

FINANCING COSTS OF PORTUGUESE COMPANIES*

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1. INTRODUCTION

The financing conditions faced by the non-financial private sector are classical determinants of investment and consumption decisions and, consequently, of economic activity and prices. In the case of companies, financing costs are dependent inter alia on the initial financing structure (namely the share of debt, the maturity structure and/or the interest resetting period), the depth, liquidity and cross-border integration of capital markets, as well as by both investors' and savers' preferences. Thus, monetary policy impulses are likely to be transmitted heterogeneously to corporate financing conditions across individual euro area countries, thereby inducing differentiated effects on future economic and price developments. Although the price formation mechanism in financial markets provides information on financing conditions, it should be borne in mind that information asymmetries in this market are likely to lead to quantitative restrictions, by rationing funds available at the prevailing market price (Stiglitz and Weiss (1981)).

This paper aims at obtaining a set of measures of developments in the real financing costs of Portuguese companies. To this end, calculation procedures are established and their methodological options discussed. Such measures are proxies for the actual costs incurred by companies in various financing market segments, which, taking into account the corporate financial structure, may be aggregated into a synthetic indicator for total funds obtained by these companies. The proposed indicators give additional information¹ for the establishment of a coherent framework for the analysis of the financial conditions faced by the private sector. In fact, such measures facilitate the monitoring over time of overall corporate financing conditions and the analysis of developments in corporate financing and may contribute to improve forecast tools for corporate investment.

The article is structured as follows: Section 2 presents the financing structure of Portuguese non-financial corporations and compares it with that of the euro area as a whole. Section 3 proposes measures of real corporate financing costs for the broad categories of financial instruments, namely equity, bank loans, short-term market-based debt and medium and long-term market-based debt. Section 4 presents a synthetic indicator, illustrating real total financing costs, that results from the aggregation of partial indicators for each instrument using their outstanding amounts as weights. Finally, Section 5 summarises the main results.

* The analyses, opinions and findings of this article represent the views of the authors, they are not necessarily those of the Banco de Portugal.

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(1) Among the elements that must be taken into account when assessing corporate financing conditions are the dynamics of corporate financing volumes, the way they meet the sector's aggregate borrowing needs, as well as qualitative information from surveys to companies (e.g. Investment Survey) or banks (e.g. Euro Area Bank Lending Survey).

2. FINANCING STRUCTURE OF COMPANIES

Among the forms of corporate external financing, two types should be distinguished: financing through equity and financing through debt, which, in turn, includes loans by credit institutions and market-based debt. Table 1 presents the weight of each of these external financing components for companies in Portugal and the euro area at the end of 1998 and 2006.

Equity is the main source of financing of Portuguese companies, accounting for 60 per cent of total financing at the end of 2006, compared with around 73 per cent in the euro area. The largest part of equity of Portuguese companies is non-quoted, amounting to 67 per cent of all equity at the end of 2006. The weight of unquoted shares is related to the fact that the Portuguese corporate structure comprises a large proportion of small and medium-sized enterprises. This is also observed in the euro area as a whole (unquoted shares amounted to 63 per cent of equity financing in 2006), where small and medium-sized enterprises account for a significantly higher share than in the United States and Japan.² It should be noted that, between end-1998 and end-2006, the weight of equity financing of Portuguese companies declined and was largely counterbalanced by an increase in the weight of bank loans. In turn, the financing structure in the euro area was more stable in the period as a whole, although there were significant fluctuations associated with swings in international stock market prices during this period.

Bank financing is very significant in the corporate financing structure in Portugal, accounting for 31 per cent of total financing in 2006, i.e. considerably higher than in the euro area as a whole. In Portugal, most loans have an original maturity of up to 1 year, in contrast to the euro area where bank financing with maturities of over 5 years predominates. Moreover, it should be noted that in Portugal, even for longer maturities, interest rates on bank loans to companies are indexed to short-term interest rates, conversely to what is typically observed in some major euro area economies, where interest rates on bank loans with longer maturities are strongly correlated with medium and long-term government bond yields.

Financing through the issuance of debt securities accounts for a small share of external financing of Portuguese companies (9 per cent in 2006), of which more than half concerns short-term debt securi-

Table 1

FINANCING STRUCTURE OF COMPANIES IN PORTUGAL AND THE EURO AREA (AMOUNTS OUTSTANDING)
As a percentage of the total

| | Loans | | | | Debt securities | | | Shares | | |
|---------------|-------|--------------|-----------------------|--------------|-----------------|------------|-----------|--------|--------|----------|
| | Total | Up to 1 year | Between 1 and 5 years | Over 5 years | Total | Short-term | Long-term | Total | Quoted | Unquoted |
| December 1998 | | | | | | | | | | |
| Portugal | 23 | 14 | 5 | 4 | 6 | 1 | 5 | 71 | 28 | 43 |
| Euro area | 25 | 9 | 3 | 12 | 4 | 1 | 3 | 72 | 31 | 41 |
| December 2006 | | | | | | | | | | |
| Portugal | 31 | 13 | 8 | 10 | 9 | 5 | 4 | 60 | 20 | 40 |
| Euro area | 23 | 7 | 4 | 12 | 4 | 2 | 3 | 73 | 27 | 46 |

Sources: ECB and Banco de Portugal.

(2) In Portugal, employment in small and medium-sized enterprises stands at around 87 per cent, compared with 66 per cent in Europe, 46 per cent in the United States and 33 per cent in Japan (for a comparison between Europe, United States and Japan, see Hartman et al (2003)).

ties, namely commercial paper that is a close substitute for short-term bank loans. Nonetheless, the weight of financing through the issuance of debt securities in Portugal is higher than in the euro area as a whole, where the weight in total external corporate financing reached only 4 per cent in 2006.

3. INDICATORS OF REAL FINANCING COSTS OF NON-FINANCIAL CORPORATIONS

This section proposes methodologies for the calculation of corporate financing cost indicators of the previously mentioned broad categories of financial instruments. For the purpose of monitoring developments in the Portuguese economy in the context of the euro area, and in order to have a benchmark to better interpret results, each subsection of this paper includes similar indicators constructed for the euro area as a whole.

3.1. Cost of equity financing

The measurement of the cost of equity financing, seen as the rate of return demanded by investors for holding stocks, presents various methodological difficulties. First, while for listed companies a market price for equity is available, for unlisted companies, which represent the majority, this information is absent. Moreover, even for listed companies the cost of equity is not directly observable in the market, implying that an indirect analytical approach must be chosen.

We take the cost of quoted equity as indicative for the cost of unquoted equity. This approach consists in assuming that there is an implicit shadow price for the equity of unlisted companies, which is similar, in aggregated terms, to that of listed companies. This corresponds to assuming that the structure in terms of sectoral composition, size and transparency is similar in both groups of companies. In general, unlisted companies are smaller and more opaque than listed companies, due either to the greater proportion of unlisted companies in the early phases of companies life cycle or to less strict requirements regarding the disclosure of information to the public. Thus, it may be argued that the cost of equity of these companies is underestimated when this procedure is used.

With regard to the analytical approach for the calculation of equity financing costs, it should be noted that the price of a stock is equal to the discounted values of future dividends, considering the equity risk premium in the discount rate. Thus, the operationalisation of a methodology to calculate the cost of equity implies the availability of information on stock prices and all future corporate cash flows. The simplest approach consists in setting a real long-term growth rate for future dividends and to assume that it remains constant when discounting the value of future expected dividends. Long-term dividend growth rates are typically fixed by using an estimate of the potential growth rate of the economy. This rate is assessed when the cost of equity is estimated. In this context, the cost of equity can be residually calculated using the so-called Gordon formula (Gordon (1962)):

$$C_c = \frac{D_t}{P_t}(1+g) + g \quad (1)$$

where C_c is the cost of equity, D_t / P_t the current dividend yield and g the growth rate of dividends in the long run. Equation (1) can be interpreted as follows: for the same current dividend yield, a higher expected growth rate of dividends will only be compatible with a higher cost of equity. In other words, exogenous changes in the expected growth rate of dividends must be reflected in the current price of equity. Although this set of assumptions simplifies the problem, it is considered to be rather limited as it does not take into account all the information available in financial markets, in particular investors' percep-

tions regarding earnings' growth rates in the short-term (see ECB (2002) and Panigirtzoulou and Scammel (2002)). Thus, the methodology used in this paper is a generalisation of the Gordon formula to estimate the cost of equity and assumes three stages for the development of the dividend growth rate (Three Stage Dividend Discount Model).³ More specifically, the first stage includes the first four years and it is assumed that the growth rate of dividends is that obtained by analysts' forecasts regarding corporate earnings; the second stage corresponds to the next eight years, when dividends are expected to converge in a linear fashion to the constant long-term growth rate, which is assumed to prevail throughout the third and last stage. Fuller and Hsia (1984), based upon the Three Stage Dividend Discount Model, show that the cost of equity may be residually obtained by:

$$C_c = \frac{D_t}{P_t} [(1+g) + 8(ga-g)] + g \quad (2)$$

where ga is the forecast of the average growth rate of dividends over the next four years. Equation (2) has an interpretation similar to equation (1), i.e. for the same dividend yield a change in the forecast of the average four-year dividend growth rate is only compatible with a correspondent change in the cost of equity. The cost of equity was calculated on the basis of the Morgan Stanley Capital International index for Portugal (MSCI-Portugal). This index is representative of the Portuguese stock market with a composition similar to that of PSI 20. Thomson Financial Datastream provides data on the dividend yield and on earnings per share growth forecast of the International Brokers Estimate System (IBES) for the MSCI-Portugal. Earnings growth rate forecast provided by analysts are used to determine the four-year average dividend growth rate, assuming a constant payout ratio. Thus, the expected growth rate of dividends for the next four years is calculated as the average of earnings per share (EPS) forecast by analysts for the following periods: current year, 1 year ahead, 2 years ahead and 3 years ahead. This rate was deflated by Consensus Economics expected inflation for Portugal. The real growth rate of dividends in the long run is assumed to be equal to the estimate for potential output growth in Portugal, as would happen if the Gordon formula were used. In fact, in the long run, aggregate corporate earnings growth should be consistent with the income growth of the economy as a whole. More specifically, it was assumed that $g = 2.0\%$, in line with the Almeida and Félix (2006) results for the 1999-2005 period.⁴

Chart 1 shows the real cost of equity financing for MSCI-Portugal between January 1999 and October 2007.⁵ In addition, an estimate of the cost of equity in the euro area is presented for the Dow Jones Eurostoxx index, calculated on the basis of the same methodology.^{6,7} As shown in the chart, over the period under review the estimate for the real cost of equity financing in Portugal was significantly volatile, being on average around 0.8 p.p. higher than in the euro area. Between January 1999 and January 2001, the real cost of equity in Portugal fluctuated around 5.8 per cent and subsequently started an upward movement, reaching peaks slightly above 11 per cent in the second half of 2004. Since then, it has fallen significantly, standing systematically below the historical average since early 2006. In the same period, the euro area real cost of equity was less volatile, with slight fluctuations around 4.5 per

(3) Panigirtzoulou and Scammel (2002) show that the use of the Three Stage Dividend Discount Model for the assessment of stock prices offers a relatively good explanation for the past behaviour of stock indices in the United Kingdom and the United States.

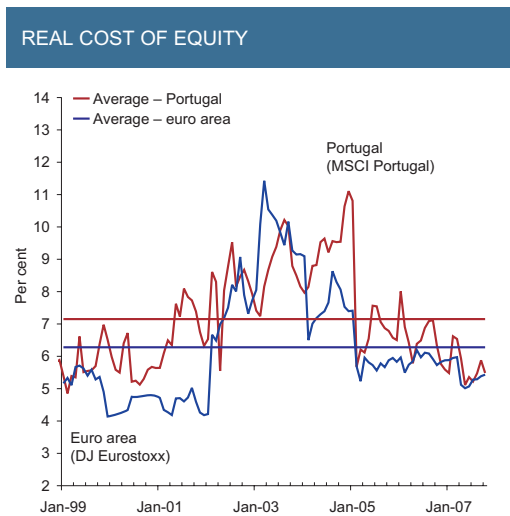
(4) The assumption for the growth rate of dividends in the long run only influences the level of the estimated cost of equity, but does not condition its developments. For instance, a growth rate of potential output 0.5 p.p. higher than that assumed would imply an increase in the estimated cost of equity, on average, of around 0.4 p.p. over the period under review.

(5) The cut-off date for the charts included in this section was 31 October 2007.

(6) For the real growth rate of dividends over the first four years, analysts' forecasts regarding earnings per share of the Dow Jones Eurostoxx index were considered in the current year, 1 year ahead, 2 years ahead and 3 years ahead. For the real growth rate of dividends in the long run, a value of 2.0 per cent was assumed, in line with estimates for potential output growth in the euro area in the 1995-2006 period (see ECB(2005b)).

(7) Both indices comprise financial corporations (namely banks). This may give rise to some bias in the indicator as a proxy for the cost of capital of non-financial corporations, namely in periods of significant corrections in financial corporations shares, as was recently seen. The weight of financial sector shares on the market value of the stock indices considered is around 30 per cent, both in Portugal and the euro area.

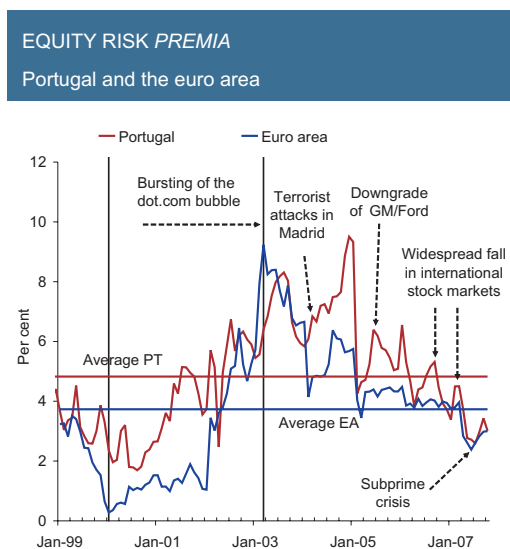
Chart 1



Sources: Thomson Financial Datastream, Consensus Economics and Banco de Portugal calculations.

cent up to January 2002 and a strong increase to a peak of around 11 per cent in March 2003. Since that date, the cost of equity in the euro area declined considerably to levels below the historical average since early 2005. Another way to assess developments in the cost of equity is through the behaviour of the equity risk premium demanded by investors to invest in the stock market. Chart 2 shows estimates for the equity risk *premia* implied in stock markets in Portugal and the euro area, which is calculated by subtracting the risk-free real interest rate from the real cost of equity. The risk-free real interest rates used are the government bond yield in Portugal and the euro area, deflated by the corresponding Consensus Economics long-term inflation expectations. According to these measures, the equity risk premium increased considerably throughout 2002, but less markedly in Portugal than in the euro area. These developments occurred in the context of corporate accounting scandals in

Chart 2



Sources: BIS, Consensus Economics, Thomson Financial Datastream and Banco de Portugal calculations.

particular in the United States and heightened geopolitical tensions, associated with a possible military intervention in Iraq. Between March 2003 and March 2004, the risk premium was corrected downwards, both in Portugal and the euro area. This correction was fully reversed in Portugal in the second half of 2004, when the risk premium reached peak levels (around 10 per cent at the end of 2004). Likewise, in the euro area, the equity risk premium increased in the second half of 2004, albeit less markedly. Investors' fears about the impact of the strong increase in international oil prices on corporate earnings may have contributed to these developments, which in the case of Portugal might have been aggravated by some political instability in the context of the persistence of major external and fiscal imbalances.

As from the beginning of 2005, the risk premium in the Portuguese stock market declined gradually to levels below the average for the past few years, in tandem with the euro area stock market. In general, the risk premium in Portugal was more sensitive than in the euro area to episodes of some financial markets turbulence as illustrated in the chart. Very recently, in the context of changes in the perception of risk by international investors associated with concerns regarding the size and allocation of losses related with the US subprime mortgage market, as well as of other strongly leveraged debt markets, the equity risk premium increased in the Portuguese and in the euro area stock markets. However, this premium remained below the average for the past few years.

3.2 Bank loan costs

In Portugal, the interest rate on corporate bank loans is determined almost exclusively by money market interest rates, either because loans with an original maturity of up to 1 year predominate, or because in longer maturities interest rates are index-linked to short-term interest rates, and are also periodically revised at short intervals. In this context, interest rates on outstanding amounts, applied to all operations outstanding during the reference period (comprising those negotiated in that period and those negotiated in previous periods) reflect very rapidly changes in expectations regarding the key monetary policy interest rate. This is particularly relevant in the case of Portugal, given that some problems were identified regarding data on interest rates on new business that advise against their use when assessing the cost of corporate bank loans in Portugal. In fact, in the context of the euro area harmonised MFI lending rates, interest rates on new business are provided, i.e. interest rates for any new agreement between a customer and a MFI (new contracts and renegotiations of existing contracts), which, theoretically, are a better tool to monitor the marginal cost of corporate borrowing. However, the method of aggregating these statistics can lead to biases and to spurious volatility in aggregate statistics, as is observed in Portugal according to Banco de Portugal (2003) and ECB (2006).⁸ Therefore, this paper exclusively analyses interest rates on outstanding amounts, using harmonised MFI statistics for the period after January 2003; up to December 2002 series were estimated on the basis of data available in that period and published according to the methodology presented in Banco de Portugal (2003).

For the purpose of calculating the interest rate on bank loans prevailing in Portugal, the almost exclusive indexation of corporate interest rates to key money market interest rates renders the breakdown by maturity categories unnecessary, given that, by definition, interest rates on both short and longer-term operations similarly reflect developments in their reference rates. Interest rates on bank loans in the euro area as a whole, on the other hand, include a relevant share of long-term fixed-rate

(8) The aggregation problems identified are associated with the fact that in Portugal loans frequently have very short maturities (being consequently overrepresented in aggregate statistics) and relatively high interest rates compared to the remaining operations, possibly reflecting the refinancing of trade credits by the financial system.

operations. For this reason, there is an analytical advantage in using the breakdown by original maturity.

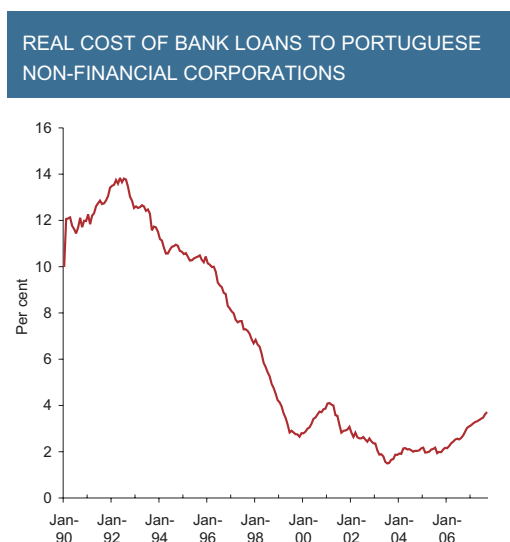
As discussed above, the real interest rate on loans to non-financial corporations in Portugal directly results from the average rate weighted by end-of-period outstanding amounts in all operations, deflated by Consensus Economics expectations for the average inflation expected over the relevant horizon. It was assumed that this was a one-year horizon, in line with the interest rate resetting maturity of up to 12 months characterising almost all operations.

The same procedure is applicable to the calculation of real interest rates on outstanding amounts with an original maturity of up to 1 year for the euro area as a whole. However, the approach to longer maturities requires some additional research, given that statistics available for interest rates on outstanding amounts do not make it possible to identify the structure of the interest rate revision periods for operations with maturities of over 1 year. In order to obtain an indication of this structure, the correlation between the level of each of the above-mentioned categories and government bond yields in that period was calculated. Interest rates on loans with maturities between “1 and 5 years” have a maximum correlation with two-year government bond yields, while interest rates on loans with maturities of “over 5 years” have a maximum correlation with seven-year government bond yields. This procedure led to the choice of the average inflation rates expected for the next 2 and 7 years in order to deflate nominal interest rates.

Similarly to Portugal, the series of bank interest rates in the euro area recorded a methodological break in January 2003. In fact, bank interest rates used for the period prior to January 2003 correspond to the aggregation of statistics published by national central banks on a best effort basis, but are not harmonised in terms of concepts and calculation methodologies. As from January 2003, harmonised statistics of euro area MFI interest rates were used.⁹

Chart 3 shows the interest rate representative of real cost of bank lending to companies in Portugal from early 1990 to August 2007.¹⁰ Throughout the 1990s the real cost of bank lending to Portuguese companies declined significantly, moving from values around 13 per cent during the 1990-1992 period

Chart 3



Sources: Consensus Economics and Banco de Portugal calculations.

(9) These replaced the statistics on retail bank interest rates previously produced on the basis of statistics on national interest rates.

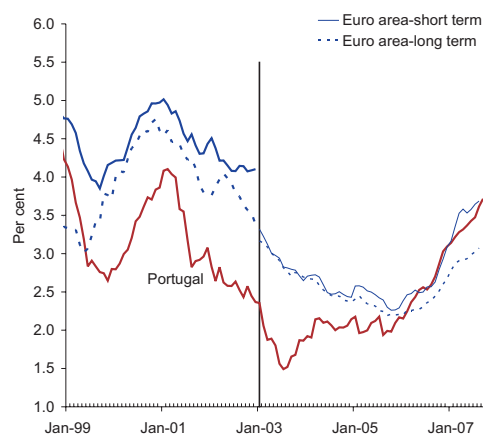
(10) Unless otherwise indicated, the cut-off date for the charts included in this section was September 2007.

to around 4 per cent in January 1999. Since the creation of the euro area, the real cost of bank lending to Portuguese companies fluctuated within an interval between 1.7 and 4.2 per cent. After recording troughs of 1.7 per cent in mid-2003, the real cost of bank financing recorded an upward trend, which was more marked as from the third quarter of 2005, standing at 3.7 per cent in September 2007.

Chart 4 shows real cost of bank lending to companies in Portugal compared to the euro area in the two above-mentioned maturity categories after January 1999. The vertical line in January 2003 illustrates the break in the series with the introduction of harmonised statistics. From a conceptual perspective, the real interest rate for Portugal directly compares with the real short-term interest rate for the euro area. Between early 1999 and the end of 2005, the real cost of bank loans in Portugal was systematically lower than in the euro area, largely reflecting relatively higher short-term inflation expectations in Portugal (Chart 5). From that date onwards, the cost of bank financing in Portugal converged to the euro area, and is now virtually at the same level.

Chart 4

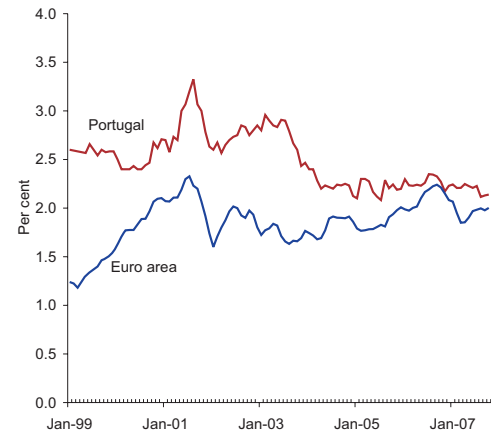
REAL COST OF BANK LOANS TO NON-FINANCIAL CORPORATIONS IN PORTUGAL AND THE EURO AREA



Sources: ECB, Consensus Economics and Banco de Portugal calculations.
Note: The vertical line in January 2003 indicates the break in the series following the introduction of harmonised MFI statistics. For the euro area, the short-term interest rate corresponds to loans up to 1 year and the long-term interest rate corresponds to loans over 1 year.

Chart 5

ONE-YEAR INFLATION EXPECTATIONS



Source: Consensus Economics and Banco de Portugal calculations.

3.3. Cost of securitised debt

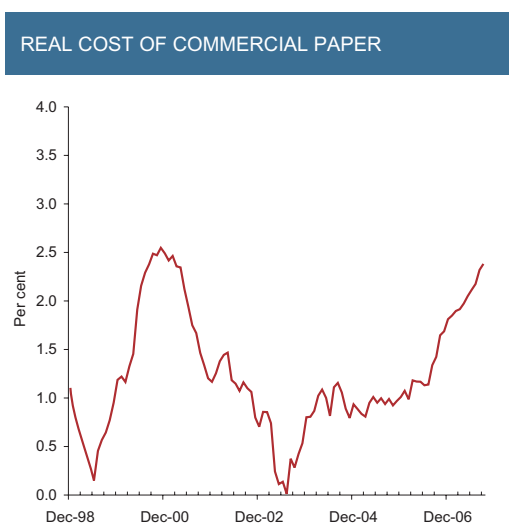
When calculating the real cost of securitised debt financing, it is important to distinguish between short-term debt and long-term debt, given that the relevant horizon for the expected inflation rate to be used in the deflation of nominal interest rates is different in both cases.

3.3.1. Short-term debt

In Portugal, short-term debt securities issued by non-financial corporations comprises almost exclusively commercial paper of highly rated large companies. Some characteristics make this instrument a very close substitute for bank credit such as the fact that issuances are usually guaranteed by a bank syndicate. Interest rates correspond to interest rate averages in the primary market of commercial paper for maturities of “25 up to 35 days”, “85 up to 95 days” and “180 up to 190 days”, double weighted by the corresponding amounts issued and the average maturity of each of the three above-mentioned maturity categories. In addition, in order to reduce the excessive volatility in this series, associated with the fact that a relatively small number of large issuers participate in this market, the resulting series was smoothed through a three-month moving average and subsequently it was deflated by Consensus Economics inflation expectations over a one-year horizon (Chart 6). Unfortunately, the lack of available data hampers the construction of an indicator for this market segment in the euro area as a whole.

As shown in Chart 6, the real cost of financing through the issuance of commercial paper, after reaching values close to zero in the second half of 2003, has been gradually increasing to levels close to the peaks. In September 2007 the real cost of this type of financing stood at 2.4 per cent.

Chart 6



Sources: Consensus Economics and Banco de Portugal calculations.

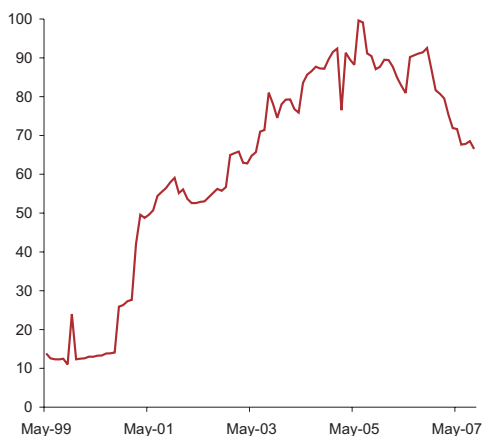
3.3.2. Medium and long-term debt

The calculation of long-term debt securities real financing costs is based on the yield of the Lehman Brothers index for bonds with a maturity of over 1 year issued by Portuguese investment grade non-financial corporations.¹¹ As shown in Chart 7, this index is a good representative of the market for long-term debt securities issued by Portuguese non-financial corporations.¹²

Chart 8 shows the real cost of borrowing in the bond market by Portuguese companies, assessed by the Lehman Brothers index, together with an indicator of the euro area bond market financing costs, measured by the Merrill Lynch index of bonds with a maturity of over 1 year issued by euro area investment grade non-financial corporations. Index yields were deflated by Consensus Economics inflation expectations in line with the average duration of indices (approximately 5 years in Portugal and the euro area). As expected, in the period under review the cost of borrowing by Portuguese companies is virtually equal to that of European companies. In Portugal, the real cost of debt securities reached a peak around 4.0 per cent in mid-2000, and subsequently moved back to values between 1 and 2 per cent from mid-2003 to the last quarter of 2005. Since then, an upward trend has been observed, with the financing cost standing at around 3.0 per cent in October 2007.

Chart 7

COVERAGE OF THE LEHMAN BROTHERS INDEX FOR MEDIUM AND LONG-TERM DEBT SECURITIES OF PORTUGUESE NON-FINANCIAL CORPORATIONS^(a)

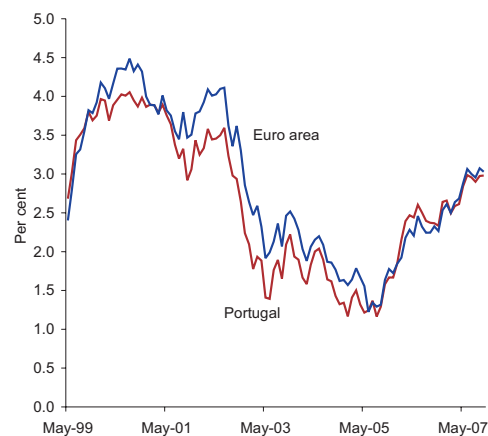


Sources: Lehman Brothers and Banco de Portugal.

Note: (a) Ratio of the market value of the Lehman Brothers index for medium and long-term debt securities of Portuguese non-financial corporations to total outstanding amounts of this instrument.

Chart 8

REAL COST OF BOND FINANCING OF NON-FINANCIAL CORPORATIONS IN PORTUGAL AND THE EURO AREA



Sources: Lehman Brothers, Consensus Economics, Thomson Financial Datastream and Banco de Portugal calculations.

(11) Issuances with ratings equal to or higher than Baa3/BBB-/BBB- according to the scales defined by Moody's, Standard & Poors and Fitch respectively.

(12) The cut-off date for the charts included in this section was 31 October 2007.

4. AGGREGATE INDICATOR OF CORPORATE FINANCING COSTS

In order to obtain a synthetic indicator of the real financing cost incurred by Portuguese companies, indicators presented in the previous sections were aggregated using the corresponding outstanding amounts as weights. It should be noted that in this article the cost of unquoted equity is proxied by the cost of quoted shares, and therefore the weight associated with the real cost of equity corresponds to total outstanding amounts of “shares and other equity” recorded under the liability side of non-financial corporations balance sheet, as published in financial accounts. In fact, for the purpose of aggregating the various partial indicators, it could have been possible not to consider unquoted equity, as it might be suggested by some previous applications used by other central banks (see ECB (2005a)). However, such procedure would represent a very significant omission, as it would not take into account the largest share of financing of Portuguese companies. This is particularly relevant to ensure higher comparability of results of the application of this type of methodology to different economies. In fact, the analysis of the financial structure of Portuguese companies and companies in the euro area as a whole presented in Table 1, shows that there is a larger relative proportion of quoted shares in the euro area than in Portugal. This, together with the fact that equity capital is the most expensive source of financing, would mechanically and somewhat spuriously lead to a systematically higher average real cost of financing of euro area companies compared to that of Portuguese companies. In addition, the fact that all equity is taken into account makes it possible to internalise the effects of corporate listing and delisting dynamics, whose impact on aggregation weights, if only quoted shares were used, would have no economic relevance.

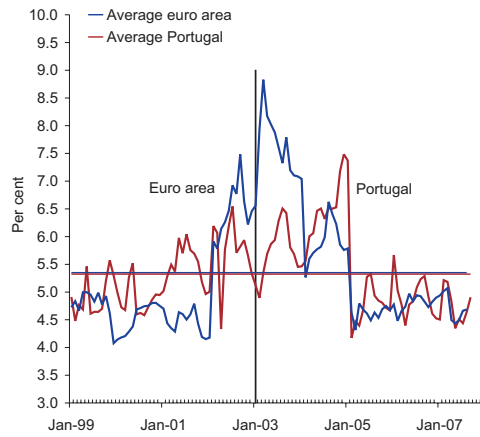
Chart 9 shows a synthetic indicator of the real cost of total financing of Portuguese non-financial corporations in the period between January 1999¹³ and September 2007, as well as an equivalent indicator calculated for the euro area using a similar methodology.¹⁴ The aggregation procedure described and the resulting indicator, in terms of concept, is similar to the weighted average cost of capital (or “wacc”) recurrently used in financial economics literature. Thus, it should not be interpreted as a mere mechanical aggregation of the cost associated to very different financial instruments. In other words, the fact that a given financial instrument has a circumstantial or a structurally lower cost than other instruments does not lead to the conclusion that the companies’ choice of one of them is strictly better, as the financing cost of each instrument is not independent from the corporate financial structure and from the interest rate or refinancing risk inherent in different instruments. If, on the one hand, equity financing is the most stable, given that through it a company obtains funds which are not liable to investors ex-ante when a company is going concern, on the other hand, by giving their holders residual rights on corporate assets, subordinated to the payment of all remaining liabilities, it introduces a risk premium demanded by the shareholder. The overall financial debt cost is endogenous regarding the debt to equity ratio in the financing structure, i.e. the lower the ratio the lower the cost. Turning to the structure of debt maturities, all other things being equal, the cost of longer-term debt should be higher than that of short-term debt, both because uncertainty as to debtor credit risk increases over the time horizon, and because debtors are willing to pay a higher cost so as not to assume the risk of not being able to roll-over as in their short-term debt. The same rationale applies to the legitimacy to compare, in absolute terms, indicators for different economies, which are characterised by diverse financial structures and market conventions.

(13) Given that there are no data available on the cost of medium and long-term debt securities for the period between January 1999 and May 1999, a constant yield was assumed, similar to that observed in May 1999.

(14) The indicator for the euro area corresponds to the average weighted by the outstanding amounts recorded in euro area financial accounts of bank interest rates on outstanding amounts, securitised debt market financing cost (based on a weighted average of yields in two indices of corporate bonds compiled by Merrill Lynch, one for investment grade companies and another for high yield companies) and the stock market financing cost.

Chart 9

OVERALL REAL COST OF FINANCING OF NON-FINANCIAL CORPORATIONS IN PORTUGAL AND THE EURO AREA

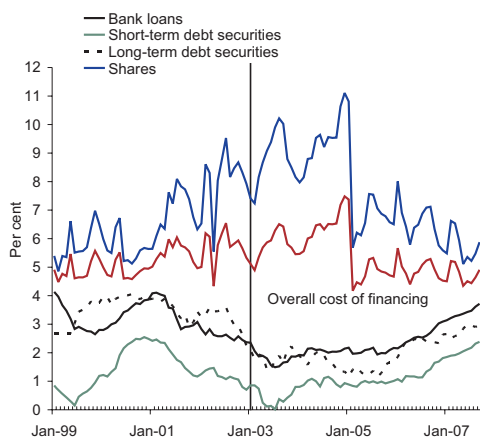


Sources: ECB, Consensus Economics, Lehman Brothers, Thomson Financial Datastream and Banco de Portugal calculations.
 Note: The vertical line in January 2003 indicates the break in the series following the introduction of harmonised MFI statistics.

Bearing in mind that some caution is warranted when comparing estimates for different economies, and despite the various financing structures, it is interesting to note that the overall real financing cost of Portuguese companies was, on average, virtually equal to that of euro area companies over the period under review. In Portugal, the overall real cost of financing reached peaks of around 7.5 per cent in the second half of 2004, while in the euro area the peaks occurred in March 2003 (around 8.8 per cent). In the past few years, the average cost of corporate financing, as measured by these indicators, has remained relatively stable at levels below the averages for the period. This is due to diverging de-

Chart 10

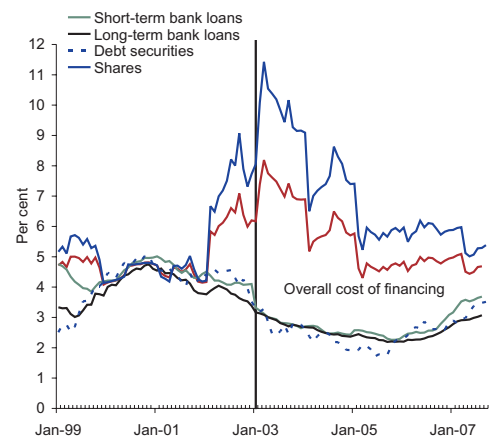
REAL COST OF FINANCING OF PORTUGUESE NON-FINANCIAL CORPORATIONS



Sources: ECB, Consensus Economics, Lehman Brothers, Thomson Financial Datastream and Banco de Portugal calculations.
 Note: The vertical line in January 2003 indicates the break in the series following the introduction of harmonised MFI statistics.

Chart 11

REAL COST OF FINANCING OF EURO AREA NON-FINANCIAL CORPORATIONS



Sources: ECB, Consensus Economics, Thomson Financial Datastream and Banco de Portugal calculations.
 Note: The vertical line in January 2003 indicates the break in the series following the introduction of harmonised MFI statistics.

velopments in the cost of debt financing and in the cost of equity financing, which seem to be negatively correlated (Charts 10 and 11). In fact, favourable conditions in stock markets counterbalanced the upward trend in the real cost of debt securities and bank loan financing. This trend started in late 2005 and led to the virtual stabilisation of the overall cost of corporate financing. However, this should be interpreted with caution, due to high uncertainty associated with the calculation of the cost of equity vis-à-vis the cost of other financing sources. In any case, it is relatively safe to argue that, in terms of prices, financing conditions faced by Portuguese and euro area companies over the past two years have remained favourable by historical standards.

5. CONCLUSIONS

This article proposes measures of the costs of financing of Portuguese non-financial corporations companies in the broad categories of financial instruments (equity, bank loans and debt securities), and whenever possible a comparison is made with the euro area. Moreover, a synthetic indicator has been constructed in order to illustrate the overall cost of financing of non-financial corporations, which results from the aggregation of partial cost indicators, by using the outstanding amounts of each instrument as a weight. The financing cost is assessed in real terms, on the basis of Consensus Economics inflation expectations over the relevant horizons.

Although some colinearity exists with the euro area as a whole, the estimate for the cost of equity financing of Portuguese companies is slightly more volatile and, on average, higher.

Up to the end of 2005, the cost of bank financing in Portugal was systematically lower than that of the euro area, reflecting higher inflation expectations in Portugal over the short-term horizon. As from January 2006, the cost of bank financing of Portuguese companies has converged to that resulting from short-term financing operations in the euro area and, since then, they have been broadly at the same level.

In Portugal short-term debt securities financing consists almost exclusively of the issuance of commercial paper of highly rated large enterprises. The cost of this type of financing follows closely the official interest rate cycle, having reached figures close to zero in real terms in the second half of 2003. Since then it has increased gradually to levels close to the peaks reached in the period. Unfortunately, the lack of available data hampers the comparison with the euro area in this market segment. With regard to long-term debt securities, the results show that the cost of financing of Portuguese companies virtually coincides with that of European companies, having recorded an upward trend since the end of 2005.

Despite the methodological limitations associated with the different financing structures and market conventions, an indicator of the overall cost of financing of Portuguese and euro area companies was constructed, as an average weighted by outstanding amounts of the financing cost of each financial instrument. Although the resulting synthetic indicator should be seen as an illustrative measure, the historical average for Portugal is virtually coincident with that of the euro area. In recent years, the average corporate financing cost was relatively stable at levels below the historical average. This is due to diverging developments in the debt financing cost and the equity financing cost, which seem to be negatively correlated. In other words, favourable conditions in stock markets over the most recent period counterbalanced the upward trend in the real cost of debt securities and bank loan financing, leading to the virtual stabilisation of the overall cost of corporate financing.

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