Corporate profits and the recovery of the Spanish economy

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Spain´s recent internal devaluation policies have helped to decrease labor costs and improve corporate profit margins. The significant increase in ROA in Spain for operating assets is evidence of profitable investment opportunities within the country.

This article assesses the effectiveness of Spain´s internal devaluation policies by examining the evolution of corporate profitability during the crisis. The analysis is based on the Return on Assets (ROA) and Return on Equity (ROE), calculated using official data from the National and Financial Accounts. Returns are considered for capital assets used for production of goods and services in Spain, in order to measure the incentives for capital investment, as well as for financial assets, which for the most part are permanent investments abroad. ROA has increased throughout the crisis largely due to decreased labor costs, providing evidence that internal devaluation policies have been effective. Lower net interest payments and corporate taxes have also supported the rise in corporate profits. ROA for operating assets in Spain was 8% before taxes in 2013 - a sound basis for a corporate-led recovery of the Spanish economy.

Introduction

Corporate profits are an important economic indicator. For given financial and macroeconomic conditions, changes in profits tend to be positively correlated with changes in capital investment and either stimulate or deter economic growth. This article examines the evolution of profitability of Spanish non-financial corporations (NFCs) in the time period from 2006 to 2013, when the Spanish economy experienced the most serious recession of recent times in the context of the international financial and economic crisis. One of the explanations of why the Spanish economy entered into a severe recession, with many jobs lost and high unemployment, is that Spanish firms lost international competitiveness during the years of economic expansion that followed the creation of the Euro.

Presumably, one of the consequences of the loss in competitiveness is a decline in corporate profits, leading firms to close down unprofitable activities, reduce employment and cancel investment projects. In response, some public policies have been put in place to restore competitiveness through internal devaluation, i.e. through wage and price deflation. The labor market reform is an important example of one of the many policies adopted by the Spanish government to achieve the goal of internal devaluation. Internal

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devaluation will be effective in restoring economic growth as long as corporate profits go up and a new virtuous cycle of employment growth and capital investment begins.

The goal of this paper is to assess the effectiveness of the internal devaluation process through an examination of the evolution of corporate profitability and its determinants. From the analysis, it should be possible to conclude whether the Spanish economy is ready or not for a sustainable corporate-led recovery. The two main variables used for this analysis are the rate of return on operating assets (ROA) and the rate of return on equity (ROE). The calculation of the ratios requires information from the income statement (revenues, costs, profits), and from the balance sheet (assets and equity), consolidated for Spanish NFCs. The information for the elaboration of the consolidated income statement is obtained from the National Accounts (published by the INE). The information for the elaboration of the balance sheet comes from the Financial Accounts (published by Banco de España).[2]

The results of the analysis lead to different conclusions depending on whether the focus is on the ROA of operations variable, or on the ROE. According to the ROA, profitability of Spanish NFCs increases over time during the years of the crisis. This occurs because profit margins increase as a result of the reduction in labor costs as a proportion of the value added. The ROA corresponds to profitability of assets deployed in production in Spain so the evidence from this indicator is that internal deflation policy has been effective in reducing labor costs and increasing the gross profit margin. The ROE is lower than the ROA of operations and its time evolution is more erratic. There are two main reasons for this. One is that half of the assets of Spanish NFCs are financial assets, with a lower rate of return than the operating one. The other is the evolution in financial expenses for debt finance, and in corporate taxes, which both reached peak values in the years prior to the crisis. Debt and equity finance are used to finance both operating assets and financial assets in an undistinguishable manner, so the pool of cash-flows generated from both of them is at the disposal of corporations, for example for cancelation of debt, dividend payments, and for new investment decisions. The relatively high ROA of operations in 2013 indicates that conditions are favorable for investment in Spain, supporting a corporate-led recovery. However, some interference from competition in the use of funds in deleveraging operations cannot be excluded.

The rest of the article is organized as follows. The ensuing section shows the evolution of the main items of the income statement consolidated for Spanish NFCs, as elaborated from the National Accounts database. The next section presents the assets and liabilities of the balance sheet also consolidated for the total of NFCs elaborated with data from the Financial Accounts. The subsequent section contains the results from the calculation of rates of return for different groups of assets and for the stock of equity. Finally, the last section contains a discussion of the results and main conclusions and implications.

Income statement

The aggregate income statement for Spanish NFCs in the years from 2006 to 2013, adapted from National Accounts data, is shown in Table 1. An important distinction for the purpose of this analysis is that between operational flows and financial flows. The former include the items from production to EBIT of operations, while the latter include the items interest and dividends received, rents from properties and interest expenses.

Production and Gross Value Added (GVA), reached their maximum value in 2008 and then

[2] For a detailed and more complete description of the sources of data, methodology and actual calculations of the numbers used in this analysis, see the author’s publication (http://dx.doi.org/10.2139/ssrn.2436481).

Table 1

Income Statement: Spanish NFCs

Millions	2006	2007	2008	2009	2010	2011	2012	2013
Production at basic prices	1,330,779	1,416,984	1,445,250	1,393,950	1,399,362	1,405,186	1,383,624	1,358,459
- Intermediate consumption	870,693	926,720	923,134	888430	887349	887,949	873,531	855,050
GROSS VALUE ADDED	**460,086**	**490,264**	**522,116**	**505,520**	**512,013**	**517,237**	**510,093**	**503,409**
+ Subsidies and production taxes	-1,613	-939	-1,093	-1,792	-2,006	-2,244	-3,953	-5,728
- Labor costs	294,492	317,289	337,916	321,836	315,103	314,651	299,397	283,473
EBITDA OPERATIONS	**163,981**	**172,036**	**183,107**	**181,892**	**194,904**	**200,342**	**206,743**	**214,208**
- Amortization	78,441	84,817	90,824	93,096	95,549	98,319	100,587	102,169
EBIT OPERATIONS	**85,540**	**87,219**	**92,283**	**88,796**	**99,355**	**102,023**	**106,156**	**112,039**
+ Received interests and dividends	28,411	32,362	36,297	31,609	30,300	30,625	28,353	25,092
+ Other rents from properties	3,248	5,500	1,375	2,046	1,083	630	881	1,100
EBIT	**117,199**	**125,081**	**129,955**	**122,451**	**130,738**	**133,278**	**135,390**	**138,231**
- Interest expenses	36,019	51,984	59,954	32,968	30,477	36,313	32,312	23,015
- Corporate taxes	33,813	41,665	25,449	19,793	15,996	15,786	19,742	18,777
NET PROFIT	**47,367**	**31,432**	**44,552**	**69,690**	**84,265**	**81,179**	**83,336**	**96,439**

Sources: Own elaboration from Informe de la Central de Balances, Chapter 2; Cuentas de los Sectores Institucionales. Sociedades no Financieras de CN.

declined until 2013, so the GVA in 2013 was 4% lower than the GVA in 2008. The GVA as a percentage of the value of production increased from 35% to 37% from 2007 to 2013, probably as a consequence of a reduction in imports and an increase in in-house production. Overall, the GVA of NFCs represents between 45% and 50% of Spanish GDP.

Labor costs reach a maximum in 2008 and decreased since then. In relative terms, labor costs represented 65% of GVA until 2008 and only 57% of GVA in 2013. The EBITDA of operations reached its minimum in 2009 and increased since then in absolute and in relative terms. Seven of the eight percentage points of decrease in labor costs can be attributed to the increased share of EBITDA on GVA; the other point compensates the increase in production taxes. Overall, the EBITDA from operations is approximately 36% of GVA until 2009 and increased until 42% in 2013. Amortization costs increased all along the period and in 2013, they were 30% higher than in 2006, probably reflecting the loss in economic value of operating assets during the crisis. Since amortization increased over time at a higher rate than GVA, the EBIT from operations as a percentage of GVA remained stable around 19% until 2010 and then increased to 22% in 2013.

The non-operating revenues of NFCs include the interests and dividends received from their financial assets and rents from properties, in a lower amount. These revenues represented around 8% of the GVA in 2007 and 5% in 2013. This explains that the EBIT as a proportion of GVA remained rather stable over time, 26% in 2007 and 27% in 2012 and 2013. Interest payments on debt reached a maximum high of almost 60 billion euros in 2008, 11% of the GVA, and a minimum of 23 billion in 2013, 5% of GVA. Corporate taxes reached a maximum high in absolute and relative value in 2007, 8% of GVA, then decreased until 2009 and moderately increased again, so in 2013, corporate taxes represented 4% of GVA.

The changes over time in interest expenses and corporate taxes determine most of the time variation in net profits, from a low value of 31.4 billion in 2007, 6% of GVA, to a three times higher value of 96.4 billion, 19% of GVA in 2013. The increase of 13 percentage points of net profit over GVA from 2007 to 2013 is decomposed as follows: positive contributions of 8, 6 and 4 percentage points from lower labor costs, interest expenses and corporate taxes, respectively; negative contributions of 3 and 2 percentage points from higher amortization and production taxes, and 2 percentage points of GVA from lower interest and dividends.

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Balance sheet

The aggregated balance sheet of Spanish NFCs for the years between 2006 and 2013 are presented in Table 2, both in absolute and relative terms to total assets. On the asset side, a distinction is made between operational assets and financial assets. The operational assets include fixed assets (buildings, equipment machinery) and current assets (cash, inventories, accounts receivable net of accounts payable). They are assets deployed and used for production of goods and services in Spain. The financial assets include long-term and short-term financial investments by NFCs, excluding bank deposits (corporate bank deposits will in part be tied to bank loan operations). The largest part of the remaining financial assets are permanent investments in subsidiaries and other companies abroad. Therefore, the reported debt with cost in the balance sheet of Table 2 is gross debt minus accounts payable and minus bank deposits. The difference between assets and debt with cost is total equity. Debt and equity finance operational and financial assets indistinguishably.

Total assets and liabilities of Spanish NFCs reached a maximum value above 2.8 trillion euros

Table 2
Balance sheet: Spanish NFCs

2a: Absolute values in millions of euros

	2006	2007	2008	2009	2010	2011	2012	2013
Operational assets	1,249,335	1,409,100	1,449,339	1,385,433	1,375,123	1,373,814	1,360,264	1,374,146
Financial assets	1,239,440	1,426,424	1,380,852	1,272,061	1,293,988	1,353,840	1,372,075	1,418,387
Total assets	**2,488,775**	**2,835,524**	**2,830,191**	**2,657,494**	**2,669,111**	**2,727,654**	**2,732,339**	**2,792,533**
Debt with cost	898,616	1,095,492	1,232,029	1,273,325	1,287,669	1,306,971	1,258,921	1,176,044
Equity	1,590,158	1,740,032	1,598,162	1,384,169	1,381,443	1,420,683	1,473,418	1,616,489
Total liabilities	**2,488,774**	**2,835,524**	**2,830,191**	**2,657,494**	**2,669,111**	**2,727,654**	**2,732,339**	**2,792,533**
2b: Relative values								
Financial assets/Assets	50%	50%	49%	48%	48%	49%	50%	51%
Debt with cost/Assets	38%	39%	44%	48%	48%	48%	46%	42%

Sources: Own elaboration from Informe de la Central de Balances 2013 and Cuentas Financieras, several years.

in the years 2007 and 2008, after a period of high growth in both operational, but especially, financial assets. In 2009, with the crisis, total assets decreased 6% with respect to their value in 2008, but increased again afterwards, so total assets in 2013 were only 3% lower than in 2008. The volatility in the value of financial assets over time is higher than that of operational assets. On the liability side, equity of NFCs reached a maximum of 1.74 trillion euros in 2007 and a minimum of 1.38 trillion euros, 20% lower, in 2010. However, in 2013, the value of equity increased again and was closer to the 2007 value.

The total amounts of operational and financial assets of Spanish NFCs are very similar during the period 2006-2013, so each represents around 50% of the total assets with few variations year by year. The debt with cost of Spanish NFCs, as calculated in this paper, represented 36% of total assets and liabilities in 2006, before the crisis, and the ratio reached a maximum of 48% of total assets and liabilities during the years 2009 till 2011. In 2013, the debt with cost relative to total assets was 42%, six percentage points lower than the maximum ratio but still six points above the leverage ratio in 2006. The decrease in debt with cost in 2013, both in absolute and relative terms, is the consequence of the deleveraging process by Spanish NFCs, reflected also in the evolution of debt of non-financial corporations over Spain´s GDP.

Rates of return

We now match the earnings and profits in Table 1 with the assets and liabilities in Table 2 to obtain the rates of return on assets, ROA and the rate of return on equity, ROE. Spanish NFCs obtain earnings from operating activities in Spain, referred to as operating earnings, and receive interests and dividends from their financial investments. Since data is available for the flow of earnings and for the stock separately for each type of asset (operational and financial), first, the rates of return are calculated separately for each type of asset, and next for total assets on the balance sheet. In the calculation of the ROA of operations, we separate the contribution to ROA from margin, EBIT operations/Net Value Added, and from productivity, Net Value Added/operating assets. Therefore ROA operations = EBIT operations/operating assets. Finally, the financial ROA is equal to received interests and dividends divided by financial assets.

The results of the calculations are shown in the first six lines of Table 3. The ROA of operations is 6.8% in 2006 and decreased 0.4 percentage points in the following three years; after that, it increased again and reached a maximum of 8.2% in 2013. All of the increase in ROA in 2013 with respect to the value in 2007 is explained by the increase in margin, from 21.5% in 2007 to 28.1% in 2013. The Net Value Added per euro of

Table 3

Rates of Return on Assets, ROA, and Equity, ROE. Spanish NFCs

Percentage

	2006	2007	2008	2009	2010	2011	2012	2013
ROA Operations	6.8	6.2	6.4	6.4	7.2	7.3	7.8	8.2
Margin	22.4	21.5	21.4	21.5	23.9	24.4	25.9	28.1
Productivity	30.5	28.8	29.8	29.8	30.3	29.9	29.9	28.5
ROA Financial	2.3	2.3	2.6	2.5	2.3	2.3	2.1	1.8
ROA Total	4.7	4.4	4.6	4.6	4.9	4.8	4.9	5.1
ROA Total after Taxes	3.4	2.9	3.7	3.9	4.3	4.3	4.2	4.5
Average Cost Debt	4.1	4.7	4.9	2.6	2.4	2.8	2.6	2.2
ROE	3.2	1.8	2.8	5.1	6.1	5.6	5.6	6.1

Source: Own elaboration from Tables 1 and 2.

operating assets stays practically stable around 30% over the entire period (keeping in mind that operating assets are valued at their replacement value).

One possible explanation of why the return on financial assets is lower than the return on operational assets is that the interests and dividends received by the Spanish parent company from the subsidiaries only represent part of the profits earned by the corresponding operating assets abroad. The rest of profits may be retained in the subsidiary.

The return on financial assets, financial ROA, is much lower than the ROA from operations and varies from the maximum of 2.6% in 2008 to 1.8% 2013. This figure may only be a lower bound of the return from the financial assets of Spanish NFCs, ignoring changes in market value, because the financial assets held by Spanish parent companies are claims that these companies have on operating assets in foreign firms and subsidiaries. The interests and dividends received from these foreign companies and subsidiaries by the Spanish parent company will only represent part of the profits earned by the corresponding operating assets abroad. The rest of profits may be retained abroad.

The total ROA is the ratio between EBIT and total assets, operational plus financial. Since total assets are practically equally split between operational and financial assets, then the total ROA is the average of the two ROA (Income from property is a low absolute amount). As shown in Table 3, the total ROA is rather stable over time in the range between 4.5% and 5%. If the total ROA is calculated net of corporate taxes then the after tax ROA is particularly low in the year 2007, less than 3%; form Table 1, corporate taxes reached a maximum in the year 2007 and decline over time afterwards.

The last two rows of Table 3 report the average cost of debt, interest expenses/debt with cost, and the ROE, net profit/equity. The average cost of debt increased from 4.1% in 2006 to 4.9% in 2008, and decreased sharply in the years that follow to a minimum of 2.2% in 2013. The relatively high average cost of debt coincides with the years when the ECB tightened monetary policy by increases official interest rates. When the crisis was evident, the ECB changed monetary policy and official interest rates went down to historical minimum values that continue today. The figures on average costs of debt in Table 3 will be affected by interest rates charged between parent and subsidiaries in intra group operations. They are also lower than the interest rates paid by the majority of Spanish small and medium NFCs on new bank loans and debt issues in the years between 2010 and 2013.

Financial leverage and corporate taxes induce high volatility in the evolution of ROE, with a minimum of 1.8% in 2007 to a maximum of 6.1% in 2010 and 2013. The ROE in the years 2006-2008 is lower than the total ROA after taxes, because during these years the total ROA is less than the average cost of debt. From 2009 to 2013 financial leverage is positive and ROE is above total ROA after taxes, with a value around 6% annual return.

Discussion

Net profits of Spanish NFCs reached a minimum of 31.4 billion euros in 2007, when the crisis started, and reached a maximum of 96.4 billion in 2013, coinciding with several quarters of positive GDP growth rates. In terms of generation and use of cash flows, in 2007 the Spanish NFCs had a deficit (difference between generated and use of funds) of 123.6 billion euros, 25% of their GVA; in 2013 the corporate sector contributed to the financing of the rest of the economic sector with 35.8 billion, 7% of their GVA. The gross of this difference comes from a reduction in gross capital formation of 63.0 billion euros and an increase in generated funds, net profit plus amortization, of 82.0 billion euros. If the assumption that investment is sensible to the evolution of the return on investment is correct, then the lower profits anticipated a fall in investment after 2007, and the increase in profits in recent years anticipates the recovery of corporate investment. Additionally the corporate sector as a whole generates excess cash flows to finance additional capital investment with internally generated funds.

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One of the main factors behind the turnaround in corporate profits has been the increase in operational profits i.e. from production and sales activities in Spain and from Spain by NFCs. This increase in operating profits is the consequence of an eight percentage-points loss in the share of labor costs in the Gross Value Added of corporations from 2007 until 2013, and the corresponding increase in the gross profit margin from operations. Price inflation measured by the GDP deflator has been practically zero during the years of the crisis, wages and salaries have experienced zero or moderate increases, and labor productivity has increased steadily. The increase in gross profit margin of operations is then fully explained by a decrease in unit labor costs.

Overall, during the years of the crisis the price inflation of the Spanish economy has been lower than that of the Euro zone and unit labor costs have decreased at a higher pace than in other core euro countries. Thus, the price and unit labor costs indicators of competitiveness have moved in the direction of restoring external competitiveness, at the same time that corporate profits were on an upward trend. The internal devaluation process has delivered the desired results.

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This explanation of the operating profit margin hides, however, an important composition effect. In 2007, the value added and employment in Construction activities represented 15% of value added and employment in the Spanish economy. In 2013, these percentages had been reduced by half. The 1.5 million jobs lost in the Construction sector during this period represented around 15% of the total employment in the corporate sector. In the steady state equilibrium, the gross profit margin of operations will be determined by technological factors (more or less labor intensive production technologies), market power of firms, and bargaining power of employers in the labor market. If the activities discontinued in the construction sector are more labor intensive than the average activities of the rest of the economy, then the important contraction in the construction sector alone would explain part of the increase in corporate profits from pure composition effects.

But the increase in the gross profit margin of operations due to lower unit labor costs is not the only factor behind the increase in net corporate profits. On the one hand, the increase in margin was compensated for by higher amortization and depreciation of operating assets, probably also as a reflection of loss in their economic value during the crisis, so the contribution from the net margin was less than from the gross one. On the other, compared to their values in 2007, the sum of interest expenses and corporate taxes in 2013 had been reduced by 52 billion euros, the same amount as the reduction in labor costs from 2008 to 2013 (Table 1). When the crisis started, the ECB, and other Central Banks, were in a process of increasing the official interest rates that translated into higher cost of debt for corporations. The highly leveraged Spanish NFCs experienced a substantial increase in interest expenses and a corresponding decrease in net profits. The increase in interest of debt also coincided with record high years of corporate taxes.

One important point that follows from the previous discussion is the difference in the conclusions on the dynamics of profitability of Spanish NFCs from the ROA of operations and from the ROA on total assets, operational and financial together. The National Accounts only report as a contribution to output of the NFCs the interests and dividends received from the financial assets held by the Spanish parent companies on their balance sheets. The value added produced by the subsidiaries and the earnings retained there are not included as part of the value added of corporations to the GDP of the Spanish economy. The final result is that the ROA of total assets underestimates the return on assets deployed in production and sales activities in Spain and from Spain. In other words, in the assessment of the attractiveness of investing to produce in Spain and sell from Spain, the relevant indicator is the ROA of operations, not the ROA on total assets. In 2013, the former is substantially higher than the latter and the 8.2% value for this year and the time trend provide a sound basis for a sustained recovery.

The duality between operational and financial assets of NFCs also has implications for the right assessment of leverage ratios. The standard indicator of debt of NFCs over GDP or GVA of the corporate sector excludes from the denominator value added from operations in the subsidiaries and the profits retained there, while the debt in the numerator contributes to finance assets that contribute to production, value added and profits of the subsidiaries. Debt over total assets is a preferable leverage indicator to debt over GDP, with assets valued at market prices, because debt and assets result from investment and financing decisions taken at the same time. The corporate debt over GDP of Spanish NFCs shows an increasing trend and reaches absolute values above those observed in other countries, highlighting the need for rapid deleveraging. In recent years, the ratio of debt over total assets, Table 2, is above historical values but the increase in the ratio over time is much less pronounced than the increase in the ratio of corporate debt over GVA.

Looking forward, the expectation from an analysis of profitability of Spanish NFCs is that investment in capital formation will increase again. The National Accounts figures give a maximum of gross capital formation of 180.0 billion euros in 2007 and a minimum of 118.0 billion in 2013, barely above the amortization for the year. For the whole economy, corporate and non-corporate sectors, the National Accounts show a positive growth rate in investment in equipment and machinery in the past year and a half. Capital investment data for NFCs does not separate investment in machinery and equipment from the other investments, but it is reasonable that most of this investment has taken place in the corporate sector.

Conclusion

Internal devaluation policies will succeed in their goal of contributing to the economic recovery if the lower labor costs and the higher business profits increase corporate investment and employment. The evolution of corporate profits will then be an important indicator to assess the effectiveness of internal devaluation policies and the prospects for capital investment. The consolidated income statement and balance sheet data on Spanish NFCs in the period 2006-2013 examined in this paper suggest that the internal devaluation policies have succeeded in their goals and the Spanish economy is on the path to a corporate-led recovery. The analysis also confirms the relevance of properly separating the returns from operations in Spain from the total returns from operations in Spain and abroad, when assessing the prospects of corporate investment in Spain using National Accounts data. The distinction is also relevant for the assessment of the leverage of the corporate sector of the economy using the ratio corporate debt over GDP, or using the ratio debt over total assets. In this respect, the analysis presented suggests that the current ratio of debt over total assets for Spanish NFCs is compatible with using the excess of generated funds to increase investment instead of reducing leverage by canceling outstanding debt.

Corporate profitability is a necessary condition for investment and growth. Profits are a source of finance that, together with debt, provide the needed funds for investment. Credit availability is important to finance profitable investment projects but the reported evidence on excess of generated funds over used funds by Spanish NFCs, in 2013, indicates that the corporate sector has at its disposal internally generated funds to increase corporate investment by over 30.0 billion euros. The estimated ROA of 8% for operating assets in Spain is considered sufficiently high to anticipate profitable investment opportunities in Spain financed with retained earnings and additional debt if necessary. Notice that deleverage of the Spanish corporate sector will continue as long as the leverage ratio of new investment projects is lower than the average leverage ratio of the stock of invested assets.