José Rodrigues da Costa/Maria Eugénia Mata

Portugal’s 1974 Carnation Revolution and nationalizations: the effects on the Lisbon Stock Exchange

ABSTRACT

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The 1974 revolution in Portugal put an end to the authoritarian political regime that had prevailed in that country for more than 40 years. Although no blood was shed, the military coup and subsequent nationalizations led to the suspension of operations in both the Lisbon and Oporto stock exchanges, as well as to dramatic challenges to growth and social turmoil coupled with the effects of the first oil shock.

A truly democratic regime could only be achieved following the reinstatement of land property rights, re-privatization, and reopening of the Lisbon and Oporto stock exchanges. In compiling an index for the Lisbon stock exchange quotations since it reopened in 1977, this paper demonstrates that joining Europe in 1986 and the euro zone in 1999 brought different effects to this market by legitimizing the character of the Portuguese political regime on the one hand, and decreasing the capital risk premium on the other hand.

Introduction

Ownership is a topic of great interest in business history.1 The interwar nationalization experiments in Germany and the post-1945 generalized state-owned condition of many firms considered to be of vital interest by governments in Europe (as well as their later privatization), stimulated a vast literature on firm efficiency, entrepreneurship, and decision-making.2 However, the effects of nationalizations (and privatizations) on stock markets have received much less attention.3 Nevertheless,

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stock exchanges in Europe reflected the increasing internationalization of the continent throughout the 20th century, adjusting their operations to the historical challenges witnessed on this continent. The 20th century was a dramatic time for Europe, with the two long and bloody wars dominating European markets and financial flows. While Portugal participated only in the First World War (remaining neutral in the Second), it is possible to say that the twentieth century was a time of structuring political events that framed its geopolitical position in today's globalized world. Although Lisbon was a small stock market throughout the twentieth century, it responded to the many historical challenges and had to adjust to the political events and decisions in the greater theatre, while catching up with the most modern stock exchange patterns of the civilized world. The largest wave of nationalizations in the country followed the military revolution of 25 April 1974, termed the Carnation Revolution. The name for this event was coined after soldiers put these flowers into the muzzles of their weapons, an image that the media transmitted to the world to demonstrate the widespread popular support for the new regime. In bringing hopes for democracy, socialism, and decolonization, the left-leaning Carnation Revolution put an end to the political regime that was born from the military revolution of 28 May 1926 and also ushered in a vast program of nationalizations.

Revolutions in 20th-century Europe were not so numerous. So, the effects of Portugal's 1974 upheaval on the Lisbon stock market may illustrate a particular class of consequences that only the Portuguese case can provide for the study of recent capital markets' sensitivity to domestic revolutionary turmoil or political change. Financial markets contribute to international capital flows in competitive international markets in the globalized world, lowering the barriers to foreign direct investment. Economists and economic historians devote much study to stock markets to understand the long process of innovation and survival in those markets. In recent decades, particularly following the end of the Bretton Woods regime, scholars have also contributed to macroeconomic and financial studies in building more and more sophisticated mathematical models to explain both financial decisions and the investment selection process. Confidence, positive expectations for the financial market, and trust in political regimes surely contribute to decisions regarding private investment.

There have been many studies on the cost of capital, not only in the USA, but in Europe and elsewhere. In contrast, however, there are no studies on the cost of capital

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10 Ibbotson Associates, Stocks, Bonds, Bills, and Inflation Yearbook (several years); Jeremy J. Siegel, The Equity Premium: Stock and Bond Returns since 1802, in: Financial Analysts Journal 1 (1992), 28-38; Myron J. Gordon, Dividends,
in Portugal, despite the fact that the Lisbon stock exchange has existed for many centuries, and corporate firms, as well as government, have used it to raise savings capital for investment. To the extent that savers must be compensated for postponing their consumption by purchasing securities (shares, bonds, etc.), the historical evidence of the revolution may illustrate the level of rewards expected and demanded by those investors at different moments in time. Risk aversion, the subjective estimation of risk, and its association with political events such as nationalizations (and later privatizations) strongly influence investors’ decisions. By measuring these effects, this paper seeks to answer these questions: How did the market react to the political environment in Portugal in the period following the Carnation Revolution in terms of the required rewards? Conversely, from the investors’ perspective, what was the cost of capital in Portugal, from then onwards?

The paper belongs to a larger project to study the Portuguese capital market throughout the 20th century, and is spearheading the discussion of the Portuguese case in the last decades. Specifically, it seeks to explain what influence political events such as nationalizations and privatizations exerted on the mean return for capital in democratic Portugal. To what extent can the experience of the Portuguese democracy reflect the importance of property rights for investment decisions? Uncertainty surely drove the level of returns, as most of the assets were subject to risk and should be compared to the returns provided by alternative risk-free assets:11 What was the equity risk premium in Portugal in the last decades? How did the market react to the decision of joining Europe, privatizations, and joining the euro zone?

After describing the political background of the recent Portuguese democracy in section 2, section 3 summarizes the analytical methodology developed by economists in the last decades addressing the cost of capital. Section 4 presents an index of capitalization to estimate the cost of capital from the Lisbon Stock Exchange quotations. This is a novel addition to the literature, as the only previously existing homogeneous index for the Lisbon Stock Exchange begins in 1988. Section 5 checks the impact of the main political events, particularly nationalizations, joining the European Economic Community, privatizations, and monetary union. The last section offers interpretations for the results in the context of the Portuguese historical experience.

Political Background

The participation in the First World War eroded the economic performance of the first democratic republican regime in Portugal, which was replaced by an authoritarian regime in 1926 that survived throughout the next decades, preserving a neutral position during the Second World War, promoting economic growth after the war, maintaining a colonial empire, and overseeing a catching-up process with the western
European countries. The military character of this regime ended in 1933 when a constitution was granted, but its authoritarian flavor remained. It was a regime based on a single political party and with a Prime Minister, António de Oliveira Salazar, who remained in power for 38 years without interruption from 1930 to 1968. From the end of the Second World War to 1974, the Portuguese economy enjoyed considerable economic success thanks to sustained growth rates, modernization, and internationalization.\textsuperscript{12} The increasing openness and the economic integration in 1959 into the European Free Trade Association (EFTA) brought competition to the production regime and a healthy stimulus to technological improvement, corporate performance, stock market operations, and increasing productivity.\textsuperscript{13} The success of this performance explains its longevity, which lasted until the effects of overseas wars and the first oil shock put an end to the steady six per cent Golden Age annual growth rate of the Portuguese economy.\textsuperscript{14}

In spite of these successes, the Portuguese economy was challenged by the small size of the motherland compared to the vastness of its overseas empire, which extended from the Atlantic islands of Cape Verde and São Tomé and Príncipe, to the large African territories of Guinea, Angola, and Mozambique (under Portuguese control since the Berlin conference of the 1880s), and even to the small Asian territories in India, Macau, and Timor (the vestiges of the Portuguese Asian empire dating back to the role of Portugal in the Age of the Discoveries).

In fact, the post-war decolonization experiences of other European empires affected the Portuguese overseas territories, where local movements seeking independence arose in the 1960s. Salazar’s political regime faced three colonial battlefields simultaneously after 1961, in Angola, Mozambique, and Guinea. Although a more liberal Prime Minister, Marcelo Caetano, replaced Salazar in 1968 when he became infirm after a domestic accident, the political opposition to the regime benefited from the great difficulties that were afflicting Portuguese society at the beginning of the 1970s. Those difficulties played a decisive role in installing a new political regime in Portugal.\textsuperscript{15} Meanwhile, Portugal also experienced a number of events, as did other countries, such as the experience of European economic integration and the 1973 oil shock. Coupled with the exhaustion of economic resources to maintain the expeditionary forces overseas, the imminent military defeat of the Portuguese army in one of the three theatres of operation (Guinea) precipitated the end of the authoritarian political regime in April 1974.

Very suddenly, all of these structural breaks occurred simultaneously, culminating in the Carnation Revolution. Since the Soviet Union still held an important international role in the context of the Cold War,\textsuperscript{16} the socialist ideals of the new political regime soon translated into a policy of decolonization, nationalizations, and land reform. Central planning mechanisms came into favour and were seen as the final alternative to market equilibrium. Decolonization represented the end of five centuries of expertise in controlling

\textsuperscript{12} Angus Maddison, \textit{The World Economy, a Millennial Perspective}, Paris 2001.
\textsuperscript{13} Peter Temin, \textit{The golden age of European growth: A review essay}, in: European review of Economic History (1997), 127-149.
vast empires. Agrarian reform was undertaken, particularly in southern Portugal, the only region where medium to large properties were dominant. The institutionalization of political parties and trade unions fuelled domestic politics and impressed a socialist political blueprint onto the 1976 political Constitution. Radical leftwing policies inspired in the Communist Party supported land expropriations in 1975, transferring control and ownership to local farm workers. At the same time, the new political regime promoted the nationalization of many economic sectors that were considered to be vital instruments for government control, with indemnities, which were, however, below the market value of the assets. Banking and insurance were nationalized from September 1974 to March 1975. Electricity production and its distribution, iron and steel production, oil refining and distribution, basic petrochemicals, shipbuilding and ship repair sectors, cement, tobacco, and paper (cellulose) were nationalized in April 1975. Most transport followed in turn, particularly rail and large road firms, maritime and air transport, the communication sector, and urban and suburban mass transport in the two metropolitan areas of Lisbon and Oporto. In late 1975 and 1976, fishing and the media companies were added, which «created the largest public enterprise sector that ever existed in the Portuguese economy», frightening many entrepreneurs, who left Portugal for Brazil and turned their business interests to other endeavours.

Trading operations were suspended in the Lisbon and Oporto stock markets on 25 April 1974 after many centuries of financial activity. Firms having their headquarters in the African possessions disappeared altogether and many others, even if headquartered in the homeland, had strong overseas ties and thus were hurt severely when independence was granted to these territories, usually to Marxist-inspired political regimes.

As a result of these political events, the Portuguese financial system was confined to a Central Bank (Banco de Portugal) with the pre-existing nationalized banks under its tight control, and a capital market restricted to public debt, managed by the Treasury. This explains why, when the Lisbon stock exchange re-opened on 12 January 1976, it could trade only in Treasury bonds. Only later, on 7 March 1977, it was authorized to trade other assets as well. However, the number, dimension, and diversity of non-nationalized firms with their assets listed and quoted on the exchange was then very small. As Bradford Cornell says, «The efficient market hypothesis says that publicly available information is immediately reflected in the current level of the stock market». Only in the 90s, and due to the 1989 revision of the 1976 constitution,...
could Portugal pursue a policy of privatization of most of the nationalized sectors, while land was returned to the control of the earlier owners’ families. The return to a different political perspective of full respect for property rights was in line with the decision to join Europe, but that would only occur in 1986. Portugal pursued a long process of application and negotiation, along with Spain. The ten members of the European Economic Community (EEC) took the political decision to accept the two Iberian partners simultaneously, this in order to facilitate the extension of safe democratic regimes to a region where extreme political regimes had prevailed.23

Against all expectations, Portugal was able to re-establish a capital market and develop a modern and efficient stock exchange in a very short period of time (around 15 years), and with such a success that it is today one of the five partners of the NYSE EURONEXT Group, the first group of exchanges with transatlantic operations.24

Based on our methodological approach to estimating the average cost of capital, the following sections will detail the technical aspects to discuss the compensation that investors required for risking their money.25 The political events that most affected the Portuguese capital market will also be identified.

Analytical Discussion

The 20th century ushered in a maturing process of economics in general, and financial management in particular. Many studies have estimated the average cost of capital in various countries, in a number of investment decisions, largely due to the use of the capital asset pricing model (CAPM), which requires the use of the average risk premium.26 Although these estimates focused first on the UK and the USA markets, in 2002 the equity risk premium was homogeneously estimated for many other countries, considering historical data covering the period 1900 until 2000.27 Dimson, Marsh, and Staunton (2002) produced estimates for 16 developed countries, noting that the USA, Japan, Germany, and France comprise 85 per cent of the global capital equity.28 They titled their work, «The Triumph of the Optimists» because throughout the 20th century equities have proved to be the most rewarding investment in all those 16 countries. Their study neglects Portugal, not only because of its small size, but mainly because such research has never been undertaken by Portuguese historians, and it may...
be that special historical conditions in this country have provoked different behaviour for the average cost of capital.

Considerable interest in the equity risk premium issue led some economists to devote their attention to general equilibrium models. 29 Mehra and Prescott used a database for gross domestic product (GDP) and consumption in the USA for the years 1889 to 1978, and concluded that Arrow-Debreu asset-pricing models could not simultaneously explain the high (American) equity risk premium on the one hand and, on the other hand, the small average risk-free interest rates that were historically observed in America. 30 Some years later, Rietz re-specified their model for a frictionless pure-exchange economy and solved the puzzle in capturing the effects of (possible) market crashes (in abandoning the hypothesis that consumption growth rates are symmetric about their mean, i.e. above their mean as often as they fall below). 31 Reasonable degrees of time preference and risk aversion were found, provided that plausibly severe crashes are not too improbable in the long-term analysis, and may lead the asset owners to lose all they have invested. Note that the disappearance of colonial firms, because of decolonization and civil wars in Angola and Mozambique following their independence from Portugal, meant a total loss of assets, while nationalization of firms situated in Portugal with low indemnities represented a partial loss and strong fear about future investment.

Barro and Ursúa go into full annual data on consumption for 22 countries (including Portugal) to detect crises, as this is the variable «that enters into usual asset-price equations». 32 To enlarge the sample these authors also use GDP for 35 countries (including Portugal). For samples that start as early as 1870 (as is the case for Portuguese GDP estimations) a peak-to-trough method was used for each country in order to isolate economic crises (defined as cumulative declines in consumption or GDP of at least ten per cent): 87 crises for consumption and 148 for GDP were discovered, leading to the conclusion that 3.5 years was the average duration for disasters, having a mean of 21 to 22 per cent loss, under a coincident timing both in consumption and GDP. 33 The conclusion is that a Lucas tree-model with independent identically distributed (i.i.d.) growth shocks and Epstein-Zin-Weil preferences accords with the observed average equity premium of around seven percent, after supposing that 3.5 was the coefficient of relative risk aversion. 34

29 General equilibrium models explain the behavior of supply, demand, and prices for all goods and factors (including capital) in a whole economy with many markets, by seeking to prove that equilibrium prices exist and are at equilibrium.


33 For rises, see also Carmen M. Reinhart, *Eight Hundred Years of Financial Folly*, Munich Personal RePEc Archive working-paper 11864 (2 December 2008), Online at http://mpra.ub.uni-muenchen.de/11864/1/MPRA_paper_11864.pdf [last access 6 December 2010].

34 Lucas considers the example of an economy populated by a large number of identical individual consumers, in which the only assets are a set of identical infinitely lived trees. Epstein-Zin-Weil preferences are the consumer’s preferences over the stream of consumption, considering the consumer’s degree of risk aversion and the consumer’s elasticity of inter-temporal substitution.
Estimates for the Capitalization Index throughout the Period of the Portuguese Democracy

The oldest uninterrupted time series of a Portuguese share index is the Bolsa de Valores de Lisboa (BVL/PSI-General), which started the daily series on 5 January 1988 with a base value of 1,000 points and continues until today. For dates before January 1988, there existed nothing compatible with this index, not at least because the different series that did exist did not disclose the methodology adopted to calculate the index or else followed solutions not compatible to the above index (traded volume weighted instead of capitalization weighted). BVL-General includes all shares listed on the main market of the Lisbon Stock Exchange and placed weights on each of them according to their capitalizations. For each day a single value is computed based on the closing prices of the shares included in the sample, but all corporate events affecting the price of any share beyond the sentiment of the market are taken into account through proper adjustments, either in the numerator or the denominator of the index formula.

However, the base date adopted for the BVL-General index – beginning of 1988 – might still be somewhat influenced by the excessive speculation of the two previous years, which culminated in the spectacular crash of October 1987; that is, it might be overvalued, since in the 1980s the Portuguese share market was still recovering from the impairments that followed the economic and social events of 1974, in particular the suspension of exchange operations for about two years (as the exchange closed for trading on 25 April 1974 and reopened for share trading only on 7 March 1977). Therefore, in order to extend the index, the challenge was to replicate as closely as possible the methodology of the BVL-General index for the period 1978 to 1987. 1977 was excluded owing to the extremely limited market that prevailed immediately after operations resumed on the Lisbon stock exchange. The source of information that was used to extend the index toward earlier years was the series of daily bulletins published on paper by the Lisbon stock exchange. These are available at the Documentation Centre of what is (today called) Euronext Lisbon. (After the Lisbon stock exchange joined the Euronext group of exchanges, in February 2002, this became the legal name adopted by the Portuguese affiliate.) However, only a single day per week was used, in order to reduce the computational burden. Quotations for Wednesdays were selected – except if it was a bank holiday – in order to minimize potential weekend effects upon observed prices.

Other methodological proceedings were also carefully followed up. To homogenize as much as possible the existing time series of the index after 1988 with the new series to be constructed, the following measures were adopted: All new companies listed in Lisbon were included in the weighted sample; every listed company was excluded from the index formula as soon as no quotations were available for two or more weeks (reflecting either delisting or simple suspension from trading); if a quotation was missing for a single week, the previous week’s value was used; and the gross dividends paid out

35 The Bank Totta & Açores index belongs to the first case and the Banco de Portugal index to the second.
by any listed company as an extra capitalization value were added to the weekly return on the first week after the payment day.

Additionally, because liquidity was very thin during most of these ten years, in the case that on any given Wednesday there was no quotation, the following measures were taken to minimize the impact of that gap: the simple average between bid and ask offers for that day was used as the second best estimate of the magnitude of those prices; and if only bid or ask offers were available, these values were used instead; if a bank holiday occurred on a Wednesday, the adjacent Tuesday or Thursday was used instead as representative of that week.

The results from the period January 1978 to June 2009 are very interesting if the average historical annual return is estimated using the 31.5 years of the Lisbon stock exchange history by fitting a straight line to the log values of the share index covering that entire sample, not forgetting the correction for time series autocorrelation and heteroscedasticity. Figure 1 depicts the evolution of the index throughout the Portuguese democracy (from January 1978 until the end of June 2009) and the trend line.

The estimated coefficient for the adjusted straight trend line measures the average annual (continuous) return provided by the Lisbon market during this window of time. It was 17.5 per cent p.a. (365-day year). The second step was to estimate the equity return premium (ERP) as the difference between share returns and free-risk instruments returns with similar maturity, to assess the compensation for uncertainty. Because treasury bonds did not exist during some of the sampled years – the case of

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**Figure 1: The Capitalization Index throughout the Portuguese Democracy**

Source: Lisbon Stock Exchange, Daily Bulletin (1 January 1970 to 31 December 1987); Lisbon Stock Exchange, BVL General Index and PSI 20 Index, online information; annual Reports of Companies, in: Lisbon Central Bank Historical Archive and Library; Costa/Mata/Justino, Portugese Average (cf. n. 25), 24.

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T-Bills – or were very illiquid – the case of T-Bonds – the risk-free rate was estimated using the domestic Interbank Money Market (in 2009 we used the European Over-Night Interest Average EONIA). The geometric annualized average interest rate for overnight operations or similar for the same period of 31.5 years was 9.47 per cent p.a. (365-day year). So, the geometric average for the ERP above the short-term risk-free rate resulting from the log-linear trend in the whole period of the Portuguese democracy during its 31.5 years (from January 1978 to June 2009) was $17.5 - 9.47 = 8.03$ per cent.

Assessing the Role of Political Events

The value of 8.03 per cent for the ERP is above the observed average equity premium of around seven per cent leveraged equity discussed in Barro and Ursúa to accommodate a 3.5 coefficient of relative risk aversion. At the same time, it stands below the top historical American experience (10.46 per cent from January 1946 to December 1972) which is above other historical periods in the USA and elsewhere.\textsuperscript{37} Note also that the world average cost of capital estimated by Dimson, Marsh, and Staunton is about five per cent.\textsuperscript{38} From this perspective, Barro and Ursúa’s\textsuperscript{39} idea may apply here as this higher capital remuneration may have occurred exactly to compensate for the losses of wealth and risk of nationalization (the local perspectives on crises that may seem unlikely phenomena but historically often occur and which did occur in Portugal), and the need for survival in the financial market. In fact, if that estimate should account for the losses suffered by investors with the Carnation Revolution – decolonization, nationalization of the large firms with indemnities much below their market value, closure of firms headquartered overseas (100 per cent loss), and heavy losses in value of the few remaining firms because of the complex political and social environment that followed the revolution – the 8.03 percent average return looks very normal. As a matter of fact, if the 1978 to 2009 time series of the index were extended further backwards to the eve of the Carnation Revolution (24 April 1974), a typical investor in 100 monetary units would have lost almost 2/3 of his wealth from that date until the beginning of 1978, from where he would have obtained an average annual return of 8.03 per cent above the risk-free rate.\textsuperscript{40} This makes an overall average along the whole 35.3 years – April 1974 to June 2009 – of about 4.05 per cent. Figure 2 clarifies this overall averaging process assuming an initial wealth of 100 Euro before the revolution.

This annual value of about 4.05 per cent for the ERP is much more in line with the estimated world average, and helps to assess the role of these political events on the high cost of capital in the Lisbon stock market.

In order to better comment on the evolution of the index, we followed two steps. First, we sought to identify potential structural breaks. Formal tests were carried out to
discover turning points and different phases in the index and «to detect the relation between politics and financial markets, […] and a moving-windows technique to search for structural breaks in the bond price series. The basic idea of the method is to estimate linear regressions within small time windows and then statistically check for differences in the means of the bond prices between them». 41 Second, the phases and turning points which have been detected using this method will be analysed in the comments of the next section on short-run evolution.

Potential structural breaking points are major events affecting the Portuguese economy. In an ex-ante analysis, relevant events that may be anticipated are the European Economic Community (EC) accession on 1 January 1986 and the euro zone entry on 1 January 1999. However, the inspection of the graph of the log-values of the index reveals five more possible structural breaks: November 1979, July to August 1987, February 1998, May 1998, and February 2002. As Waldenström and Frey remind us, «This is not an event study where a list of existing interesting dates are proposed and tested. Instead, we want the data to speak for itself [sic] and not reflect our prior knowledge of historical events». 42 As a result, all these dates were checked.

Chow’s breakpoint tests were used, partitioning the data into subsamples corresponding to before and after the date of the structural break. This test then compares the sum of squared residuals from fitting a single equation to the entire sample with the sum of squared residuals from fitting separate equations to the subsamples. The null hypothesis is that there is no break in the data on the specified date. The test is based on both F and LR test statistics, because F statistics assume i.i.d. normal finite sample distribution which is clearly violated by the high skewness (1.246) and excess kurtosis (17.248), of the returns. Therefore, it is more correct to draw conclusions on the LR value. F-statistics, however, are still reported as these are an asymptotic statistic.

The results of the Chow’s Breakpoint Test are presented in Table 1.

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42 Ibid.

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*Figure 2: Averaging process assuming an average loss of 66.6 per cent from 24 April 1974 to January 1978 and an annual return of 8.3 per cent ERP thereafter*

Source: See figure 1.
Table 1: Chow’s Breakpoint Test

<table>
<thead>
<tr>
<th>Date</th>
<th>F-statistic</th>
<th>Probability</th>
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</thead>
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<tr>
<td>November 1979</td>
<td>0.254307</td>
<td>0.858301</td>
</tr>
<tr>
<td>LR</td>
<td>0.765654</td>
<td>0.857663</td>
</tr>
<tr>
<td>January 1986</td>
<td>1.851119</td>
<td>0.135935</td>
</tr>
<tr>
<td>LR</td>
<td>5.564414</td>
<td>0.134836</td>
</tr>
<tr>
<td>July 1987</td>
<td>7.002993</td>
<td>0.000111</td>
</tr>
<tr>
<td>LR</td>
<td>20.95179</td>
<td>0.000108</td>
</tr>
<tr>
<td>Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 1998</td>
<td>8.746578</td>
<td>0.000009</td>
</tr>
<tr>
<td>LR</td>
<td>26.12690</td>
<td>0.000009</td>
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<tr>
<td>May 1998</td>
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<td>0.000001</td>
</tr>
<tr>
<td>LR</td>
<td>30.35433</td>
<td>0.000001</td>
</tr>
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<td></td>
<td></td>
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<tr>
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<tr>
<td>LR</td>
<td>23.13559</td>
<td>0.000038</td>
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<tr>
<td>Break</td>
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<tr>
<td>February 2002</td>
<td>5.021059</td>
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<tr>
<td>LR</td>
<td>15.04933</td>
<td>0.001775</td>
</tr>
<tr>
<td>Break</td>
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<td></td>
</tr>
</tbody>
</table>

The Chow Breakpoint Test found statistical evidence of structural breaks occurring in most of the dates identified as possible candidates. This means that these dates really represented moments of structural break for the time series. The hypothesis of no structural break, according to Chow’s Breakpoint Test, is rejected for July 1987, February 1998, May 1998, and February 2002 (the probability of the LR statistics is the lowest for May 1998). There is also some evidence of a structural break in January 1986 because the LR statistic is not zero but is low.

The EC accession might have led to the 1986 structural break. In Figure 1, this period is characterized by the biggest jump in the time series that was followed by the increase to a new level. Joining the monetary union in 1999 should also have been a significant structural break for the Lisbon exchange. As above, for the analysis, the dates closest to the event dates were taken since there is no observation on the date 1 January 1999, the legal date when Portugal joined the European Monetary Union, and the earliest subsequent observation in the sample was 6 January 1999.

Comments on short-run evolution: The Three Phases of the Index

To better illustrate the results of the econometric tests, Figure 3 compares the actual evolution of the log values of index to the best-fit straight line and places that evolution within the limiting borders of one standard deviation confidence interval. It thus draws a confidence band around the average line defined by deviations equal to one standard deviation.
From a short-run perspective it is possible to identify three phases. In the first phase from 1977 to 1985 the evolution of transactions was relatively sluggish, corresponding to the period when it became clear that Portugal could not remain in a position of isolationism following the decolonization in 1975. It was expected that increased cooperation with the EC would lead not only to an associate status with the EC according to article 238 of the Treaty of Rome, but to full membership according to article 237 of the same Treaty, a wish articulated on 20 September 1976 through the signature of the Financial and Additional document to the 1972 Agreement in Brussels by the Portuguese Foreign Office Minister at the time, Medeiros Ferreira. The negotiations for this purpose were long, and the trading volume on the Lisbon stock exchange was small.

As a result of the nationalizations that followed the Carnation Revolution, in 1977 the public enterprise sector was several times larger than it had been a few months earlier: it amounted to roughly 23 per cent of gross added value, 19 per cent of employment, and 43 per cent of the gross fixed capital formation of the Portuguese economy.\(^43\) Also, the political mood of the 1976 constitution of the country was reinforced with a law for the delimitation of sectors between private initiative and public sector. This law banned private ownership in the banking and insurance sectors.\(^{44}\) Looking at the long-run one-standard deviation confidence interval, we see that only after November 1979 the index did cross the lower border of the one standard deviation confidence band.

Although the European Commission responded favourably to Portugal’s proposal for EC membership on 19 May 1977, the formal answer of the EC was obtained only on 6 June 1978, with the stated motive of consolidating democracy in the whole Iberian

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\(^{43}\) Emílio Rui Vilar, et. al. (Grupo de Trabalho Interministerial para Análise e Avaliação da Situação e das Perspectivas de Evolução do Sector Empresarial do Estado), Livro Branco do Sector Empresarial do Estado, Lisbon 1998.

\(^{44}\) Law 46/77 of 8 July 1977.
region. The official negotiations were opened in Luxembourg only on 17 October 1978. Indemnities to former shareholders were paid in 1979 and 1980 with Treasury bonds with a low coupon rate to compensate for nationalized and expropriated assets. (The Portuguese state issued 264,485 billion escudos in bonds, with a present discounted value of 10.030 billion Euro in 2001. These bonds implied an expenditure of 322.982 billion escudos in service, with a present discounted value of 5.980 billion Euro in 2001.)

Additionally, while those negotiations with Europe were going slowly, the 1979 crisis of the second oil shock brought added woe. For the first time, in 1980 and 1981, the index attained the long-run trend level. The Decree-Law 406/83 of 19 November 1983, based on Law 11/83 of 16 August 1983, would redefine the limits between the public and the private sectors, paving the way to future privatizations.

In 1983 the index decreased to the lower level of the band. Because Greece had become a European partner in 1981, there was a political will to accept the other two southern European candidates, but extending the now ten-partner Europe to two additional less-developed newcomers had considerable economic costs. In the domestic capital market, the agreement that was reached with the IMF was able to restore confidence. The end of the crisis also stimulated a positive final phase for the negotiations to join Europe, but the capital market’s recovery began only in 1985, when the parliamentary elections gave the victory to the Social Democratic party, a centre-right party headed by Cavaco Silva. The success of the negotiations to join Europe also brought rising expectations, and the treaty was signed in June 1985 after the decision of the international Lisbon conference of 4 to 8 March 1985.

The Chow Test check for January 1986 suggests that this moment is the beginning of a new (second) phase for the Lisbon stock market, but the effect of joining the EEC on 1 January 1986 had a lagging effect on the financial market, and the rise from July 1987 may still be connected to European accession. The reason is that the EEC membership application itself required standardization in the financial market and political and economic transformations, all of which led to a decrease in the overall risk of the Portuguese financial market and advanced it to the new stage of development. Joining the EC had political, economic, and cultural meanings, which included the consolidation of the political regime born in the 1974 military revolution, the challenge of modernization for competitiveness in the international markets, and the commitment to the geopolitical values of the market-oriented economies. Positive returns increased a great deal from 1986 to October 1987, as if a local boom were occurring. On 6 January 1988, the market was clearly above the long-term average and 1988/89, as evidenced by

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the fact that the index runs above the one standard deviation confidence interval. This was the time when land property rights reverted to their original owners, after the failure of most of the agricultural collective unions and cooperatives that the revolution had spawned in the south, and this was also the time for privatizations. The motivation for privatizations came from social democratic political principles, and began formally in 1987. This explains the euphoric behaviour that fuelled excessive quotations (above the one standard deviation interval), ending with the October 1987 crash, which was also felt abroad. Soon, however, the beginning of privatizations sustained the index above the upper limit of the one standard deviation interval.

This performance trend was later analysed using technical arguments about the inherent lower efficiency of state-owned firms that justified the policy of privatizations. In fact, the dominant belief was that the «results [are] consistent with the hypothesis of lower performance of public enterprises, supporting the results of agency theory, namely the inherent difficulty in monitoring public enterprises and the lack of incentives conducive to efficiency».49 One main problem that was pointed out was the fact that «managers do not have a clear dissociation between management procedures and the political considerations of who appoints them».50 Strictly formulated government aims might therefore clash with managerial goals, damaging governance strategies. In other words, «managerial goals become ambiguous and even conflicting, management discretion is limited, leadership turnover is high, and responsibility for results is low, leading to […] bureaucracy».51

Privatizations continued in 1988. Privatizations were becoming fashionable, negative opinions about state-owned enterprises were growing, and elsewhere communist central-planning regimes were collapsing. The decree-law 449/88 of 10 December 1988 redefined the limits of the public and private sectors in order to reinforce privatizations, following many operative proceedings introduced in June 1988. The next year, 1989, witnessed further, substantial privatization operations, particularly in the insurance sector, and the first privatization of a bank, Banco Totta & Açores. The new political environment was reflected in a reform of the constitution in this same year. The new constitution abandoned socialism, land reform, and nationalization as goals of the Portuguese political regime. In the following years the Lisbon stock market witnessed a smooth development of the share index, and the whole decade of the 1990s was very successful for stock investors since the average index always remained above its long-run trend. Confidence in the potential for Portuguese growth was high, and the Portuguese standard of living rose in the 90s about 50 per cent above that of the 70s. The organization of a World Exhibition in Lisbon, which took place from 22 May to 30 September 1998, combined with the renewal of the eastern region of Lisbon and the construction of a long bridge to link the two banks of the metropolitan area were praised as a victory for Portuguese economic performance. At the time this bridge was the longest in Europe (at 17 km) and celebrated the discoveries and the voyage of

50 Ibid.
Vasco da Gama to India as well as Portuguese engineering technology, not least since it was constructed in only two years.

Several economic groups flourished during this period, some of which had already been important during the Salazar regime (the Mello’s Companhia União Fabril, the Champalimaud, and the Espírito Santo family groups), but Amorim, SONAE, and Banco Comercial Português were new actors in the country. Having been founded before the revolution, they were less touched by the effects of that event, and blossomed along with democracy. Throughout the period from 1989 to the end of the millennium the index saw a steady increase in Lisbon. In 1997 the index crossed the upper bound of the one standard deviation interval, and in 1999 touched it again. As Figure 4 shows, privatization operations occurred slowly from 1989 to 1995, with the bulk of them concentrated exactly from 1996 to 2001.

Although the peak in the number of privatizing operations occurred in 1995, the peak of the value for these privatization operations was reached in May 1998, which explains that this moment proved to be a break point according to the checking methodologies. The strong statistical evidence for this structural break of May 1998 may be connected to the positive expectations of investors regarding the European Monetary Union (EMU) since after that date the log index increased. The reasoning behind this is simple. For investors, EMU accession would lead to the standardization of the financial

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**Figure 4**

Privatizations in Portugal

![Diagram showing privatizations in Portugal with data from 1987 to 2006.](https://doi.org/10.17104/0342-2852_2011_1_29)


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52 For the groups that were important before 1974, see Maria Belmira Martins, *Sociedades e Grupos em Portugal*, Lisbon 1975. For the role of groups, see Tarun Khanna/Yishay Yafeh, *Business Groups in Emerging Markets: Paragons or Parasites?*, in: Journal of Economic Literature 2 (2007), 331–372.

Portugal’s 1974 Carnation Revolution and nationalizations

markets, introduction of the stricter rules of game, and interrelation with the financial markets of other EMU member states. This led to a lower assessment of risk by the players in the financial market and to an increase in capitalization (the peak of the index, in May 1998, may also be related to the inauguration of the world exhibition). Privatizations were always a very important stimulus for the index in the Lisbon stock market. The strong connection between privatizations and the index evolution is quite clear in merging Figures 3 and 4.

Meanwhile, there was the negative influence of the global 1993 crisis, but this was smoothed by the domestic recovery following European Union accession and by the enthusiasm for privatizations, which attracted many people with more experience and much more capital to invest in Portuguese assets, in particular non-residents. Also, the confirmation that the efforts developed between 1995 and 1998 to respect the three per cent public deficit threshold necessary to participate in the monetary union brought even greater confidence. The effects on the financial market may have then been felt, although the Euro was borne only on the 1 January 1999. Since Euro membership should decrease the country’s risk, it must affect the overall risk of the financial market. Since interest rates also decreased, savers were stimulated to invest in shares. Investors may have required less return for their investments because the associated risk fell and the premium no longer needed to be so high. Moreover, price volatility also decreased. Because Portugal belongs to the euro zone, inflation is under the strict control of the European Central Bank (and, therefore, Portugal benefits from a lower inflation risk premium owing to reduced uncertainty).

Privatization operations reached a lower value than in the two years preceding, but the success of the telecommunication, tobacco, and paper sectors continued to attract domestic and foreign investors to the Lisbon capital market. According to the checking methodologies, May 1998 is considered a break point, and it is worth noting that the index in 2000 was still above its long-run trend.
Looking again at the index, a third phase can be identified starting from the end of the millennium to the present. The index has remained below the long-run trend from the end of the millennium onwards (see figures 3 or 5), and the 2008 global crisis drove it even below the lower threshold of the confidence interval. This decline of the index from the end of the millennium to the present deserves some attention, as the influence of the so-called international dot.com crisis in 2000 may also be combined with another major factor: within the monetary union investors required much lower rewards for their investment during these recent years.

A different reason for this poor performance of the index may be Portugal’s sluggish economic growth in the new millennium. Economists search for the reasons underpinning the disappointing performance. Some blame the high Euro conversion rate for the former Portuguese currency, which reduced the international competitiveness of the Portuguese economy since it made Portuguese products very expensive (and non-competitive) abroad. So, investors may be anticipating lower returns for their investments because of lower levels of performance by Portuguese companies, which is a supply-side argument in favour of taking February 2002 as the structural breaking point. Another reason may be the fact that the government portfolio was still very large.

From 2004 to 2007 there was a new upswing in the index, which coincided with a new phase of privatizations in 2004 to 2006. Average revenues per operation were high in this regard, particularly in 2006. However, the index remained below its long-run trend. The international sub-prime crisis that began in the second semester of 2007 drove the index back down, leading to levels below the lower bound of the one standard deviation interval. Therefore, the international influence on the Lisbon exchange cannot be ignored, although this is a narrow and less-experienced market.

Conclusion

Financial markets have always attracted attention because of their central role in fuelling the economic development of nations, and because they provide decisive information for economic decision-making in market-oriented economies. Having lasted for more than four decades, the failure of the former political regime through the military coup of 1974 put in motion the ideals of freedom, democracy, and socialism. Global events, as well as domestic achievements, such as the national political regimes and the connections to the overseas empire, were main factors affecting domestic stock market operations and financial decisions in the country throughout the twentieth century.

The Portuguese capital market and stock exchange are studied here to reveal the importance of political events in the years of the Carnation Revolution and throughout the recent Portuguese democratic regime. We have also extended the historical time series of the share index of the Lisbon Stock Exchange to cover the period from January 1978 to June 2009.

With the help of these added data there is now evidence that stock exchange variables are a decisive topic for examining the effects of political events upon financial markets. The estimated equity risk premium of 8.03 per cent was much higher than the world

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54 Cornell, *Equity Risk premium* (cf. n. 22).
average of about five percent estimated by Dimson, Marsh, and Staunton (2002), but this was to compensate for losses of wealth and nationalizations, as there is a need of survival in the financial market. A truly democratic regime could only be achieved following the reinstatement of land property rights, re-privatization, and reopening of the Lisbon and Oporto stock exchanges. Nationalizations were detrimental for the Lisbon stock exchange, while privatizations were positive. The econometric tests undertaken to locate breaking points demonstrate that the Lisbon equity market has experienced three different phases during the current democratic period.55

First, there was a very sluggish evolution of the index from the reopening of the exchange in 1977 until joining the EEC in 1986. We may call this the trade reopening phase.

From then until the end of the millennium, the index was confined within the one standard deviation confidence interval around the long-run trend, although with some smaller cycles. The best moments were associated with privatizations, particularly in the 1996 to 2001 period when average revenues per operation were at the highest. As a whole, from 1987 to 2006, privatizations involved 164 firms, in 239 operations, earning a total of approximately 26 billion Euro.

From the 2000 peak on, the index ran within the lower half of the confidence band, but the 2007 crisis forced the index below the lower border of that band. A broader research effort, including examination of historical evidence coming from the period before democracy, is needed to check alternative interpretations for this last phase of the Portuguese democracy in order to assess the role of the performance of the Portuguese economy on financial markets, and to determine if a structural break in the beginning of the millennium really brought a sustained lower cost of capital to Portugal due to the introduction of the Euro in 1999.

The case of the Carnation Revolution and the importance of the European anchor for Portuguese democracy reflect the importance of property rights for investment decisions in financial markets. The paper also illustrates how an important dialogue may be established between macroeconomists and economic historians in looking for evidence from the large laboratory of experiences and facts that history makes available whenever long-term analyses are sought.

Adress of the authors: José Rodrigues da Costa/Maria Eugénia Mata, Universidade Nova de Lisboa, Faculdade de Economia, NOVA School of Business and Economics, Campus de Campolide, 1099-032 – Lisbon, Portugal, Email: jcosta@fe.unl.pt and memata@fe.unl.pt.

55 The Oporto Exchange reopened only in 1981 and always played a marginal role in the local economy.