

Financial Literacy, Financial Advice and Mortgage Risks

by Raun van Ooijen and Maarten van Rooij

Discussion by Costanza Torricelli

University of Modena and Reggio Emilia and CEFIN

Netspar International Pension Workshop, January 2014

Aims and Relevance of the Paper

Aims

- 1 Examine whether financially sophisticated households *better understand* the risks of their mortgage loan
- 2 Whether they *take out* different mortgages compared to households with lower levels of financial knowledge

Relevance:

- It adds to the literature of Financial Literacy and Financial decision making pioneered by Lusardi et al.
- NL very appropriate mortgage mkt for such an analysis
- Important policy implications not just in terms of financial education, but also on the role of financial advice

Measures used for Financial Literacy

Financial Ability is measured by two sets of questions and lots of descriptives analysed

- 1 **Financial Literacy (FL):** the canonical 3 questions designed by A. Lusardi for the HRS (also Alessie et al 2011)
 - to test the understanding of basic concepts such as *compound interest, inflation and portfolio diversification*
 - it appears higher than US but cautious interpretation because of wording issue
- 2 **Debt Literacy (DL):** a set of 3 questions piloted by Lusardi and Tufano (2009)
 - *more difficult*, require higher numeracy skills and better understanding of loans
 - performance of Dutch respondents overwhelmingly good – nearly double gets it right compared to US

Measures used for Mortgage Risk

Two questions to elicit (self-assessed) measures of Mortgage Risk:

- 1 **Income Risk** of being unable to meet the repayments (declining income or rising interest rates with ARM) mortgages;
- 2 **Wealth Risk** of negative housing equity because of house price decline, mortgage in excess of housing value

Ask mortgage owners to rate 6 different mortgage types and to get an unbiased (i.e. comparable across respondents) measure

- first run an ordered probit of self reported riskiness of mortgage contract as a function of objective risk features
- then use the predicted values to create an unbiased measure of self-assessed risk

This unbiased measure of self-assessed risk is then regressed on measures of FL/DL

Main Results from descriptives and econometric analysis

- Individuals with higher FL more often have Interest-only mortgages
- Individuals with lower FL more often have traditional mortgages
- No clear association between FL and mortgage attributes
- Low FL individuals *perceive* mortgage features such as an interest-only component or adjustable interest rates more risky compared to more FL individuals
- Higher level of DL is related to the ownership of riskier mortgages
- Final specification (Tabel 15): FL does not matter but DKs do (+), DL matters (+) DKs don't, perceived risk always matter (+), role for intermediaries and family

The dependent variable

- Fine as long as you use mortgage attributes or types (Table 12 and 13)
- But when you use risk perception, don't you have an omitted variable or reverse causality problem?
- Some of your results could be explained by familiarity (e.g. those on IO)
- An interesting dependent variable could be some comparison between risk perception and actual (default event) in order to test for the role of FL and DL for the goodness of household mortgage choices

The dependent variable

- Fine as long as you use mortgage attributes or types (Table 12 and 13)
- But when you use risk perception, don't you have an omitted variable or reverse causality problem?
- Some of your results could be explained by familiarity (e.g. those on IO)
- An interesting dependent variable could be some comparison between risk perception and actual (default event) in order to test for the role of FL and DL for the goodness of household mortgage choices

The dependent variable

- Fine as long as you use mortgage attributes or types (Table 12 and 13)
- But when you use risk perception, don't you have an omitted variable or reverse causality problem?
- Some of your results could be explained by familiarity (e.g. those on IO)
- An interesting dependent variable could be some comparison between risk perception and actual (default event) in order to test for the role of FL and DL for the goodness of household mortgage choices

The dependent variable

- Fine as long as you use mortgage attributes or types (Table 12 and 13)
- But when you use risk perception, don't you have an omitted variable or reverse causality problem?
- Some of your results could be explained by familiarity (e.g. those on IO)
- An interesting dependent variable could be some comparison between risk perception and actual (default event) in order to test for the role of FL and DL for the goodness of household mortgage choices

What risks and what measures?

To better interpret results (and my comments) I suggest to distinguish the different types of risks and think of the appropriate measure

- 1 Mortgage **credit risk**: mainly default risk, measured e.g. by LTV, LTI,PTI
- 2 Mortgage **market risk**: mainly interest rate risk as measured by (Macaulay)Duration, but also stock mkt risk for e.g. endowment mortgages
- 3 **Background risks**: e.g. income risk (measured by the correlation between future labour income risk and mortgage attributes) and equity risk (related mainly to credit and macro risk)

What risks and what measures?

To better interpret results (and my comments) I suggest to distinguish the different types of risks and think of the appropriate measure

- 1 Mortgage **credit risk**: mainly default risk, measured e.g. by LTV, LTI,PTI
- 2 Mortgage **market risk**: mainly interest rate risk as measured by (Macaulay)Duration, but also stock mkt risk for e.g. endowment mortgages
- 3 **Background risks**: e.g. income risk (measured by the correlation between future labour income risk and mortgage attributes) and equity risk (related mainly to credit and macro risk)

What risks and what measures?

To better interpret results (and my comments) I suggest to distinguish the different types of risks and think of the appropriate measure

- 1 Mortgage **credit risk**: mainly default risk, measured e.g. by LTV, LTI,PTI
- 2 Mortgage **market risk**: mainly interest rate risk as measured by (Macaulay)Duration, but also stock mkt risk for e.g. endowment mortgages
- 3 **Background risks**: e.g. income risk (measured by the correlation between future labour income risk and mortgage attributes) and equity risk (related mainly to credit and macro risk)

More precise associations

You look at the association between FL/DL and risk, whereby the latter refers to different types of risks of different mixtures

Do you ex-ante expect to have the same type of association for all the risk types?

Ex. what you define "income risk" is actually a mix of interest rate risk and mere income risk

This may explain why you do not find clear association between FL and mortgage attributes because the latter mainly relate to credit risk and FL questions relate to literacy on interest rate, inflation and portfolio

Different questions

Why not looking at the association between FL/DL and each type of risk separately as much as possible?

- IO Mortgages mainly related to negative equity risk, i.e. mkt risk
- but FL questions are perhaps too far from this type of risk and this might explain why high FL is associated with IO choice

Different questions

Why not looking at the association between FL/DL and each type of risk separately as much as possible?

- IO Mortgages mainly related to negative equity risk, i.e. mkt risk
- but FL questions are perhaps too far from this type of risk and this might explain why high FL is associated with IO choice

Different interpretations

- Mortgages which you generally interpret as more risky are not necessarily so
- e.g. ARM have, ceteris paribus, lower Duration than FRM, which is consistent with one of your finding
- Cocco (2013) highlights the benefits in terms of *consumption smoothing* potential of IO mortgages (or ARM) for individuals with rising wage patterns. Do you take that into account?
 - Could you control for income patterns, perhaps also in term of interactions as FL should have different outcomes for flat vs rising incomes
 - Couldn't you control for the asset side? Riskiness of the mortgage depends on that too

Different interpretations

- Mortgages which you generally interpret as more risky are not necessarily so
- e.g. ARM have, *ceteris paribus*, lower Duration than FRM, which is consistent with one of your finding
- Cocco (2013) highlights the benefits in terms of *consumption smoothing* potential of IO mortgages (or ARM) for individuals with rising wage patterns. Do you take that into account?
 - Could you control for income patterns, perhaps also in term of interactions as FL should have different outcomes for flat vs rising incomes
 - Couldn't you control for the asset side? Riskiness of the mortgage depends on that too

Different interpretations

- Mortgages which you generally interpret as more risky are not necessarily so
- e.g. ARM have, ceteris paribus, lower Duration than FRM, which is consistent with one of your finding
- Cocco (2013) highlights the benefits in terms of *consumption smoothing* potential of IO mortgages (or ARM) for individuals with rising wage patterns. Do you take that into account?
 - Could you control for income patterns, perhaps also in term of interactions as FL should have different outcomes for flat vs rising incomes
 - Couldn't you control for the asset side? Riskiness of the mortgage depends on that too

Different interpretations

- Mortgages which you generally interpret as more risky are not necessarily so
- e.g. ARM have, ceteris paribus, lower Duration than FRM, which is consistent with one of your finding
- Cocco (2013) highlights the benefits in terms of *consumption smoothing* potential of IO mortgages (or ARM) for individuals with rising wage patterns. Do you take that into account?
 - Could you control for income patterns, perhaps also in term of interactions as FL should have different outcomes for flat vs rising incomes
 - Couldn't you control for the asset side? Riskiness of the mortgage depends on that too

Different interpretations

- Mortgages which you generally interpret as more risky are not necessarily so
- e.g. ARM have, ceteris paribus, lower Duration than FRM, which is consistent with one of your finding
- Cocco (2013) highlights the benefits in terms of *consumption smoothing* potential of IO mortgages (or ARM) for individuals with rising wage patterns. Do you take that into account?
 - Could you control for income patterns, perhaps also in term of interactions as FL should have different outcomes for flat vs rising incomes
 - Couldn't you control for the asset side? Riskiness of the mortgage depends on that too

The role of intermediaries

- If FL/DL does not have an impact on the perception of risk, how is it meant to affect the riskiness of the mortgage contract?
- Which are the channels?
 - Is it through intermediaries?
- Or are you saying that even though DL/FL do not have an impact on the perception of risk of different features, they do have an impact on the overall perception?

The Role of DKs

Results:

- Table 15 Panel B shows that, even though FL is not significant, illiteracy (that is answering all *don't know*) is the real issue, since it is strongly associated with riskier mortgages
- Is it a confidence problem?

Comment:

- ALL DK's in the regression, but more commentary would be interesting
- you suggest that one of the channels could be the action of financial advisers who take advantage of low literacy to push consumers towards riskier products
- But the effect remains strong even after controlling for source of advice
 - it may be interesting to interact ALL DK's and source of advice to check complementarities/substitutional effects

The Role of DKs

Results:

- Table 15 Panel B shows that, even though FL is not significant, illiteracy (that is answering all *don't know*) is the real issue, since it is strongly associated with riskier mortgages
- Is it a confidence problem?

Comment:

- ALL DK's in the regression, but more commentary would be interesting
- you suggest that one of the channels could be the action of financial advisers who take advantage of low literacy to push consumers towards riskier products
- But the effect remains strong even after controlling for source of advice
- it may be interesting to interact ALL DK's and source of advice to check complementarities/substitutional effects

The Role of DKs

Results:

- Table 15 Panel B shows that, even though FL is not significant, illiteracy (that is answering all *don't know*) is the real issue, since it is strongly associated with riskier mortgages
- Is it a confidence problem?

Comment:

- ALL DK's in the regression, but more commentary would be interesting
- you suggest that one of the channels could be the action of financial advisers who take advantage of low literacy to push consumers towards riskier products
- But the effect remains strong even after controlling for source of advice
 - it may be interesting to interact ALL DK's and source of advice to check complementarities/substitutional effects

The Role of DKs

Results:

- Table 15 Panel B shows that, even though FL is not significant, illiteracy (that is answering all *don't know*) is the real issue, since it is strongly associated with riskier mortgages
- Is it a confidence problem?

Comment:

- ALL DK's in the regression, but more commentary would be interesting
- you suggest that one of the channels could be the action of financial advisers who take advantage of low literacy to push consumers towards riskier products
- But the effect remains strong even after controlling for source of advice
 - it may be interesting to interact ALL DK's and source of advice to check complementarities/substitutional effects

Final Comment

Very interesting paper, lots of ideas, lots of material, but not always easy to follow

Presentation suggestions:

- reduce descriptives from the current 9 Tables to just a few
- controls are very important, list them in the text
- tables' panel without controls are not interesting
- be careful with questions translation: those on DL contains misprints that are misleading

Final Comment

Very interesting paper, lots of ideas, lots of material, but not always easy to follow

Presentation suggestions:

- reduce descriptives from the current 9 Tables to just a few
- controls are very important, list them in the text
- tables' panel without controls are not interesting
- be careful with questions translation: those on DL contains misprints that are misleading

Final Comment

Very interesting paper, lots of ideas, lots of material, but not always easy to follow

Presentation suggestions:

- reduce descriptives from the current 9 Tables to just a few
- controls are very important, list them in the text
- tables' panel without controls are not interesting
- be careful with questions translation: those on DL contains misprints that are misleading

Final Comment

Very interesting paper, lots of ideas, lots of material, but not always easy to follow

Presentation suggestions:

- reduce descriptives from the current 9 Tables to just a few
- controls are very important, list them in the text
- tables' panel without controls are not interesting
- be careful with questions translation: those on DL contains misprints that are misleading

Minor Comments

Very minor comments

- Page 19 (in the conclusions) you say that “interest-only mortgages are more prevalent among borrowers with high FL” - The regression (table 13, panel B) shows no significant effect of either DL or FL
- You also say no association between FL and LTV/LTI, but table 12 shows significant negative association between FL and current LTV/LTV, and negative association between DL an original LTV/LTI

Minor Comments

Very minor comments

- Page 19 (in the conclusions) you say that “interest-only mortgages are more prevalent among borrowers with high FL” - The regression (table 13, panel B) shows no significant effect of either DL or FL
- You also say no association between FL and LTV/LTI, but table 12 shows significant negative association between FL and current LTV/LTV, and negative association between DL an original LTV/LTI