

5References

Adams, Willian, Liran Einav, and Jonathan Levin, 2009, Liquidity constraints and imperfect in-formation in subprime lending American Economic Review 99, 49-84

Aghion, P., and Patrick Bolton, 1992, An incomplete contracts approach to financial contracting, Review of Economic Studies 59, 1473-1494.

Amendolara, Cesar, 2006, Alienação fiduciária como instrumento de fomento a concessão de crédito, in Ivo Waisberg and Marcos R. F. Fontes, eds.: Contratos Bancários (Quartier Latin).

Assunção, Juliano J., Efraim Benmelech, Fernando Silva, 2012, Repossession and the Democratization of Credit, Working paper, NBER.

Atanasov, V., Bernard Black, Conrad Ciccotello, and Stanley Gyoshev, 2010, How does law affect finance? An examination of equity tunneling in Bulgaria, Journal of Financial Economics 96,155-173.

Bae, Kee-Hong, and Vidhan K., Goyal, 2009, Creditor rights, enforcement, and bank loans, Journal of Finance 64, 823-860.

Banerjee, Abhijit and Esther Duflo, Rachel Glennerster, and Cynthia Kinnan, 2010, The miracle of micro finance? Evidence from a randomized evaluation, BREAD working paper No.278.

Banerjee, Abhijit and Andrew F. Newman, 1993, Occupational choice and the process of development, Journal of Political Economy 101, 274-298.

Beck, Thorsten, 2000, Impediments to the development and efficiency of financial intermediation in Brazil, Working paper, World Bank Policy Research.

Beck, Thorsten, Ross Levine, and Norman Loayza, 2000, Finance and the sources of growth, Journal of Financial Economics, 58, 261-300

Benmelech, Efraim, 2009, Asset salability and debt maturity: Evidence from 19th century American railroads, Review of Financial Studies 22, 1545-1583.

Benmelech, Efraim, and Nittai K. Bergman, 2008, Liquidation values and the credibility of financial contract renegotiation: Evidence from U.S. airlines, Quarterly Journal of Economics 123, 1635-1677.

Benmelech, Efraim, and Nittai K. Bergman, 2009, Collateral pricing, Journal of Financial Economics 91, 339-360.

Benmelech, Efraim, and Nittai K. Bergman, 2011, Vintage capital and creditor protection, Journal of Financial Economics 99, 308-332.

Benmelech, Efraim, Mark J. Garmise, and Tobias J. Moskowitz, 2005, Do liquidation values affect financial contracts? Evidence from commercial loan contracts and zoning regulation, Quarterly Journal of Economics 120, 1121-1154.

Berger, A., and Gregory Udell, 1990, Collateral, loan quality and bank risk, Journal of Monetary Economics 25, 21-42.

Bernanke, Ben, and Mark Gertler, 1989, Agency costs, net worth, and business fluctuations, *The American Economic Review* 79, 14-31

Bernanke, Ben, Mark Gertler, and Simon Gilchrist, 1999, The financial accelerator in a quantitative business cycle framework, *Handbook of Macroeconomics* volume 1, Parte C, 1341-1393

Bertrand, Marianne, Antoinette Schoar, and David Thesmar, 2007, Banking deregulation and industry structure: Evidence from the French banking reforms of 1985, *Journal of Finance* 62597-628.

van Binsbergen, J., John Graham, and Jie Yang, 2010, The cost of debt, *Journal of Finance* 65, 2089-2136.

Bolton, P., and David S. Scharfstein, 1996, Optimal debt structure and the number of creditors, *Journal of Political Economy* 104, 1-25.

Boot, A., and Anjan Thakor, 1991, Off-balance sheet liabilities, deposit insurance and capital regulation, *Journal of Banking & Finance* 15, 825-846.

Brunnermeier, Markus, 2009, deciphering the liquidity and credit crunch 2007-2008, *Journal of Economic Perspective* 23, 77-100

Campello, Murillo, Erasmo Giambona, John Graham and Campbell Harvey, 2011, Liquidity management and corporate investment during a financial crisis, *Review of Financial Studies* 24, 1944-1979

Coelho, Christiano A., Bruno Funchal, and Joao M. P. de Mello, forthcoming, The Brazilian payroll lending experiment, *Review of Economics and Statistics*.

Costa, Ana C. A., and Joao M. P. de Mello, 2006, Judicial risk and credit market performance: Micro evidence from Brazilian payroll loans, Working paper, NBER.

Demirguc-Kunt, Asli, Luc Laeven, and Ross Levine, 2004, Regulations, market structure, institutions, and the cost of financial intermediation, *Journal of Money, Credit, and Banking* 36, 593-622.

Djankov, S., Oliver Hart, C. McLiesh, and Andrei Shleifer, 2008, Debt enforcement around the world, *Journal of Political Economy* 116, 1105-1149.

Djankov, S., C. McLiesh, and Andrei Shleifer, 2007, Private credit in 129 countries, *Journal of Financial Economics* 84, 299-329.

Einav, Liran, Mark Jenkins, and Jonathan Levin, 2009, The impact of information technology on consumer lending (Stanford University, mimeo).

Einav, Liran, Mark Jenkins, and Jonathan Levin, 2011, Contract pricing in consumer credit markets (Stanford University, mimeo).

Eisfeldt, A., and Adriano Rampini, 2009, Leasing, ability to repossess, and debt capacity, *Review of Financial Studies* 22, 1621-1257.

Hart, O., and John Moore, 1994, A theory of debt based on the inalienability of human capital, *Quarterly Journal of Economics* 109, 841-879.

Hart, O., and John Moore, 1998, Default and renegotiation: A dynamic model of debt, *Quarterly Journal of Economics* 113, 1-41.

Haselmann, R., Katharina Pistor, and Vikrant Vig, 2010, How law affects lending, *Review of Financial Studies* 23, 549-580.

refer Iacoviello, Matteo, 2005, House Prices, Borrowing Constraints, and

Monetary Policy in the Business Cycle , American Economic Review 95, 739-764

Ivashina, Victoria and David Scharfstein, 2010, Bank lending during the financial crisis of 2008, Journal of Financial Economics 97, 319-388

Jaimovich, Nir, and Sergio Rebelo, 2009, Can news about the future drive the business cycle?

American Economic Review, 99, 1097-1118

Jappelli, Tullio, Marco Pagano, and Magda Bianco, 2005, Courts and banks: Effects of judicial enforcement on credit markets, Journal of Money, Credit, and Banking 37, 223-244.

Jimenez, G., Vicente Salas, and Jesus Saurina, 2006, Determinants of collateral, Journal of Financial Economics 81, 255-281.

John, K., Anthony Lynch, and Manju Puri, 2003, Credit ratings, collateral, and loan characteristics: Implications for yield, Journal of Business 76, 371-409

Johnson, H., and Rene Stulz, 1985, An analysis of secured debt, Journal of Financial Economics 14, 501-521.

Kaplan, S., Frederic Martel, and Per Stromberg, 2007, How do legal differences and experience affect financial contracts?, Journal of financial intermediation 16, 273-311.

Keys, Benjamin J., Tanmoy Mukherjee, Amit Seru, and Vikrant Vig, 2010, Did securitization lead to lax screening? Evidence from subprime loans, Quarterly Journal of Economics 125, 307-362.

King, Robert and Ross Levine, 1993, Finance and growth: Schumpeter might be right, Quarterly Journal of Economics 108, 717-737

Krishnamurthy, Arvind, 2010, How debt markets have malfunctioned in the crisis, Journal of Economic Perspective 24, 3-28

Kwarka, Noh-Sun 2002, Default risks, interest rate spreads, and business cycles: Explaining the interest rate spread as a leading indicator, Journal of Economic Dynamics and Control 26, 271302

Kiyotaki, and John Moore, 1997, Credit Cycles, Journal of Political Economy 105 , 211- 248

La Porta, R., F. Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1997, Legal determinants of external finance, Journal of Finance 52, 2803-2834.

La Porta, R., F. Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1998, Law and finance,

Journal of Political Economy 106, 1113-1155.

Laeven, Luc, and Giovanni Majnoni, 2005, Does judicial Efficiency lower the cost of credit?, Journal of Banking and Finance 29, 1791-1812.

Lerner, Josh, and Antoinette Schoar, 2005, Does legal enforcement affect financial transactions? The contractual channel in private equity, Quarterly Journal of Economics 120, 223-246.

Liberty, Jose, and Atif Mian, 2010, Collateral spread and financial development, Journal of Finance 65, 147-177.

Meyer, Bruce, 1990, Unemployment insurance and unemployment spells, Econometrica 58, 757-782

Meyer, Bruce, 1995, Semiparametric estimation of hazard models, (Northwestern University, mimeo). Mian, Atif, and Amir Sufi, 2009, The consequences of mortgage credit expansion: Evidence from the U.S. mortgage default crisis, *Quarterly Journal of Economics* 124, 1449-1496.

Mian, Atif, and Amir Sufi, 2010, The great recession: Lessons from microeconomic data, *American Economic Review: Papers and Proceedings* 100, 1-10.

Petersen, Mitchell A., and Raghuram G. Rajan, 2007, The benefits of lending relationships: Evidence from small business data, *Journal of Finance* 62, 2803-2834.

Qian, Jun, and Philip E. Strahan, 2007, How laws and institutions shape financial contracts: The case of bank loans, *Journal of Finance* 62, 2803-2834.

Rampini, A., and S. Viswanathan, 2010, Collateral, risk management, and the distribution of debt capacity, *Journal of Finance* 65, 2293-2322.

Shleifer, Andrei, and Robert W. Vishny, 1992, Liquidation values and debt capacity: A market equilibrium approach, *Journal of Finance* 47, 143-166.

Stiglitz, Joseph and Andrew Weiss, 1981, Credit Rationing in Markets with Imperfect Information, *American Economic Review* 71, 393-410

Vig, V., 2011, Access to collateral and corporate debt structure: Evidence from a natural experiment, EFA 2008 Athens Meetings Paper.

Tabela 24

Table 1:

Summary Statistics

This table provides descriptive statistics for the variables used in the empirical analysis.

Panel A: Contract characteristics					
	Mean	5th Percentile	Median	95th Percentile	Standard Deviation
Interest rate	1.90	1.23	1.77	3.10	0.61
Maturity	47.7	24.0	48.0	60.0	14.1
Down payment	5,782	0,0	3,951	17,282	5,786
Total financed (R\$)	14,188	4,341	12,997	27,317	7,753
Total due (R\$)	22,471	7,036	20,947	42,664	11,946
Installment Value	482	229	431	912	257
Car value (R\$)	19,971	8,207	19,004	35,752	8,999
Consumer leverage	28.5	10.0	26.0	53.0	19.4
Default	0.09	0.0	0.0	1.0	0.28
Panel B: Borrower characteristics					
	Mean	5th Percentile	Median	95th Percentile	Standard Deviation
Income (R\$)	2,445	882	1,784	5,672	11,289
Client of the bank	0.27	0.0	0.0	1.0	0.45
Guarantor	0.11	0.0	0.0	1.0	0.31
High risk	0.03	0.0	0.0	0.0	0.17
Medium risk	0.20	0.0	0.0	1.0	0.40
Low risk	0.41	0.0	0.0	1.0	0.48
Very low risk	0.36	0.0	0.0	1.0	0.48
Male	0.64	0.0	1.0	1.0	0.48
Single	0.48	0.0	0.0	1.0	0.50
Married	0.36	0.0	0.0	1.0	0.48
Homeowner	0.81	0.0	1.0	1.0	0.39
Lives with parents	0.15	0.0	0.0	1.0	0.36
Employee	0.60	0.0	1.0	1.0	0.49
Retired/pensioner	0.10	0.0	0.0	1.0	0.30
Self-	0.28	0.0	0.0	1.0	0.45
Panel C: Car characteristics					
	Mean	5th Percentile	Median	95th Percentile	Standard Deviation
New	0.34	0.0	0.0	1.0	0.47
Age	4.60	0.0	4.0	13.0	4.60
Dealer priority	0.73	0.0	1.0	1.0	0.44

Tabela 25

Table 2:

Parameter p - No Controls

This Table estimates equation (3) under the assumption (6). Our measure of default is a dummy, which takes the value of one if the borrower was at least one installment late, and zero otherwise. For hazard function, we consider the proportion of paid installment. We are not controlling for observable characteristics.

Dependent Variable=	004	005	006	007	008	009	010
Parameter p	1.34 (0.07)	1.17 (0.04)	0.98 (0.03)	0.88 (0.02)	0.90 (0.02)	0.86 (0.03)	0.88 (0.03)
Upper bound (at 5%)	1.21	1.10	0.94	0.84	0.87	0.82	0.83
Lower bound (at 5%)	1.47	1.24	1.03	0.91	0.94	0.91	0.94
Contract terms	No	No	No	No	No	No	No
Personal	No	No	No	No	No	No	No
Car	No	No	No	No	No	No	No
Observations	6,039	9,818	13,229	16,700	16,201	12,865	13,069

Tabela 26

Table 3:

Parameter p - All Controls

This Table estimates equation (3) under the assumption (6). Our measure of default is a dummy, which takes the value of one if the borrower was at least one installment late, and zero otherwise. For hazard function, we consider the proportion of paid installment. We are controlling for contract terms (spread, maturity, installment value and total due), borrower characteristics (income, borrower type of risk, gender, presence of a guarantor, type of job, type of residence, marital status, and whether the borrower is a client of The Bank), and car characteristics (a dummy for new car).

Dependent Variable=	004	005	006	007	008	009	010
Parameter p	1.36 (0.07)	1.19 (0.04)	1.01 (0.03)	0.93 (0.02)	1.00 (0.02)	1.00 (0.03)	1.02 (0.03)
Upper bound (at 5%)	1.23	1.13	0.96	0.89	0.97	0.95	0.96
Lower bound (at 5%)	1.50	1.27	1.06	0.96	1.04	1.05	1.08
Contract terms	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Personal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Car characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,039	9,818	13,229	16,700	16,201	12,865	13,069

Tabela 27

Table 4:

Parameter p - Personal Characteristics

This Table estimates equation (3) under the assumption (6). Our measure of default is a dummy, which takes the value of one if the borrower was at least one installment late, and zero otherwise. For hazard function, we considerer the proportion of paid installment. We are controlling for borrower characteristics (income, borrower type of risk, gender, presence of a guarantor, type of job, type of residence, marital status, and whether the borrower is a client of The Bank), and car characteristics (a dummy for new car).

Dependent Variable=	004	005	006	007	008	009	010
Parameter p	1.35 (0.07)	1.18 (0.04)	0.99 (0.03)	0.88 (0.02)	0.91 (0.02)	0.87 (0.02)	0.91 (0.03)
Upper bound (at 5%)	1.22	1.11	0.94	0.85	0.88	0.83	0.85
Lower bound (at 5%)	1.49	1.25	1.04	0.91	0.95	0.21	0.96
Contract terms	No	No	No	No	No	No	No
Personal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Car characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,039	9,818	13,229	16,700	16,201	12,865	13,069

Tabela 28

Table 5:

Parameter p - Contract Terms

This Table estimates equation (3) under the assumption (6). Our measure of default is a dummy, which takes the value of one if the borrower was at least one installment late, and zero otherwise. For hazard function, we consider the proportion of paid installment. We are controlling for contract terms (spread, maturity, installment value and total due).

Dependent Variable=	004	005	006	007	008	009	010
Parameter p	1.35 (0.07)	1.19 (0.04)	1.00 (0.03)	0.92 (0.02)	1.00 (0.02)	1.00 (0.03)	1.00 (0.03)
Upper bound (at 5%)	1.22	1.12	0.96	0.88	0.97	0.95	0.94
Lower bound (at 5%)	1.48	1.26	1.06	0.95	1.05	1.05	1.06
Contract terms	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Personal characteristics	No	No	No	No	No	No	No
Car characteristics	No	No	No	No	No	No	No
Observations	6,039	9,818	13,229	16,700	16,201	12,865	13,069