

Female Portfolio Choices and Marital Property Regime¹

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13th Research Workshop BdE-CEMFI

¹The views expressed here are those of the authors and do not necessarily represent the views of the ECB or the Bank of Spain

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Literature studying how these rules influence female labor supply [Voena \(2015\)](#); [Imre \(2022\)](#), fertility, divorce ([Brassiolo, 2013](#); [Imre, 2022](#)), asset accumulation [Voena \(2015\)](#)

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This paper: How do property division rules shape household financial portfolio choices?

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Our paper: financial portfolio choices (safe vs risky asses); gender dimension (Bajtelsmit and Bernasek, 1996; Barber and Odean, 2001; Lusardi and Mitchell, 2014)

This paper

Empirical analysis

Provide causal estimates of property regimes on household financial behavior

- 1 Exploit regional variation in marital laws in Spain + household wealth survey data (EFF)

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Theoretical & Quantitative Analysis

Build a household financial portfolio choice model to analyze the mechanisms

- | Wives make savings decisions
- | Couples face a probability of divorce & differ in the property division rule

Calibrate the model to two-earner married Spanish households

Counterfactual experiments: property division rules & income profiles

The mechanism

- Divorce constitutes a financial risk:

(i) **Costly**
(ii) State with **lower income level; higher income risk** } " safe assets

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 - 2) 50-50 rule for community-property: risky assets $\text{spouse}^{COM} < \text{spouse}^{SEP}$

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- | Gender differences in income profiles
 - 2) Women earn less; more volatile earnings: risky assets $\text{wives}^{\text{COM}} < \text{husb}^{\text{COM}}$ for the same cost

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$$\frac{\text{Risky Assets}^{W,SEP}}{\text{Risky Assets}^{W,COM}} > \frac{\text{Risky Assets}^{H,SEP}}{\text{Risky Assets}^{H,COM}}$$

Institutional Setting and Data

Spanish Marital Property Regime Legislation



- Couples can opt out of the default regime by signing prenuptial contracts (17% total marriages 2002-2020) [Data](#)

Data

Spanish Survey of Household Finances

- **Spanish Survey of Household Finances**; Bank of Spain 2002-2020 (7 waves)
- Detailed information on wealth, debt, and income of Spanish households
- Sample of married couples; both spouses work (# 4,306 couples) All F M
 - | Financial portfolio (bank deposits, equity, mutual funds, etc.)
 - | Marital property regime
 - | Gender of the spouse most knowledgeable about household finances

Empirical Strategy

IV approach

- Couples can use prenuptial contracts to opt out of the default regime
 - † Wealthier spouses might self-select into separate property ([Frémeaux and Leturcq, 2020](#))

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$$Y_{i,t} = \beta_0 + \beta_1 \text{Sep. Property}_{i,t} + \delta^0 X_{i,t} + \lambda_t + v_{i,t}$$

$$\text{Sep. Property}_{i,t} = \alpha_0 + \alpha_1 \text{Region}_{i,t} + \gamma^0 X_{i,t} + \lambda_t + \varepsilon_{i,t}$$

- ▮ $\text{Region}_{i,t} = 1$ for Catalonia and Balearic Islands as IV

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- † $\text{Region}_{i,t} = 1$ for Catalonia and Balearic Islands as IV
- † $Y_{i,t}$: participation and share in risky assets (equity and mutual funds)
- † $X_{i,t}$ vector of household characteristics (age, educ, occupation financial sector, housing tenure, etc); λ_t survey FE

IV Estimates

Results

Table: 2SLS Estimates - Participation in Risky Financial Assets

	(1) Participation Risky Assets	(2) Participation Risky Assets	(3) Participation Risky Assets
	All couples	Wife household head	Husband household head
Separate Property	-0.013 (0.035)	0.092*** (0.022)	-0.058 (0.043)
Mean Outcome	0.28	0.20	0.32
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	4306	1482	2824

First Stage

OLS Estimates

IV Estimates

Results

Table: 2SLS Estimates - % Risky Financial Assets

	(1) Share Risky Assets	(2) Share Risky Assets	(3) Share Risky Assets
	All couples	Wife household head	Husband household head
Separate Property	-0.254 (1.538)	3.249*** (0.991)	-1.780 (1.886)
Mean Outcome	9.68	6.52	11.40
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	4306	1482	2824

OLS Estimates

Robustness Checks

Exclusion restriction: property division rules affect financial outcomes **only** through couples adopting the default regime

- | Regional default regimes emanate from historical roots (Roman empire, Visigothic kingdom) ! Shape culture, regional development, etc

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Robustness

- | Regional controls (GDP, unemployment)
- | Socio-economic characteristics
 - F Risk attitudes, social norms (mother's occupation), financial sophistication (online banking)

Other robustness

- | Outliers. Restrict sample to wives second-earners

Theoretical Model

Theoretical Framework

Setting

- Households consist of two individuals $i \in \{w, h\}$ who live for two periods
 - | **First period:** wife chooses consumption c and how much to save in a risky asset (a_r^w) and safe asset (a_s^w) given her husband's saving decisions
 - | **Second period:** couples divorce with probability δ and consume all savings and income

Theoretical Framework

Setting

Preferences

$$u(c) = \frac{c^{1-\gamma}}{1-\gamma}$$

Asset returns

$$r_r \sim N(\mu_r, \sigma_r^2) \quad \text{with } \mu_r > r_s$$

Income profiles

$$y^{i,m} = \bar{y}^{i,m} \epsilon^{i,m}; \quad \ln(\epsilon^{i,m}) = \rho \epsilon^{i,m} + v; \quad v \sim N(0, \sigma_{i,m}^2).$$

Budget constraint

$$c + \sum_{i=w,h} a_s^{i^0} + \sum_{i=w,h} a_r^{i^0} = \sum_{i=w,h} y_t^{i,m} + \underbrace{\sum_{i=w,h} (1+r_r) a_r^{i^0} + \sum_{i=w,h} (1+r_s) a_s^{i^0}}_{\sum_i a^{i^0}}$$

Married Problem

Theoretical Framework

Setting

Divorce and marital property regime. Budget constraint in the second period if the couple divorces

$$c^{i^0} = \begin{cases} y^{i,m^0} + \frac{a^{w^0} + a^{h^0}}{2} & \text{if } m = c \\ y^{i,m^0} + a^{i^0} & \text{if } m = s \end{cases} \quad (1)$$

Divorce Problem

Theoretical Framework

Calibration

- Calibrate the model to Spanish couples whose household finances are led by wives
- Externally calibrated parameters calibration
 - | Income profiles of couples Go
 - | Husband savings (total savings, risky participation & share) Go
 - | Divorce probability Go
 - | Risky asset return

Theoretical Framework

Calibration

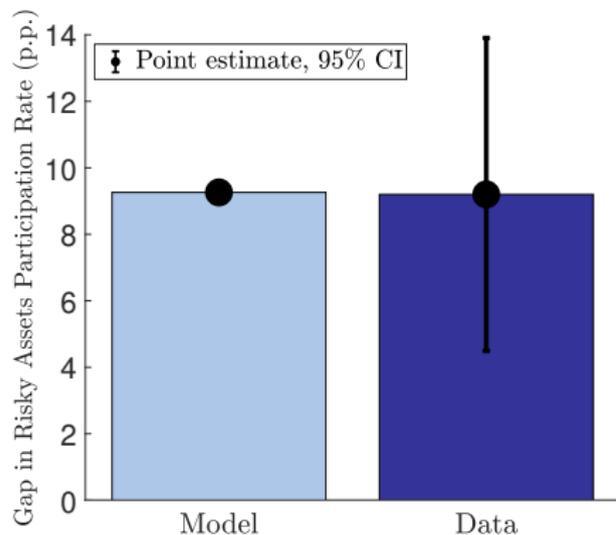
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 - | Income profiles of couples Go
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 - | Risky asset return
- **Target:** estimated gap in risky assets participation

$$c^i = \begin{cases} y^{i,m} + (1 - \kappa) \frac{a^w + a^h}{2} & \text{if } m = c \\ y^{i,m} + a^i & \text{if } m = s \end{cases} \quad \kappa = 0.4 \quad (2)$$

Data

Theoretical Framework

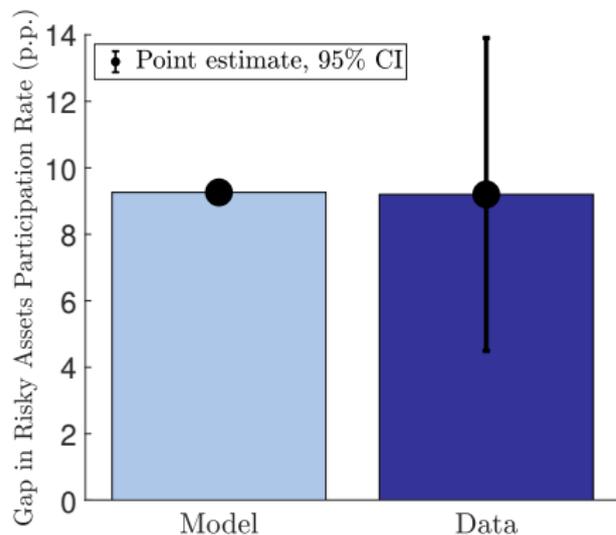
Targeted and Untargeted Moments



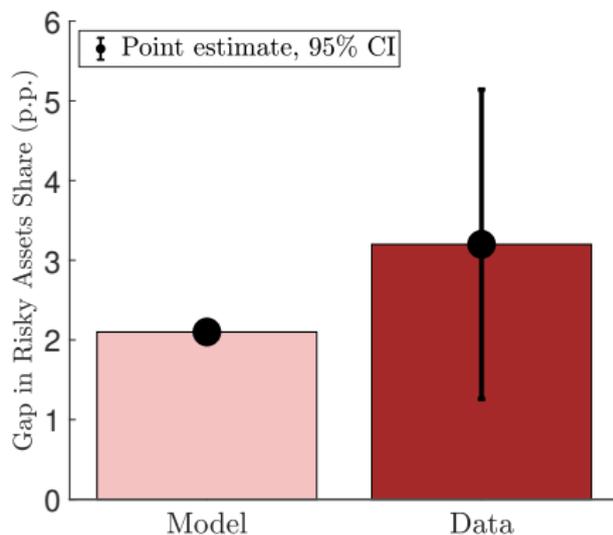
(a) Participation risky assets (targeted)

Theoretical Framework

Targeted and Untargeted Moments



(a) Participation risky assets (targeted)



(b) Share risky assets (untargeted)

Theoretical Framework

More results

	Model		Data	
	Separate	Community	Separate	Community
Participation risky assets	25.52%	16.26%	28.20%	13.79%
Wife	12.24%	1.44%		
Husband	15.12%	15.12%		

More results

Explaining the property regime gap

In the model, property division rules introduce differences in:

- | Dissolution cost of marriage
- | Sharing rule of assets upon divorce
- | Husbands' savings
- | Income profiles of both spouses

Theoretical Results

Counterfactual Exercises

Exercise 1. Dissolution cost of marriage (κ)

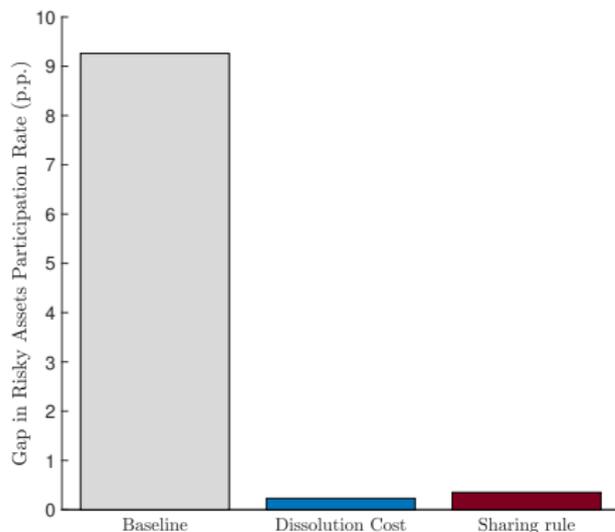
$$c^i = \begin{cases} y^{i,m} + \frac{a^w + a^h}{2} & \kappa^i \text{ if } m = c \\ y^{i,m} + \frac{a^w + a^h}{2} & \text{if } m = s \end{cases}$$

Exercise 2. Sharing rule of assets upon divorce

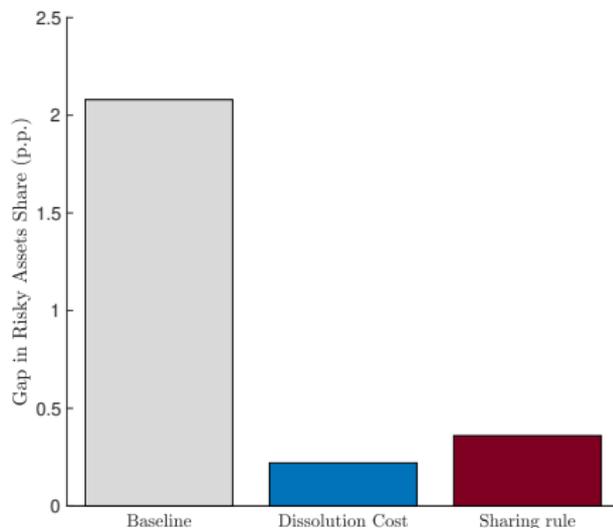
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Theoretical Results

Counterfactual Exercise: The Role of Property Division Rules



(a) Participation risky assets



(b) Share risky assets

Theoretical Results

Counterfactual Exercises

Exercise 3. Husbands' savings

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- | Use husbands' savings in separate-property; # a^h
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Exercise 4. Income profiles

$$y^{w,c} = \bar{y}^{w,c} \epsilon^{w,c}; \quad \ln(\epsilon^{w,c}) = \rho \epsilon^{w,c} + v; \quad v \sim N(0, \sigma_{w,c}^2).$$

Use income profile of wives in separate-property: " σ, ρ # \bar{y}

- | Compared to the **baseline economy**, gap risky participation " 0.8 p.p
- | Compared to the **baseline economy**, gap risky participation # 0.02 p.p

Recap: Empirical Results & Model Validation

Empirical results

- | Property regime gap in risky financial investment
 - F 9.2 % more likely to participate in risky assets
 - F 3.2 p.p higher share of risky assets in the portfolio
- | Only when **wives** are household heads; no effect when **husbands** are

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Is our model able to replicate this no-effect when husbands make savings decisions?

- | In the model, gender heterogeneity (i) **income profiles**; (ii) **the other spouse's savings process**
- | Calibrate the model to male-headed Spanish couples in the data

Theoretical Results

Why only female-headed households?

	Wife is household head		Husband is household head	
	Separate	Community	Separate	Community
Income household head				
\bar{y}	24,000	16,000	27,000	24,000
σ	0.260	0.237	0.180	0.192
ρ	0.934	0.940	0.821	0.827
Other spouse's savings				
a^j/y	0.193	0.210	0.194	0.195
Participation	15.4%	15.4%	13.7%	13.7%
Conditional risky share	36.9%	36.9%	23.4%	23.4%

Table: Income process and other spouse's savings parameters

Theoretical Results

Why only female-headed households?

	Baseline		Counterfactual	
	Wife is household head	Husband is household head	Wife is household head	Husband is household head
	Separate	Community	Separate	Community
Share risky assets	4.61%	2.53%	4.63%	4.61%
Wife	3.00%	0.26%	3.31%	3.31%
Husband	7.09%	7.09%	5.09%	5.07%
Gap	2.08pp		0.03 pp	

Other results

Theoretical Results

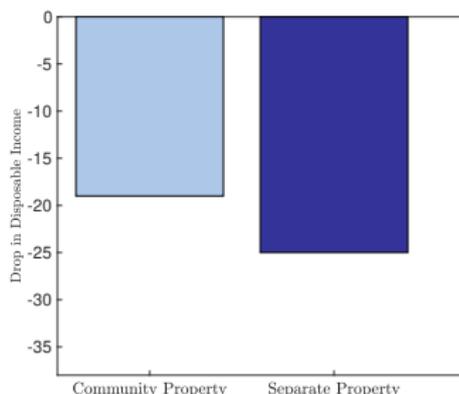
Why only female-headed households?

- Disposable income in marriage $y^{DI,i,m} = y^{i,m} + y^{j,m} \quad a^j \quad m \in \{c, sg\}$
- Disposable income in divorce $y^{DI,i} = \begin{cases} y^{i,m} + (1 - \kappa) \frac{a^j}{2} & \text{if } m = c \\ y^{i,m} & \text{if } m = s \end{cases}$

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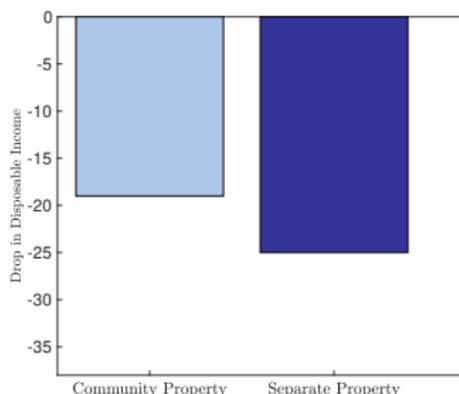


(a) Husband household head

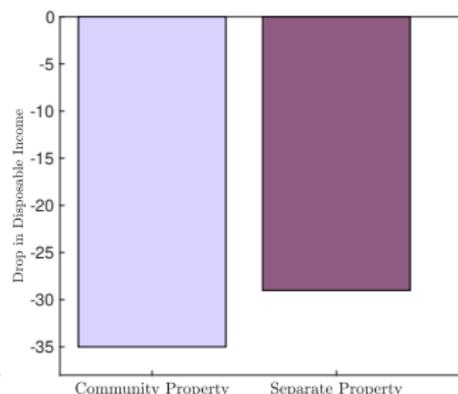
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(a) Husband household head



(b) Wife household head

Figure: Drop Disposable Income upon Divorce

Conclusions

- Empirical Evidence
 - ┆ Provide causal estimates of marital property regime on household financial outcomes
 - ┆ Separate property couples hold riskier portfolios whenever wives are the most knowledgeable about household finances
- Theoretical Model & Quantitative Analysis
 - ┆ Differences in (i) dissolution cost (ii) sharing rule of assets in divorce can generate the property regime gap in risky asset holdings
 - ┆ Lower permanent income and higher income risk for women reinforce this mechanism

Thank you!

Appendix

Household Summary Statistics - All couples [Back](#)

	Mean	St. dev.	Separate	Community
Panel A. Socioeconomic characteristics				
<i>Household head</i>				
Separate property	0.26	0.44		
Female	0.34	0.47	0.32	0.35
Age	46	8.69	46	46
Education				
Less than high school	0.23	0.43	0.16	0.26
High School	0.34	0.47	0.31	0.35
College	0.43	0.49	0.53	0.39
Occupation in financial sector	0.05	0.22	0.08	0.04
<i>Comparative ratios bw spouses</i>				
Education ratio bw spouses	1.10	0.48	1.10	1.11
Age ratio bw spouses	1.03	0.10	1.04	1.03
Wage ratio bw spouses	1.58	1.82	1.74	1.53
<i>Other controls</i>				
Home-ownership				
Rent	0.09	0.29	0.10	0.09
Ownership	0.87	0.33	0.86	0.88
Other	0.04	0.18	0.05	0.03
Household size	3.52	0.99	3.47	3.53
Income (thousands eur)	66.95	92.96	90.35	58.79
Net wealth (thousands eur)	552.02	3418.54	1123.63	351.35
Panel B. Financial Variables				
<i>Financial Variables</i>				
Participation risky assets	0.30	0.48	0.38	0.27
Risky asset classes (%Total asset classes)	0.15	0.24	0.19	0.14
Risky assets share	0.15	0.29	0.21	0.13

Appendix

Household Summary Statistics - Wife is Household Head [Back](#)

	Mean	St. dev.	Separate	Community
Panel A. Socioeconomic characteristics				
<i>Household head</i>				
Separate property	0.25	0.43		
Age	44	7.98	44	44
Education				
Less than high school	0.24	0.43	0.19	0.26
High School	0.35	0.48	0.31	0.36
College	0.40	0.49	0.50	0.37
Occupation in financial sector	0.05	0.23	0.08	0.05
<i>Comparative ratios bw spouses</i>				
Education ratio bw spouses	1.24	0.56	1.20	1.26
Age ratio bw spouses	0.98	0.09	0.98	0.97
Wage ratio bw spouses	0.83	0.65	0.89	0.81
<i>Other controls</i>				
Home-ownership				
Rent	0.11	0.29	0.13	0.11
Ownership	0.84	0.33	0.82	0.85
Other	0.04	0.18	0.05	0.04
Household size	3.55	0.99	3.52	3.56
Income (thousands eur)	55.12	46.98	67.52	51.08
Net wealth (thousands eur)	306.46	614.22	464.76	254.90
Panel B. Financial Variables				
<i>Financial Variables</i>				
Participation risky assets	0.22	0.41	0.33	0.18
Risky asset classes (%Total asset classes)	0.11	0.21	0.17	0.09
Risky assets share	0.10	0.24	0.16	0.08

Appendix

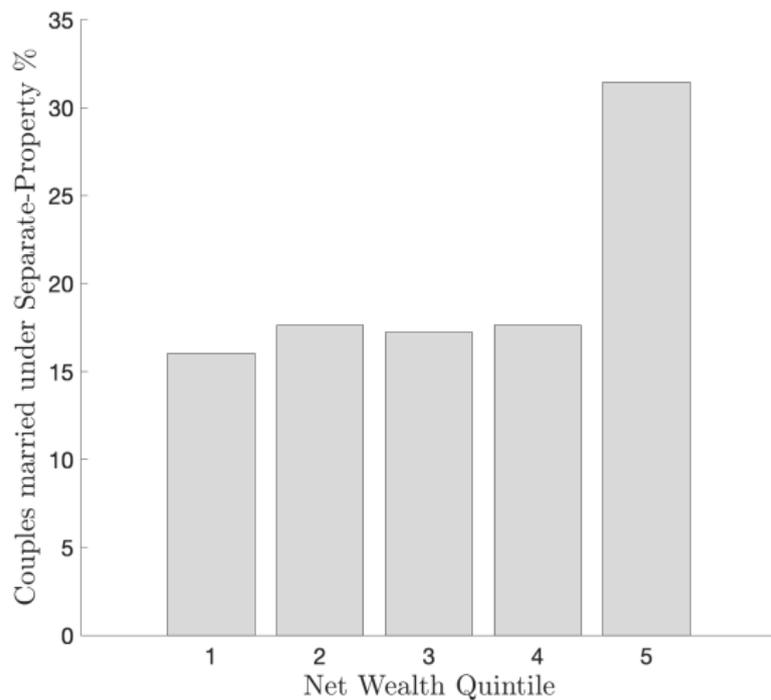
Household Summary Statistics - Husband is Household Head

[Back](#)

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Panel A. Socioeconomic characteristics				
<i>Household head</i>				
Separate property	0.27	0.44		
Age	47	8.88	47	47
Education				
Less than high school	0.23	0.42	0.15	0.26
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<i>Comparative ratios bw spouses</i>				
Education ratio bw spouses	1.04	0.41	1.05	1.03
Age ratio bw spouses	1.06	0.09	1.06	1.06
Wage ratio bw spouses	1.98	2.09	2.14	1.92
<i>Other controls</i>				
Home-ownership				
Rent	0.08	0.27	0.08	0.08
Ownership	0.89	0.32	0.87	0.89
Other	0.03	0.17	0.04	0.03
Household size	3.50	1.00	3.45	3.51
Income (thousands eur)	73.17	109.00	101.28	62.92
Net wealth (thousands eur)	679.90	4186.65	1438.94	403.04
Panel B. Financial Variables				
<i>Financial Variables</i>				
Participation risky assets	0.35	0.48	0.41	0.32
Risky asset classes (%Total asset classes)	0.18	0.25	0.21	0.16
Risky assets share	0.18	0.31	0.23	0.16

Appendix

Opting Out of Community Property



IV Estimates

First-Stage

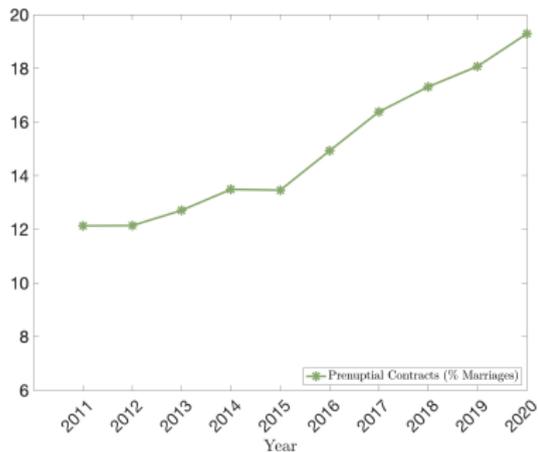
Table: First-stage Regression

	(1) Sep. Property
Regions with Default Sep. Property	0.556*** (0.014)
Household Characteristics	Yes
Survey FE	Yes
F-value	118.50
Prob > F	0.000
Observations	4306

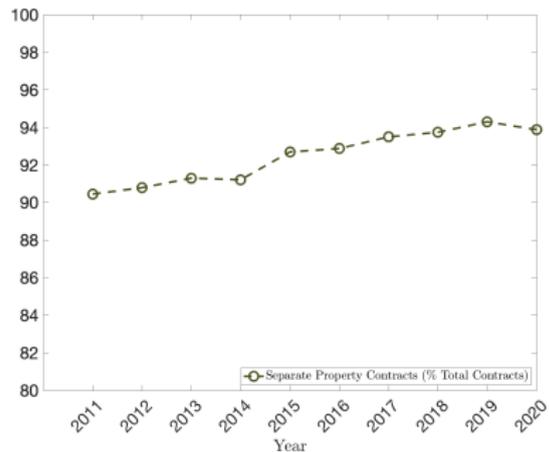
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Appendix

Prenuptial Contracts



(a) Prenuptial Contracts (% Marriages)



(b) Separate Property (% Total Contracts)

Figure: Prenuptial Contracts

Appendix

OLS Results

Table: OLS Estimates - Participation in Risky Financial Assets

	(1) Participation Risky Assets	(2) Participation Risky Assets	(3) Participation Risky Assets
	All couples	Wife household head	Husband household head
Separate Property	0.035 (0.022)	0.095*** (0.023)	0.005 (0.022)
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	4306	1482	2824

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Appendix

OLS Results

Table: OLS Estimates - % Risky Financial Assets

	(1) Share Risky Assets	(2) Share Risky Assets	(3) Share Risky Assets
	All couples	Wife household head	Husband household head
Separate Property	3.355*** (1.085)	4.321*** (1.007)	2.717** (1.253)
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	4306	1482	2824

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Appendix

Robustness

Table: Robustness Checks - Regional Controls

	(1) Participation Risky Assets	(2) Share Risky Assets
Separate Property	0.080*** (0.024)	2.740*** (0.990)
Mean Outcome	0.20	6.42
GDP	×	×
Unemp. rate	×	×
Households Characteristics	Yes	Yes
Survey Year FE	Yes	Yes
Observations	1482	1482

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Appendix

Robustness

Table: Robustness Checks - Participation in risky financial assets

	(1) Participation Risky Assets	(2) Participation Risky Assets	(3) Participation Risky Assets
Wife is household head			
Separate Property	0.081*** (0.028)	0.092*** (0.021)	0.090*** (0.020)
Mean Outcome	0.20	0.20	0.20
Risk Attitudes	×		
Online Banking		×	
Mother Housewife			×
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	1482	1482	1453

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Appendix

Robustness

Table: Robustness Checks - % Risky financial assets

	(1) Share Risky Assets	(2) Share Risky Assets	(3) Share Risky Assets
Wife is household head			
	2.710** (1.217)	3.253*** (0.980)	2.689** (1.076)
Mean Outcome	6.52	6.52	6.52
Risk Attitudes	×		
Online Banking		×	
Mother Housewife			×
Households Characteristics	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Observations	1482	1482	1453

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Appendix

Robustness

Table: Robustness Checks - Household head and Second Earner

	(1) Participation Risky Assets	(2) Share Risky Assets
Separate Property	0.096*** (0.023)	2.691** (1.099)
Mean Outcome	0.20	6.52
Households Characteristics	Yes	Yes
Survey Year FE	Yes	Yes
Observations	1069	1069

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Appendix

Value Function- Married Couples Back

$$V^M(a^w, a^h, a_s^{h^0}, a_r^{h^0}, \epsilon^w, \epsilon^h, m) = \max_{a_s^{w^0}, a_r^{w^0}, c} \frac{c^{1-\gamma}}{1-\gamma} + \beta \left[(1-\delta) \mathbb{E} V^M(a^{w^0}, a^{h^0}, 0, 0, \epsilon^{w^0}, \epsilon^{h^0}, m) + \delta \sum_{i=w,h} \mathbb{E} V^D(i, a^{w^0}, a^{h^0}, 0, 0, \epsilon^{i^0}, m) \right]$$

$$c + \sum_{i=w,h} a_s^{i^0} + \sum_{i=w,h} a_r^{i^0} = \sum_{i=w,h} y_t^{i,m} + \sum_{i=w,h} a^i$$

$$a^{i^0} = (1+r_r) a_r^{i^0} + (1+r_s) a_s^{i^0}, \quad \delta i = fw, hg$$

$$y^{i,m} = \bar{y}^{i,m} \epsilon^{i,m}, \quad \delta i = fw, hg$$

$$\ln(\epsilon^{i,m}) = \rho \epsilon^{i,m} + v; \quad v \sim N(0, \sigma_{i,m}^2), \quad \delta i = fw, hg$$

$$r_r \sim N(\mu_r, \sigma_r^2)$$

$$\mu_r > r_s \quad \epsilon^{i,m} ? r_r, \quad \delta i = fw, hg \quad a_s^{w^0} + a_r^{w^0} \quad \bar{A}$$

Appendix

Value Function - Married Couples Back

$$V^D(i, a^{w^0}, a^{h^0}, 0, 0, \epsilon^{i^0}, m) = \max_{c^{i^0}} \frac{(c^{i^0})^{(1-\gamma)}}{1-\gamma} \quad (4)$$
$$c^{i^0} = \begin{cases} y^{i,m^0} + (1-\kappa) \frac{a^{w^0} + a^{h^0}}{2} & \text{if } m = c \\ y^{i,m^0} + a^{i^0} & \text{if } m = s \end{cases}$$
$$y^{i,m^0} = \bar{y}^{i,m} \epsilon^{i,m^0} \quad \ln(\epsilon^{i,m^0}) = \rho \epsilon^{i,m^0} + v; \quad v \sim N(0, \sigma_{i,m}^2).$$

Appendix

Calibration

Parameter	Value	Source	Parameter	Value	Source
Income process			Husbands' savings		
$\bar{y}^{h,c}$	21847.2	EFF	$\frac{a^c}{y^c}$	0.3639	
$\bar{y}^{h,s}$	29229.4		$\frac{a^s}{y^s}$	0.3512	
$\bar{y}^{w,c}$	16093.1		Participation	0.1514	
$\bar{y}^{w,s}$	23949.8		Cond. risky share	0.4648	
$\sigma_{h,c}^2$	0.245		Other parameters		
$\sigma_{h,s}^2$	0.209		σ_r^2	0.206	Bank of Spain
$\sigma_{w,c}^2$	0.237		μ_r		
$\sigma_{w,s}^2$	0.260		r_s	0	See text
$\rho_{h,c}$	0.896		δ	0.24	INE
$\rho_{h,s}$	0.764		γ	10	Cocco et al (2005)
$\rho_{w,c}$	0.940		β	1	See text
$\rho_{w,s}$	0.934				

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Appendix

Calibration

- Set \tilde{y}^i to match the average labor earnings of spouses observed in the EFF 2002-2020
- Estimate the stochastic component

$$\ln w_{jt}^{i,m} = \beta_1 \text{age}_{jt}^{i,m} + \beta_2 (\text{age}^2)_{jt}^{i,m} + \lambda_j + \gamma_t + u_{jt}^{i,m} \quad \delta i \geq fh, wg \quad \delta m \geq fc, sg$$

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Appendix

Calibration

- Husbands' total savings: use married couples' savings-to-income ratio EFF 2002-2020

‣ Husbands save a fraction θ of total savings $\frac{a^{h,m}}{y^m} = \theta$ $\frac{a^m}{y^m}$ 8.2% *fc, sg*

‣ Assume θ is proportional to the income: $\theta = \frac{1}{1 + \frac{y^m}{y_m}}$

- Husband's participation & share of risky assets. Data on single men
 - Participation: 15.4 %
 - Conditional risky share: 36.9 %

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Appendix

Calibration

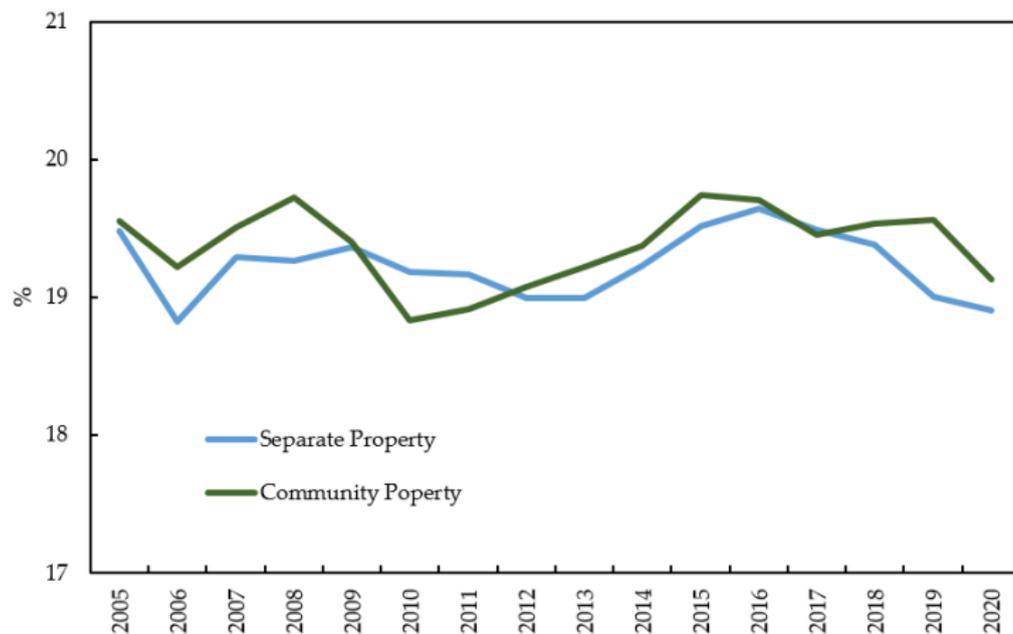


Figure: Divorced couples (% marriages > 5 years)

Appendix

Fraction of Assets Destroyed in divorce

- Identify couples who get divorced in the panel EFF 2002-2020
- Compute changes in deposits before and after divorce

	Fraction of Deposits Destroyed	Obs
Community Property Couples	36%	279
Separate Property Couples	0%	164

Table: Fraction of Deposits Destroyed in Divorce by Prop. Regime

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Appendix

Theoretical results. Baseline Economy

	Model		Data	
	Separate	Community	Separate	Community
Share risky assets	4.61%	2.53%	14.59%	4.89%
Wife	3.00%	0.26%		
Husband	7.09%	7.09%		
Savings-to-income	49.83%	65.55%	35.12%	36.39%
Wife	30.23%	43.79%		
Husband	19.59%	20.97%		

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Male-headed households calibration

	Husband is household head	
	Separate	Community
Income profile		
\bar{y}^h	27,000	24,000
σ^h	0.180	0.192
ρ^h	0.821	0.827
\bar{y}^w	19,000	17,000
σ^w	0.220	0.182
ρ^w	0.879	0.732
Other spouse's savings		
a^w/y	0.194	0.195
Participation	13.7%	13.7%
Conditional risky share	23.4%	23.4%

Table: Income process and other spouse's savings parameters

Appendix

Model validation

	Baseline		Counterfactual	
	Wife is household head Separate	Community	Husband is household head Separate	Community
Participation risky assets	25.52%	16.26%	84.26%	99.44%
Wife	12.24%	1.44%	13.24%	13.24%
Husband	15.12%	15.12%	81.94%	99.45%
Gap	9.2pp		-15.24 pp	
Savings-to-income	49.83%	65.55%	37.81%	58.65%
Wife	30.23%	43.79%	14.70%	17.98%
Husband	19.59%	20.97%	23.10%	44.71%

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