

Does the introduction of the euro affect the debt-equity choice?

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June 30, 2006

Abstract

We study firms from 14 Western European countries to detect the influence of a vanishing risk premium due to exchange rate risk on equity and debt issues. According to our hypothesis, Eurozone firms in industries with relatively higher external finance dependence (EFD) issue more equity and debt after 1999 than those outside the Euro area. We find that Eurozone firms in high EFD industries are more likely to issue equity, and are more likely to be equity issuers than debt issuers after 1999. Further, there is evidence that firms in our sample follow a dynamic leverage target.

Keywords: Euro introduction, external finance dependence, firm performance.

JEL classification: G3

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1 Introduction

The introduction of the common European currency — the euro — on the 1st of January 1999 was an important step by the European community. Well before that, in 1990 the European Commission (European Commission (1990)) discussed the benefits of the euro introduction. Among other benefits it was argued that the introduction of the euro may cause a decrease in the risk premium on capital, which could lead to more investment due to the increase in positive net present value projects and hence to a higher growth level of the economy. In the present paper we study the companies' security issue choices to detect the probable decrease in cost of capital due to the introduction of the common currency.

The elimination of exchange rate risk between the countries in the European Monetary Union (EMU) is a key factor spurring the integration of the twelve national financial markets. A larger pool of euro-denominated funds (increased competition between providers of capital), wider risk sharing and better diversification opportunities for capital allocation became available. A report by Baele, Ferrando, Hördahl, Krylova, and Monnet (2004) from the European Central Bank confirms that the home-country bias of European institutional investor portfolios has decreased substantially in the last few years after the introduction of the euro. At the same time the continent-wide diversification of portfolios caused the higher co-movement of stock returns. The study above reports evidence that the explanatory power of common economic news in European stock return variance has increased from 20% to 40% in the post-Euro period. By contrast, the integration of the European bank credit markets has been slow according to Baele, Ferrando, Hördahl, Krylova, and Monnet (2004). Rajan and Zingales (2003) show that the bond issues to GDP have increased within EMU countries compared to others after the introduction of the common currency. Hence, we observe the deepening of the financial markets.

The benefits of the introduction of the euro has been studied in a couple of recent empirical papers. Bris, Koskinen, and Nilsson (2005) has found an positive effect on corporate investments. They detect the positive effect of the euro on investment

for firms from countries with previously weak currencies as well as for financially constrained firms. This confirms the prediction of the European Commission (1990) claiming that the small open and less developed economies have the most to gain from the introduction of the common currency. Bris, Koskinen, and Nilsson (2003) detect a positive effect of the euro introduction on firms valuations (Tobin's Q) for firms from countries with previously weak currencies. Hence, both papers by Bris, Koskinen, and Nilsson detect that the introduction of the euro has had a positive effect on firms.

Our study complements the existing literature by looking at the capital structure of the firm. We combine the capital structure literature with the finance and growth literature. We study the equity and debt issues before and after 1999 across firms from EMU and non-EMU countries. To identify the effect of the introduction of the euro due to the decrease in the cost of financing we control for the external finance dependence (EFD) of the firm's industry in our analysis. The firms from industries with higher EFD are the ones to benefit the most from the decrease in the cost of finance.

There are empirical studies in the literature dealing with financial development and economic growth.¹ For example, Rajan and Zingales (1998) report that industries relying relatively more on external finance have higher growth rates in countries with more developed financial markets. The authors argue that the lower cost of external finance provides a channel through which the financial market development facilitates growth. Accordingly, if we observe an exogenous reduction in the cost of issuing equity and debt for the Euro area firms after 1999 we should find the Eurozone firms from industries with higher EFD issue more debt and equity after 1999 compared to companies from other countries. We also study whether the introduction of the euro affects more equity than debt issues.

The analyses in this paper are based on firm-level data from Amadeus database provided by Bureau Van Dijk. The analysis focuses on firms from 14 Western European countries, among which 10 belong to EMU. The time period covered in this study is

¹For related papers on financial development and growth see King and Levine (1993), Carlin and Mayer (2003), and surveys by Levine (1997), Beck, Demirgüt-Kunt, Levine, and Maksimovic (2001) and Wachtel (2001).

1995-2002. Our firm-level panel data study is a methodological improvement in the finance and growth literature. The estimation methodology follows Hovakimian, Opler, and Titman (2001), where we control for the introduction of the euro in the security issue choice regression.

We find that Eurozone firms from higher external finance dependent industries do issue more equity compared to other firms but we do not find that they would issue more debt after 1999. When we compare the firms issuing equity versus firms issuing debt we find that Euro area firms from industries with higher EFD are more likely to issue equity than debt. Hence, the introduction of the euro (the financial market integration) does reduce costs of financing and in particular make the equity finance more appealing. This result gives an extra motivation for the new EU member countries to adopt the euro. The firms from Eastern Europe rely much less on external finance compared to Western European firms (Jõeveer (2006)) indicating that changes in the cost of finance could change the firms financial structures substantially. Our paper makes a contribution to the capital structure literature as well by confirming the mean reverting behavior of leverage — over-leveraged firms are less likely to issue debt and more likely to not issue any securities or to issue equity.

This paper is organized as follows: in the next section, we explain our working hypothesis and the empirical estimation methodology. The data section follows. In section 4 we presents the results. Finally, we conclude in section 5.

2 Hypothesis and testing methodology

Our plan is to identify the decrease in the cost of capital due to the euro introduction by studying the influence of firm's industry external finance dependence on debt and equity issue choices. This empirical strategy requires us to define an industry benchmark. We follow Rajan and Zingales (1998) who show that some industries are in a greater need of outside capital than others. These are usually industries with higher R & D activity, larger scale plant investment needs and smaller regular turnover, *ceteris paribus*. The

above authors estimate that the most external finance dependent industries in the US during the 1980's were the manufacturing of pharmaceuticals, plastic products, office machinery and computers, and radios. The least dependent industries on the other hand were the manufacturing of tobacco, pottery, and leather. In this paper we chose industry average finance dependence of UK firms as a benchmark.

We rely on a UK sample in estimating the benchmark external finance dependence of particular industries due to several reasons. First, the UK did not adopt the Euro, hence British firms' financing is not affected directly by the 1999 event. Second, the UK is considered to be an economy with the deepest, most liquid and most developed financial markets in Europe. Hence, the Euroland is on the way to catch up with the UK in financial development. Thus we assume that the observed external finance dependence of different UK industries is "optimal", and is determined by technological differences between industries.

Rajan and Zingales (1998) define external finance dependence as capital expenditures minus cash flow from operations divided by capital expenditures, where cash flow from operations is defined as the sum of cash flow from operations plus decrease in inventories, decrease in receivables, and increase in payables. In other words EFD gives the percentage of capital expenditures that is not financed by cash flows. Hence, higher the indicator more external finance is demanded. In our paper we use two measures of external finance dependence. First, EFD_1 is defined as a change in fixed assets minus cash flow plus change in inventories plus change in receivables minus change in payables divided by absolute value of change in fixed assets. Second, EFD_2 is defined as a change in tangible fixed assets minus cash flow plus change in inventories plus change in receivables minus change in payables divided by absolute value of change in tangible fixed assets.² The two EFD measures used are highly correlated (73%) with each other.

In Table 1 we report the external finance dependence levels for 14 industries. The

²We sum the nominator and denominator of the EFD index over the years for each firm and calculate the ratio by using the sums (so we avoid the possible extreme values). We take the industry median as a proxy for EFD. We exclude from the analysis industries where there is less than 5 UK firms represented.

number of comparable industries with Rajan and Zingales (1998) is so low since they used only manufacturing sector denoted in ISIC industry classification in their analysis. We use NACE 3 digit industry classification which is not one-to-one comparable to ISIC. Still, we find positive above 50% correlation coefficient among their's EFD measure based on US firms with our measures. The difference in the levels of our EFD and Rajan and Zingales's EFD measure comes from the fact that our proxy for the capital expenditure is a change in fixed assets hence it is the capital expenditure net of the sale of property, plant, and equipment while the capital expenditure used in Rajan and Zingales (Compustat item 128) does not take into account the income from selling the fixed assets.

We analyse the firms' ability to issue debt and equity versus not issuing and the choice between issuing debt versus issuing equity in response to the introduction of the euro. The capital structure theories predict that the decrease in cost of capital will cause the equity and debt issues to increase. In the pecking order theory (POT)³ the internal and external funds have different costs due to the asymmetry of information between the insiders and outsiders of the firm. Using the logic of pecking order theory, firms will first use the internal funds and among the external funds the "safe" debt is preferred to "risky" equity. In other words — equity would be issued only after exhaustion of internal sources and debt. Hence, based on POT the drop in cost of capital will cause more projects to have positive net present value. The investment opportunities might overweight the internal finance available causing the debt and equity issues to increase. The trade-off theory (TOT) of capital structure predicts that the decrease in cost of capital should increase the debt issues only. According to the TOT firms increase the share of debt in their capital structure as the benefits of debt (eg. tax shields) balance the potential distress cost of debt (eg. bankruptcy costs). Hence, the firm is expected to have an optimal level of leverage. If the cost of capital decreases the tax shields achieved will decrease as well. To keep the amount of tax shields constant, the total value of debt should increase.

³See for example Shyam-Sunder and Myers (1999) and Myers (1984).

The introduction of the euro can be viewed as a natural experiment in financial development. Accordingly, in our test we select control and treatment groups of firms. The latter is composed of listed companies registered in the 10 Eurozone countries.⁴ In the former we account listed enterprises both from EU member countries outside the Eurozone, such as Denmark and Sweden,⁵ and from Western European countries that are not EU members, such as Norway and Switzerland.

Our working hypothesis is that the new debt and equity issues are higher after 1999 for Eurozone firms from relatively more external finance dependence industries. We adopt the methodology introduced in Hovakimian, Opler, and Titman (2001) for studying equity and debt issues.⁶ The idea of their paper is to estimate whether the issue of new capital or retire/repurchase of existing capital takes firms closer to their target leverage ratios, which is consistent with trade-off theory.⁷ Hence, we would expect the deviation from target leverage to have a significant negative coefficient in the debt issue regression and a significant positive coefficient in the equity issue regression. The target leverage is obtained from estimating a static leverage regression where explanatory variables are profitability, tangibility and log size of the firm.⁸ Leverage is defined as long-term debt over long-term debt plus shareholder capital. It is constrained to have value between 0 and 1 in our analysis. Our testing equation is the following:

$$D_{it} = \alpha + \beta EURO_{it} + \gamma X_{it-1} + \varepsilon_{it} \quad (1)$$

where i is a firm index and t is a year index ($t=1996-2002$). D_{it} is a dummy variable

⁴Luxembourg are not considered due to lack of data. Greece is left out since they adopt euro only in 2001.

⁵UK firms are excluded from analyses since they were used for calculating benchmark EFD. Including UK firms to the analysis does not change the results.

⁶Similar estimation methods have been latter used in Hovakimian (2004) and Hovakimian, Hovakimian, and Tehranian (2004).

⁷Chen and Zhao (2005) show that the leverage can be mean reverting irrespectively of which of the two capital structure theories firm follows. Hence, we should be cautious assigning the effect found to TOT.

⁸See for example Rajan and Zingales (1995) and Harris and Raviv (1991).

representing issuing decision. It is either: i) equal to one if firm issues debt⁹ and zero if firm is not involved in either issuing debt or equity or ii) equal to one if firm issues equity and zero if firm is not involved in either issuing debt or equity or iii) equal to one if firm issues debt and zero if firm issues equity. *EURO* is Euro dummy, which equals one if firm *i* is in the Eurozone at time *t* and zero otherwise. X_{it-1} includes the vector of firm-specific variables: the leverage deviation from its target (leverage deficit), ratio of profit/loss over total assets, and logarithm of total assets. We also control for country of origin, industry and year. ε_{it} is error term. The coefficient of our interest is β . It should be positive for the equity issue and debt issue regressions to support our hypotheses and its sign is unclear for the equity issue versus debt issue regression.

To get evidence whether the euro effect we observe is due to the drop in cost of capital we add to the regression the EFD interacted with Euro dummy.

$$D_{it} = \alpha + \beta EURO_{it} + \delta EURO_{it} EFD_j + \gamma X_{it-1} + \varepsilon_{it} \quad (2)$$

where EFD_j is external finance dependence of industry *j* into which the firm belongs. We would expect δ to be positive for the equity issue and debt issue regressions. The sign of δ is unclear for the equity issue versus debt issue regression.

3 Data

The firm-level data used in our analyses is from the Amadeus (Analyse MAjor Databases from EUropean Sources) database, collected by Bureau Van Dijk. The database contains firm balance sheet and income statements from European countries. We focus on firms from 14 Western European countries. We analyse only stock market listed firms. We excluded firms from the financial intermediation sector and which were not

⁹We follow Hovakimian, Opler, and Titman (2001) in defining the firm to be debt or equity issuing. The firm is debt issuing in given year if the change in long-term debt is larger than 5% of total assets. The firm is equity issuing in given year if the change in book share capital is larger than 5% of total assets.

established before 1999 and which had left our sample by 1999.

Table 2 present summary statistics about evolution of debt and equity issues in EMU and non-EMU countries (UK is excluded). First of all note that the number of firm years is approximately 4 times larger in EMU countries. Also notice that the sample is unbalanced: we have much more observations after the introduction of the euro in 1999. The frequencies of security issues have increased over time. Noticeable is the increase in the frequency of equity issues from 7% to 14% for EMU countries (from 9% to 13% for non-EMU countries). The frequency of debt issues (keep in mind that trough out the paper we refer to debt issues without distinguishing the public (eg. bond issue) and private (eg. bank credit) debt issues) have been in similar levels for EMU and non-EMU countries (10%(8%) before and 12%(14%) after 1999 for EMU(non-EMU)).

In Table 3 the summary statistics of main financial variables are reported. Firms are grouped to EMU and non-EMU countries. The median EMU firm is smaller compared to non-EMU firms both before and after the introduction of the euro. The debt issuing firms are larger than not issuing and equity issuing firms. Also profitability and growth opportunities (MTB ratio) of firms have decreased over time.

4 Results

Table 4 presents the results of OLS estimation of equation (1). Results of debt issues versus neither equity or debt issues are reported in the first column. The introduction of the euro has a positive effect on debt issues. The firm belonging in EMU has 5% higher probability of issuing debt compared to other firms. The coefficient on leverage deficit is negative and is statistically significant. If leverage deficit has a large positive value then the firm is over-leveraged. Hence, the negative sign can be interpreted as implying that over-leveraged firms are less likely to issued debt while under-levered firms are more likely to issue debt. This result confirms the mean revering behavior of leverage. We find that more profitable and larger firms are more likely to issue debt than not to be involved in security issues.

Results of equity issues versus neither equity or debt issues are reported in the second column of Table 4. The only significant coefficient is in front of size — smaller firms are more likely to issue equity. We do not observe any effect of the introduction of the euro on firm equity issue decision.

The last column of Table 4 is of interest for disentangling the effect of the introduction of the euro to the debt versus equity issues. We do not find any effect of the introduction of the euro but we once again confirm the mean reverting behavior of leverage. Hence, the over-leveraged firms are more likely to issue equity than to issue debt.

So we have been able to show that the euro introduction has increased the debt issues but we have detected no influence on equity issues. In next we look for what type of firms are more likely to get involved with security issues after 1999.

Table 5 presents the results of OLS estimation of equation 2. Results of debt issues versus neither equity or debt issues are reported in the first two columns. The euro introduction has a positive effect on debt issues as in Table 4. The magnitude of the effect is robust to the inclusion of EFD variable. The interaction of Euro dummy and EFD has a positive but insignificant coefficient. The results are robust for the EFD measure used.

Columns (3)-(4) of Table 5 present the results of equity issues versus neither equity or debt issues. Here the interaction terms of Euro dummy with EFD measures are positive and significant at 10% level. Hence, we detect that EMU firms from industries with higher EFD are more likely to issue equity after 1999.

The last two columns of Table 5 report the results of debt versus equity issues. The Euro dummy has an insignificant positive coefficient. Hence, the debt issues are more likely in Eurozone after 1999 but this effect is measured imprecisely. The interaction term of Euro dummy with EFD has a significant negative coefficient for the first EFD measure. Stressing that the Eurozone firms from industries with higher EFD are more likely to issue equity than debt after the introduction of the euro. Hence, it seems that

the cost of financing has decreased more for equity than for debt financing.¹⁰

5 Conclusion

This paper investigates the effect of European currency unification on the ability of firms to raise external finance. Our paper ties the growth and finance literature with capital structure literature. The paper is closely connected to the theoretical and empirical debate on whether and how financial development affects economic growth and enterprise development (e.g. see Fisman and Love (2003)), as well as to papers investigating the influence of the euro introduction on corporate valuations (Bris, Koskinen, and Nilsson (2003)) and investments (Bris, Koskinen, and Nilsson (2005)). The methodological framework of our paper follows the capital structure literature (Hovakimian, Opler, and Titman (2001)).

The main results of the paper are that after the introduction of the euro in 1999 the Eurozone firms are more likely to i) issue debt; and ii) issue equity and issue equity rather than debt if they belong to industries with higher EFD. The first result confirms that firms in EMU are more likely to use debt finance compared to other firms after the euro introduction. Hence, it seems that the credit market conditions have improved in EMU. The second result indicates that firms, which demand higher external finance are more likely to rely on equity finance after the euro introduction. This is an indication that the cost of equity finance have been more appealing compared to cost of debt finance after 1999.

Our paper confirms the prediction that the introduction of the euro has decreased the cost of capital to firms. The financing choices of firms are likely to change after joining the EMU. This result from micro-panel data is particularly important for the countries about to adopt the euro.

¹⁰The result that firms from industries with higher EFD are more likely to issue equity than debt after the introduction of the euro might have a second interpretation if we follow the logic of POT. Namely the firms from industries with higher EFD might have exhausted the debt finance available and therefore turn to equity finance.

References

- Baele, L., A. Ferrando, P. Hördahl, E. Krylova, and C. Monnet, 2004, “Measuring financial integration in the Euro area,” *ECB Occasional Paper series*, 14.
- Beck, T., A. Demirgüt-Kunt, R. Levine, and V. Maksimovic, 2001, “Financial Structure and Economic Development: Firm, Industry, and Country Evidence,” in Asli Demirgüt-Kunt, and Ross Levine (ed.), *Financial Structure and economic growth. a cross-country comparison of banks, markets, and development* . chap. 5, pp. 189–241, MIT Press.
- Bris, A., Y. Koskinen, and M. Nilsson, 2003, “The Euro is Good after all: Evidence from Corporate Valuations,” *unpublished*.
- Bris, A., Y. Koskinen, and M. Nilsson, 2005, “The Real Effects of the Euro: Evidence from Corporate Investments,” *Review of Finance*, 9, 1–37.
- Carlin, W., and C. Mayer, 2003, “Finance, investment, and growth,” *Journal of Financial Economics*, 69, 191.
- Chen, L., and X. Zhao, 2005, “Profitability, Mean Reversion of Leverage, and Capital Structure Choices,” *SSRN Working paper*, 666992.
- European Commission, 1990, “European Economy,” Special issue.
- Fisman, R., and I. Love, 2003, “Financial Dependence and Growth Revisited,” *NBER working paper*, 9582.
- Harris, M., and A. Raviv, 1991, “The Theory of Capital Structure,” *Journal of Finance*, 46, 297–355.
- Hovakimian, A., 2004, “The Role of Target Leverage: In Security Issues and Repurchases,” *Journal of Business*, 77, 1041–1071.

- Hovakimian, A., G. Hovakimian, and H. Tehranian, 2004, “Determinants of target capital structure: The case of dual debt and equity issues,” *Journal of Financial Economics*, 71, 527–540.
- Hovakimian, A., T. Opler, and S. Titman, 2001, “The Debt-Equity Choice,” *Journal of Financial and Quantitative Analysis*, 36, 1–24.
- Jõeveer, K., 2006, “The Sources of Capital Structure: Evidence from Transition Countries,” *CERGE-EI Working Paper*.
- King, R. G., and R. Levine, 1993, “Finance and Growth: Schumpeter Might be Right,” *The Quarterly Journal of Economics*, 108, 717–737.
- Levine, R., 1997, “Financial Development and Economic Growth: Views and Agenda,” *Journal of Economic Literature*, 35, 688–726.
- Myers, S. C., 1984, “The Capital Structure Puzzle,” *Journal of Finance*, 39, 575–592.
- Rajan, R. G., and L. Zingales, 1995, “What do We Know about Capital Structure? Some Evidence from International Data,” *Journal of Finance*, 50, 1421–1460.
- Rajan, R. G., and L. Zingales, 1998, “Financial Dependence and Growth,” *The American Economic Review*, 88, 559–586.
- Rajan, R. G., and L. Zingales, 2003, “Banks and Markets: The Changing Character of European Finance,” in V. Gaspar, P. Hartmann, and O. Sleijpen (ed.), *The Transformation of European Financial System*, European Central Bank.
- Shyam-Sunder, L., and S. C. Myers, 1999, “Testing static tradeoff against pecking order models of capital structure,” *Journal of Financial Economics*, 51, 219–244.
- Wachtel, P., 2001, “Growth and finance: what do we know and how do we know it,” *International Finance*, 4, 335–362.

TABLE 1—MEASURES OF EXTERNAL FINANCE DEPENDENCE (EFD)

Industry	NACE	ISIC	EFD _{RZ}	EFD ₁	EFD ₂
Apparel	18	322	0.03	-2.46	-2.66
Paper and products	21	341	0.18	-4.13	-9.41
Printing and publishing	22	342	0.2	0.14	3.56
Metal products	28	381	0.24	-2.09	-1.99
Furniture	36	332	0.24	-2.06	-2.33
Transportation equipment	34	384	0.31	-1.99	-1.99
Textile	17	321	0.4	-4.45	-3.61
Mechinery	29	382	0.45	-3.33	-4.24
Ship	35	3841	0.46	0.24	1.41
Electric machinery	31	383	0.77	-0.77	-1.78
Professional goods	33	385	0.96	0.66	2.10
Radio	32	3832	1.04	-1.58	-2.02
Office and computing	30	3825	1.06	1.43	12.58

NOTES: EFD_{RZ} is EDF from Rajan and Zingales (1998) Table 1, EFD₁ is UK industry median EDF defined as (change in fixed assets - cash flow + change in inventories + change in receivables - change in payables)/ absolute value of change in fixed assets, EFD₂ is UK industry median EDF defined as (change in tangible fixed assets - cash flow + change in inventories + change in receivables - change in payables)/ absolute value of change in tangible fixed assets.

TABLE 2—NUMBER OF DEBT AND EQUITY ISSUES IN EMU AND NON-EMU

	EMU countries					non-EMU countries				
	Equity issues		Debt issues		Total	Equity issues		Debt issues		Total
	Obs.	Freq.	Obs.	Freq.		Obs.	Freq.	Obs.	Freq.	
1996	57	0.04	150	0.10	1 537	13	0.05	16	0.06	261
1997	130	0.07	177	0.10	1 765	7	0.01	12	0.02	499
1998	206	0.09	251	0.11	2 205	55	0.09	90	0.14	639
1999	240	0.08	371	0.12	3 097	42	0.06	89	0.13	696
2000	473	0.13	388	0.10	3 705	56	0.08	112	0.15	739
2001	241	0.07	383	0.11	3 336	28	0.04	96	0.13	764
2002	803	0.30	406	0.15	2 704	82	0.12	114	0.16	696
Total	2 150	0.11	2 126	0.11	19 412	283	0.06	529	0.12	4 501

NOTES: The firm is debt issuing in given year if the change in long-term debt is larger than 5% of total assets. The firm is equity issuing in given year if the change in book share capital is larger than 5% of total assets. EMU countries are Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherland, Portugal and Spain. non-EMU countries are Denmark, Norway, Sweden and Switzerland.

TABLE 3—SUMMARY STATISTICS

	EMU			non-EMU				
				Before 1999				
	Mean	Median	St. dev.	Equity issuers				
				Obs.	Mean	Median	St. dev.	Obs.
Total assets	315	28	1488	594	397	34	2139	380
Leverage	0.11	0.00	0.18	561	0.30	0.12	0.97	312
Leverage deficit	0.01	-0.02	0.16	549	0.21	0.04	0.98	310
ROA	0.08	0.06	0.13	581	-0.07	0.03	0.34	377
	Mean	Median	St. dev.	Debt issuers				
Total assets	1063	88	4444	1 136	990	122	3779	902
Leverage	0.24	0.18	0.27	1 135	0.35	0.28	1.00	902
Leverage deficit	0.08	0.03	0.24	1 130	0.22	0.14	1.01	899
ROA	0.04	0.04	0.09	1 131	0.02	0.05	0.22	899
	Mean	Median	St. dev.	No issuers				
Total assets	1281	54	10400	6 163	779	80	3161	4 954
Leverage	0.14	0.00	0.30	5 832	0.24	0.13	1.32	3 986
Leverage deficit	-0.01	-0.04	0.29	5 778	0.11	0.01	1.32	3 973
ROA	0.04	0.05	1.31	6 142	0.01	0.05	0.31	4 939
	Mean	Median	St. dev.	After 1999				
				Equity issuers				
Total assets	180	15	1829	2 153	480	20	8365	703
Leverage	0.07	0.00	0.34	2 017	0.19	0.03	1.35	555
Leverage deficit	-0.05	-0.08	0.33	2 002	0.09	-0.01	1.36	550
ROA	-0.06	0.00	0.41	2 134	-0.31	-0.10	0.84	701
	Mean	Median	St. dev.	Debt issuers				
Total assets	2064	121	10600	2 794	1259	147	7082	1 657
Leverage	0.25	0.20	0.39	2 794	0.34	0.30	0.86	1 657
Leverage deficit	0.07	0.01	0.36	2 791	0.19	0.14	0.85	1 654
ROA	0.00	0.03	0.32	2 791	-0.04	0.03	0.36	1 656
	Mean	Median	St. dev.	No issuers				
Total assets	1064	33	6422	9 577	944	78	5909	7 098
Leverage	1.98	0.00	176.55	8 997	0.20	0.11	2.13	5 554
Leverage deficit	1.84	-0.07	176.82	8 969	0.06	-0.01	2.13	5 536
ROA	-0.01	0.02	0.21	9 554	-1.35	0.02	102.54	7 082

NOTES: Euro countries are Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Portugal, and Spain. Non-euro countries are Denmark, Norway, Sweden and Switzerland. Total assets are given in millions of 1995 US dollars. Leverage is defined as long-term debt over long-term debt plus book share capital. Leverage deficit defined as leverage minus target leverage. ROA is defined as profit/losses of period over total assets.

TABLE 4—EQUITY, DEBT AND DEBT VS. EQUITY ISSUES
CONTROLLING FOR EURO DUMMY

	Debt vs. NoIssue	Equity vs. NoIssue	Debt vs. Equity
Leverage deficit	-.021 (.012)*	.016 (.016)	-.114 (.037)***
Euro	.048 (.023)**	.004 (.013)	.055 (.046)
ROA	.072 (.017)***	.005 (.008)	.009 (.006)
Log(Total assets)	.013 (.002)***	-.025 (.002)***	.082 (.004)***
Const.	-.124 (.055)**	.23 (.03)***	.13 (.108)
Obs.	10819	9747	2612
R^2	.05	.072	.3

NOTES: Leverage deficit defined as leverage minus target leverage. Leverage deficit, ROA and Log(Total assets) are one period lagged. Robust standard errors are in brackets. ***, ** and * denotes significance at the 1, 5 and 10 percent level respectively. Standard errors are based on clustering across firms. All regressions include country, industry and year dummies.

TABLE 5—EQUITY, DEBT AND DEBT VS. EQUITY ISSUES
CONTROLLING FOR EURO DUMMY AND EFD

	Debt vs. NoIssue		Equity vs. NoIssue		Debt vs. Equity	
Leverage deficit	-.02 (.011)*	-.02 (.011)*	.022 (.019)	.022 (.019)	-.115 (.036)***	-.114 (.037)***
Euro	.048 (.023)**	.046 (.023)**	.002 (.014)	-.003 (.014)	.044 (.047)	.06 (.046)
Euro * EFD1	.002 (.006)		.008 (.004)*		-.028 (.013)**	
Euro * EFD2		.002 (.002)		.004 (.002)*		-.005 (.005)
ROA	.072 (.017)***	.072 (.017)***	.004 (.009)	.004 (.009)	.009 (.006)	.009 (.006)
Log(Total assets)	.013 (.002)***	.013 (.002)***	-.026 (.002)***	-.026 (.002)***	.082 (.004)***	.082 (.004)***
Const.	-.124 (.055)**	-.123 (.055)**	.24 (.027)***	.24 (.027)***	-.14 (.208)	-.166 (.216)
Obs.	10803	10803	8906	8906	2609	2609
R^2	.05	.05	.079	.079	.301	.3

NOTES: EFD₁ is UK industry median EDF defined as (change in fixed assets - cash flow + change in inventories + change in receivables - change in payables)/ absolute value of change in fixed assets, EFD₂ is UK industry median EDF defined as (change in tangible fixed assets - cash flow + change in inventories + change in receivables - change in payables)/ absolute value of change in tangible fixed assets. Leverage deficit defined as leverage minus target leverage. Leverage deficit, ROA and Log(Total assets) are one period lagged. Robust standard errors are in brackets. ***, ** and * denotes significance at the 1, 5 and 10 percent level respectively. Standard errors are based on clustering across firms. All regressions include country, industry and year dummies.