

Box 1.3: The role of equity in financing the economy

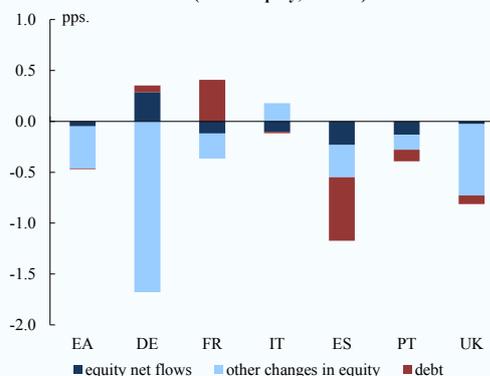
The financial crisis revealed shortcomings of the EU financial system that are impeding economic growth. It seems to overly rely on financing intermediated through banks while at the same time the European banking sector has been adjusting towards less lending to the private sector⁽¹⁾. Stronger capital markets in Europe and in particular the development of equity financing could overcome some funding constraints stemming from overreliance on banking, address the issue of over indebtedness of parts of the EU corporate sector and provide for a better risk transfer and risk sharing across Member States. A favourable development in equity markets seems therefore key in providing the necessary boost to the current cyclical upturn of the European economy. After focuses on corporate lending and private sector deleveraging in the previous forecasts, this box analyses the EU equity markets and assesses the implications for the corporate funding structures.

A higher share of funding through equity could be an important mean to reduce EU corporates' debt overhang, which has been considered a crucial legacy of the financial crisis and motivated a need to deleverage and to improve shock resilience. Corporate deleveraging in the EU has so far mainly occurred through corporates' retaining profits either used to repay debt or to increase the equity basis. Active deleveraging through debt reduction entails a reduction in assets available to the corporate and possibly a cutback of investment with adverse feedback effects on both corporates' earnings capacity and aggregate demand.⁽²⁾ The alternative of deleveraging via debt reduction is to increase the corporate equity base. Such funding mean would maintain the advantage of strengthening the corporate financial structure, i.e. improving loss absorbency and credit risk.

⁽¹⁾ See Box 1.2 ('Corporate lending prospects in the euro area Member States') in European Commission (DG ECFIN), Spring 2015 forecast, *European Economy*, 2015, No 2, pp. 47-50.

⁽²⁾ For a review of the literature on the link between corporate debt and investment and empirical estimates with European corporations, see S. Kalemli-Özcan et al. (2015), Debt Overhang, Rollover Risk and Investment in Europe, paper presented at ECFIN conference "The Post-Crisis Slump", September 2015: http://ec.europa.eu/economy_finance/events/2015/20151001_post_crisis_slump/index_en.htm.

Graph 1: Contribution to NFCs deleveraging (debt to equity, 2009-15)



When calculating debt-equity ratios for the non-financial corporate (NFCs) sector from the national accounts, it emerges that debt-to-equity has fallen from a historical peak of almost 1.4 in 2009 to 0.9 early 2015 in the euro area. The contribution to this 0.5 fall in leverage is shared between the rise in equity and the fall in debt instruments (bonds and bank loans) (see Graph 1). Overall in the euro area, the rise in equity valuation is the main contributor to the decline in the debt-to-equity ratio. Graph 1 also documents significant cross-country differences in the EU since the crisis with essentially corporates in southern economies having recourse to debt reduction to strengthen their corporate financial structure.

While the market value of corporates' equity has increased, the low contribution to deleveraging from equity transactions suggests that they made little use of their potential to tap equity markets to fund investments.⁽³⁾ Indeed, transactions data show that corporate funding structures have changed gradually in the euro area from non-market funding to market sources for both debt and equity. Between 2012 and 2014 bond issuance came as substitute to bank lending in response to the sharp contraction in bank lending. Over the same period, substitution via equity issuance has hardly been noticeable. Unlisted equity emerged as the main funding source for corporates, but trended downwards. Since mid-2014 a transition towards marketable instruments is also taking place for

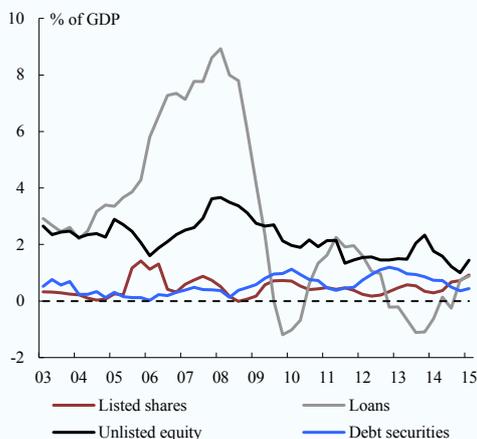
⁽³⁾ It is common to see debt-to-equity ratios vary closely with fluctuations in stock prices while corporations do little in terms of flows, debt or equity issuance, to counteract this mechanistic effect. See 'Capital Structure and Stock Returns', I. Welch, *Journal of Political Economy*, Vol. 112, No. 1 (February 2004), pp. 106-132.

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equity as funding through listed shares is picking up (see Graph 2).

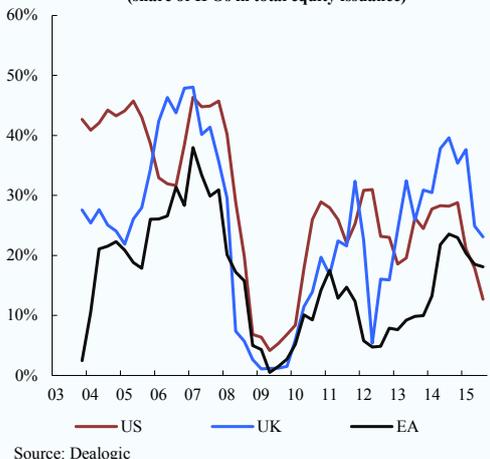
Graph 2: Corporate funding flows (euro area, net yearly flows)



One key element in the expansion of equity markets is the proportion of corporations that become listed for the first time. The relative importance of initial public offerings (IPOs) has historically been lower in the euro area compared with the US or the UK, though data over the last few months shows a higher ratio in the euro area than in the US. Nevertheless, established corporates account for the clear majority of new issuance.

The share of initial public offerings (IPOs) in total new issuance is varying with the economic cycle (see Graph 3). Hence, better economic prospects seemed to encourage corporates to start equity issuance, possibly thanks to pro-cyclicality of appetite by investors for less liquid and more risky assets that have high potential return.

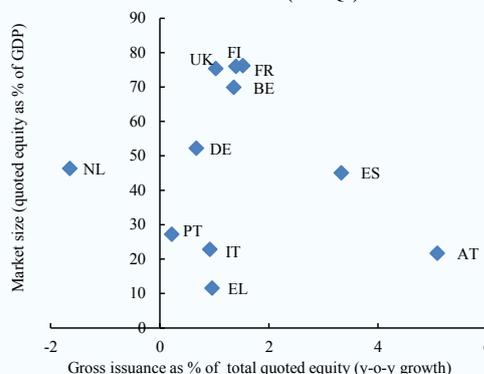
Graph 3: IPO vs Established firms (share of IPOs in total equity issuance)



Source: Dealogic

Equity issuance varies widely across euro area countries and is hardly correlated with market capitalisation of listed corporates (see Graph 4). That is, equity issuance was neither strong in countries in which corporates had an already large share of listed shares on their balance sheet (UK, France and Finland) nor in those with a large scope to catch up (Greece, Italy, Portugal). Strong issuance activity in Spain relative to France, Germany and the Netherlands suggest that the usual distinction between vulnerable and non-vulnerable Member States provides no good explanation in the current juncture.

Graph 4: Size and growth rate of stock markets in selected EU countries (2015-Q1)



The causes of cross-country differences in the size of listed equity markets are numerous. For example, corporations in Italy and Portugal are overall smaller and/or operating in sectors where corporations are less often listed. The calculations in Table 1⁽⁴⁾ show the role of the economic structure such as corporate size and sectoral composition in explaining differences in the use of listed equity across selected EU Member States. For this exercise, the fraction of corporates with listed shares⁽⁵⁾ across some EU Member States is compared with a simulated ratio that shows how high this ratio would have been in a country if the fraction of listed corporates had been as high as in the euro area in each sector and each size class. It turned out that corporate size and sectoral composition explain 1.5 pps of the low use of listed equity in Italy and 2.1 pps in Portugal (difference to EA value). The calculations suggest that Germany should have a somewhat higher equity ratio than these two structural factors indicate. The difference between the actual and simulated value gives an estimate of differences in corporates' financial

⁽⁴⁾ The sum of the differences due to economic and financial structures amount to the difference between the respective country and the EA.

⁽⁵⁾ Measured as the share of operating revenues of listed corporates in all corporates' operating revenues.

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behaviour i.e. on corporates' decision to get listed or remain unlisted. Such financial parameters appear to explain to a large degree the relatively more developed equity markets in France and the UK.

Table 1:

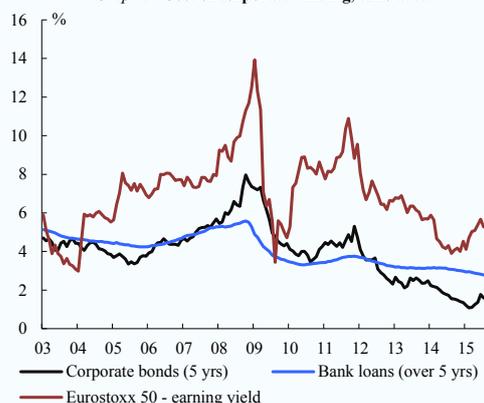
Cross-country differences in the use of listed equity

	EA	DE	FR	IT	ES	PT	UK
% of operating revenues by listed corporates in total corporates' operating revenues (1)	15.7	15.2	21.1	13.8	15.2	14.3	23.4
(1) If all countries had the euro area financial structure i.e. the same proportion of listed corporations for each size/sector	15.7	16.7	16.1	14.1	17.5	13.6	20.0
Differences due to economic structure	1.0	0.5	-1.5	1.8	-2.1	4.3	
Differences due to financial structures	-1.5	5.0	-0.4	-2.2	0.7	3.4	

Source: ORBIS, EC calculations

Equity is considered as the most expensive capital form in the pecking-order of financial instruments.⁽⁶⁾ Since balance sheet adjustment in the banking system made bank loans more expensive, corporate bond issuance became relatively more attractive than bank loans as witnessed by the rising issuance of bonds by corporates. The costs of equity are proxied by the earning yield in Graph 5, which is the inverse price-earnings ratio. While the price component can be read from share price quotes, here the Eurostoxx50, the earnings component is based on analysts' forecasts usually of earnings one year ahead. The latter is the most volatile component of this earning yield.⁽⁷⁾

Graph 5: Cost of corporate funding, euro area



Though the equity yield has been much higher than the interest on bank loans and corporate bonds, the

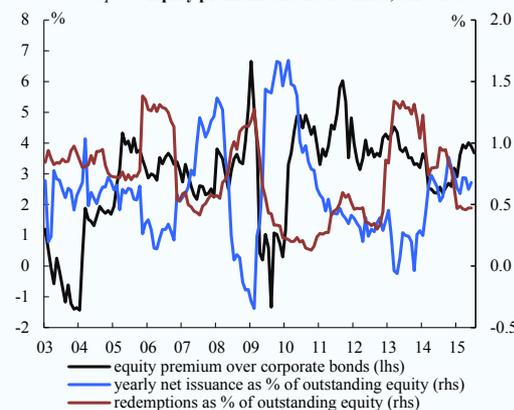
⁽⁶⁾ See S. Myers, N. Majluf, (1984). "Corporate financing and investment decisions when corporates have information that investors do not have". *Journal of Financial Economics*, Vol. 13 No. 2, pp.187–221.

⁽⁷⁾ For a discussion of different measures of the cost of equity, see 'Valuing stock markets and the equity premium', article in *ECB Monthly Report* November 2008, pp. 87-98.

comparison is somewhat misleading because equity does not have to be repaid unlike debt. To understand the attractiveness of equity funding, it is therefore more informative to look at how the equity premium, i.e. the difference of the earning yield over the corporate bond yield, has changed over time. Whereas the earnings yield has been on a downward trend since 2012 and on average been lower since then before the financial crisis, the picture is less clear cut for the equity premium. The latter has only been marginally lower since 2012 than before the financial crisis 2005-08 (see Graph 6). Overall, although the correlation between equity premium and net issuance of quoted shares is not perfect, there is a clear influence of the relative price.⁽⁸⁾ Especially, when the equity premium is either at a local peak (2005, 2008, 2011) or local trough (2004, 2007, 2009, 2014), net issuance tends to be low or high.

Redemptions play an important role in making net issuance correlate with any proxy of equity costs.⁽⁹⁾ Corporations bought back their own shares when the equity premium was high or during periods of rapid declines in corporate bond yields such as in 2013. Conversely, corporations slowed down share buybacks when the earnings premium was low such as in 2007 or during periods of low and uncertain earnings such as during the second half of 2009 and 2010.

Graph 6: Equity premium and net issuance, euro area



Both structural and cyclical factors may explain why corporates substituted bank loans by corporate

⁽⁸⁾ See 'Market Timing and Capital Structure', M. Baker and J. Wurgler, *Journal of Finance*, 2002.

⁽⁹⁾ Gross issuances are much flatter and hence display a weaker correlation with the price index.

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bonds and less so by issuing quoted stocks.⁽¹⁰⁾ First, equity issuance entails a change in ownership structure whereas debt issuance does not. Managers and incumbent stock holders may be reluctant to widen the investor base. Second, differences in corporate financial structures are heavily influenced by differences in the tax treatment of funding instruments which is biased in favour of debt in most EU countries. Third, issuance costs, especially for first time issuers, are high for equity because investors request transparency. It is therefore understandable that long-established corporates tap the stock market, while initial public offerings by non-quoted corporates lag and smaller corporates may consider issuing costs as prohibitive. Fourth, since equity allows participation in the upside potential whereas bonds do not, investors may prefer holding bonds in a low growth environment as the likelihood that the upside potential materialises is low.

Conclusion

Over the last few years, corporate funding structures have been changing in the euro area as

⁽¹⁰⁾ There is wide literature attempting to explain the capital structure of corporates with little consensus overall. Alternative theories such as trade-off and the pecking order were developed after Modigliani & Miller's capital structure irrelevance theory. For Europe, see "Debt-equity choice in Europe", P. Gaud, M. Hoesli and A. Bender, *International Review of Financial Analysis* 16 (2007).

witnessed by a shift from bank lending to market funding thereby reducing the vulnerability to balance sheet adjustment in the banking system. Market instruments and especially listed equity takes a central role in US corporate external funding. According to some recent studies, this contributed to initiating a much swifter economic rebound in the US than in the EU.⁽¹¹⁾

Compared to the use of corporate bonds as a funding tool, equity issuance has been considerably weaker in the EU economy and the upturn is still recent. It has been supported by declining costs of equity, which are however more pronounced in absolute terms than relative to the costs of bond issuance. At the current juncture, more equity funding and higher equity prices improve debt-to-equity ratios and thereby alleviate pressures on corporates to deleverage via debt reduction. However, equity prices have a cyclical behaviour and therefore do not ensure long-term stability for debt-to-equity ratios. The current substitution in terms of flows from debt to equity provides a more robust indicator for the strengthening in the corporate financial structure.

⁽¹¹⁾ See J. Allard, and R. Blavy, (2011), Market Phoenixes and Banking Ducks, Are Recoveries Faster in Market-Based Financial Systems? *IMF Working Paper* No. 11/213; Thomas Grjebine et al. (2014), Corporate Debt Structure and Economic Recoveries CEPII Working Paper 19.