrant when he/she is foreign-born.¹⁶ In addition to immigrant status, we can also exploit information about years since migration by organizing them into a set of dummies capturing cohorts of arrival (before 1980, in

¹²We also define an alternative measure based on a set of four binary variables, each capturing whether the preferred risk profile of financial investments is respectively associated with the following: high risk, high returns; reasonable risk, good returns; low risk, reasonable returns; or no risk, low returns.

¹³In all the analysis, monetary amounts are expressed in Euro at 2010 constant prices.

¹⁴We also separately consider the two most relevant wealth components, namely, Housing and Other Real Estate and Valuables. Taken together, they represent about 78% of net wealth (namely, 99% for immigrants against 76% for natives).

¹⁵Other decisions that we shall consider are Holding Foreign Assets, defined as a dummy which takes value 1 if the household holds foreign assets; Share of Foreign Assets, defined by a continuous variable ranging between 0 and 1 and representing the share of financial assets held in foreign ones; Owning a Business, defined as a dummy which takes value 1 if the household holds a business; and Owning Valuables, defined analogously.

¹⁶Naturalized household heads born abroad are therefore classified as immigrants, while second-generation immigrants are not classified as immigrants since they were born in Italy.

the 80s, in the 90s, and after 2000). Moreover, for each immigrant household head, the survey asks his/her country of origin. However, for privacy reasons, data on country of origin are not available for external users and were thus provided for this research, and limitedly to the 2006 and 2012 sample period, only at the aggregated level for the following, not overlapping, seven groups of countries: EU15 & North America, New EU, Other Europe, North Africa, Sub-Saharan Africa, Central & South America, Asia & Oceania, as described in Table A1 in the Appendix.

To further investigate how the household head's decisions are affected by the status of his/her partner, we focus on the sub-sample of households including a couple (either married, or in an informal relationship). Over this sub-sample, we investigate issues related to intermarriage, in particular whether the nativity gap in financial decisions differs in couples where both partners are immigrant if compared to those where a native is married to an immigrant. To this end, we define four dummy variables: Both Natives, which takes value 1 if both the head and the spouse are natives; Mixed with Immigrant Head, which takes value 1 if the only immigrant within the couple is the household head; Mixed with Immigrant Spouse, which takes value 1 if the only immigrant within the couple is the spouse; and Both Immigrants, which takes value 1 if both the household head and the spouse are immigrants.

Table A1 in the Appendix provides a more detailed description of all the data and variables we use. Table A2 presents summary statistics, separately for households with an immigrant and a native head, as well as t statistics for differences in mean. The sample contains 38,665 observations, of which 1,837 (5%) have an immigrant, i.e., foreign-born, household head. For most outcomes of interest, immigrant households display substantially different mean values if compared to the natives. Mean net wealth is only $\leq 45,704$ against $\leq 256,449$, with significant gaps for each component. Moreover, on average, fewer immigrants own risky assets (1.4% against 11.6%) and they choose them in lower shares (0.9% against 6.1%). A smaller share of the immigrants owns a house (19.4% against 72.7%), with a smaller but still significant gap for mortgages (10.9% against 11.3%). More are indebted with friends and relatives (7.4% against 2.7%) and fewer hold businesses (6.3% against 13.8%) and valuables (60.5% against 88.3%). The proportion of financially fragile households is larger for immigrants (10% against 8.8%), albeit not significantly so statistically.

Turning to the covariates, in terms of demographic characteristics, immigrant households are more likely than native ones to be headed by a male, albeit the difference is not statistically significant, while immigrant heads are much younger than native (41-year-old against 57). The proportion of household heads who are married (or in a stable union)

 $^{^{17}}$ The share of households with a foreign-born head increases from 2.4% in 2006 to 6.5% in 2014.

is similar among immigrants and natives. The number of household members is slightly higher for immigrants. While the share of household heads holding a high level of education is similar among immigrants and natives, their education profile differs significantly at the lower bound, since 7.7% of the immigrants hold a low level of education against 27.5% of the natives, while 81.1% of the immigrants hold a medium level against 61% of the natives. Labor market characteristics reveal that 77% of immigrant household heads are employees against 36.1% of the natives, while 7.7% against 3.3% are unemployed, and 3.1% against 42.17% are retired, in line with the remarkably different age profile of natives and immigrants. Mean annual income is lower for immigrants (\in 13,497 against \in 22,703). Immigrant heads are financially more risk averse than natives. On average, immigrant heads have been in Italy for almost 14 years. The North East attracts the largest share (37.7%), followed by the North West and the Center. 54% of the immigrant households come from Europe and North America, with Other Europe being the most represented area.

5 The immigrant-native gap: Main results

In this section, we investigate how the immigrant status of the household head affects wealth accumulation and portfolio decisions.

5.1 Net wealth

In order to assess how net wealth holdings are affected by immigrant status, we estimate over pooled data the following quantile regression model of household net wealth, W_h . This approach accounts for both the observed skewness in wealth distribution and the presence of zero or negative wealth levels.¹⁹ It also offers the advantage of analyzing the nativity gap along the entire distribution of wealth rather than only for its mean. The model can be written as follows:

$$W_{ht}^q = \kappa^q + \beta^q I_h + X_{ht} \delta^q + \tau + \rho + e_{ht}^q \tag{1}$$

where h denotes the household, t denotes the year, and q denotes a specific quantile of the wealth distribution. I_h is a dummy variable capturing the immigrant status of the

 $^{^{18}}$ Income is net of tax, therefore it can take negative values when the household represents an individual firm. Negative values are reported in 73 cases in 2006-2014.

¹⁹To account for skewness, a variable is often entered in terms of logarithmic terms, but a logarithmic transformation is not appropriate for variables with zero or negative values, as is the case for net wealth.

head of household h, X_{ht} is a vector of households and household heads' characteristics, including family size, income quartile dummies and, with reference to the household head, gender, age in linear and quadratic terms, education, labor force status, risk aversion, and years since migration. τ and ρ are year and macro-region fixed effects, respectively, and e_{ht}^q is the error term. Including such a rich set of controls as well as a specific proxy for risk aversion helps in containing the bias induced by potential unobserved heterogeneity between natives and immigrants due to, e.g., ability or motivation.

Table 1: Net Wealth, 2006-2014

	10th Q	25th Q	50th Q	75th Q	90th Q	OLS	
Immigrant	-3.1821***	-3.4959	-21.8101***	-36.8271***	-34.4063***	-26.2378	
	(1.023)	(2.794)	(3.643)	(4.924)	(10.735)	(16.387)	
Years Since Migration	-0.1374***	-0.5673***	-0.317	0.0443	-0.5503***	-0.0986	
	(0.047)	(0.151)	(0.194)	(0.239)	(0.21)	(1.294)	
N	39,100						

The table reports coefficients from quantile regressions and, in the last column, from an OLS regression. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

In Table 1 we present estimates of model (1) for the 10th, 25th, 50th, 75th, and 90th quantiles. Our variable of interest is Immigrant, a dummy variable that captures the immigrant status of the household head and shows negative coefficients at all quantiles (despite statistically insignificant at the 25th quantile), signalling a weaker position of immigrant households along the entire wealth distribution.²⁰ In particular, the median net wealth of immigrant household heads is estimated to be €21,810 lower than the median net wealth of natives. Thus, immigrant household heads are accumulating less than natives. Years since migration, which can help in spotting the speed of a potential assimilation process, exhibit negative and significant coefficients only at the extremes of the distribution, namely, below the 25th and above the 90th quantile. This suggests that, among migrants belonging to these quantiles, those who have migrated earlier are actually in a worse position. For the sake of comparison, the last column of Table 1 also reports the coefficient of a standard linear OLS regression for wealth, where the Immigrant dummy shows a negative, although not significant, coefficient, confirming that our approach based

²⁰Since our focus is on how wealth is affected by immigrant status, Table 1 only reports the corresponding coefficient, as well as the coefficient on years since migration. However, in Table A3 we reproduce the same regressions in Table 1 showing all covariates. It is instructive to report that, for instance, wealth is lower for males and higher for married household heads, varies non-linearly with age, increases with education and income, and decreases with risk aversion. An alternative specification including the more granular measure of risk aversion, omitting the category corresponding to the lowest level of risk aversion, yields similar results which we do not report for brevity. Since only less than 1% of the household heads in the sample belong to such category, we prefer to keep the single-dummy measure for the remaining of the analysis.

on quantile regressions is indeed more informative.

Our results are consistent with those previously found by Mathä, Porpiglia and Sierminska (2011) on the basis of the 2008 wave of the SHIW. In particular, they show for Italy a significant wealth gap, albeit only at and above the median. Our results are also broadly consistent with those found for other countries. For instance, for Germany, Sinning (2007) shows for the year 2002 that immigrants hold significantly less net worth than natives. Similarly, Cobb-Clark and Hildebrand (2006a) show that foreign-born households are less wealthy than US-born households and that the gap becomes larger as one moves up the wealth distribution. Regarding immigration histories, however, they find that the year of immigration is unrelated to wealth positions.²¹

Table 2: Net Wealth, Interactions, 2006-2014

100	JIC Z. INCO VV	caron, interac	2000-	2014	
	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant*Male	-7.2691***	-13.9870***	-9.2522**	-8.1778	-7.2496
	(2.198)	(2.188)	(4.701)	(5.486)	(16.129)
Immigrant*Couple	-11.6901***	-36.6342***	-56.4635***	-72.5626***	-94.2368***
	(1.349)	(2.318)	(4.133)	(4.907)	(9.678)
Immigrant*Medium Edu.	-7.0265**	-15.7706***	-8.1314	-23.5555	-56.5665***
	(3.026)	(5.510)	(6.111)	(20.186)	(19.630)
Immigrant*High Edu.	-15.4933**	-47.4483***	-62.7544***	-86.8321***	-194.5414***
	(6.628)	(7.708)	(9.366)	(30.962)	(36.753)
Immigrant*Employee	1.1374	2.9732	42.3022***	57.1814***	107.0717***
	(1.472)	(2.938)	(5.070)	(11.716)	(15.955)
Immigrant*Self-employed	-22.1185***	-46.2109***	-26.2464***	-76.5587***	-194.0142***
	(4.072)	(8.297)	(10.086)	(18.779)	(43.450)
Immigrant*Retired	-2.2046	0.9842	40.0892***	74.6752**	150.5877
_	(5.294)	(15.356)	(7.752)	(31.406)	(167.610)
Immigrant*Risk Averse	3.3888**	7.6679***	23.1825***	16.8014*	34.9789***
	(1.374)	(2.830)	(3.370)	(9.854)	(11.391)
N	·	· · · · · · · · · · · · · · · · · · ·	39,100		

The table reports quantile regressions coefficients of the interactions between the immigrant dummy and each covariate of interest. In each set of quantile regressions, the immigrant dummy is interacted with a single covariate of interest. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include, besides the immigrant dummy: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; *** significant at 5%; *** significant at 1%.

In order to understand the drivers of the gaps between immigrants and natives that we uncovered, we interact the immigrant dummy with some of the individual characteristics

 $^{^{21}}$ In Table A4 we also present estimates for the two most important components of wealth. For Housing and Other Real Estate, immigrants are holding less than natives, but significantly so only above the median. At the median, the gap is now even larger at €32,899. These results are consistent with those found by Cobb-Clark and Hildebrand (2006a) for the US and Sinning (2007) for Germany. For Valuables, instead, a gap for immigrants is present along the entire distribution, even though its size is relatively modest (only €649 at the median).

we entered among the controls and, for each separate set of quantile regressions, in Table 2 we report the results for gender, marital status, education, employment status, and risk aversion. We detect a negative impact of being an immigrant male for the lower quantiles including the median, while being married and holding a relatively high level of education exhibit a significantly negative interaction coefficient at all quantiles. The latter result can be explained by the fact that highly-skilled migrants are more likely to be poorer than natives with similar skills. Heterogeneous effects also emerge by employment status with employees, relative to unemployed, performing better at and above the median, while self-employment emerges as a driver of lower wealth for immigrants along the entire wealth distribution. Lastly, relatively more risk averse immigrants are better off along the entire wealth distribution, despite the low magnitude of the effect.

5.2 Asset holdings

In this sub-section we explore how the immigrant status of the household head affects his/her financial decisions along five main dimensions, namely: Holding Risky Assets, Share of Risky Assets, Home Ownership, Holding Mortgage, and Holding Informal Debts. For each household portfolio decision D, we estimate the following model:

$$D_{ht} = \kappa + \beta I_h + X_{ht}\delta + \tau + \rho + e_{ht} \tag{2}$$

where D_{ht} represents the decision of interest for household h at time t while the regressors are defined as in model (1), with wealth quartiles added among the controls. We estimate model (2) over pooled data using probit or OLS regressions when the dependent variable is binary or continuous, respectively. For probit, tables report marginal effects.

Table 3: Asset Holdings, 2006-2014

			, ,		
	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
Immigrant	-0.0933***	-0.0205***	-0.0970***	-0.0346***	0.0128
	(0.006)	(0.005)	(0.026)	(0.011)	(0.008)
Years Since Migration	0.0027***	0.0002	0.0025***	0.0019***	-0.0003
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Results are presented in Table 3. For each portfolio decision, a negative correlation

emerges between immigrant status and the dependent variable of interest, with the only exception of holdings of informal debts, which display a very small and insignificant coefficient most likely due to the extremely limited number of households holding informal debts among the immigrants (only 136). In terms of magnitudes, for the decision of holding risky assets after controlling for all covariates we find that immigrants are on average 9.33 percentage points less likely to hold risky assets (with an overall gap of 1.02 percentage points given the sample mean of 10.94%).²² The variable capturing years since migration shows a positive sign for all decisions, with the exception of the share of risky assets and informal debt holdings, for which it is not significant. This points to occurrence of assimilation, which tends to reduce the gaps as immigrants get settled.²³

In comparison with the literature, our results are consistent with those by Cobb-Clark and Hildebrand (2006a) and Borjas (2002), who also find that asset ownership rates, including housing, are relatively lower within the immigrant US population. For them, the timing of the migration decision matters, with more established immigrants holding significantly less and recent immigrants holding significantly more financial wealth, while an opposite pattern emerges with respect to real estate equity, possibly because of a migration cohort effect. Again for immigrants in the US, Chatterjee and Zahirovic-Herbert (2014) show that the probability of owning financial assets increases with risk tolerance. For Germany, Sinning (2007) shows that the migrants' degree of portfolio diversification is significantly lower than that of comparable natives.

To shed some light on the possible drivers of the observed gaps again we interact the immigrant dummy with gender, marital status, education, labor status, and risk aversion. Table 4 shows that male immigrants are relatively less likely than female to hold risky assets, and that they hold smaller shares of the latter, while being married increases the likelihood that an immigrant household heads owns a house and holds a mortgage. Furthermore, education matters for holding risky assets, indicating that it is among the more educated that such holdings and the corresponding shares are lower for immigrants, a result which comes from the fact that at lower levels of education both natives and immigrants alike tend to avoid this kind of assets. Being employed (either as an employee or self-employed, where the omitted dummy is for unemployed) increases

²²In Table A5 we reproduce the same regressions in Table 3 showing all covariates and revealing, for instance, that males are more prone to hold risky assets and informal debt, while married hold more mortgages and less informal debt. Risk aversion exerts a negative effect on all decisions except home ownership and mortgages. (Unreported) results based on the more granular measure of risk aversion yield consistent conclusions. For a discussion of the overall determinants of household portfolios in Italy we refer to Guiso and Jappelli (2002).

²³In Table A6 we show results for additional decisions and financial fragility, showing all covariates. Immigrant status exerts a negative impact on holding foreign assets and the corresponding share, as well as owning a business and valuables, while being an immigrant is associated to a higher probability of being financially fragile.

Table 4: Asset Holdings, Interactions, 2006-2014

	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
Immigrant*Male	-0.0150**	-0.0210**	0.0055	-0.0002	0.0258*
	(0.007)	(0.009)	(0.019)	(0.019)	(0.015)
Immigrant*Couple	-0.0102	-0.0081	0.0663***	0.0548***	-0.0012
	(0.007)	(0.009)	(0.017)	(0.016)	(0.017)
Immigrant*Medium Edu.	-0.0209***	-0.0182**	0.0053	-0.0239	-0.0036
	(0.007)	(0.009)	(0.041)	(0.044)	(0.031)
Immigrant*High Edu.	-0.0518***	-0.0541***	0.0248	-0.0199	-0.0054
	(0.011)	(0.014)	(0.050)	(0.051)	(0.038)
Immigrant*Employee	0.0482***	0.0520***	-0.0438	-0.0609*	-0.0493*
	(0.014)	(0.018)	(0.030)	(0.032)	(0.029)
Immigrant*Self-employed	0.0520***	0.0533***	-0.0226	-0.0850**	0.0297
	(0.014)	(0.018)	(0.042)	(0.040)	(0.053)
Immigrant*Retired	0.0269*	0.0257	-0.1186***	-0.1144***	-0.0472
	(0.015)	(0.020)	(0.041)	(0.036)	(0.043)
Immigrant*Risk Averse	0.0339***	0.0357***	0.0145	0.0328*	-0.0430**
	(0.007)	(0.009)	(0.018)	(0.018)	(0.021)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

the likelihood that an immigrant heads holds risky assets. Lastly, being risk averse also matters for most decisions.²⁴

6 A matching strategy

A potential issue with the results presented so far is that the potential unobserved heterogeneity between immigrants and natives is not controlled for in the baseline regressions and might induce a bias in the estimates. To overcome this issue we apply a matching estimator, with the aim of restricting the comparison to household heads with similar characteristics. Since an exact matching strategy is ruled out by the relatively low number of observations concerning immigrants in our dataset, we opt for a propensity score matching strategy. This strategy implies a first step in which the propensity score, i.e., the probability of being an immigrant is computed conditional on a set of characteristics. We select the broadest possible set, including age, gender, marital status, household size, income and wealth quartiles, occupation, education, risk aversion, year, and macro-

²⁴On the other hand, the results for other decisions and financial fragility do not reveal any significant driver of the native-immigrant gaps (see Table A7).

region. As a second step, households are matched using the propensity score, so as to rebalance the sample statistics between immigrants and natives. The common support condition, assuring that we are effectively matching only comparable immigrant and native household heads, is satisfied by all the resulting observations.

Table 5: Descriptive Statistics, Before and After Propensity Score Matching, 2006-2014

		After PS M	Iatching			
Variable	Immigrants	Natives	Difference	t-stat	Difference	t-stat
Family size	2.67	2.45	0.22	7.23***	0.11	2.40 **
Male	0.59	0.58	0.02	1.4	0.04	2.54**
Age	43.47	59.73	-16.27	-45.36***	0.1	0.26
Couple	0.64	0.62	0.02	1.91*	0.05	2.89**
Education	1.03	0.81	0.22	15.19***	-0.02	-1.17
Labor Force Status	1.07	1.95	-0.88	-33.4***	-0.02	-0.88
Income Quartile	1.85	2.57	-0.72	-27.35***	-0.02	-0.77
Wealth Quartile	1.47	2.68	-1.2	-47.03***	0	0.00
Risk Averse	0.7	0.54	0.16	13.18***	0	-0.18
Year	2011	2010	1	15.09***	-0.2	-2.00**
Macro-region	2.19	2.78	-0.59	-18.52***	-0.02	-0.62

For each variable, the table reports the mean for immigrants and natives, and the difference between the two means before and after propensity score matching is applied. * significant at 10%; *** significant at 5%; *** significant at 1%.

Table 5 and Figure A1 compare the selected characteristics of immigrants and natives before and after propensity score matching and show that, although there are still some differences left after matching between the two groups, the differences are much smaller and statistically less significant than before.²⁵

Table 6: Net Wealth, Propensity Score Matching, 2006-2014

	Net Wealth
Immigrant	-64.6289***
	(6.386)
N	39,637

The table reports the coefficient from propensity score matching with robust standard errors. Immigrant stands for immigrant household head. * significant at 10%; ** significant at 5%; *** significant at 1%.

Tables 6 and 7 show the average treatment effect on the treated (ATT) for wealth and asset holdings, respectively. For wealth, the PS matching estimator reveals an average gap of \leq 64.629, which is larger in magnitude and now significant if compared with the

²⁵Ferrari (2020) applies a propensity score matching method to estimate the nativity wealth gap among older households in Europe using SHARE data and finds that immigrant households in the upper part of the wealth distribution are better off, and those in the lower part of the wealth distribution are worse off, than comparable native households.

Table 7: Asset Holdings, Propensity Score Matching, 2006-2014

		<u> </u>		<u> </u>	
	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
Immigrant	-0.0165***	-0.0077*	-0.0512***	-0.0136	-0.0017
	(0.006)	(0.002)	(0.014)	(0.013)	(0.013)
N	38,665	32,492	38,665	38,665	38,665

The table reports coefficients from propensity score matching with robust standard errors. Immigrant stands for immigrant household head. * significant at 10%; ** significant at 5%; *** significant at 1%.

OLS coefficient displayed in the last column of Table 1, but consistent with the gaps we observed along the entire distribution of wealth. For assets, the matching estimates are smaller than the ones obtained in our baseline empirical strategy and reported in Table 3. Nonetheless, the two estimation strategies reassuringly present a broadly similar picture: immigrant status is still found not statistically significant for informal debts, while it exerts a significant negative effect on risky assets holdings (both in terms of participation decision and share being held), home ownership, and mortgages, even though the latter effect is no longer precisely estimated.²⁶ Thus, in the subsequent extensions, where we investigate potential heterogeneities by immigrants' characteristics – so that the implementation of a matching strategy is consequently ruled out – we can quite confidently rely on our baseline empirical strategy.

7 Further results

The analyses performed so far refer to the entire pool of immigrants in the sample. However, the descriptive statistics in Table A2 prove quite a degree of heterogeneity in terms, e.g., of migration histories and countries of origin. Hence, in Sub-sections 7.1 and 7.2 we disaggregate the overall effect of being an immigrant by cohort of arrival and country of origin, respectively, while in Sub-section 7.3 we investigate any potential role of the different combinations of immigrant and natives within the couple. In Sub-section 7.4 we provide evidence of the robustness of our results to using an alternative definition of immigrant, based on citizenship rather than on country of birth. Lastly, in Sub-section 7.5 we split the sample period between a pre- and a post-crises sub-period.

7.1 Heterogeneity by cohort of arrival

Italy has been subject to several waves of immigration, that displayed several differences in terms of economic motivation and family consideration. To capture these differences,

²⁶In Table A8, if compared with Table A6, ownership of businesses and valuables and financial fragility remain significantly affected, while foreign asset holdings do not.

we replace the dummy for the immigrant status of the household head with a set of dummies capturing cohorts of arrival.²⁷ We assign four dummies, for household heads who migrated before 1980, in the 80s, in the 90s, and in 2000 or after.²⁸ While few of the immigrant heads in our sample arrived before 1980 (7%) and in the 80s (6%), about 31% arrived in the 90s and 56% since 2000.

Table 8: Net Wealth by Cohort of Arrival, 2006-2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Pre-1980 Cohort	0.2248	-4.8216	-16.5056	-39.8893	-144.9500*
	(8.917)	(26.426)	(17.993)	(34.756)	(81.452)
1980s Cohort	0.792	-13.3913	-48.3149**	-57.7680***	-138.7886***
	(5.042)	(11.804)	(23.365)	(18.951)	(39.645)
1990s Cohort	-7.3276*	-16.7375**	-49.4257***	-66.5532***	-104.1349***
	(3.808)	(6.722)	(5.595)	(15.300)	(21.837)
Post-2000 Cohort	-2.3256	-2.5263	-19.7336***	-34.1463***	-47.6708***
	(2.492)	(3.837)	(3.587)	(5.862)	(14.007)
N			39,100		

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; *** significant at 5%; *** significant at 1%.

In Table 8 we present results for the distribution of net wealth. As before, the omitted binary variable identifies households with a native head. The table reveals several patterns. For the pre-1980 cohort, the gap for immigrants is only significant at the upper end of the distribution, which may be due to a loss of power due to the low number of observations. For the 1980s cohort, the gap is significant at and above the median. The 1990s cohort displays a gap at all quantiles. For the post-2000 cohort, the most numerous one, no gap is detected below the 25th quantile, which suggests that among the lowest quantiles those immigrant families that migrated more recently are not significantly poorer than native ones. The observed heterogeneities across cohorts are broadly consistent with those obtained by Mathä, Porpiglia and Sierminska (2011) using only the 2008 wave of the SHIW.²⁹

²⁷Starting with Borjas (1985), it has been documented that cohorts of arrival matter for immigrants' earnings assimilation, with the most recent cohorts often being in a worse position than the earlier ones. Unfortunately, we are not able to exploit the panel component of our data due to the negligible size of the sample of immigrants. Nevertheless, disaggregating by cohorts in our case should help to shed more light on the history of immigration to Italy with respect to immigrants' financial decisions.

²⁸The rest of the model specification remains the same. In particular, years since migration is still included among the covariates – albeit not reported in the tables – so as to capture their potentially different effect for immigrants belonging to separate cohorts.

²⁹We cannot perform an analysis by cohort for the wealth components since, due to the small number of observations, estimates do not converge. The same applies to the other extensions to follow.

Table 9: Asset Holdings by Cohort of Arrival, 2006-2014

	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
Pre-1980 Cohort	-0.0267	-0.0097	-0.4912***	-0.1018***	-0.0227
	(0.083)	(0.032)	(0.171)	(0.021)	(0.015)
1980s Cohort	-0.0398	-0.0224	-0.2190*	-0.0459	-0.0219**
	(0.043)	(0.021)	(0.119)	(0.035)	(0.011)
1990s Cohort	-0.0849***	-0.0233**	-0.1226*	-0.0227	0.0067
	(0.013)	(0.012)	(0.069)	(0.028)	(0.018)
Post-2000 Cohort	-0.0909***	-0.0174***	-0.1844***	-0.0653***	0.0037
	(0.009)	(0.006)	(0.043)	(0.012)	(0.010)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 9 applies the same disaggregation to portfolio decisions, showing a variegated picture. For the decision to hold risky assets, the gap is determined by the behavior of the two cohorts that arrived after 1990. This is consistent with the results for the corresponding share. Home ownership reveals a gap for all cohorts, suggesting that immigrants hardly catch up with natives when it comes to buying a house. For mortgages, the first and last cohorts are driving the average negative result. Interestingly, while informal debt holdings were not significant for immigrants overall, now we can identify a significant gap for the 1980s cohort, who somewhat unexpectedly seems to be relying less than natives on such kind of debts.³⁰

Overall, heterogeneities across cohorts appear substantial, reflecting the distinct stages of the recent immigration history of the country.

7.2 Heterogeneity by country of origin

Immigrants from different countries may accumulate and allocate their portfolios differently, possibly to account for shocks in the source countries, or in response to distinct cultural backgrounds. In order to dig further in this direction, we estimate variants of models (1) and (2) where the immigrant dummy is replaced by a set of dummies reflecting an immigrant household head's country of origin, grouped into seven aggregations (defined in detail in Table A1): EU15 & North America (with about 6% of the household

³⁰As shown in Table A9, for foreign assets the negative effect of immigrant status is to be attributed to the pre-1980 cohort; owning a business is less likely for immigrants that arrived in the 90s; for valuables and financial fragility, the pre-1980 cohort does not display a significant disadvantage if compared to natives, while the following three do.

heads), New EU (21%), Other Europe (27%), North Africa (15%), Sub-Saharan Africa (11%), Central & South America (7%), and Asia & Oceania (13%).

Table 10: Net Wealth by Country of Origin, 2006-2012

	10th Q 25th Q 50th Q 75th Q 90th Q							
	10011 &	20th Q		190H Ø	300H Q			
			Panel A					
Immigrant	-3.8542	-2.3046	-16.7110***	-31.2487***	-39.7258**			
	(2.785)	(3.339)	(5.101)	(5.789)	(15.447)			
			Panel B					
EU15 & N.America	-7.9973	-4.6827	8.8646	-7.1995	-54.563			
	(8.799)	(13.737)	(17.617)	(15.184)	(44.920)			
New EU	-2.273	1.3	-7.2676	-31.7906***	-24.4848			
	(4.212)	(2.676)	(6.016)	(7.225)	(23.531)			
Other Europe	-5.3344**	-4.8902*	-26.4094***	-38.0282***	-47.1848***			
	(2.354)	(2.952)	(6.354)	(11.501)	(15.428)			
North Africa	-7.6456	-3.2712	-7.5197	-23.4295***	-39.6486			
	(10.042)	(4.843)	(5.682)	(6.773)	(40.948)			
Sub-S.Africa	-0.6964	3.3214	-2.9714	-22.1999**	-10.4579			
	(3.068)	(4.368)	(5.528)	(9.320)	(55.105)			
Central & S.America	-2.9555	1.2708	-22.8788***	-12.5940**	-8.7368			
	(10.593)	(6.763)	(5.765)	(5.982)	(13.898)			
Asia & Oceania	-5.5635	-1.9441	-17.6081***	-43.4380***	-78.3801***			
	(3.751)	(5.085)	(6.413)	(10.241)	(16.096)			
N			31,056					

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

We start by considering the determinants of net wealth. Since disaggregated data are only available for the period 2006-2012, for the sake of comparison in Table 10, Panel A we first report a specification involving once again the household head's immigrant status dummy, but now over the shorter time period. The results are in line with Table 1, even though dropping the last wave results in a loss of significance of the gap for the 10th quantile. Next, in Panel B, we present results by groups of countries, where again the omitted binary variable identifies households with a native head. Despite the fact that the low number of observations for each group tends to decrease the significance of the coefficients, we do observe some interesting heterogeneities. For instance, immigrants from EU15 & North America are not significantly poorer than natives, while for immigrants from other European countries and continents the average pattern is essentially replicated. Immigrants from Central & South America and Asia & Oceania are indeed poorer, but only at and above the median.

Table 11: Asset Holdings by Country of Origin, 2006-2012

	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
			Panel A		
Immigrant	-0.0981***	-0.0261***	-0.0857***	-0.0342***	0.0077
	(0.006)	(0.007)	(0.031)	(0.013)	(0.009)
N	30,742	25,769	30,742	30,742	30,742
			Panel B		
EU15 & N.America	-0.0954***	-0.0363*	-0.0121	-0.0638	-0.0003
	(0.015)	(0.022)	(0.070)	(0.043)	(0.040)
New EU	-0.1066***	-0.0151**	-0.2653***	-0.0823***	0.0230
	(0.007)	(0.007)	(0.066)	(0.012)	(0.017)
Other EU	-0.0925***	-0.0337***	-0.0605	-0.0146	-0.0030
	(0.010)	(0.009)	(0.040)	(0.022)	(0.010)
North Africa	-0.1043***	-0.0329***	0.0092	-0.0079	0.0230
	(0.008)	(0.010)	(0.037)	(0.031)	(0.021)
Sub-S.Africa	-	-0.0411***	-0.0735*	-0.0226	-0.0064
	-	(0.011)	(0.041)	(0.022)	(0.012)
Central & S.America	-0.0872***	-0.0276**	0.0044	0.0150	-0.0193***
	(0.021)	(0.012)	(0.025)	(0.031)	(0.007)
Asia & Oceania	-0.1053***	-0.0209*	-0.0748*	-0.0565***	0.0054
	(0.009)	(0.011)	(0.042)	(0.017)	(0.016)
N	30,591	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

In Table 11 we repeat the above analysis for asset holdings. Panel A replicates the specification with the immigrant status dummy over the period 2006-2012 and confirms the results in Table 3. In Panel B we replace the immigrant status dummy with the seven dummies for country groups. The emerging picture is variegated. For instance, the lower probability of holding risky assets for immigrants appears to be equally present in all groups of countries (even though it cannot even be estimated for sub-Saharan Africa). By contrast, other results are driven by specific source countries. For instance, the lowest probability of being a home owner, if compared to natives, is observed for households with a head born in a EU new member country, possibly since many of them come as domestic helpers, followed by Sub-Saharan Africa and Asia & Oceania.³¹

To sum up, the above results on wealth and asset portfolios do shed some light on the financial choices of people coming from different source countries and, even though their interpretation is sometimes difficult due to the very small number of observations, they

³¹Table A10 shows that holding valuables is less likely, and financial fragility more so, for most country groups if compared to natives.

indeed testify substantial heterogeneities by source country, with variegated consequences across different kinds of assets.

A comparison with the literature is complicated by the fact that other host countries have very different compositions of the immigrant population, if compared to Italy. In the US, for instance, European and Asian households are often found to behave differently from those from Mexico and Central and South America. Overall, however, a great deal of diversity by source country is always present within the immigrant population.³²

7.3 The influence of spouses and the role of intermarriage

The results from the previous sub-sections focus on the immigrant status of the household head, consistently with his/her responsibility for the financial choices of the household. However, within a household, the primary decision maker may well be influenced by other family members, and especially by the partner within a couple. In particular, a couple can involve two immigrants, or else an immigrant and a native, or two natives. In case of a mixed couple, it may also matter whether the household head, as opposed to the partner, is the immigrant. To account for all the possible combinations and assess their influence on financial decisions, we focus first on a sub-sample of households including a couple. As explained in Section 4, over this sample we then define four dummy variables denoting households including a couple of natives (Both Natives), a couple of immigrants (Both Immigrants) or a mixed couple, further distinguishing whether the immigrant is the household head (Mixed Immigrant Head) or the spouse (Mixed Immigrant Spouse).³³

In Table 12 we present results for the distribution of net wealth. Preliminarily, in Panel A we present the immigrant status dummy alone as in Table 1, but now, for the sake of comparison with the following specifications the regression is run over the subsample of households including a couple. If compared to Table 1, where all households are included, some differences do emerge. The gap in wealth with respect to natives is larger in size and is significant also at the 25th quantile. Since in this specification we cannot distinguish whether the immigrant household head has a native or an immigrant spouse, the observed effect is a weighted average of the effect of Mixed Immigrant Head and Both Immigrants.

In Panel B of Table 12 we can verify if the composition of a couple by immigration status does matter. The reference is a couple involving two natives. We show that,

 $^{^{32}}$ The application to our dataset of an epidemiological approach (Fernandez and Fogli, 2006; Giuliano, 2007) is prevented by the lack of information on individual countries of origin and on second-generation immigrants.

³³This classification is done independently of the immigrant status of other household members, which amounts to implicitly attributing a stronger influence on the household head's decisions of his/her spouse, if compared to other household members.

Table 12: Net Wealth and Intermarriage (Couples Sub-Sample), 2006-2014

	10th Q	25th Q	50th Q	75th Q	90th Q
	•	•	Panel A	•	
Immigrant	-6.9852*	-21.4397***	-39.8690***	-62.5018***	-51.7443***
	(3.987)	(3.929)	(5.968)	(10.398)	(15.790)
N			24,464		
			Panel B		
Mixed Immigrant Head	11.4605	14.5469	0.3208	-14.2465	-5.4179
	(8.033)	(9.310)	(11.144)	(26.384)	(32.989)
Mixed Immigrant Spouse	-11.3210***	-28.0094***	-37.3088***	-35.4235***	-34.4439***
	(2.956)	(4.417)	(10.171)	(10.698)	(12.937)
Both Immigrants	-4.9872**	-19.2108***	-40.1762***	-55.9794***	-45.7274***
	(2.443)	(4.231)	(6.101)	(10.097)	(15.649)
N			24,464		
			Panel C		
Mixed Imm. Head Male	13.1877	14.4821	19.4411	-12.1108	-8.7216
	(17.375)	(11.721)	(26.794)	(29.019)	(42.948)
Mixed Imm. Head Female	11.0993***	11.4042	-1.7373	-18.0159	-10.978
	(4.228)	(7.247)	(13.994)	(24.708)	(43.338)
Mixed Imm. Spouse Male	-75.8484	-56.3504***	-60.0615*	-89.1446***	-55.4772**
	(60.001)	(13.572)	(34.195)	(26.801)	(27.303)
Mixed Imm. Spouse Female	-6.8818**	-24.7284***	-31.5177***	-21.298	-34.9897***
	(3.196)	(3.560)	(10.187)	(15.757)	(11.081)
Both Immigrants	-4.7789	-19.2426***	-40.4834***	-56.9325***	-48.7463***
	(5.568)	(3.933)	(6.564)	(9.609)	(15.710)
N			24,277		

All models are estimated on the subsample of households with a couple. The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

for couples where both partners are immigrants, the gaps in wealth captured by the immigrant status dummy are largely confirmed. However, when we look at mixed couples, we find that those with an immigrant head are not significantly different from natives, while those with an immigrant spouse are again poorer than natives along the entire wealth distribution. In Panel C we further distinguish whether, within a mixed couple, the gender of the head also matters, to reveal that the weaker position of mixed couples with a native head and an immigrant spouse is confirmed independently of gender considerations, even though the gap with respect to natives is twice as large in size for couples with a male immigrant spouse, that is, couples with a female native head. Likewise, when the immigrant is the head, gender does not modify previous conclusions (except for a modest reversal of the gap for the lowest quantiles when the head is a female).

In Table 13 we repeat the above analysis for asset decisions. Panel A replicates Table 3 over the sub-sample of couples, yielding very similar results with the exception of

Table 13: Asset Holdings and Intermarriage (Couples Sub-Sample), 2006-2014

	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
			Panel A		
Immigrant	-0.1090***	-0.0237***	-0.0513*	-0.0297	-0.0007
	(0.010)	(0.008)	(0.028)	(0.019)	(0.008)
N	24,134	21,071	24,134	24,134	24,134
			Panel B		
Mixed Immigrant Head	-0.0634*	-0.0314	-0.0840	-0.0232	-0.0093
	(0.038)	(0.022)	(0.068)	(0.043)	(0.019)
Mixed Immigrant Spouse	-0.0202	-0.0052	-0.0025	0.0076	0.0056
	(0.013)	(0.009)	(0.016)	(0.016)	(0.008)
Both Immigrants	-0.1141***	-0.0246***	-0.0541*	-0.0288	-0.0012
	(0.009)	(0.008)	(0.028)	(0.019)	(0.009)
N	24,134	21,071	24,134	24,134	24,134
			Panel c		
Mixed Imm. Head Male	-0.0946***	-0.0397	-0.0806	-0.0027	0.0258
	(0.031)	(0.032)	(0.115)	(0.077)	(0.053)
Mixed Imm. Head Female	-0.0504	-0.0280	-0.0844	-0.0302	-0.0268***
	(0.041)	(0.021)	(0.067)	(0.040)	(0.004)
Mixed Imm. Spouse Male	-0.0273	-0.0194	0.0574**	0.0184	-0.0084
	(0.031)	(0.019)	(0.026)	(0.041)	(0.014)
Mixed Imm. Spouse Female	-0.0193	-0.0035	-0.0126	0.0062	0.0077
	(0.014)	(0.009)	(0.017)	(0.018)	(0.009)
Both Immigrants	-0.1167***	-0.0249***	-0.0552*	-0.0268	-0.0003
	(0.008)	(0.008)	(0.028)	(0.019)	(0.009)
N	23,948	20,904	23,948	23,948	23,948

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

the decision to hold a mortgage, where immigrant status no longer reaches a significant impact.³⁴ In Panel B we replace the immigrant status dummy with the set of dummies capturing pure vs mixed couples, where a couple of natives is the omitted category. For couples including two immigrants, the results mirror those in Panel A. However, for mixed couples, the coefficients are never significant, with the only exception of the decision to hold risky assets when the immigrant is the head. In other words, the financial decisions of mixed households are largely indistinguishable from those of native households, independent of the immigrant status of the head or the spouse. One possible explanation for these findings is that, through intermarriage, immigrants might have gone through an assimilation process, prior and/or during marriage, that makes them more similar to natives even with respect to financial choices. However, this effect might not be precisely

³⁴In Table A11, Panel A, the likelihood of financial fragility also appears to be unaffected by immigrant status, possibly due to the definition of financial fragility, which requires not having sufficient liquidity, a more unlikely occurrence within a household including a couple rather than a single individual.

estimated due the very limited number of observations (only 195 mixed households in the sample). The distribution of household heads by gender, with a prevalence of males, may also be part of the explanation, as addressed in Panel C, where we observe different patterns across each investment decision. For instance, the lower participation in risky assets is explained, within mixed couples with an immigrant head, by those couple where the immigrant head is a male. With regard to home ownership, on the other hand, mixed couples where the immigrant spouse is a male actually outperform natives. Informal debts are significantly lower for mixed couples with a female immigrant head.

We can compare our results with those derived for other countries. For instance, for the US, Cobb-Clark and Hildebrand (2006a) focus exclusively on households including a couple and do not include mixed households among immigrant ones, since they expect them to behave like native-born households. Thus, they do not distinguish, as we do, between mixed households headed by an immigrant rather than a native. For Germany, Sinning (2007) adopts a classification similar to ours and finds that, in terms of portfolio diversification, pure immigrant households perform at the bottom, followed by mixed households with an immigrant head and mixed households with a native head.

To sum up, the results in this sub-section document complex interactions between the patterns of intermarriage, the responsibility of making financial decisions, and the gendered division of roles within the household. Moreover, these interactions are likely influenced by the cultural background associated with different source countries, as highlighted in the previous sub-section.

7.4 Citizenship status

So far we have adopted a definition of immigrant based on the country of birth. However, it is also possible to focus instead on nationality, thus defining an immigrant as a non-Italian citizen. Information on citizenship is only available up to 2012. This alternative definition accounts for the increasing presence of second-generation immigrants who, despite being born in Italy, have no automatic access to citizenship due to the jus sanguinis regime. At the same time, however, this definition excludes the increasing number of long-term immigrants born abroad and later naturalized. As shown in Tables 14, 15, and A12, the results concerning wealth and asset holdings are largely confirmed for non-citizens.

7.5 The impact of the Great Recession

We now investigate whether the financial crisis has had an impact on how immigrant households behave if compared to native ones. To this end, the sample is split into

Table 14: Net Wealth, Foreign Citizens, 2006-2012

			· · · · · · · · · · · · · · · · · · ·		
	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant (Non-Citizen)	-3.7551***	-2.6241	-16.7574***	-30.3109***	-36.9074**
	(1.080)	(2.545)	(5.411)	(4.839)	(17.158)
N			31,056		

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 15: Asset Holdings, Foreign Citizens, 2006-2012

	Holding	Share of	Home	Holding	Holding
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts
Immigrant (Non-Citizen)	-0.0899***	-0.0227***	-0.0564**	-0.0228*	0.0086
	(0.008)	(0.006)	(0.024)	(0.013)	(0.008)
N	30,742	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

two sub-samples, where 2006 and 2008 are interpreted as pre-crisis waves, while 2010, 2012, and 2014 are interpreted as post-crisis waves. The choice to assign 2008 to the pre-crisis sub-sample can of course be questioned. However, it can be defended on several grounds. First of all, responses for each survey wave is collected at the very beginning of the following year, that is, for 2008, in early 2009. Since the real effect of the crisis on GDP manifested itself, for the case of Italy, only in 2009, with a dramatic drop of 6%, it is reasonable to assume that survey respondents, at the beginning of 2009, had not yet perceived it. In other words, even though 2008 witnessed a turmoil in financial markets, culminating in September with the bankruptcy of Lehman Brothers, 2008 was not yet, at least for Italy, a recession year. The relative stability of the real economy as of 2008 is also confirmed by data on the rate of unemployment, which was then still at 6.7%, increased to 7.8% in 2009, and then continued its growth until 2014, when it reached 12.9%. Moreover, in Italy the banking sector showed a remarkable resilience, at least in the immediate aftermath of 2008, while the decline in house prices manifested itself only after the initial financial shock and developed very gradually.

In Table 16 we present quantile regressions for wealth, separately for the pre- and post-crisis sub-samples (the relevant term of comparison is the full sample in Table 1). While before the crisis immigrant status is associated with a non-significant gap at all quantiles, after the crisis wealth gaps are consistently larger, with significance levels that replicate those over the entire 2006-2014 time period, so that the effect in Table 1 is fully attributable to the after-crisis sub-sample. Thus, these results point to a worsening of

Table 16: Net Wealth and the Great Recession: Pre- and Post-Crisis, 2006-2014

	10th Q	25th Q	50th Q	75th Q	90th Q	
	Pre-Crisis (2006-2008)					
Immigrant	-5.8834	-0.2679	-2.7063	-8.8685	-3.7009	
	(5.536)	(3.909)	(10.553)	(11.888)	(22.805)	
N	15,275					
	Post-Crisis (2010-2014)					
Immigrant	-2.3573**	-4.1512	-24.1177***	-52.2719***	-47.2710***	
	(1.056)	(2.889)	(4.729)	(7.252)	(14.681)	
N			23,825			

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

the financial conditions of immigrant households after the crisis, relative to natives.

Table 17: Asset Holdings and the Great Recession: Pre- and Post-Crisis, 2006-2014

Table 11. Tibber Holdings and the Great Reception. The and Tost Chists, 2000 2011						
	Holding	Share of	Home	Holding	Holding	
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts	
	Pre-Crisis (2006-2008)					
Immigrant	-0.1006***	-0.0184***	-0.1848**	-0.0755***	-0.0026	
	(0.009)	(0.007)	(0.076)	(0.015)	(0.015)	
N	15,152	12,810	15,152	15,152	15,152	
	Post-Crisis (2010-2014)					
Immigrant	-0.0842***	-0.0140**	-0.0693***	-0.0227	0.0229**	
	(0.009)	(0.006)	(0.025)	(0.015)	(0.011)	
N	23,513	19,682	23,513	23,513	23,513	

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Risky Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Turning to asset allocation, in Table 17 again we present separate regressions, for each outcome of interest, for the pre- and post-crisis sub-samples (with Table 3 as term of comparison). The results reveals that for some financial decisions the gaps for immigrants, if compared to natives, are relatively stable before and after the crisis. This is the case, for instance, for the decisions concerning risky assets, which show similar coefficients over the two time periods. However, the gap in home ownership actually becomes smaller after the crisis, while it disappears for mortgages, possibly because native households as

a consequences of the crisis also reduce home ownership and mortgages. Informal debt holdings, on the other hand, become more likely for immigrants after the crisis.³⁵

To sum up, the financial crisis worsened the conditions of immigrant households, relative to native ones, in several dimensions, including wealth holdings and financial fragility. After the crisis, immigrants also appear to rely more on informal debt channels.

Even though the evidence we report is only descriptive, as it cannot capture a causal impact for the recession, our results are consistent with the assessment of the consequences of the crisis for Italian immigrants in Colombo and Dalla Zuanna (2009). It is useful to relate our results also to those obtained by Amuedo-Dorantes and Pozo (2015) by comparing 2006 and 2010 for US households. They find that post-crisis wealth losses for immigrants were particularly large for the middle and top wealth quartiles, which is broadly consistent with our findings. Moreover, they show that this outcome was driven by differences across assets, with greater losses in primary housing ownership and primary housing values. Again, this pattern broadly mirrors our results. However, it should be highlighted that, while the housing market crash in the US led the recession, as previously mentioned in Italy the decline in house prices manifested itself quite gradually after the initial financial shock.

8 Conclusion

Using household survey data for Italy over the period 2006-2014, we document the presence of sizeable gaps between natives and immigrants, both with respect to wealth and asset holdings. Controlling for a rich set of households' characteristics, including risk aversion and years since migration, we find that immigrants hold less net wealth than natives along the entire wealth distribution. Moreover, immigrant status negatively affects the chances of holding risky assets, housing, mortgages, businesses, and valuables, while it increases the likelihood of financial fragility. This evidence is qualitatively unchanged when a propensity score matching strategy is used.

The interaction between immigrant status and immigration histories, source countries, and patterns of intermarriage also matter, in a variegated fashion, for accumulation and investment decisions. Namely, the nativity gap in net wealth tends to decline for more recent cohorts. Moreover, immigrants from EU15 and North America are not significantly poorer than natives. Accounting for intermarriage, the gap in wealth is confirmed when both partners are immigrants and for mixed couples where the immigrant is the spouse.

³⁵Table A13 shows that the higher likelihood of financial fragility for immigrants is also attributable to the post-crisis period, while for the other decisions no apparent difference arises before and after the crisis.

For decisions about asset holdings, the results are largely driven by couples including two immigrants. The results broadly hold when immigrants are identified as non-citizens, rather than foreign-born. The Great Recession is a major driver of the relatively worse conditions of immigrants in terms of wealth holdings, home ownership, and financial fragility, and also induces for them a greater reliance on informal debt.

While the above results offer novel and thorough evidence on how the financial decisions of immigrant households differ from native, further work is needed in order to identify the channels that drive the observed nativity gaps. Attention should also be given to other financial choices, such as saving behavior and the associated decision about remittances. Furthermore, investigating broader differences between immigrants and natives in term of family structure and gender culture, and their reflection on financial choices, is also a potential avenue for future research.

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ONLINE APPENDIX

Education

Year

Risk Averse

Family Size

Couple

Male

Macro-region

Income Quartile

Labor Force Status

-100

-150

-50

Unmatched

50

× Matched

0

Age

Wealth Quartile

Figure A1: Standardized Bias Across Covariates Before and After PS Matching

Table A1: Data Description

VARIABLE	DESCRIPTION
Immigrant	Binary variable assuming value 1 for households whose household head is foreign-born, and 0 otherwise.
Immigrant (Non-Citizen)	Binary variable assuming value 1 for households whose household head has non-Italian nationality, and 0 otherwise.
Both Natives, Mixed Immigrant Head, Mixed Immigrant Spouse, Both Immigrants	Set of binary variables locating who – within the couple – is a foreign-born, if any. These dummies are defined only for households including a couple (either married or in a stable union): - Both Natives takes value 1 for households where both members of the couple are natives, and 0 otherwise; - Mixed Immigrant Head takes value 1 for couple households where the household head is foreign-born, while the spouse is not, and 0 otherwise; - Mixed Immigrant Spouse takes value 1 for couple households where the spouse is foreign-born, while the head of the household is not, and 0 otherwise; - Both Immigrants takes value 1 for couple households where both the household head and the spouse are foreign-born, and
Net Wealth	0 otherwise. Sum of real and financial assets net of liabilities, in € at 2010 constant values.
Housing and Other Real Estate	Value of housing and other real estate, held either in Italy or abroad. It thus includes also properties held by immigrants in their home countries, in € at 2010 constant values.
Valuables	Value of jewelry, gold, art, antiques, furniture, etc., in € at 2010 constant values.
Holding Risky Assets	Binary variable taking value 1 for households holding risky financial assets, and 0 otherwise. Risky assets include stocks and shares, corporate bonds, and foreign assets.
Share of Risky Assets	Continuous variable representing the share of financial assets held in risky ones.
Home Ownership	Binary variable taking value 1 for households owning their primary residence, and 0 otherwise. Only primary residential properties located in Italy are considered.
Holding Mortgage	Binary variable taking value 1 for households having mortgages, and 0 otherwise.
Holding Informal Debts	Binary variable taking value 1 for households indebted with relatives or friends, and 0 otherwise.
Holding Foreign Assets	Binary variable taking value 1 for households holding foreign financial assets, and 0 otherwise. Foreign assets are financial assets issued by non-resident institutions.
Share of Foreign Assets	Continuous variable representing the share of financial assets held in foreign ones.
Owning Business	Binary variable taking value 1 for households holding a business, and 0 otherwise.

Owning Valuables	Binary variable taking value 1 for households holding valuables, and 0 otherwise.
Financial Fragility	Binary variable taking value 1 for financially fragile households, and 0 otherwise. Financial fragility is defined as a condition in which the household earns sufficient income to at least cover all the expected expenses, but it does not hold enough liquidity to be unable to cope with unexpected expenses (see Brunetti et al., 2016).
Family Size	Number of household members.
Male	Binary variable taking value 1 for households headed by a male, and 0 otherwise.
Age	Integer variable representing the age in years of the head of the household.
Couple	Binary variable taking value 1 for households including a married or partnered couple, 0 otherwise.
Low Education, Medium Education, High Education	 Set of binary variables representing the highest education level achieved by the household head: Low Education takes value 1 for having completed only primary education or having no education at all Medium Education takes value 1 for having completed secondary school or college High Education takes value 1 for having completed university degrees at graduate or post-graduate level.
Employee, Self Employed, Retired, Unemployed	Set of binary variables taking value 1 for household heads being in the relevant labor force status (i.e., employee, self-employed, retired, or not working), and 0 otherwise.
Net Wealth Quartiles	Binary variables taking value 1 if the household net wealth falls within the relevant distribution quartile, and 0 otherwise.
Income Quartiles	Binary variables taking value 1 if the household disposable income falls within the relevant distribution quartile, and 0 otherwise.
Risk Aversion (Alternative Measure)	Set of binary variables representing the preferred risk profile of financial investments among the following: 1 = High risk, high returns 2 = Reasonable risk, good returns 3 = Low risk, reasonable returns 4 = No risk, low returns.
Risk Averse	Binary variable taking value 1 if risk aversion level is 4, 0 otherwise.
Years Since Migration	Discrete variable representing the years since the first arrival in Italy of the head of the household. This variable is set to 0.5 for immigrants who are interviewed less than 12 months since arrival (so as to distinguish them from natives).
North-West, North-East, Center, South, Islands	Set of binary variables taking value 1 for households residing in the relevant macro-region within Italy (i.e., North West, North East, Center, South, and Islands), and 0 otherwise.

Cohort of Arrival	Set of binary variables indicating the decade of arrival in Italy of the household head:
	- Pre-1980 Cohort = arrived before 1980 - 1980s Cohort = arrived between 1980 and 1989
	- 1990s Cohort = arrived between 1990 and 1999
	- Post-2000 Cohort = arrived in 2000 or afterwards.
	Set of binary variables representing the macro-area of the country of birth of the household head among the following:
	- Native = Born in Italy
	- EU15 & North America = Born in one of the EU15 countries or in Canada or in the US
	- New EU = Born in Bulgaria, Malta, Cyprus, Croatia, Estonia,
Country of Origin	Latvia, Poland, Romania, Slovakia, Slovenia, or Hungary
Country of Origin	- Other Europe = Born in any other European country not included in the lists above
	- North Africa = Born in any country of North Africa
	- Sub-Saharan Africa = Born in any country in sub-Saharan Africa
	- Central & South America = Born in any country of Central or
	South America
	- Asia & Oceania = Born in any country in Asia or Oceania.

Table A2. Descriptive Statistics, 2006-2014

			Immigra	nts				Natives			t-stat	
	61		Std.	251		61		Std.	3.51			
Variable	Obs 1837	Mean 1	Dev.	Min 1	Max 1	Obs 36828	Mean	Dev.	Min 0	Max 0		
Immigrant						37532	0	0	0	0		
Immigrant (Non-Citizen)	1133	1	0	1	1	-	0	0				
Both Immigrants	1004	0.840	0.366	0	1	23130	0	0	0	0		
Mixed Immigrant Head	1004	0.160	0.366	0	1	23130	0	0	0	0		
-Mixed Imm. Head Male	1004	0.072	0.258	0	1	23130	0	0	0	0		
-Mixed Imm. Head Female	1004	0.088	0.283	0	1	23130	0	0	0	0		
Mixed Immigrant Spouse	1004	0	0	0	0	23130	0.036	0.187	0	1		
-Mixed Imm. Spouse Male	1004	0	0	0	0	23130	0.004	0.066	0	1		
-Mixed Imm. Spouse Female	1004	0	0	0	0	23130	0.032	0.176	0	1		
Net Wealth (in thousand €)	1837	45.704	179.945	-47.75	4171.9	36828	256.449	496.511	-725.6	28861.3	43.43	***
Housing (in thousand €)	1837	42.929	124.604	0	2237.9	36828	213.820	326.200	0	11617.9	50.8	***
,	1837					36828				10659.3	11.7	***
Valuables (in thousand €)	1837	1.005	2.536	0	50.5	36828	4.454	42.046	0	<u>4</u> 1		***
Holding Risky Assets		0.014	0.117	0	1		0.116	0.321			26.3	
Share of Risky Assets	1221	0.009	0.074	0	1	31271	0.061	0.183	0	1	15.3	***
Home Ownership	1837	0.194	0.396	0	1	36828	0.727	0.446	0	1	50.1	***
Holding Mortgage	1837	0.109	0.312	0	1	36828	0.113	0.317	0	1	-3.5	***
Holding Informal Debts	1837	0.074	0.261	0	1	36828	0.027	0.163	0	1	-7.1	***
Holding Foreign Assets	1837	0.003	0.050	0	1	36828	0.009	0.092	0	1	5.58	***
Share of Foreign Assets	1221	0.001	0.021	0	0.6	31271	0.003	0.039	0	1	2.77	***
Owning Business	1837	0.063	0.243	0	1	36828	0.138	0.3452	0	1	9.6	***
Owning Valuables	1837	0.605	0.489	0	1	36828	0.883	0.3209	0	1	21.9	***
Financial Fragility	1837	0.100	0.300	0	1	36828	0.088	0.283	0	1	-1.2	
Family Size	1837	2.563	1.558	1	12	36828	2.481	1.254	1	9	-5.8	***
Male	1837	0.621	0.485	0	1	36828	0.577	0.494	0	1	-1.4	
Age	1837	40.927	10.410	21	88	36828	57.105	16.128	20	90	57.8	***
Couple	1837	0.627	0.484	0	1	36828	0.603	0.489	0	1	-1.9	*
Low Education	1837	0.077	0.266	0	1	36828	0.275	0.447	0	1	30.0	***
Medium Education	1837	0.811	0.391	0	1	36828	0.610	0.488	0	1	-20.6	***
High Education	1837	0.112	0.315	0	1	36828	0.010	0.319	0	1	-1.1	

Self Employee				Immigran	ts				Natives			t-stat	
Seli Employed 1837 0.031 0.174 0 1 36828 0.421 0.494 0 1 68.2	Employee	1837	0.770	0.421	0	1	36828	0.361	0.480	0	1	-39.7	***
Nember 1837 0.031 0.174 0 1 36828 0.033 0.178 0 1 7.71	Self Employed	1837	0.076	0.265	0	1	36828	0.109	0.312	0	1	2.8	***
Control Cont	Retired	1837	0.031	0.174	0	1	36828	0.421	0.494	0	1	68.2	***
Risk Aversion=1 (Lowest)	Unemployed	1837	0.077	0.266	0	1	36828	0.033	0.178	0	1	-7.1	***
Risk Aversion 2 1837 0.086 0.280 0 1 36828 0.130 0.336 0 1 8.3 Risk Aversion=3 1837 0.217 0.412 0 1 36828 0.319 0.466 0 1 10.2 Risk Aversion=4 (Highest) 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Risk Aversion=4 (Highest) 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Vear Since Migration 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Vear Since Migration 1837 0.314 0.466 0 1 36828 0.544 0.498 0 1 -14.2 Vear Since Migration 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8 <	Income (in thousand €)	1837	13.497	9.864	-6.063	167.184	36828	22.703	19.470	-18.649	863.578	33.4	***
Risk Aversion=3 1837 0.217 0.412 0 1 36828 0.319 0.466 0 1 10.2 Risk Aversion=4 (Highest) 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Risk Averse 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Year Since Migration 1837 13.793 11.668 0.5 87 36828 0.544 0.498 0 1 -14.2 Year Since Migration 1837 13.793 11.668 0.5 87 36828 0.544 0.498 0 1 -14.2 Year Since Migration 1837 0.314 0.464 0 1 36828 0.559 0.438 0 1 -3.8 North-West 1837 0.314 0.464 0 1 36828 0.211 0.408 0 1 -1.3 <	Risk Aversion=1 (Lowest)	1837	0.007	0.085	0	1	36828	0.008	0.087	0	1	0.8	
Risk Aversion=4 (Highest) 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Risk Averse 1837 0.690 0.463 0 1 36828 0.544 0.498 0 1 -14.2 Region of Residence North-West 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8 North-West 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8 North-West 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8 North-Est 1837 0.377 0.485 0 1 36828 0.291 0.401 1 1.36828 0.198 0.399 0 1 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 <td>Risk Aversion=2</td> <td>1837</td> <td>0.086</td> <td>0.280</td> <td>0</td> <td>1</td> <td>36828</td> <td>0.130</td> <td>0.336</td> <td>0</td> <td>1</td> <td>8.2</td> <td>***</td>	Risk Aversion=2	1837	0.086	0.280	0	1	36828	0.130	0.336	0	1	8.2	***
Risk Averse 1837 (0.690 0.463 0 0 1 36828 0.544 0.498 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Risk Aversion=3	1837	0.217	0.412	0	1	36828	0.319	0.466	0	1	10.2	***
North-West 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 1 3.88 0 3.88 0 1 3.88 0 3.88	Risk Aversion=4 (Highest)	1837	0.690	0.463	0	1	36828	0.544	0.498	0	1	-14.2	***
Region of Residence 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8	Risk Averse	1837	0.690	0.463	0	1	36828	0.544	0.498	0	1	-14.2	***
North-West 1837 0.314 0.464 0 1 36828 0.259 0.438 0 1 -3.8	Year Since Migration	1837	13.793	11.668	0.5	87	36828	0	0	0	0		
North-Est 1837 0.314 0.404 0 1 36828 0.211 0.408 0 1 -17.4	Region of Residence												
North First 1837 0.377 0.485 0.485 0.211 0.408 0.408 0.411 0.408	North-West	1837	0.314	0.464	0	1	36828	0.259	0.438	0	1	-3.8	***
South 1837 0.073 0.260 0 1 36828 0.245 0.430 0 1 24.4 Islands 1837 0.034 0.183 0 1 36828 0.088 0.283 0 1 15.0 Cohort of arrival	North-Est	1837	0.377	0.485	0	1	36828	0.211	0.408	0	1	-17.4	***
Islands 1837 0.034 0.183 0 1 36828 0.088 0.283 0 1 15.0 Cohort of arrival Pre-1980 Cohort 1837 0.069 0.254 0 1 36828 0 0 0 0 1980s Cohort 1837 0.063 0.243 0 1 36828 0 0 0 0 1990s Cohort 1837 0.305 0.460 0 1 36828 0 0 0 0 Post-2000 Cohort 1837 0.563 0.496 0 1 36828 0 0 0 0 Country of Origin Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.269 0.444 0 1	Center	1837	0.201	0.401	0	1	36828	0.198	0.399	0	1	1.3	
Cohort of arrival Pre-1980 Cohort 1837 0.069 0.254 0 1 36828 0 0 0 0 0 0 1 1837 0.063 0.243 0 1 36828 0 0 0 0 0 0 1 1837 0.305 0.460 0 1 36828 0 0 0 0 0 0 0 0 0	South		0.073	0.260				0.245	0.430			24.4	***
Pre-1980 Cohort 1837 0.069 0.254 0 1 36828 0 0 0 0 1980s Cohort 1837 0.063 0.243 0 1 36828 0 0 0 0 1990s Cohort 1837 0.305 0.460 0 1 36828 0 0 0 0 Post-2000 Cohort 1837 0.563 0.496 0 1 36828 0 0 0 0 Country of Origin Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0	Islands	1837	0.034	0.183	0	1	36828	0.088	0.283	0	1	15.0	***
1980s Cohort 1837 0.063 0.243 0 1 36828 0 0 0 0 1990s Cohort 1837 0.305 0.460 0 1 36828 0 0 0 0 Post-2000 Cohort 1837 0.563 0.496 0 1 36828 0 0 0 0 Country of Origin Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 <	Cohort of arrival												
1990s Cohort 1837 0.305 0.460 0 1 36828 0 0 0 0 Post-2000 Cohort 1837 0.563 0.496 0 1 36828 0	Pre-1980 Cohort	1837	0.069	0.254	0	1	36828	0	0	0	0		
Post-2000 Cohort 1837 0.563 0.496 0 1 36828 0 0 0 0 Country of Origin Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0	1980s Cohort	1837	0.063	0.243	0	1	36828	0	0	0	0		
Country of Origin Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	1990s Cohort	1837	0.305	0.460	0	1	36828	0	0	0	0		
Native 1322 0 0 0 0 29420 1 0 1 1 EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	Post-2000 Cohort	1837	0.563	0.496	0	1	36828	0	0	0	0		
EU15 & North America 1322 0.063 0.243 0 1 29420 0 0 0 0 New EU 1322 0.209 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	Country of Origin												
New EU 1322 0.299 0.407 0 1 29420 0 0 0 0 Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	Native	1322	0	0	0	0	29420	1	0	1	1		
Other Europe 1322 0.269 0.444 0 1 29420 0 0 0 0 North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	EU15 & North America		0.063	0.243	0	1		0	0	0	0		
North Africa 1322 0.146 0.353 0 1 29420 0 0 0 0 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	New EU	1322	0.209	0.407	0	1	29420	0	0	0	0		
North Africa 0.146 0.353 Sub-Saharan Africa 1322 0.108 0.311 0 1 29420 0 0 0 0 Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	Other Europe	1322	0.269	0.444	0	1	29420	0	0	0	0		
Central & South America 1322 0.071 0.256 0 1 29420 0 0 0 0	North Africa	1322	0.146	0.353	0	1	29420	0	0	0	0		
Central & South America 0.071 0.256	Sub-Saharan Africa	1322	0.108	0.311	0	1	29420	0	0	0	0		
Asia & Oceania 1322 0.134 0.341 0 1 29420 0 0 0 0	Central & South America	1322	0.071	0.256	0	1	29420	0	0	0	0		
11014 to Octaina 0.101 0.011	Asia & Oceania	1322	0.134	0.341	0	1	29420	0	0	0	0		

Note: Statistics computed using sampling weights (pesopop).

Table A3: Net Wealth, All Covariates, 2006-2014

	le A3: Net V				
	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant	-3.1821***	-3.4959		-36.8271***	-34.4063***
	(1.023)	(2.794)	(3.643)	(4.924)	(10.735)
Family Size	-0.3282**	-0.0632	3.6804***	9.4124***	17.4679***
	(0.167)	(0.471)	(1.009)	(1.306)	(2.984)
Male	-2.3304***	-10.3222***	-24.3924***	-27.8526***	-17.2364***
	(0.430)	(1.085)	(1.867)	(2.709)	(5.573)
Age	0.5383***	2.3268***	4.4325***	4.4897***	4.3447***
	(0.060)	(0.214)	(0.315)	(0.426)	(0.898)
Age Squared	-0.3385***	-1.5986***	-2.7623***	-2.4452***	-1.5394*
	(0.048)	(0.202)	(0.287)	(0.413)	(0.830)
Couple	5.1872***	21.4447***	36.8209***	38.2467***	38.1227***
•	(0.633)	(1.271)	(2.218)	(3.056)	(6.257)
Medium Edu.	3.0259***	11.2067***	22.2527***		56.2946***
	(0.528)	(1.422)	(2.233)	(3.295)	(6.287)
High Edu.	4.3834***	22.9844***	56.1863***		196.7992***
0	(1.376)	(2.603)	(5.803)	(10.074)	(22.266)
Employee	-8.0999***	-39.3298***	-75.9134 [*] **	-110.4569***	-160.2098***
1 0	(1.007)		(3.778)	(4.467)	(7.882)
Self-employed	2.3273***		12.7177*		174.9849***
r vy v v	(0.839)	(3.214)		(11.402)	(30.668)
Retired	0.9158*	5.2555**	-21.7330***	-43.3428***	-74.8869***
	(0.473)		(4.327)	(5.474)	(9.665)
Income Q. 2	7.3899***	36.6154***	52.9512***	65.4967***	83.0477***
• • •	(0.901)		(2.103)		(5.261)
Income Q. 3	18.2959***	94.3386***	132.0253***	156.5704***	190.6073***
· · · · · · · · · · · · · · · · · · ·	(1.286)		(2.739)	(3.574)	(7.669)
Income Q. 4	120.0521***	224.8323***		442.2085***	707.4733***
• • •	(5.258)	(2.912)	(4.760)	(9.186)	(22.540)
Risk Averse	-1.3445***	-6.8881***	-17.4472***	-24.7814***	-32.1917***
	(0.323)	(1.293)	(2.008)	(2.586)	(5.694)
Years Since Migration	-0.1374***	-0.5673***	-0.317	0.0443	-0.5503***
O	(0.047)	(0.151)		(0.239)	(0.210)
2006	0.6526*		29.3024***	42.9928***	59.5471***
	(0.381)			(3.078)	
2008	1.0815**	9.0405***	30.3324***	40.7604***	51.4370***
	(0.420)	(1.866)	(2.600)	(4.239)	(6.423)
2010	1.4731***	6.6409***	25.7006***	38.9844***	49.3833***
	(0.480)	(1.799)	(2.816)	(3.506)	(8.637)
2012	-0.6058	2.9176*	12.8885***	15.7548***	30.2314***
	(0.391)	(1.499)	(2.309)	(3.807)	(7.842)
North East	1.1165**	5.4509***	9.8333***	19.7977***	36.3524***
	(0.526)	(1.725)	(2.253)	(3.965)	(9.545)
Center	1.0409	15.3277***	29.4494***	42.5717***	47.3928***
	(0.653)	(3.263)	(3.215)	(4.315)	(7.154)
South	0.3888	2.2903	-3.7262	-1.4469	1.9029
	(0.384)	(1.525)	(2.526)	(3.550)	(7.471)
Islands	0.346	3.2000**	-8.6236***	-18.8759***	-32.7860***
	(0.329)	(1.484)	(2.617)	(2.924)	(7.661)
N	()	(-)	39,100		()
			1 =		

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region. * significant at 10%; ** significant at 1%.

Table A4: Net Wealth Components, 2006-2014

	1010 111. 1100		iponenos, 200		
	10th Q	25th Q	50th Q	75th Q	90th Q
		Housing	g and Other R	eal Estate	
Immigrant	0.0000	-0.0617	-32.8991***	-53.7148***	-51.7013***
	(752.931)	(2.774)	(3.863)	(5.278)	(9.622)
Years Since Migration	0.0000	-0.1862	0.1786	0.4930***	0.0218
	(17.810)	(0.180)	(0.180)	(0.112)	(0.533)
			Valuables		
Immigrant	-0.0848***	-0.3740***	-0.6491***	-0.9344***	-0.7327***
	(0.022)	(0.027)	(0.042)	(0.092)	(0.168)
Years Since Migration	-0.0004	0.0023*	0.0072***	0.0100**	-0.0036
	(0.001)	(0.001)	(0.002)	(0.004)	(0.019)
N			39,100		

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A5: Asset Holdings, All Covariates, 2006-2014

Table A5: Asset Holdings, All Covariates, 2006-2014						
	Holding	Share of	Home	Holding	Holding	
	Risky Assets	Risky Assets	Ownership	Mortgage	Informal Debts	
Immigrant	-0.0933***	-0.0205***	-0.0970***	-0.0346***	0.0128	
<u> </u>	(0.006)	(0.005)	(0.026)	(0.011)	(0.008)	
Family Size	-0.0062***	-0.0053***	0.0015	0.0092***	0.0029**	
J	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	
Male	0.0113**	0.0080***	-0.0023	-0.0005	0.0088***	
	(0.005)	(0.003)	(0.004)	(0.005)	(0.003)	
Age	0.0057***	0.0028***	-0.0006	0.0031***	0.0025***	
1-00	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	
Age Squared	-0.0048***	-0.0022***	0.0004	-0.0074***	-0.0030***	
1180 oquarea	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	
Couple	0.0150***	0.0078**	-0.0032	0.0338***	-0.0138***	
Coupic	(0.005)	(0.003)	(0.005)	(0.006)	(0.004)	
Medium Edu.	0.0290***	0.0126***	-0.0398***	0.0211***	-0.0078*	
Medium Edu.	(0.0290)	(0.004)	(0.005)	(0.0211)	(0.005)	
High Edu.	0.0599***	0.0244***	-0.0631***	0.0503***	-0.0146***	
rngn rau.	(0.008)	(0.006)	(0.009)		(0.006)	
Employee	-0.0466***	-0.0189***	` /	(0.010) 0.0400***	(0.006) -0.0173***	
Employee	(0.012)	(0.005)	-0.0014 (0.008)	(0.0400)	(0.006)	
C-1f1	-0.0591***	-0.0276***	-0.0977***			
Self-employed				0.0219**	-0.0131**	
D -4: 1	(0.012) -0.0370***	(0.006)	(0.011)	(0.009)	(0.006) -0.0180***	
Retired		-0.0087	0.0080	0.0160*		
I 0 0	(0.012)	(0.006)	(0.008)	(0.009)	(0.006)	
Income Q. 2	0.0182***	-0.0008	0.0042	0.0127*	-0.0195***	
T 0.0	(0.006)	(0.003)	(0.006)	(0.008)	(0.004)	
Income Q. 3	0.0509***	0.0121***	0.0095	0.0143*	-0.0250***	
T 0 4	(0.007)	(0.004)	(0.007)	(0.008)	(0.005)	
Income Q. 4	0.1156***	0.0553***	-0.0134	0.0362***	-0.0242***	
	(0.008)	(0.005)	(0.009)	(0.010)	(0.006)	
Wealth Q. 2	0.0568***	0.0175***	0.6802***	0.1653***	-0.0182***	
	(0.006)	(0.003)	(0.007)	(0.006)	(0.004)	
Wealth Q. 3	0.0628***	0.0210***	0.9187***	0.1092***	-0.0239***	
	(0.005)	(0.003)	(0.004)	(0.006)	(0.004)	
Wealth Q. 4	0.1245***	0.0561***	0.9447***	0.0900***	-0.0289***	
	(0.006)	(0.004)	(0.004)	(0.006)	(0.005)	
Risk Averse	-0.0479***	-0.0250***	0.0163***	0.0108**	-0.0054**	
	(0.004)	(0.003)	(0.004)	(0.005)	(0.003)	
Years Since Migration	0.0027***	0.0002	0.0025***	0.0019***	-0.0003	
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	
2006	0.0031	-0.0004	0.0010	0.0487***	0.0055	
	(0.006)	(0.004)	(0.006)	(0.007)	(0.004)	
2008	0.0056	0.0061	-0.0035	0.0357***	-0.0011	
	(0.006)	(0.004)	(0.006)	(0.007)	(0.004)	
2010	0.0042	0.0080*	-0.0181***	0.0486***	0.0056	
	(0.006)	(0.004)	(0.006)	(0.007)	(0.004)	
2012	-0.0091	-0.0025	-0.0028	0.0395***	0.0011	
	(0.006)	(0.004)	(0.006)	(0.007)	(0.004)	
North East	0.0115*	0.0101**	0.0208***	0.0121*	-0.0098***	
	(0.006)	(0.004)	(0.006)	(0.006)	(0.003)	
Center	-0.0555***	-0.0240***	0.0133**	0.0079	-0.0068*	
2 22202	(0.006)	(0.004)	(0.006)	(0.007)	(0.004)	
South	-0.0994***	-0.0434***	0.0451***	-0.0394***	-0.0049	
South	(0.006)	(0.004)	(0.006)	(0.006)	(0.003)	
Islands	-0.0690***	-0.0292***	0.0712***	-0.0286***	0.0010	
10141145	(0.007)	(0.004)	(0.006)	(0.008)	(0.005)	
N	38,665	32,492	38,665	38,665	38,665	
11	30,000	94,494	50,005	50,005	50,005	

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A6: Other Assets and Financial Fragility, All Covariates, 2006-2014

Table A6: Other	Assets and F	ınancıal Frag	ılıty, All (Covariates,	2006-2014
	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
Immigrant	-0.0054***	-0.0012*	-0.0242**	-0.1726***	0.0764***
O	(0.002)	(0.001)	(0.012)	(0.022)	(0.020)
Family Size	-0.0006	-0.0002	0.0199***	0.0017	-0.0118***
	(0.001)	(0.000)	(0.002)	(0.003)	(0.002)
Male	0.0011	0.0004	-0.0160***	-0.0939***	0.0120***
TVI COLO	(0.001)	(0.001)	(0.004)	(0.005)	(0.004)
Age	0.0008***	0.0003***	0.001)	-0.0020**	-0.0006
11gc	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Age Squared	-0.0007***	-0.0002**	-0.0019**	0.0018**	0.0013*
Age oquared	(0.000)	(0.000)	(0.001)	(0.0013)	(0.0013)
Couple	0.0010	0.0001	0.001)	0.1052***	-0.0597***
Couple	(0.001)	(0.001)	(0.0097)	(0.007)	
Medium Edu.	0.0033**	0.001)	0.005)	0.0221***	(0.005) -0.0345***
Medium Edu.					
II:l. E.l	(0.001) $0.0070***$	(0.001) $0.0028**$	(0.005)	(0.007) $0.0307***$	(0.006) -0.0502***
High Edu.			-0.0153**		
Employee	(0.002)	(0.001) 0.0004	(0.006) -0.0255***	(0.010) $0.0224**$	(0.008) 0.0477***
Employee	-0.0008				
Self-employed	(0.004)	(0.001) -0.0006	(0.007) $0.6240***$	(0.010) $0.0234*$	(0.008) 0.0499***
Sen-employed	-0.0024				
D /: 1	(0.004)	(0.001)	(0.014)	(0.012)	(0.010)
Retired	-0.0040	-0.0010	-0.0123	0.0346***	0.0355***
I 0.0	(0.004)	(0.001)	(0.008) 0.0074	(0.011) $0.0472***$	(0.007)
Income Q. 2	0.0019	0.0001			0.0231***
I O. 2	(0.002)	(0.001)	(0.006)	(0.008) $0.0747***$	(0.005) $0.0356***$
Income Q. 3	0.0019	-0.0005	-0.0039		
I O. 4	(0.002) $0.0082***$	(0.001) $0.0023**$	(0.007)	(0.009) $0.0956***$	(0.006) $0.0329***$
Income Q. 4			-0.0002		
Weelth O 2	(0.002) $0.0052***$	(0.001) $0.0014**$	(0.007) $0.0596***$	(0.010) $0.0528***$	(0.008) -0.0008
Wealth Q. 2					
W141 O 2	(0.002)	(0.001)	(0.005)	(0.007) $0.0588***$	(0.006)
Wealth Q. 3	0.0032**	0.0009	0.0620***		-0.0154**
W141- O 4	(0.002) $0.0072***$	(0.001)	(0.005) $0.1322***$	(0.008) $0.0628***$	(0.007) -0.0451***
Wealth Q. 4		0.0015*			
D: 1 A	(0.002)	(0.001)	(0.007)	(0.009)	(0.007)
Risk Averse	-0.0088***	-0.0027***	-0.0081**	-0.0467***	0.0079*
77 C: M: /:	(0.001)	(0.001)	(0.004)	(0.005)	(0.004)
Years Since Migration		0.0000	-0.0000	0.0014**	-0.0010
2000	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
2006	0.0005	0.0002	0.0075	0.0250***	0.0133**
2000	(0.001)	(0.001)	(0.005)	(0.007)	(0.006)
2008	0.0020	0.0008	-0.0059	-0.0200***	-0.0021
2010	(0.001)	(0.001)	(0.005)	(0.008)	(0.006)
2010	0.0057***	0.0029***	0.0040	-0.0201***	-0.0092
2012	(0.002)	(0.001)	(0.005)	(0.007)	(0.006)
2012	0.0002	0.0013*	0.0088*	-0.0241***	0.0029
N (1 E) ((0.001)	(0.001)	(0.005)	(0.007)	(0.006)
North East	-0.0021	-0.0008	0.0137***	-0.0264***	0.0122**
C .	(0.002)	(0.001)	(0.005)	(0.008)	(0.005)
Center	-0.0058***	-0.0012	0.0026	0.0512***	0.0150***
G 41	(0.002)	(0.001)	(0.005)	(0.007)	(0.005)
South	-0.0100***	-0.0030***	0.0287***	0.0514***	0.0849***
T 1 1	(0.001)	(0.001)	(0.005)	(0.007)	(0.006)
Islands	-0.0094***	-0.0027***	0.0154**	0.0324***	0.1173***
NT.	(0.002)	(0.001)	(0.007)	(0.008)	(0.009)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region. * significant at 10%; *** significant at 5%; *** significant at 1%.

Table A7: Other Assets and Financial Fragility, Interactions, 2006-2014

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
Immigrant*Male	-0.0026	-0.0040	-0.0043	-0.1244***	-0.0280
	(0.003)	(0.005)	(0.010)	(0.028)	(0.019)
Immigrant*Couple	0.0007	0.0014	-0.0084	-0.0292	0.0242
	(0.002)	(0.003)	(0.010)	(0.031)	(0.021)
Immigrant*Medium Edu	-	-	0.0011	0.0658	-0.0399
	-	-	(0.012)	(0.049)	(0.038)
Immigrant*High Edu	-	-	0.0086	0.0936	-0.0481
	-	-	(0.016)	(0.065)	(0.043)
Immigrant*Employee	-	-	0.0136	0.0633	-0.0183
	-	-	(0.012)	(0.043)	(0.026)
Immigrant*Self-employed	-	-	-0.0650	0.1166*	-0.0371
	-	-	(0.048)	(0.064)	(0.040)
Immigrant*Retired	-	-	0.0074	0.1353	-0.0497
	-	-	(0.022)	(0.085)	(0.040)
Immigrant*Risk Averse	0.0063*	0.0070	-0.0010	-0.0455	-0.0069
	(0.003)	(0.005)	(0.010)	(0.031)	(0.020)

The table reports marginal effects and coefficients of the interactions between the immigrant dummy and each covariate of interest. In each regression, the immigrant dummy is interacted with a single covariate of interest. Probit models are estimated for the binary dependent variables and OLS for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions include, besides the immigrant dummy: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A8: Other Assets and Financial Fragility, Propensity Score Matching, 2006-2014

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
Immigrant	-0.0013	0.0001	-0.0161*	-0.1541***	0.0573**
	(0.002)	(0.001)	(0.009)	(0.019)	(0.010)
N	38,665	32,492	38,665	38,665	38,665

The table reports coefficients from propensity score matching with robust standard errors. Immigrant stands for immigrant household head. * significant at 10%; *** significant at 5%; *** significant at 1%.

Table A9: Other Assets and Financial Fragility by Cohort of Arrival, 2006-2014

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
Pre-1980 Cohort	0.7555**	0.0114	-0.0136	-0.0846	0.1198
	(0.357)	(0.008)	(0.057)	(0.113)	(0.137)
1980s Cohort	0.3292	0.0115	-0.0176	-0.1931**	0.1658*
	(0.231)	(0.010)	(0.041)	(0.086)	(0.100)
1990s Cohort	0.0232	0.0022	-0.0525***	-0.1936***	0.0914**
	(0.027)	(0.002)	(0.017)	(0.048)	(0.045)
Post-2000 Cohort	-0.0022	0.0004	-0.0087	-0.1526***	0.0808***
	(0.005)	(0.001)	(0.016)	(0.027)	(0.026)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A10: Other Assets and Financial Fragility by Country of Origin, 2006-2012

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
			Panel A		
Immigrant	-0.0054***	-0.0015*	-0.0221	-0.1743***	0.0784***
	(0.002)	(0.001)	(0.015)	(0.026)	(0.025)
N	30,742	25,769	30,742	30,742	30,742
	Panel B				
EU15 & N.America	0.0043	-0.0001	0.0179	-0.1397*	0.2348**
	(0.015)	(0.005)	(0.059)	(0.084)	(0.113)
New EU	-	-0.0024*	-0.0097	-0.1062***	0.0464
	-	(0.001)	(0.024)	(0.035)	(0.029)
Other EU	-0.0019	0.0006	-0.0158	-0.1522***	0.0715**
	(0.004)	(0.002)	(0.024)	(0.034)	(0.029)
North Africa	-	-0.0026*	-0.0328	-0.1944***	0.1723***
	-	(0.001)	(0.024)	(0.048)	(0.066)
Sub-S.Africa	-	-0.0029**	-0.0847***	-0.2754***	0.0841*
	-	(0.001)	(0.018)	(0.054)	(0.046)
Central & S.America	-	-0.0031**	-0.0471**	-0.1927***	0.0353
	-	(0.001)	(0.022)	(0.060)	(0.046)
Asia & Oceania	-0.0067**	-0.0011	-0.0012	-0.2637***	0.0792
	(0.003)	(0.002)	(0.022)	(0.054)	(0.051)
N	30,591	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A11: Other Assets, Financial Fragility and Intermarriage (Couples Sub-Sample),

2006-2014

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
			Panel A		
Immigrant	-0.0066***	-0.0018**	-0.0416**	-0.1715***	0.0208
	(0.003)	(0.001)	(0.018)	(0.030)	(0.019)
N	24,134	21,071	24,134	24,134	24,134
			Panel B		
Mixed Immigrant Head	0.0204	0.0069	0.0475	-0.0511	-0.0135
-	(0.024)	(0.007)	(0.055)	(0.045)	(0.026)
Mixed Immigrant Spouse	0.0023	0.0008	0.0158	-0.0103	0.0158
•	(0.004)	(0.002)	(0.017)	(0.013)	(0.011)
Both Immigrants		-0.0010	-0.0415**	-0.1607***	0.0166
0		(0.001)	(0.017)	(0.030)	(0.019)
N	24,134	21,071	24,134	24,134	24,134
			Panel C		
Mixed Imm. Head Male	0.0074	0.0124	0.0374	-0.1024	-0.0204
	(0.031)	(0.016)	(0.049)	(0.072)	(0.024)
Mixed Imm. Head Female	0.0285	0.0050	0.0515	-0.0321	-0.0042
	(0.028)	(0.005)	(0.059)	(0.046)	(0.035)
Mixed Imm. Spouse Male	0.0211	0.0038	0.0049	-0.0675	0.1009*
•	(0.019)	(0.005)	(0.045)	(0.041)	(0.053)
Mixed Imm. Spouse Female	-0.0002	0.0005	0.0187	-0.0028	0.0107
•	(0.004)	(0.002)	(0.018)	(0.013)	(0.011)
Both Immigrants		-0.0001	-0.0419**	-0.1678***	0.0153
		(0.002)	(0.016)	(0.031)	(0.018)
N	23,948	20,904	23,948	23,948	23,948

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A12: Asset Holdings, Foreign Citizens, 2006-2012

	Holding	Share of	Holding	Holding	Financial
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility
Immigrant (Non-Citizen)	-0.0052**	-0.0006	-0.0305***	-0.1423***	0.0549***
	(0.002)	(0.002)	(0.011)	(0.021)	(0.020)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A13: Asset Holdings and the Great Recession: Pre- and Post-Crisis, 2006-2014

	Holding	Share of	Holding	Holding	Financial	
	Foreign Assets	Foreign Assets	Business	Valuables	Fragility	
	Pre-Crisis (2006-2008)					
Immigrant	-0.0046*	-0.0008	-0.0186	-0.1882***	0.0158	
	(0.003)	(0.001)	(0.032)	(0.049)	(0.039)	
N	15,152	12,810	15,152	15,152	15,152	
	Post-Crisis (2010-2014)					
Immigrant	-0.0052*	-0.0012	-0.0226	-0.1527***	0.0987***	
	(0.003)	(0.001)	(0.015)	(0.026)	(0.025)	
N	23,513	19,682	23,513	23,513	23,513	

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable Share of Foreign Assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects. * significant at 10%; ** significant at 5%; *** significant at 1%