



SPAIN

SELECTED ISSUES

October 2017

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Approved By
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Prepared by John Ralyea, Hanni Schoelermann, and
Phakawa Jeasakul.

CONTENTS

THE SPANISH PENSION SYSTEM—CHALLENGES BEYOND FINANCIAL

SUSTAINABILITY	3
A. Introduction	3
B. Pension Finances: Recent Developments	6
C. Ongoing Pension Reforms	7
D. Unpleasant Arithmetic of a Pay-as-you-go System	9
E. Policy Options	12
F. Conclusion	18
Glossary	20

BOX

1. Inequality and Poverty Across Generation	21
References	22

A CLOSER LOOK AT EMPLOYMENT CREATION IN SPAIN SINCE THE CRISIS

A. Context	24
B. Job Growth Across Sectors and Regions: Broad but Uneven	27
C. Skills Mismatches: Foregone Potential	33
D. Conclusions	37

BOX

1. Main Features of the 2012 Labor Market Reform	26
--------------------------------------------------	----

FIGURE

1. Employment and Skills Requirements	36
References	38

CORPORATE AND HOUSEHOLD BALANCE SHEETS—THE IMPACT FROM DELEVERAGING	41
A. Credit Development: An Overview	41
B. Corporate Balance Sheets	43
C. Household Balance Sheets	51
D. Conclusions and Policy Options	58
FIGURES	
1. Credit Development	42
2. Corporate Deleveraging	43
3. Corporate Financing Need	46
4. Corporate Financial Soundness	48
5. Financial Stability Implications of Corporate Balance Sheets	51
6. Household Deleveraging	52
7. Household Financing Need	54
8. Developments in Housing Market and Construction Sector	55
9. Household Financial Soundness	56
10. Financial Stability Implications of Household Balance Sheets	57
References	60

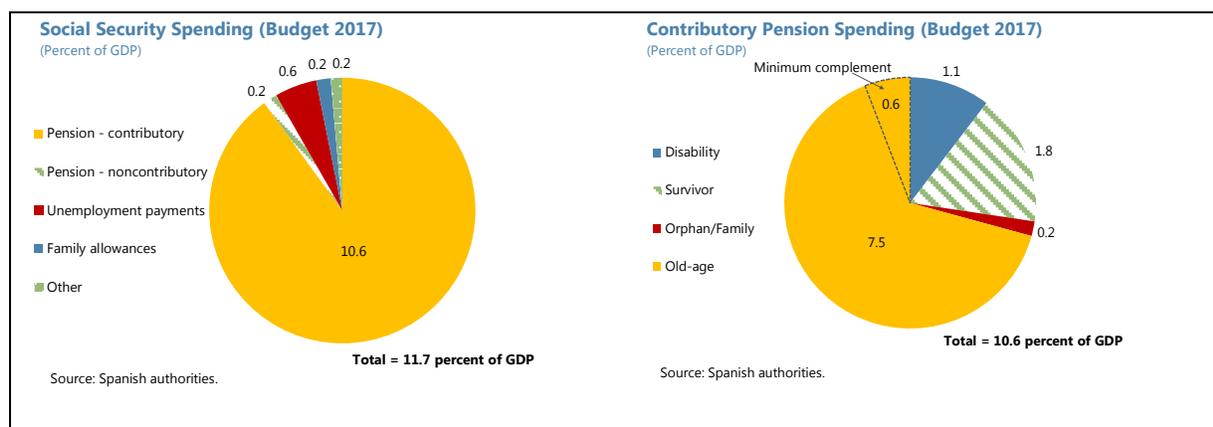
THE SPANISH PENSION SYSTEM—CHALLENGES

BEYOND FINANCIAL SUSTAINABILITY¹

Spain adopted substantial pension reforms in 2011 and 2013 that safeguard financial stability of the contributory pension system over the long term. While the reforms would keep Spanish pension benefits relative to wages above the EU average, they imply a significant reduction in purchasing power. This has stimulated public debate about the recent reforms and a parliamentary committee is now developing recommendations for new ones. This paper seeks to increase awareness of the considerations and trade-offs inherent in further pension reforms. It also proposes potential adjustments, broadly within the pension parameters agreed under the Toledo Pact, to facilitate the continued smooth transition to a sustainable and socially acceptable pension system.

A. Introduction

1. Spain's public pension system is composed of an earnings-based scheme and a non-earnings related basic one. The earning-related scheme is mandatory and pay-as-you-go. It has two parts. The main part provides long-term disability, retirement, survivor, and orphan/relatives pensions (hereafter, contributory pensions). Social security contributions finance much of contributory pension spending and funded the accumulation of pension assets in a Social Security Reserve Fund (SSRF), which was established in 2000. The other part of the public pension system covers civil servants who entered the government prior to 2011.² The non-earnings related scheme is means-tested and funded through state transfers. State transfers also top up earnings-related pensions to the minimum pension amount.³

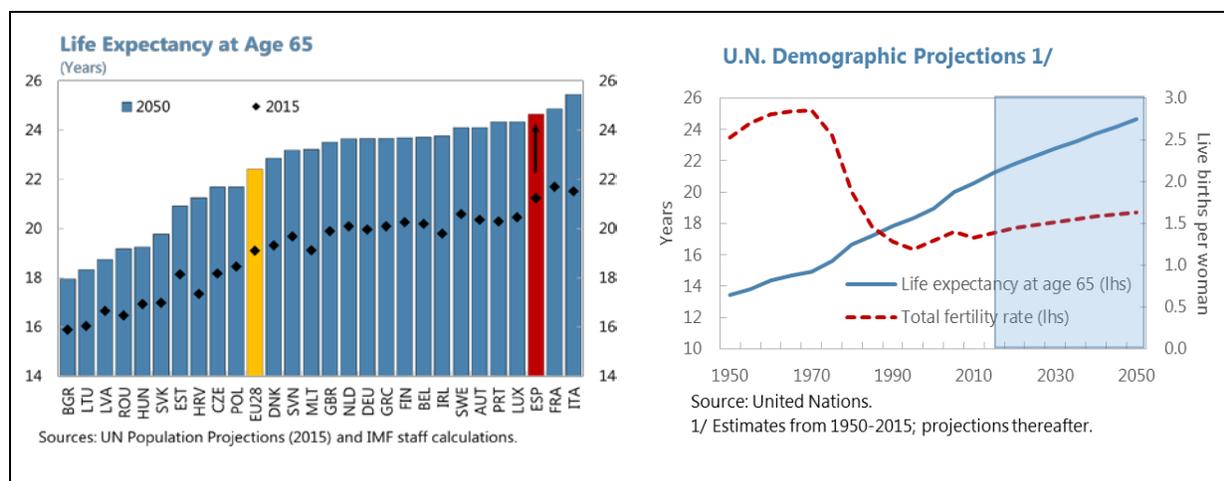
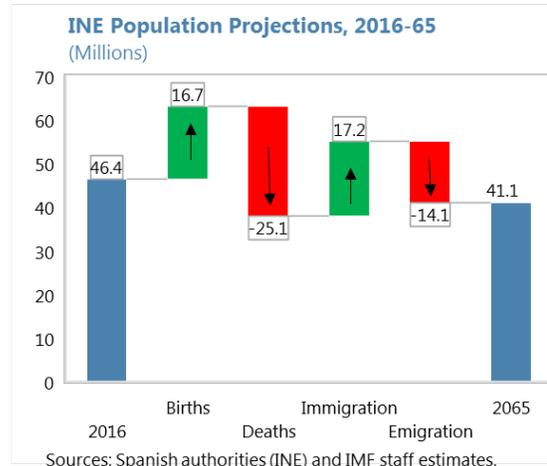


¹ The SIP was prepared by John Ralyea and benefited from comments from the Spanish authorities and Álvaro Pastor Escribano at Spain's fiscal council (AIReF). Daehaeng Kim drafted the initial outline for the SIP and Irene Yackovlev prepared the box on inequality. Tingyun Chen and Dilcia Noren also assisted with preparation of the paper.

² This system (Clases Pasivas) covers about 40 percent of civil servants and is being phased out. Less than half of new entrants to the civil service between 1992 and 2011 belong to Clases Pasivas. From 2011 onwards, all new civil servants are integrated into the Social Security system.

³ The state-financed complements to minimum pension allow for redistribution and avoid labor market distortions (Clements et al, 2014).

2. Spain’s population is projected to age and shrink.⁴ The good news is that Spaniards tend to have long lives. A 65-year old Spaniard in 2017 can expect to live, on average, to age 86, longer than most other peers in Europe (see chart). And their children can expect to live to about 90 once they reach 65. However, as in most advanced economies, fertility rates—1.3 children per woman of childbearing age in 2016—are projected to remain below replacement levels. (See the glossary for definitions of technical terms used in this paper.) Spain’s statistical agency (INE) projects that the population will contract by 12 percent over the next 50 years, despite a projected cumulative net immigration of 3.1 million individuals. Moreover, the number of potential workers that can support pensions for those over 65 will fall from 4 to 1 to less than 2 to 1. While these projections are inherently uncertain, the United Nations makes similar projections which reflect longstanding trends in Spain’s demographic profile.

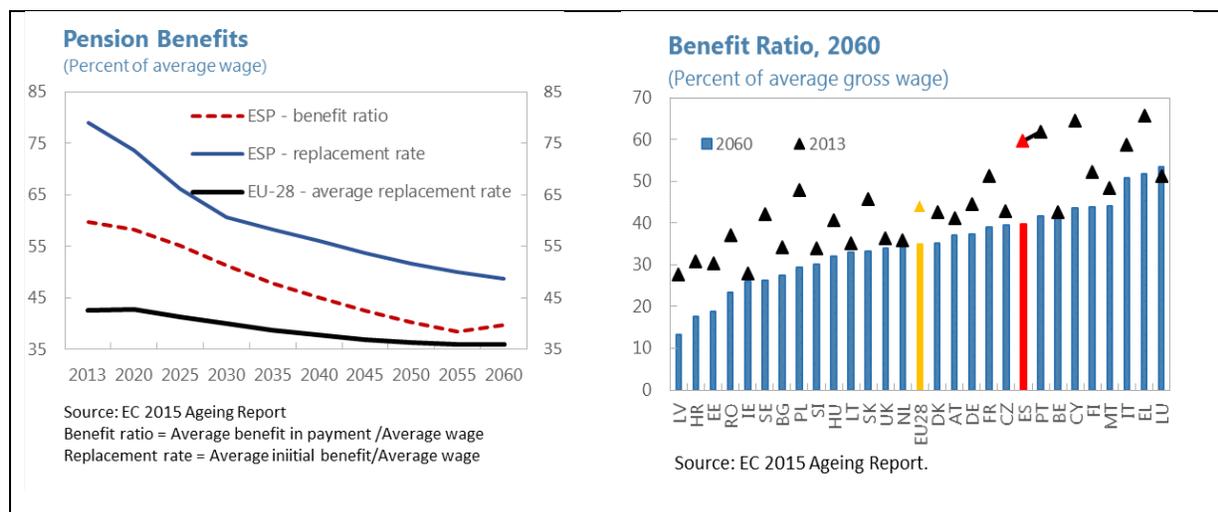


3. The authorities adopted bold reforms in 2011 and 2013 to ease the demographic pressure on contributory pension expenditure. The reforms followed the guidelines agreed under the Toledo Pact framework, a forum of stakeholders—politicians, businesses, unions, and civil society—created in 1995 to safeguard the contributory pension system’s financial viability.⁵ The reforms entailed important parametric changes to induce an increase in the effective retirement age as life expectancy increases. The 2013 reform also introduced two automatic mechanisms—the Index for Pension Revaluation (IPR) and a sustainability factor (SF)—to safeguard financial

⁴ Preliminary population data for January 1, 2017, indicates that Spain’s population increased for the first time since 2011. The increase was 0.19 percent to 46.5 million people and solely due to positive net migration of 89,000 (births and deaths offset each other). However, the working age population (15–64) fell by about 20,000.

⁵ See Report on Assessment and Reform of the Toledo Pact, approved by parliament in 2011. The Toledo Pact framework has proven to be a successful vehicle for exploring, discussing, and adopting changes to Spain’s pension system since its inception because it has been guided by a desire to avoid politicizing decisions involving pensions and operated generally on a consensus basis.

sustainability of the contributory pension system, notwithstanding recent deficits. These measures are projected to lower average pension payments compared to the average economy-wide wage and could lead to a reduction in the real value of pensions too. Recent calls have surfaced to repeal the 2013 reforms and to increase pensions above the IPR mandated rate in 2017 as the reforms begin to take effect (for an overview of the discussion, see BBVA, 2017a). Nonetheless, Spain's pensions are, on average, relatively generous and projected to remain so, based on the 2015 Ageing Report (see charts).



4. Concerns generated by the perceived inadequacy of future pensions are getting policymaker attention. While reductions from relatively high benefit levels that exist today do not jeopardize old-age poverty, the sense of loss experienced relative to expectations could prove politically unsupportable.⁶ This could put pressure on reform implementation. If the reforms are not implemented, the financial viability of the contributory pension system would be in doubt. Ad hoc changes, such as additional pension payments to protect the purchasing power of current pensions, should also be avoided as they would undermine the credibility of the recent reforms and come at the expense of Spain's younger generations, which were particularly hard hit following the global financial crisis (see Box 1). Financial viability is a pre-condition to have a serious discussion about adequacy and fairness. In addition, projections that pensions cannot increase more than 0.25 percent per year for many decades to safeguard financial sustainability signal the possible need for supplementary reforms.

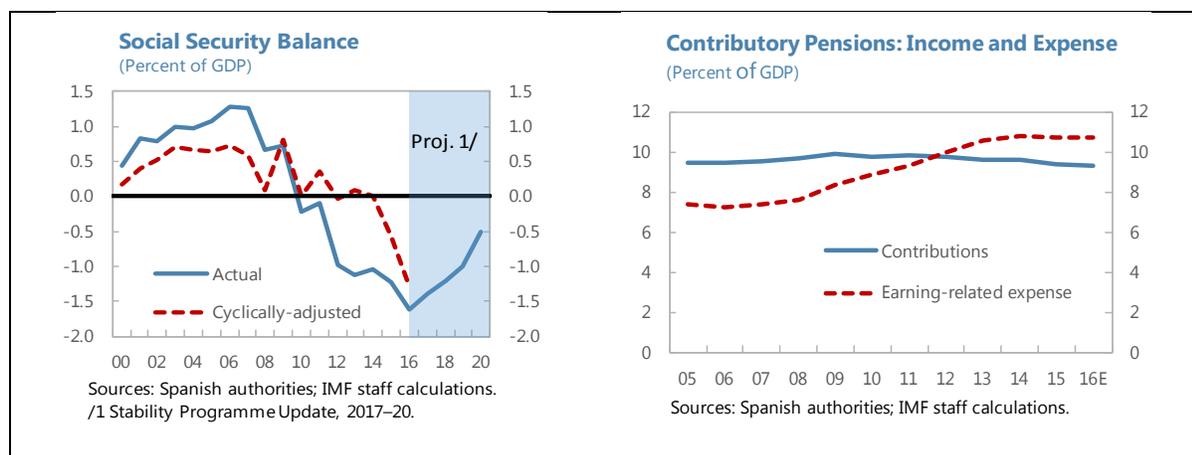
5. Further changes to the pension system should be guided by answers to three key questions. First, what constitutes an acceptable level of retirement income? Second, what share of retirement income should a public pension provide? And third, what level of pension benefit is affordable given competing priorities, e.g., health and education expenditures, and the need to maintain overall fiscal sustainability. The answers to these questions will yield the socially acceptable and financially-viable pension benefit. This paper seeks to contribute to the overall debate by reviewing the current and future finances of the contributory pension system and exploring

⁶ Spain is one of the three EU member states (together with Greece and Portugal) with an average benefit ratio projected to decline by around 20 percentage points by 2060, based on projections in the 2015 Ageing Report.

tradeoffs inherent in balancing pension financial viability and generosity. It also discusses several potential reforms that could help ease the tension between these competing priorities. Transparency of the objectives and ramifications of supplementary reforms and equal burden sharing within and across generations will be important to ensuring the social legitimacy of any changes.

B. Pension Finances: Recent Developments

6. After years of surpluses, the social security budget began running deficits in 2009.⁷ The deficits were partly driven by cyclical developments (see chart).⁸ To offset a significant fall in the number of contributors after the 2008 global financial crisis, Spain increased the ceiling on the maximum contribution base by 5 percent in both 2012 and 2013.⁹ This kept contributions relatively in line with their long-run level of about 9.8 percent of GDP per annum. The authorities also attribute some of the post-global financial crisis increase in contributory pension expenditure to unemployed older workers, who generally earned above average incomes, opting for retirement over finding a new job in a depressed economy as well as a rush to retirement to lock in existing pension benefits before the 2011 and 2013 pension reforms came fully into force (Stability Programme, 2017). This increased overall pension expenditure, including civil servant pensions, to about 12 percent of GDP in 2016, which is slightly below the average public pension expenditure in European Union members in 2014 (the latest year of data in Eurostat). Looking ahead, the authorities foresee the deficit in the social security system narrowing from 1.7 percent of GDP in 2016 to 0.5 percent of GDP in 2020 (Stability Programme, 2017) as GDP is projected to grow faster than nominal pension expenditures (3.1 percent annually).¹⁰



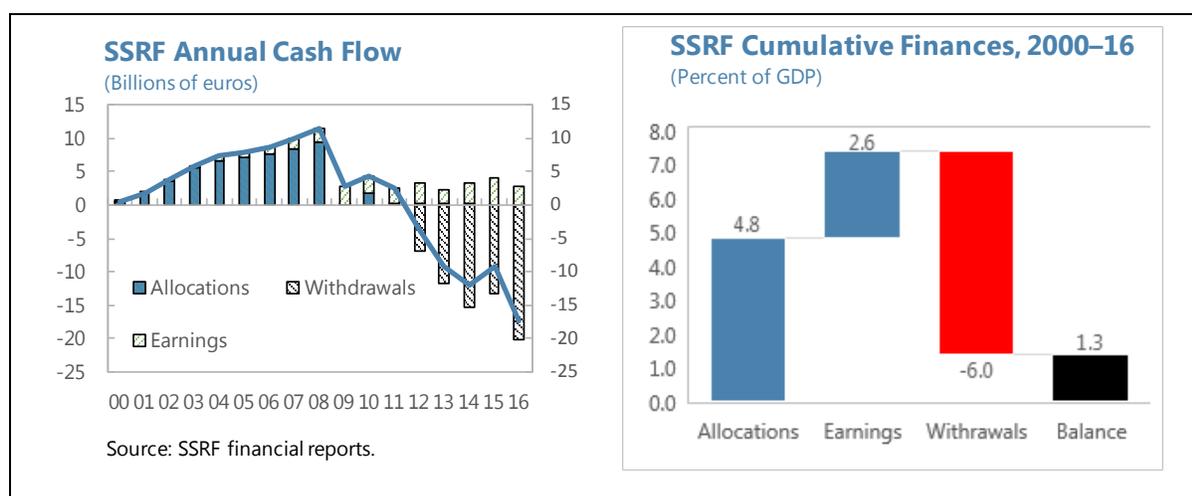
⁷ The social security budget includes spending on contributory and non-contributory pensions, unemployment benefits, and other social benefits. This is different than the social security system, which encompasses public pensions private- and public-sector workers. Contributory pension spending annually covers about 85–90 percent of social security budget non-financial outlays.

⁸ Recent deficits may also affect a structural deficit, which BBVA Research estimates to be about 1 percent of GDP (BBVA, 2017a).

⁹ The average number of contributors in 2016, based on monthly data, was 17.6 million, which reflects an increase of 1.4 million contributors from the local annual minimum average in 2012 of 16.3 million. However, it remains below the 2008 peak of 19.1 million.

¹⁰ However, based on 2017Q1 results, Spain's independent fiscal council (AIReF) projects there is an 84 percent chance that Spain will exceed its social security deficit target of 1.4 percent of GDP in 2017 (AIReF, 2017).

7. The SSRF balance reached a peak of 6.2 percent of GDP in 2011. Social security surpluses from 2000 to 2008 were deposited in the SSRF. After withdrawals amounting to 6 percent of GDP to cover social security deficits beginning in 2009, the balance has dwindled to 1.4 percent of GDP in 2016. The decrease has generated calls for taking measures, in advance, to ease the financial tension in social security system (AIREF, 2016). It also raises questions about the best way forward for financing present and future social security deficits. In general, there are two options for “cyclical” deficit financing—one in which the central government covers the financing gap on an annual basis as needed, and the other in which the central government provides upfront transfers to build a buffer to avoid the depletion.¹¹ The former option is the approach taken in 2017 as the government plans to borrow EUR 10.2 billion (1 percent of GDP) to cover part of the deficit. Either way, transparency of the system is key for broad political support and avoiding the confusion between the liquidity (cyclical deficits) and sustainability issues.



C. Ongoing Pension Reforms

8. Parametric pension reforms in 2011 and 2013 support the financial viability of the contributory pension system by incentivizing longer work lives. The following reforms, which are projected to be fully implemented by 2027, complement each other by encouraging Spaniards to remain in the labor force longer: (i) the statutory retirement age will gradually increase from 65 in 2012 to 67 in 2027; (ii) the period used to calculate pensionable earnings is being gradually increase from the last 15 years to 25 years (by 2022); (iii) access to partial early retirement was tightened;¹² and (iv) the number of years of contributions required to receive a full pension is increasing from 35 years in 2012 to 37 by 2027. The 2015 Aging Report assumes that the cumulative effect of these reforms will extend the effective retirement age 3 years to 66.4 years by 2060.¹³

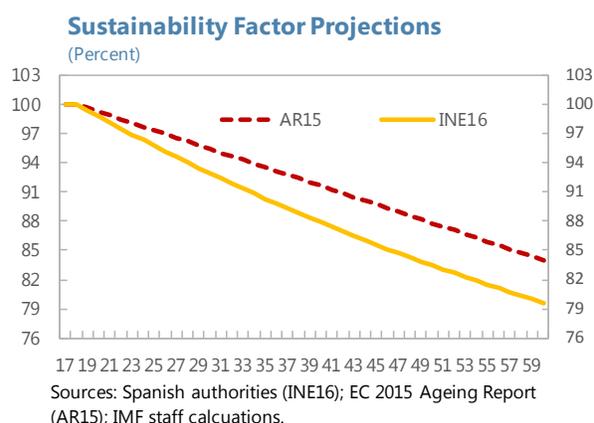
¹¹ This is viable only when the pension system is financially sustainable.

¹² For longer careers (longer than 36.5 years) the minimum age is increased progressively between 2013 and 2027 from 61 to 63 years. For medium careers (between 33 and 36.5 years) the minimum age is raised progressively from 61 to 65 years. For careers shorter than 33 years, partial retirement is not possible (before the reform only 30 years were required).

¹³ The Stability Program Update 2017–20 states that the effective retirement age has increased from 63.9 years in 2012 to 64.1 in 2017.

9. Spain also adopted two automatic mechanisms in 2013 that are critical to safeguarding the financial viability of the contributory pension system:¹⁴

- Spain implemented a new automatic indexation method for pensions in 2014.** The Index for Pension Revaluation (IPR) is designed to achieve financial balance of the pension system over the medium term. It also serves a very useful role as a barometer of pressures on contributory pension finances. The IPR for each year is calculated based on past and projected values of social security income, the number of pensions, and the average pension in the absence of revaluation. It is restricted by law to being within a range of 0.25 percent and the year-on-year percentage change in annual consumer price inflation plus 0.5 percent. With a positive floor, the IPR guarantees that nominal pension values will always increase.
- The value of pension payments will be automatically linked to increases in life expectancy through the introduction of a sustainability factor (SF) in 2019. In a nod to inter-generational equity consideration, the SF is designed to foster similar aggregate pension benefits across cohorts. The sustainability factor for the period 2019–23 will be adjusted year over year proportional to the ratio of projected life expectancy at 67 in 2012 to life expectancy at 67 in 2017. The SF is essentially a discount factor that is applied only to the initial value of a retiree's pension. In other words, it reduces the replacement rate. The SF will be updated every five years, using the most recent projections of life expectancy by Spain's statistical agency (INE) as a proxy.¹⁵



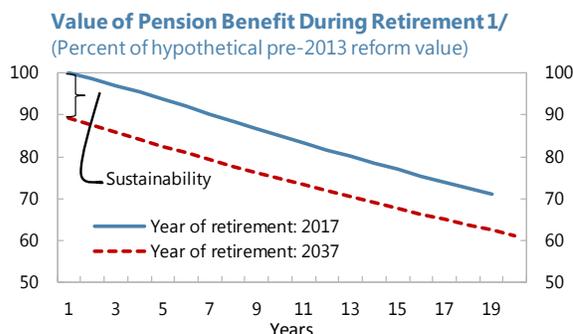
- The real value of a retiree's pensions is likely to fall during retirement.** From 2014–16, the annual IPR has set at 0.25 percent.¹⁶ With negative average inflation over that period, the purchasing power of pensioners increased. In 2017, pensions were again indexed by the IPR minimum of 0.25 percent and average inflation is expected to be around 2 percent, making 2017 the first year that the real value of pensions is likely to fall since the IPR was introduced. Multi-year projections indicate that an annual IPR of 0.25 percent will be required at least until the 2050s, given current and projected contributions and pension expenditures (EC, 2015; Hernandez de Cos et al, 2017). Realization of these forecasts would lead to a consistent reduction in the purchasing power of pensions. For example, based on the IPR projections and

¹⁴ The Bank of Spain projects that the IPR and SF will reduce the public pension deficit by about 0.1 percent of GDP per year, assuming no change in macroeconomic assumptions and no increase in revenue (Hernandez de Cos et al, 2017).

¹⁵ The mortality tables used for calculating the actual sustainability factor are not public.

¹⁶ The calculated indexation amount for 2017 by the Ministry of Employment and Social Security, assuming the macroeconomic scenario of the Stability Programme 2017–2020, consistent with medium-term financial balance of the contributory pension system was negative 3 percent.

an assumed average annual inflation rate of 2 percent, an individual that retired in 2017 can expect the real value of her pension to decrease by 30 percent over her retirement years. A 47-year old today, who retires in 2037 at the age of 67, will also witness a similar reduction in the purchasing power of his pension. However, this will be in addition to a reduction in the initial pension of about 10 percent due to application of the sustainability factor—a total reduction of 40 percent relative to the what the value of a pension would have been without the automatic mechanisms. (see chart). Of course, if a pensioner out lives the average life expectancy of their cohort, the overall decrease in the purchasing power of their pension will be even greater. The loss of real value of the pension for an extended period may create social and political pressures to deviate from IPR or halt other ongoing pension reforms.



Sources: Spanish authorities; Banco de España; IMF staff calculations.
1/ Assumes a gradual rise in inflation to its long-run level of 2 percent p.a. by 2022 and an annual pension benefit increase of 0.25 percent.

D. Unpleasant Arithmetic of a Pay-as-you-go System

10. Spain's demographics imply that either contribution revenues must increase or pension benefits must decrease to ensure financial viability of the pension system. The number of pensions in Spain is projected to increase by almost 50 percent to 15 million from 2017–50. Over the same period, life expectancy at age 65 is projected to increase by about two years. These projections are relatively certain. Less certain is the evolution of the working-age population, i.e., the number of contributors to support the increase in pension payments. Nonetheless, Eurostat, U.N., and INE all project a higher dependency ratio by 2050. Against this demographic backdrop, two simple identities can be used to highlight the tradeoffs involved in balancing contributory pension revenue (PR) and pension expense (PE), which is succinctly summarized as: $PR/GDP = PE/GDP$.

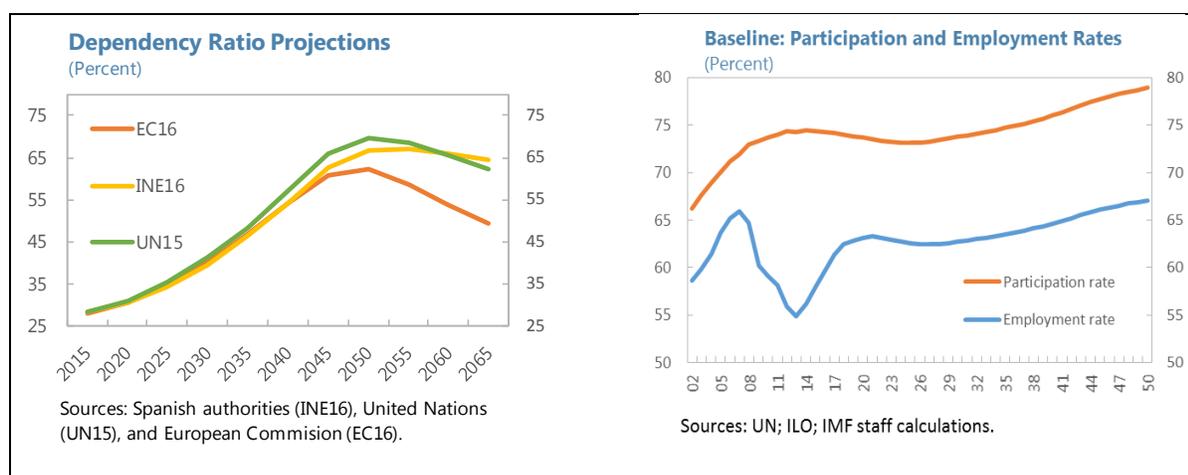
- **Contributory pension revenue identity:** In the identity, the ratio of pension revenue to GDP equals the product of the effective contribution rate and the ratio of labor compensation to GDP plus other revenue items such as state transfers.

$$\frac{\text{Pension Revenue}}{\text{GDP}} = \frac{\text{Contributions}}{\text{Labor compensation}} \cdot \frac{\text{Labor compensation}}{\text{GDP}} + \text{Other}$$

- **Contributory pension expenditure identity:** In the identity, the ratio of pension expenditure to GDP equals the product of the dependency ratio, the eligibility ratio, the benefit ratio, the inverse of the employment rate, and labor's share in GDP.

$$\frac{\text{Pension Expense}}{\text{GDP}} = \underbrace{\frac{\text{Pop age 65 +}}{\text{Pop age 15 - 64}}}_{\text{Dependency ratio}} \cdot \underbrace{\frac{\text{Pensioners}}{\text{Pop age 65 +}}}_{\text{Eligibility ratio}} \cdot \underbrace{\frac{\text{Average pension}}{\text{Average wage}}}_{\text{Benefit ratio}} \cdot \underbrace{\frac{1}{\text{Employment rate}}}_{\text{Employment rate}} \cdot \underbrace{\frac{\text{Labor compensation}}{\text{GDP}}}_{\text{Labor share in GDP}}$$

11. The identities above are used to explore the tradeoffs involved to maintain pension financial viability. Actual values for 2016 and U.N. demographic projections for 2050 are used as baseline values for the trade-off analysis (see red values in the table below).¹⁷ The baseline dependency ratios are derived from U.N. population projections (see chart). The evolution of the employment rate is proxied as the product of the International Labor Organization’s (ILO) projections for labor market participation and IMF staff projections of the unemployment rate, which stabilizes at its natural rate over the long run (see chart). To keep the analysis straightforward, labor’s share of GDP is held constant at its level in 2016 of 47.2 percent, though it has declined steadily, as in most advanced economies, over the last twenty years (WEO, 2017). In addition, the eligibility ratio (the number of pensioners relative to the number of individuals 65 and older) is held constant at its 2016 value.



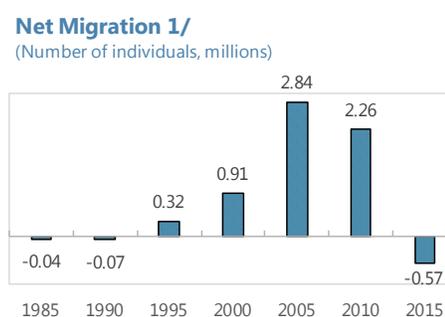
12. Absent implementation of ongoing reforms, Spain’s contributory pension spending would balloon. Spain’s aging population, and the associated increase in the dependency ratio from 29 to 70, more than doubles contributory pension spending as a share of GDP to 22½ percent of GDP by 2050. To keep the contributory pension system in balance, the effective contribution rate would have to increase 20 percentage points (see row 2 in the table below.) In other words, the tradeoff for maintaining the current benefit ratio would be a contribution rate equal to almost half of an individual’s wages. Conversely, to keep the effective contribution rate in 2050 close to its level in 2016 would require a 25-percentage point cut in the benefit ratio.

¹⁷ The cell at the intersection of column 1 and row 1 is left blank because the contributory pension system ran a deficit in 2016 of about 1.6 percent of GDP, i.e., pension revenue did not equal pension expenditure.

Pension Reform Tradeoffs							
Year	PR/GDP = PE/GDP	Effective contribution rate 2/	Dependency ratio	Eligibility ratio 3/	Benefit ratio	Employment rate	Labor share /3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) 2016	... 1/	~ 21.6	28.8	97.3	48	59.7	47.2
(2) 2050	22.6	47.8	69.5	97.3	48	68	47.2
(3) 2050	10.6	22.5	69.5	97.3	22.6	59.7	47.2
One tradeoff scenario that is plausible, financially viable, and possibly socially acceptable							
(4) 2050	12.9	27.3	63.4	97.3	35	79	47.2

Sources: Spanish authorities, Banco de Espana, UN, ILO, and IMF staff calculations.
 Row (1) is the baseline and reflects estimated actual values for 2016.
 Row (2) is the baseline in 2050 based on UN/ILO/IMF projections and a constant benefit ratio.
 Row (3) is the baseline in 2050 based on UN/ILO/IMF projections and a constant effective contribution rate.
 Row (4) allows key identity components to fluctuate to achieve "tradeoff" scenario.
 1/ The contributory pension system ran a deficit of about 1.6 percent of GDP in 2016.
 2/ Values for the effective rate in rows 2-4 implicitly incorporate the cost of complements to minimum pensions.
 3/ To keep the analysis straightforward, values are held constant at 2016 levels.

13. Tradeoffs exist that are financially sustainable and mitigate the reduction in the benefit ratio. Row 4 in the table displays one or many possibilities. The tradeoff scenario involves accepting an increase in contributory pension expenditure relative to GDP of 2¼ percentage points in exchange for a possibly more palatable decline of 13 percentage points in the benefit ratio to about 35 percent. Such a decline would allow retirees who saved resources sufficient to generate 5 percent of the average wage every year in retirement to raise retirement income to 40 percent of average wages, akin to the replacement level recommend by the ILO. The scenario rests on an increase in the effective contribution rate to allow more generous indexation of pensions. This could be achieved by raising the ceiling on the maximum contribution base.¹⁸ An important assumption is that of net migration of 5.5 million individuals (compared to INE projections of 2.5 million, and broadly in line with the net migration between 2000 and 2007) by 2050, assuming that 90 percent of "net" migrants are of working age.¹⁹ This would lower the dependency ratio to 63.4 in 2050. The scenario also assumes the employment rate rises an additional 12 percentage points above the rate in the baseline scenario to about 80 percent. The increase in the employment rate could possibly be achieved through parametric pension reforms that induce greater labor force participation and longer working lives and structural reforms that lower the natural rate of unemployment.



Source: United Nations.

1/ For five-year period ending in given year.

¹⁸ To generate the needed net increase in resources, the cap on maximum pensions would have to remain unchanged.

¹⁹ As noted earlier, net migration was about 89,000 in 2016. This was well above the projected amount of 10,000 in INE's 2016 population projections.

E. Policy Options

14. A package of gradual parametric changes and other policy measures could ease the evolution of the contributory pension system to demographic changes. As shown in the previous section, changing pension parameters entails trade-offs. More generosity of one parameter, such as an easing of the prospective reduction in the benefit ratio to improve the social legitimacy of the system, means the other(s) have to be tightened to maintain financial viability. There is no free lunch. For example, shifting certain types of contributory pensions such as survivor or orphan benefits from the social security budget to the central government budget may decrease the social security deficit, but it increases the central government deficit by the same amount. Such a shift comes with the risks that the artificial “improvement” in the social security budget could be viewed as an opportunity to raise pension benefits, which would pressure overall fiscal sustainability. While refinements to pension parameters is the most direct way to address pension financial viability and generosity, the contributory pension system does not exist in a vacuum. Other policy changes could lessen the magnitude of parametric changes that are needed to safeguard the financial viability of the contributory pension system (see table). It is also important to consider reform complementarities. For example, reforms that incentivize longer working lives would be more effective if accompanied by the promotion of life-long learning and retraining opportunities.

	Tradeoffs to Maintain Financial Viability of Pension System								
	Pension system					Other changes 1/			
	Demographic shock	Benefit purchasing power				General taxes	Labor productivity	Private savings	Migration (15-65)
Contributions (rate/base)		Replacement rate	Benefit indexation	Length of work life					
Fertility rate	↓	↑	↓	↓	↑	↑	↑	↑	↑
Life expectancy	↑	↑	↓	↓	↑	↑	↑	↑	↑

Sources: IMF staff.
 1/ Policies that lead to increases in identified items will lessen the magnitude of the needed change in pension parameters.

15. Transparency will be critical to the success of ongoing reforms and any additional ones. A public pension is not meant to cover the entire retirement income that a retiree would need. If there is such an expectation, it has to be made clear that this expectation can’t be met. That puts a premium on providing workers with the necessary information about their future public pension benefit so that they can take optimal decisions on saving and labor market participation.

16. Intra- and inter-generational equity must also be kept in mind to foster social acceptance of the contributory pension system. Intergenerational equity issues could be particularly sensitive in Spain now. The burden of adjustment falls more on future pensioners, while retiree pensions were shielded from much of the economic fallout following the global financial crisis. In terms of intra-generational equity, it is important to understand how the benefit ratio changes over time by income group. If it falls more for higher income earners, the social impact of the less generous pension in the future would be easier to handle with a voluntary funded pillar.²⁰

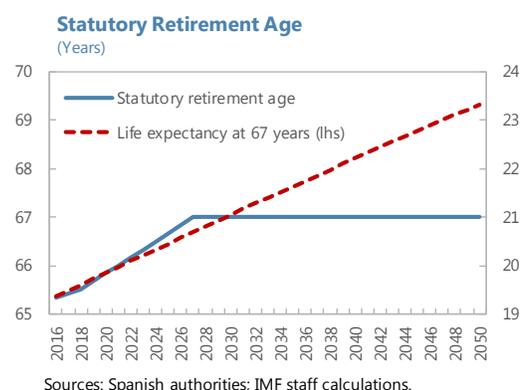
²⁰ Straying too far from an actuarially fair system could reduce participation in a contributory pension system and precipitate labor market distortions.

However, a proportionate decline of the pension generosity would burden lower income earners more.

Supplementary Parametric Measures

17. Supplementary parametric reforms could further incentivize greater labor force participation and longer work lives. The reforms primary purpose would be to increase the effective retirement age though some would also reduce contributory pension benefits. Implementing the supplementary reforms as a package likely would be more effective as they complement each other. For example, automatically linking the statutory retirement age to changes in life expectancy and lengthening accrual periods would likely provide a greater incentive to individuals to work longer than just raising the statutory retirement age.

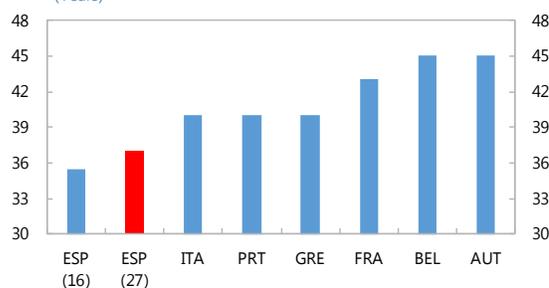
- Index the statutory retirement age to changes in life expectancy at retirement:** Given the projected increase in life expectancy this would raise the retirement age over time. Raising the retirement age promotes higher employment levels and growth, mitigates the size of the cut in benefits needed to maintain financial sustainability of the contributory pension system, and can be explained to the public in light of increasing life expectancy (Clement et al., 2014). Spain would not be alone if it did so. Seven of Spain's euro area peers have implemented an automatic link between changes in life expectancy and changes in the statutory retirement age (See table below). Critically, an automatic link removes the difficult political decision to make needed ad hoc changes in the statutory retirement age over time as the population ages. Spain made such a decision in 2011 when it decided to increase its statutory retirement age to 67 by 2027. That reform initially raises the statutory retirement age slightly faster than change in life expectancy, based on INE's 2016 population projections. However, leaving the retirement age at 67 would lead to higher pension costs as life expectancy increases after 2030. The Bank of Spain estimates that an effective retirement age of 70 would reduce pension spending by 2–4 percent of GDP (Hernandez de Cos et al., 2017) On the downside, an automatic link to changes in life expectancy could affect intra-generational equity to the extent that changes in life expectancy differ between well-educated, well-off and less educated poorer workers. The cap on the maximum pension mitigates the latter concern to some extent.
- Adjust pension accrual rates to encourage longer work lives:** The 2011 reform extends the required contribution period for a full pension from 35 to 37 years.²¹ However, accrual rates will remain front loaded. As pointed out by the Bank of Spain, an individual accrues a pension entitlement of 50 percent in the first fifteen years of their work life and rights to another



²¹ A contribution period of 15 years is required to receive the full minimum contributory pension. In 2013, 27 percent of pensions and 21 percent of new pensions were minimum contributory pension benefits (EC, 2015b).

34 percent over the next fifteen years (Hernandez de Cos et al, 2017). In addition, among the larger euro area countries, Spain will still have the shortest accrual period. The length of the accrual period for a full pension in the other countries ranges from 40–45 years (See chart). Another approach would be to lower the existing initial accrual level from 50 to 40 percent, say.²² Better yet, to encourage longer work lives the annual accrual rate could be backload.

Minimum Contributory Period for Full Pension (Years)



Sources: Spanish authorities; European Commission.

- Restrict access to early retirement:** About 20 percent of pensions go to individuals less than 65 years old. Most of these are disability pensions.²³ A review of eligibility criteria for receiving disability pensions may reveal that the criteria could be tightened with little impact on those who truly are disabled. At a minimum, the rule that allows for early retirement with a full pension should be dropped.²⁴

Selected Pension Parameters in large Euro Area Countries

	Statutory retirement age linked to life expectancy	Ceiling on earnings base for contributions	Pensionable earnings reference period
Austria	No	None	Best 40 (as of 2028)
Belgium	No	None	Full career
Denmark	Yes	None	Years fo residence
Finland	Yes	None	Full career
France	No	None	Best 25
Germany	No	2 x average wage (2014)	Full career
Greece	Yes	10 x minimum wage (2016)	Full career
Italy 1/	Yes	None	Full career
Netherlands	Yes	< 1 x average wage	Years of residence
Portugal	Yes	None	Full career
Spain	No	~ 2 x average wage (2016)	Last 25 (as of 2022)
Sweden 1/	Yes	None	Full career

Sources: European Commission; OECD Pensions at a Glance (2015); International Social Security Association.

1/ Notional defined contribution system.

- Extend the pensionable earnings reference period to a contributor’s full career:** The 2011 reform extends the reference period from 15 to 25 years by 2022. However, this still leaves Spain

²² Workers that retire at the statutory retirement age are eligible for half of the full pension amount after 15 years of contribution.

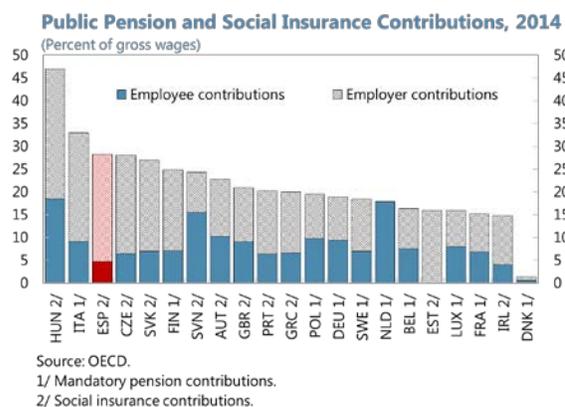
²³ About 6 percent of old-age pensions go to individuals under age 65.

²⁴ In 2017, an individual can retire at age 65 with a full pension provided he has contributed to the pension system for 36 years and three months. The required contribution period to receive a full pension at age 65 gradually increases to 38 year and six months by 2027.

as one of only a handful of European Union countries that still restrict the pensionable earnings period to less than a full career (EC, 2016).²⁵

- **Review the reasons for the high number of multiple pensions:** As of 2017, 850,000 pensioners (about 10 percent of all pensioners) received at least two public pensions.²⁶

18. Spain could increase social security revenue without raising contribution rates. Raising social security rates on employers or employees could have a negative effect on growth and incentives for firms to hire workers or individuals to work. Besides, Spain's statutory social security contribution rates are already relatively high at 28.3 percent per annum (see chart).²⁷ Nonetheless, there is scope to increase social security revenue by raising the minimum and maximum earnings subject to contributions. This would generate net additional social security revenue provided the value on the maximum and minimum pensions were to increase less, respectively. Leaving the cap unchanged would also lead to greater intra-generational equity.



19. The Bank of Spain estimates that revenues would increase about EUR 10 billion if the ceiling on wages subject to contributions were removed. This is equivalent to 10 percent increase over current contributions. Precedent for a higher (or no) ceiling exists. As the table above shows, most of Spain's peers have higher ceilings or no ceiling on earnings subject to contributions. In addition, as noted earlier, to offset the impact on social security revenue from the fall in the number of contributors during the recession years of 2012 and 2013, Spain increased the contribution ceiling by 5 percent, while only raising the maximum pension amount by 1 percent each year.²⁸ The tradeoff for raising the ceiling on earnings is that the pension system loses some of its contributory nature, i.e., the link



²⁵ France, Lithuania, Malta, Austria and Slovenia are the others.

²⁶ In gross terms, as of March 2017, there were 8.6 million pensioners who received 9.5 million pensions.

²⁷ The effective rate was 21–22 percent in 2016 in large part due to a ceiling on the amount earnings subject to social security taxes.

²⁸ More broadly, the steady decline in labor's share in GDP across advanced economies, including Spain, over the last several decades (WEO, 2017) implies a steady decline in social security contributions, absent increases in the effective contribution rate.

between one's earnings and the amount of the future pension diminishes for relatively wealthier contributors.²⁹

20. Raising the minimum contribution amount for self-employed individuals also would raise revenue. Moreover, it would better align the system with the principles of a contributory system. Currently, the minimum contribution level yields a pension value that is less than the minimum pension.³⁰ Self-employed individuals therefore have an incentive to declare only the minimum level of earnings. To declare more, i.e., up to the contribution amount corresponding to the minimum pension, would yield no additional pension. This loop hole should be closed by aligning the minimum contribution amount for self-employed workers with the amount needed to receive the minimum pension (without the state complement).

21. General taxation could also provide a source of additional revenue to cover pensions expenditures. Spain has already taken a step in this direction. By borrowing to fund part of the 2017 social security budget deficit, Spain has implicitly decided to use future general tax revenue to fund part of contributory pension expenditure in 2017.³¹ Other countries cover some pension-related expenses through general taxes. For example, Germany has earmarked one point of VAT for the public pension system (EC, 2016). As noted in the accompanying staff report, Spain's VAT policy gap is large suggesting that there is room to raise additional VAT revenue. If Spain were to go this route and earmark an increase in indirect taxes for contributory pension expenses, this would have mild redistribution consequences.³² Specifically, an increase in indirect taxes means that everyone including pensioners will help pay for the pension benefit, unlike the hike of social contributions, which only active labor participants pay. Earmarking would also mean that the additional VAT revenue would not be available for other priority expenditures.

Transparency and Other Possible Reforms

22. Transparency about the demographic pressures the contributory pension system faces and the tradeoffs inherent in safeguarding pension sustainability is a must.³³ In some cases, this simply means more frequent communication with workers about their individual pensions to

²⁹ Spain's pension system is already progressive. For example, in 2014 the cap on the maximum pension (EUR 2,523/month) was 83 percent of the maximum contribution base (EUR 3,263/month). At the same time, the minimum annual pension (EUR 781/month) was 121 percent of the minimum contribution base (EUR 753/month). Note: Pensioners receive 14 "monthly" pension payments per year, which includes two bonus payments.

³⁰ As noted earlier, the state tops up pensions to ensure all contributors receive at least the established minimum pension.

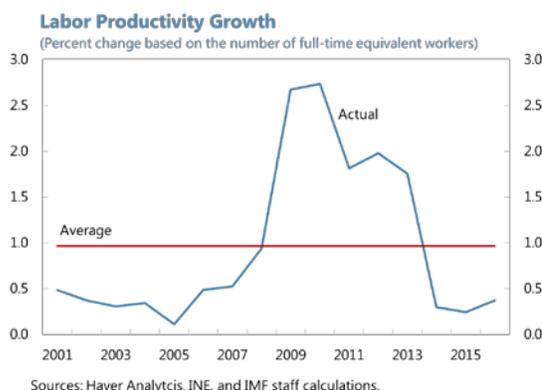
³¹ Other pension-related expenses are covered from general taxes including the complement on minimum pensions and non-contributory pension costs (about 0.8 percent of GDP in 2016). In addition, in 2016, Spain added a complementary maternity benefit on the pension of women with two or more children. Spain's fiscal council (AIReF) estimates that this will cost EUR 240 million (0.02 percent of GDP) in 2019 (AIReF, 2016).

³² From a technical standpoint, the IPR calculation methodology allows for the inclusion of other revenue sources in the calculation of the annual indexation.

³³ The authorities took an important step in introducing more transparency about the contributory system's finances by publishing the annual calculation of IPR and underlying components in the 2017.

manage expectations. For example, annual investment reports could be sent to contributors documenting past contribution history and their projected old-age pension benefit. At the same time, the government could step up promotion of its website (mi pension) for individuals to calculate their future pension benefits. Broader discourse should clearly explain the trade-offs (financial viability vs. pension generosity; intra- and inter-generational equity considerations) inherent in reforms of pension system parameters and revenue measures. Aside from giving contributors a clear understanding of the benefits and limits of the pension system, transparency is also necessary to leverage behavior changes that support a viable pension system and reduce the risk of old age poverty, i.e., working longer and saving more. Reforms that boost labor productivity would also improve the social legitimacy of the pension system by enhancing its generosity, at least in terms of supporting the purchasing power of pension benefits.

23. Boosting productivity would lead to higher pension values, for a given benefit level, provided productivity gains are reflected in average wages. If the maximum pension value was to grow more slowly than productivity, higher productivity would also lead to a net increase in social security resources. The trick is to boost Spain's productivity. Since 2000, annual productivity growth in Spain has averaged a meager 0.9 percent, which encompasses Spain's pre-global financial crisis economic surge in the mid-2000s. In addition, a recent study analyzing the effects of aging on productivity concluded that a five-percentage point increase in the share of workers aged 55–64 is associated with a decrease in total factor productivity, a key component of labor productivity, of somewhere between two and four percent (Aiyar et al, 2016). For Spain, this implies a decrease in TFP of 4 to 8 percent by 2035, when the share of workers aged 55–64 is projected to have increased 10-percentage points from 2016. Worse yet, Spain's aging population lowers growth prospects. The projected fall in the working-age population alone, if it materializes, would reduce GDP by about 0.2 percent every year. These considerations put a premium on structural reforms to boost productivity, such as implementing those identified in the staff report.



24. Shifting to a notional defined contribution system (NDC) could speed up behavioral changes.³⁴ Among Spain's peers, Finland, Italy, and Sweden have NDC systems. Key characteristics of notional defined contribution accounts (NDC) include: (i) contributions are recorded into individual "savings account;" (ii) the "savings" balance grows at a *notional* interest rate, usually linked to an economic indicator such as average wage growth; (iii) at retirement, the account balance is divided by life expectancy to derive annual pension; and (iv) pensions in payment are indexed based on some rule. An NDC system automatically provides degree of fiscal balancing: as life expectancy grows, the benefit available at a given retirement age tends to fall because the account balance is divided by a longer life expectancy. It also could incentivize individuals to work longer to avoid "low"

³⁴ The information on NDC was drawn from Schwartz et al., 2014.)

pension benefits. A key risk of an NDC system are that many workers could end up with minimum pension if they do not contribute for long, earn low returns, or contribute based on low wages. Generally, an NDC system would have a less of a redistributive element compared to current defined-benefit system. Moreover, in NDC, higher contribution rate automatically translates into higher future benefits. Thus, raising contribution rates to offset permanent shocks does little to restore system balance.

25. Private saving is a logical source to replace the reduction in retirement income from lower public pension benefits. Spain's private financial savings are relatively low as reported in the Financial Sector Stability Assessment that accompanies the main staff report. Private pension fund assets amount to less than 10 percent of GDP compared to 37 percent of GDP, on average, in OECD members, according to the Bank of Spain. One way to possibly stimulate greater private savings is to offer tax incentives. However, Spain's existing incentives appear to have generated little additional savings, while the benefits may have gone to those in the upper-end of the income distribution (European Commission, 2008). The authorities may want to reconsider the use of tax incentives. As an alternative, Spain could automatically enroll workers in a government-sponsored private second pillar, with the ability to opt out. The contributions to the pillar could be additional to the public pension contribution. To keep costs manageable, the public sector could administer the pillar with fund managers competing to provide investment services. Ideally, the second pillar savings would be portable. . Another way would be to champion a private savings program that automatically increases employee's savings out of future raises in wages (Thaler and Benzarti, 2003). This approach gets around a key hurdle in getting individuals to save more, which is the "cost" of foregoing consumption today. Such a program has been successful in stimulating private savings in the United States.³⁵ Yet another consideration would be the introduction and appropriate regulation of reverse mortgages to unlock retirees' housing wealth as a source of retirement income.

26. Net migration could play a role in easing parametric tradeoffs. Net migration that increased the number of workers would thereby raise the number of contributors to the pension system. The additional revenue would allow for more gradual parametric changes. High immigration levels are not unprecedented in Spain, which enjoyed a large influx of immigrants in the early 2000s. A complementary approach would be to undertake policy changes that slowed the amount of emigration, which INE projects to be 14.1 million over the next 35 years or so. However, the specific policy measures that would alter net migration flows more in favor of Spain are beyond the scope of this paper.

F. Conclusion

27. Spain's population, like those in many other advanced economies, is projected to age over the coming decades. While projections are uncertain, the simple fact is that Spain's aging and shrinking population has put and will continue to put relentless pressure on contributory pension finances. Spain's policy makers have already done much of the heavy lifting. The reforms adopted in

³⁵ Benzarti reports that 60 percent of large U.S. companies have a savings programs

2011 and 2013 if fully implemented will ensure the financial viability of the contributory pension system. The onus of adjustment falls primarily on reducing the real and relative value of pensions payments. This has led to concerns that the projected deterioration of pension generosity may not be socially acceptable, politically sustainable, and poses a risk of reform reversal in the medium-term.

28. The need for further refinements is not surprising. As a country's population evolves so too must its pension system to maintain its financial viability and social legitimacy. Pension changes should be carefully considered. Revenue and expenditure changes have the potential to undermine labor demand, or labor supply or introduce or exacerbate existing intra- and inter-generational equity imbalances. These considerations are not a reason for an inaction. Rather they put a premium on designing a package of reforms to maximize the benefits, while minimizing the costs, of reform (reference here). In addition, pension reforms work best when they are introduced gradually, this allows for the behavior changes needed for workers and retirees to adopt to the new pension realities.

29. Key decisions are what constitutes an acceptable level of retirement income and the share that the contributory pension system should provide. These decisions should be arrived at through public discourse and will jointly determine the replacement rate that the contributory pension system needs to deliver. The Toledo Pact Commission provides an excellent forum for these very important decisions, which must also consider available resources or the ability of the government to gather more resources. Pension parameters can then be adjusted to safeguard the contributory pension systems financial viability and address intra- and intergenerational considerations. To achieve a durable result, Spain's long-standing tradition of consensus building for pension reforms should be preserved and political fragmentation avoided.

30. This paper suggests a possible package of reforms to safeguard financial viability and address recent concerns. The package could include parametric changes such as automatically linking the retirement age to changes in life expectancy, adjusting accrual rates and the calculation of pensionable earnings, and raising the ceiling the maximum earnings subject to contributions and the minimum contribution amount paid by the self-employed. Shifting survivor and orphan pensions to the central government budget does not improve the financial viability of the pension system. Similarly, ad hoc increases in pensions to protect pensioners from a loss in purchasing power risks opening the door to further ad hoc adjustments that would undermine the financial viability of the system and credibility of Spain's commitment to fiscal sustainability. These reforms should be complemented by policies that encourage greater private savings and increases in labor productivity. Consideration could also be given to how to boost net migration.

31. Above all, with an aging population, there is no room for reform reversals. It also needs to be made clear that the contributory pension system was never meant to be and should never be a retiree's sole source of income. Spaniards, like their peers in many other advanced countries, will need to work longer and save more to provide for their financial well-being in retirement. Government policies can play a significant role in easy this adjustment to the new demographic realities.

Glossary

Benefit ratio: The average pension benefit paid relative to the average gross economy-wide wage.

Dependency ratio: The number of persons aged 65 and older relative to the working-age population.

Effective contribution rate: Total social security contributions received relative to the contribution base (wages paid to employees and earnings of self-employed workers).

Effective retirement age: Actual average age of retirement.

Eligibility ratio: The number of pensioners relative to the number of persons aged 65 or older.

Employment rate: The number of individuals employed relative to the working age population.

Fertility rate: Average number of children born to women child-bearing age.

Life expectancy: Average number of additional years one is expected to live upon achieving a given age.

Net migration: Immigrants less emigrants.

Participation rate: The number of employed and unemployed persons relative to the working age population.

Pensionable earnings period: The years of contributions from which the base pension amount is derived.

Replacement rate: The average of the value of initial pension payments to the gross average wage of the cohort from 55-64 or the average gross economy-wide wage.

Working age population: The number of persons between the ages of 15 and 64, inclusive.

Box 1. Inequality and Poverty Across Generations

A consequence of the Global Financial Crisis (GFC) in most of Europe was an increase in inequality and poverty across generations. Spain was no exception where its youth was particularly hard hit by economic stagnation.

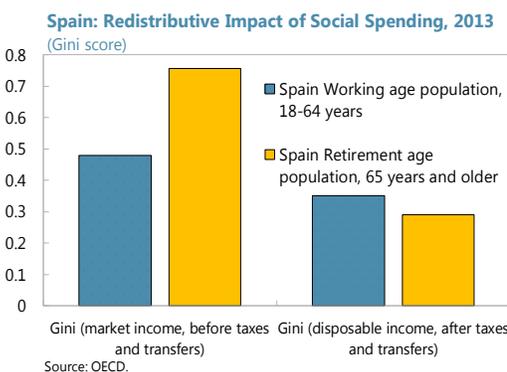
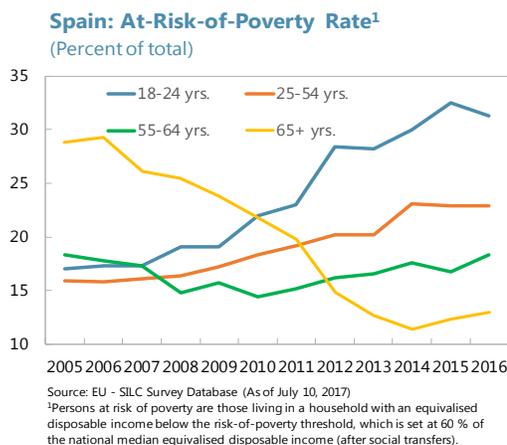
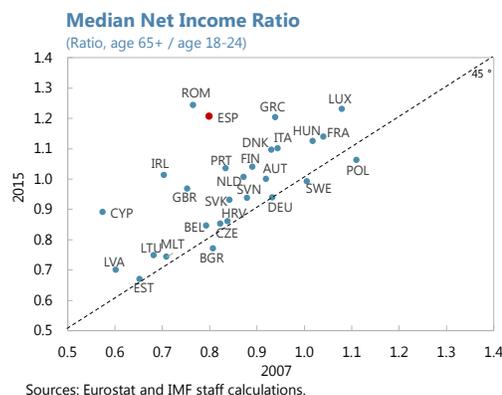
The median net income ratio of those over age 65 to those between the ages of 18–24 increased in 24 of 28 EU countries following the GFC. Spain experienced the second largest increase from 0.8 in 2007 to 1.2 in 2015 as the median equivalized income of youth (18 to 24 years old) deteriorated sharply on the back of job losses. The median net income of the youth in Spain is now 20 percent lower than that of the elderly. However, the recovery in youth employment is contributing to close this gap: in 2015 population aged over 65 saw their income increase by 1.7%, while population aged 16–29 enjoyed a larger increase of 4.9%. The aggregate median income (lower limit of the sixth decile) increased by 2.5 percent in 2015.

The poverty rate for youth in Spain in relative terms has doubled over the past decade. In 2015, one in three youths was at risk of poverty, defined as the share of persons with equivalized disposable income (after social transfers) of less than 60 percent of the median disposable income. At the same time, compared to all other age groups, the poverty rate for the elderly dropped sharply from 30 percent in 2005 to 12 percent in 2015.

Pension reforms helped shield the elderly through the worst of the crisis. While market income inequality in Spain is significantly higher for the elderly, after accounting for fiscal redistribution through taxes and transfers, disposable income inequality for the elderly is lower than for the working age population.

Looking more broadly at Europe, the young remain vulnerable as social assistance geared towards them in many countries underwent cuts, deindexation and a tightening of benefits eligibility. The redistributive impact of these policy choices is felt across the EU.

Inequality across age groups and poverty among the young will be an important consideration when deciding on the trade-offs of future pension reforms in Spain.



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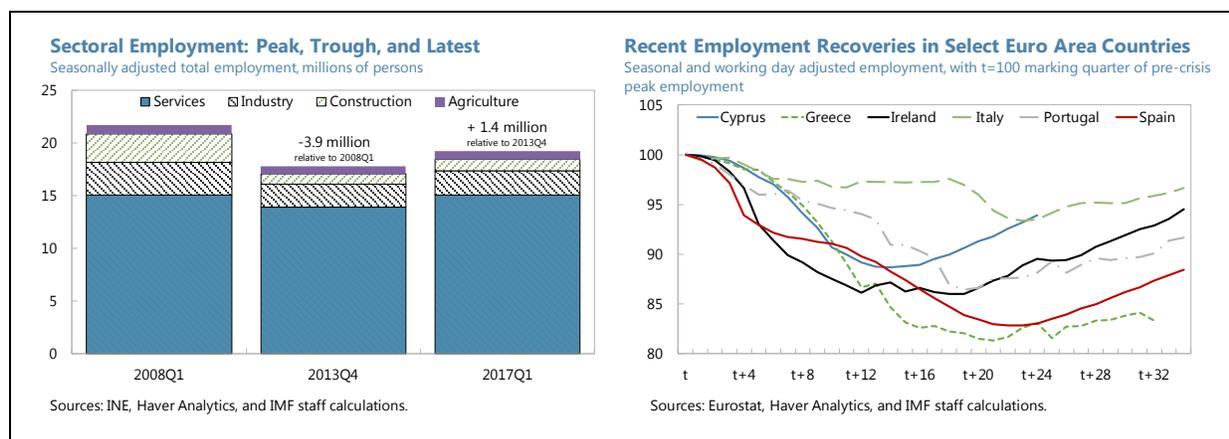
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A CLOSER LOOK AT EMPLOYMENT CREATION IN SPAIN SINCE THE CRISIS¹

Over the past three years, the Spanish labor market has seen a strong turnaround, recovering more than a third of jobs lost during the crisis. This rebound has taken place on the back of significant wage moderation and regained external competitiveness, supported by labor market reforms. Employment has been growing across sectors, with services accounting for 80 percent of net employment creation, marking a sectoral shift away from construction. Except for some fast-growing smaller sectors such as information and communications, the new service-sector jobs are generally in the lower-productivity segment, including in tourism-related activities, and just over half are of temporary nature. Job growth has also varied across regions, reflecting different employment situations and sectoral specializations. Generally, the newly created jobs make sub-optimal use of existing skill patterns in Spain, with over-skilling becoming more prevalent and persistent skills gaps among the lower-educated preventing many from finding employment.

A. Context

1. Following a deep fall in employment during the crisis, the Spanish labor market has improved substantially. Between early 2008 and late 2013, Spain lost 3.9 million jobs, equivalent to one out of five. In early 2014, the labor market finally turned around and Spanish employment has since increased by 1.4 million jobs (until the first quarter of 2017, based on unadjusted national accounts data).² The labor market recovery appears to be broad based, with employment picking up across sectors, and both youth and long-term unemployment on the decline against a slight increase in the participation rate. Overall, at an average rate of 2½ percent per annum, Spanish employment growth has been among the fastest of the recent employment recoveries in euro area countries severely affected by the crisis (see text chart).

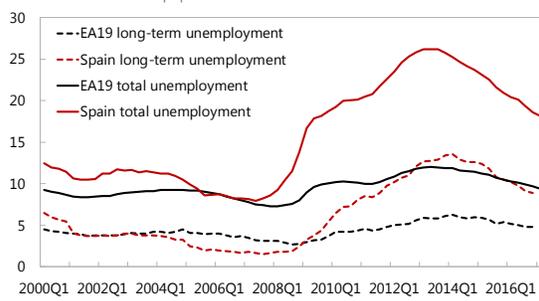


¹ Prepared by Hanni Schoelermann.

² National accounts data counts the number of jobs, whereas labor force statistics yield information on the number of persons employed by main activity (OECD, 1998). For the total economy, national accounts and labor force survey data are very close together, with the latter showing a decline in employment by 3.7 million between early 2008 and 2014, and an increase by 1.5 million employed until the first quarter of 2017.

2. But unemployment remains high. Among euro area countries, Spain saw the largest and most protracted drop in employment, bar Greece. While real GDP has recovered to pre-crisis levels, total employment remains some 10 percent below its 2008 peak, revealing an upward shift in productivity compared to the pre-crisis period. Migration, which led to an increase in Spain's working-age population by 2.3 million people between 2002 and 2008, has been negative since the crisis, implying a smaller pool of potential labor. However, unemployment, while at its lowest level in seven years, is still among the highest in Europe, and stood at 17.3 percent in the 2017:Q2. Youth unemployment is more than double the national average, and those out of a job for more than a year account for nearly half of all unemployed. Almost half of the reduction in total employment came from the construction sector, which collapsed following the burst of the real estate bubble in 2008. Many who worked in this sector have relatively low levels of education or training, complicating their transition into new employment (Jansen et al., 2016).

EA19 and Spain: Total and Long-term Unemployment
Percent of total active population.



Sources: Eurostat and Haver Analytics.

Note: Total unemployment is seasonally adjusted, long-term unemployment is not.

3. Labor market reforms have contributed to job creation, but labor market duality remains pervasive. Empirical studies find that the 2012 labor market reforms (Box 1) have helped wage moderation and wages have become more responsive to overall macroeconomic conditions, although they remain relatively unresponsive to sectoral developments (Izquierdo et al., 2013; Garcia-Perez, 2016; IMF, 2015; OECD, 2014).¹ This has dampened labor-shedding, increased hiring and made the labor market more resilient to economic shocks (Doménech et al., 2016; IMF, 2015). Moreover, more new jobs are of a permanent nature than would have been the case without the reforms, though the effect is rather limited in size (Garcia-Perez, 2016; OECD, 2014). In addition, there is evidence that the duration of unemployment has declined (ibid).

4. At the same time, various measures have been taken to support hiring. The 2012 labor market reform introduced the *Contrato de Emprendedores*, a full-time permanent employment contract with an extended trial period of up to 12 months, to incentivize permanent hiring. The contract is available to firms with less than 50 employees and allows the hiring firm to claim several tax benefits provided the new employee is kept for at least three years (ILO, 2014). Until August 2016, there was also a €500 monthly deduction from social security contributions for new permanent hires. Recently, the government has taken steps to further improve its active labor market policies, introducing individual re-integration assistance for long-term unemployed and automatic eligibility of all registered young unemployed for support under the EU's Youth Guarantee (European Commission, 2017; IMF, 2017).

¹ For an overview of the literature, see Annex 1 in IMF Country Report 17/23.

Box 1. Main Features of the 2012 Labor Market Reform

Collective negotiation and firms' internal flexibility

- Priority given to firm-level wage agreements over regional or industry-level collective agreements
- Easing and clarification of opt-out clauses from collective agreements
- Limiting the automatic extension of expired collective agreements (ultra-activity) to one year
- Easing of modifications to working conditions
- Promotion of temporary layoffs and reductions in working hours, by eliminating prior approval from the authorities and by adopting strong fiscal incentives

Employment protection

- Reduced compensation for unfair dismissals of permanent workers—Compensation for unfair dismissals of permanent workers: 33 days (previously 45 days) per year worked, with a maximum of 24 months (previously 42 months). Compensation for fair dismissals of permanent workers remained at 20 days per year worked with a maximum of 12 months.
- Greater flexibility for fair dismissals due to unfavorable economic conditions
- Lower dismissal costs and increased efficiency in the use of fair dismissal via revised procedures

Hiring

- Introduction of new permanent contract for small firms (less than 50 workers) with a trial period of one year, with significant fiscal and social security benefits
- Limit to the renewal of temporary contracts up to two years
- Increased flexibility in the regulation of part-time jobs and teleworking

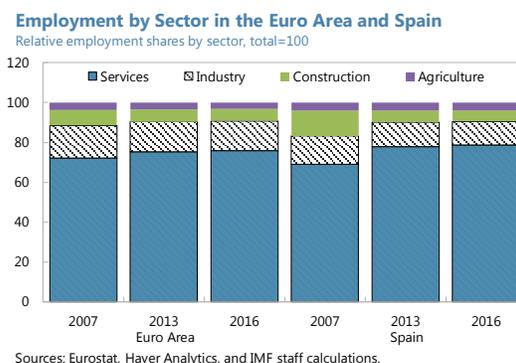
Active labor market policies

- Greater incentives for training and apprenticeship contracts
- More professional training by private agencies
- Temporary Employment Agencies authorized to act as private placement agencies

5. This note takes a closer look at the underlying features of the Spanish employment recovery, with a view to identifying achievements, trends, and future challenges. It explores where employment creation has taken place, on which terms, and to what extent the new jobs make use of Spain's labor potential. For the analysis, national accounts data is used, complemented by social security affiliation numbers for sub-sectoral analysis and labor force survey results for information by region, skills and contract terms. Section B examines the main sectoral and regional developments in net job creation to date, as well as the terms of employment and productivity characteristics of the new jobs. Section C looks at the skill requirements of the new jobs and the distribution of skills in the labor force, with a view to identifying potential implications for the further employment recovery. Section D concludes.

B. Job Growth Across Sectors and Regions: Broad but Uneven

6. The crisis marked a sectoral shift in employment. The bursting of the real estate bubble led to a collapse in construction employment, which declined by two-thirds between early 2008 and the end of 2013. Similarly, roughly 30 percent of industry jobs were lost during the crisis. By contrast, declines in service employment were less pronounced in proportional terms, and net employment growth in services has been positive since mid-2013. This led to a significant shift in the sectoral composition of employment in the economy: the share of service sector jobs increased from 69 percent of total employment before the crisis to 78 percent in 2013 (see text chart). This was partly because of the collapse in construction employment, but also due to the relatively strong performance of service-sector employment itself.² The share of construction in total employment was more than halved, falling from nearly 13 percent in 2007 to 5½ percent in 2013. The share of industry employment also fell by 2 percentage points. As a result of these relative changes, Spain's sectoral distribution of employment is now similar to the euro area average, with industry accounting for a marginally lower and services for a slightly higher share.

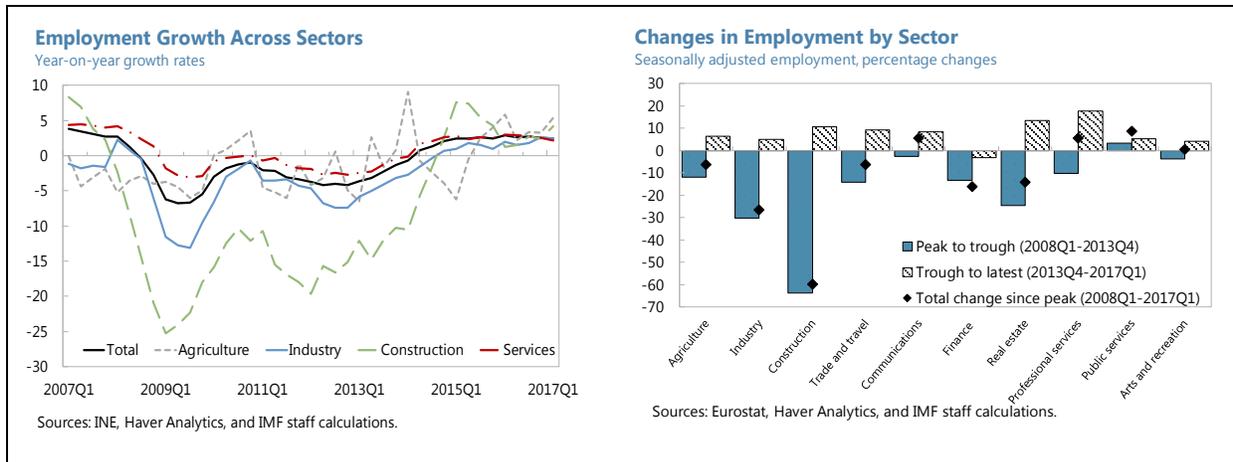


7. The employment recovery is felt across sectors, but has been driven by services. For the total economy, employment has been on the rise since early 2014, and since mid-2014, it has been growing in each of the main economic sectors (agriculture, industry, construction, and services). Employment creation has been strongest in the services sector. It accounts for almost 1.2 of the 1.4 million new jobs, i.e. more than 8 out of 10. For one, this reflects the sector's large share in total employment, but also steady employment growth at a relatively fast pace, especially considering the mild decline in the crisis. As a result, the preceding job losses in the sector have been more than offset. By contrast, both in construction and industry, employment remains far below its pre-crisis levels. While the overall percentage change in employment in these sectors since the trough is similar to that observed in the services sector, this has to be seen in the context of employment picking up from a very low base.³ However, in 2016, job growth rates in both sectors accelerated and—in the case of construction—even outpaced services. All in all, since 2013, sectoral employment shares have thus remained broadly stable.⁴

² Approximately two-thirds of the relative increase in service sector employment was mechanical and due to the reduction in construction jobs. The other third was due to the relatively better performance of service employment.

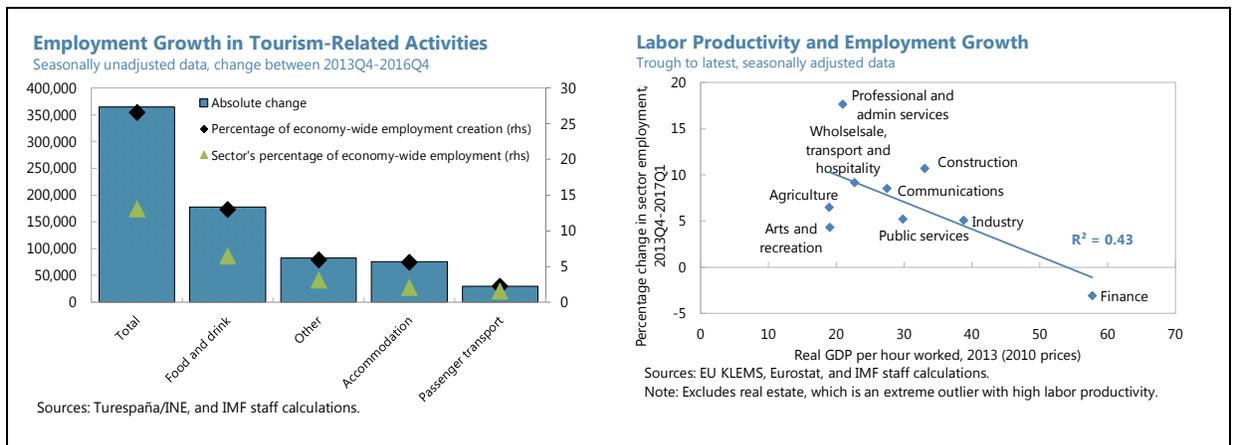
³ For industry employment, there is a significant discrepancy between national accounts and labor force survey data. According to the former, industry employment has picked up by less than 6 percent between 2014:Q1 and 2017, whereas labor force survey data shows a rebound of nearly 12 percent. Social security affiliation numbers are closer to the national accounts data, recording an increase of 7½ percent over the same period. The discrepancy between national accounts and survey data might in part be explained by different sectoral definitions, as well as survey data covering resident households, while national accounts data captures employment in resident production units (accounting for cross-border workers. For comparison, service employment rose by 8.5 percent and construction employment by 11 percent over the same period (national accounts).

⁴ This finding is consistent with both national accounts and labor force survey data.



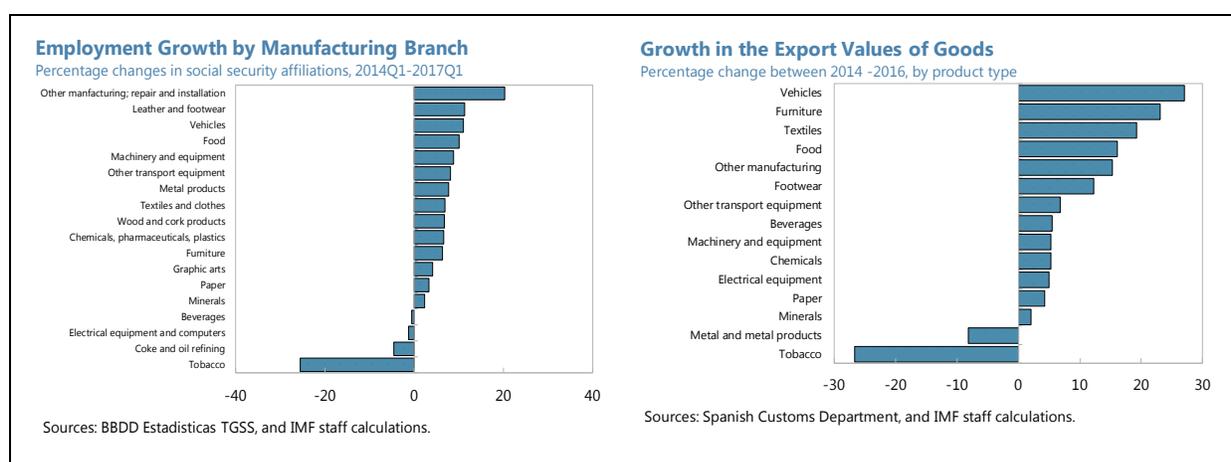
8. The majority of services-sector employment gains are in lower-productivity activities.

While economic activities benefitting from tourism account for only approximately 13 percent of total employment, roughly one quarter of the total net employment creation since end-2013 has been in tourism-related activities.⁵ An additional quarter of the new jobs are in professional, scientific, technical and administrative support activities, and another 14 percent in public services, which unlike other subsectors saw employment grow steadily throughout the crisis, driven by increases in education and health care. All of these sectors have labor productivity below the economy-wide average. Although high-productivity sectors like information and communications and real estate services have experienced rapid employment growth, they account for only 3½ percent of total employment. Further disaggregation moreover shows fast job creation in some of the higher-productivity sub-sectors of professional services, such as in employment services, which have expanded by 50 percent since early 2014, as well as in other professional, scientific and technical activities and management consulting. Jointly, these make up another 2 percent of jobs in the economy, trend rising. Meanwhile, the financial sector continues to reduce employment.

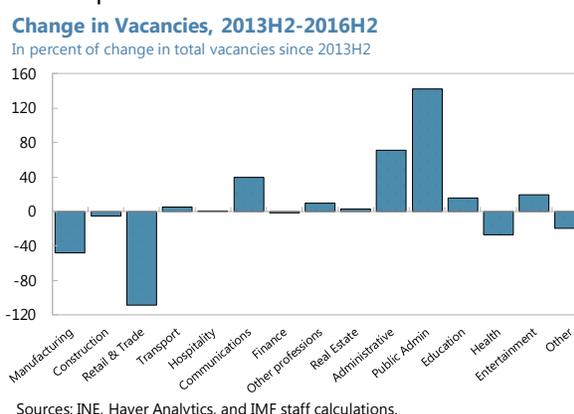


⁵ Tourism-related industries include food and beverage services, accommodation, transport, and other tourism activities. Using a restrictive Eurostat definition of selected tourism industries, including only air transport, accommodation, and travel agency and tour operator services, 83,000 tourism jobs have been created since the crisis, equivalent to six percent of total employment growth.

9. In manufacturing branches, job creation has been linked to export performance and the recent pick-up in construction activity. During the crisis, manufacturing branches that were linked to the construction sector, such as the manufacturing of wood and cork, metals, and machinery and equipment, were among those that reduced employment the most, alongside manufacturers of mineral products, furniture, and textiles and clothes. In the upswing, employment has increased significantly in all of these sectors apart from mineral manufacturing. Hiring in these areas seems to have been supported by a strong improvement in their export performance. The subsectors that have increased exports and expanded employment the most are other manufacturing, vehicles, food, and footwear and leather. Employment in building-sector-related manufacturing branches also appear to have benefitted from the pick-up in construction activity (see text charts). Overall, about half of the new jobs in manufacturing are in subsectors with above-average labor productivity.

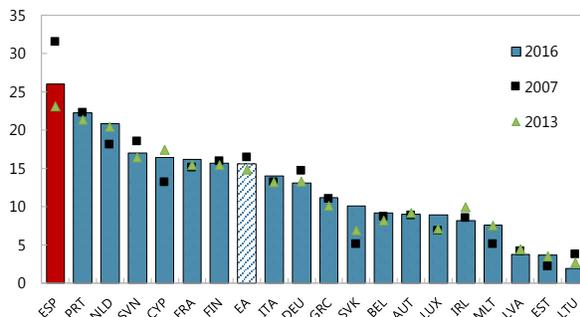


10. Vacancies suggest that the greatest short-term employment demand continues to be in lower-productivity sectors. Public administration and private administrative services have experienced the largest proportional rise in vacancies since the second half of 2013. Among high-productivity sectors, information and communications has seen the fastest growth in vacancies. However, vacancy statistics should be interpreted carefully, as they also capture positions vacated by people moving out of lower-paid low-productivity jobs as the economy recovers and labor demand in better-paid sectors picks up.



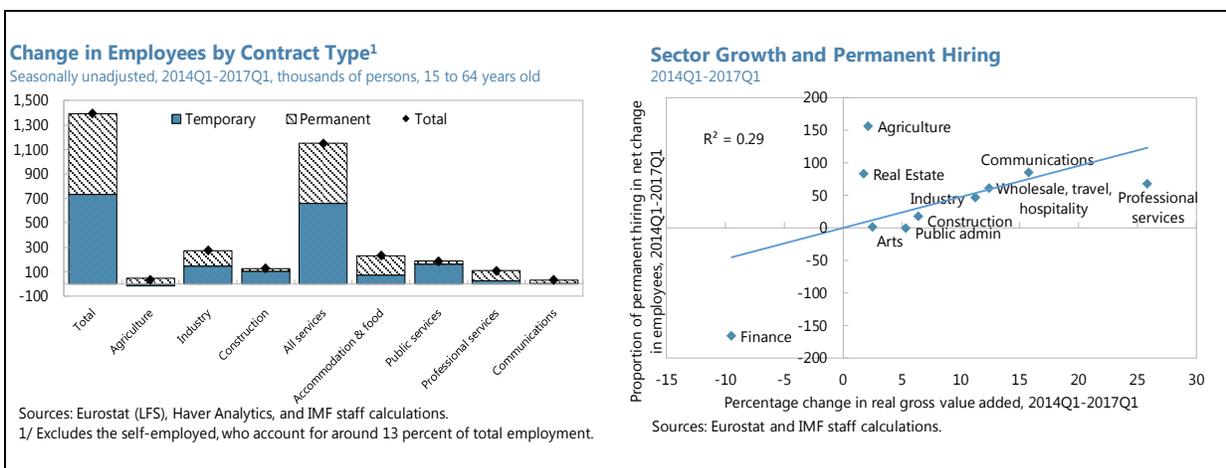
11. The labor market has remained segmented. Employment protection for permanent workers remains costlier than for temporary ones, including due to uncertain and cumbersome dismissal procedures (European Commission, 2017). The flexibility of temporary contracts has helped to kick-start the recovery of the Spanish labor market, with just over half of all new jobs created since 2014:Q1 being temporary. This has brought the share of temporary employees to just above 26 percent of total employees. Although the share of temporary jobs is still some percentage points below its pre-crisis peak, this is mostly due to the disproportionate shedding of temporary labor during the crisis. Spain still has the highest share of temporary employment in the euro area.⁶ Several studies suggest that widespread use of temporary contracts can undermine total factor productivity growth by reducing employees’ effort (Dolado et al., 2011), as well as their incentives to acquire firm-specific knowledge and their training opportunities (Cabrales et al., 2014). It might also favor production projects with shorter duration, which tend to have lower productivity (Cahuc et al., 2016).

Temporary Employment in Euro Area Countries
As a percentage share of total employment



Sources: Haver Analytics and Eurostat (LFS).

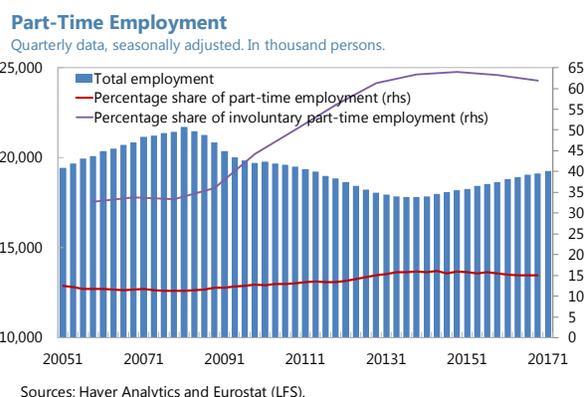
12. Temporary hiring is used across sectors. Hires in construction and some services—such as public services, notably the health sector—are particularly likely to be employed on a temporary basis.⁷ High (employment) growth sub-sectors such as professional and technical service activities, communications, and—despite their seasonal nature—tourism-related activities (i.e. accommodation and food services) seem to extend more permanent contracts, pointing to sector-specific growth prospects as one factor influencing firms’ preferred choice of hiring.



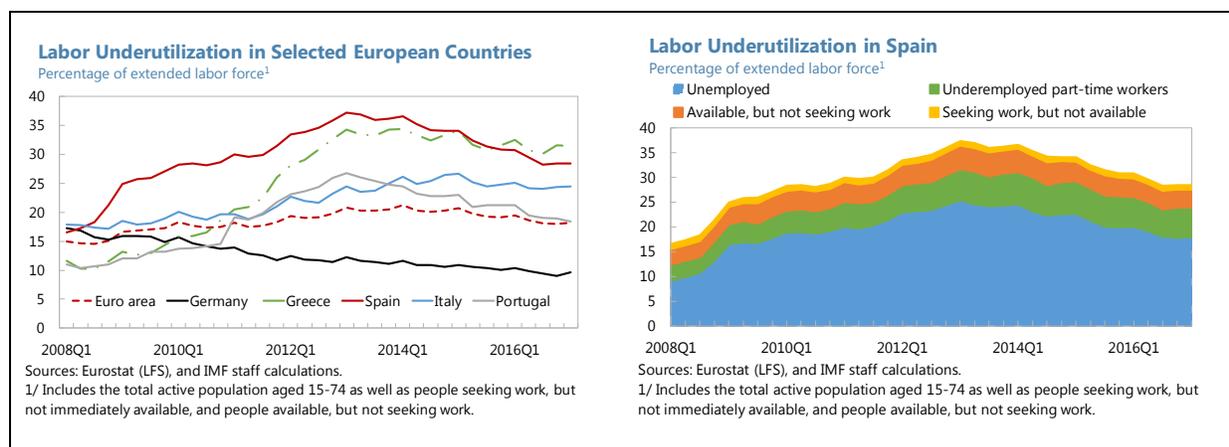
⁶ At the same time, the share of self-employment in total employment has slightly decreased since early 2014, against a very modest increase in the absolute number of self-employed people in the economy.

⁷ On March 29, 2017, the government agreed with trade unions to convert up to 90 percent of the approximately 300,000 temporary employment positions in public administration into permanent ones over the next three years.

13. Involuntary part-time work increased substantially during the crisis and remains high by historical standards. The overall share of part-time work rose only mildly during the crisis, and is low in comparison with other European countries. It went up from 11½ percent of total employment in 2007 to almost 16 percent in 2014, and receded to 15 percent in 2016.⁸ The increase was driven by a rise in male part-time employment, which doubled to about 8 percent of total employed men, while female part-time employment increased by 2 percentage points to 24 percent. However, the share of involuntary part-time employment surged between 2007 and 2014, and, at currently still above 60 percent, is among the highest in the euro area.



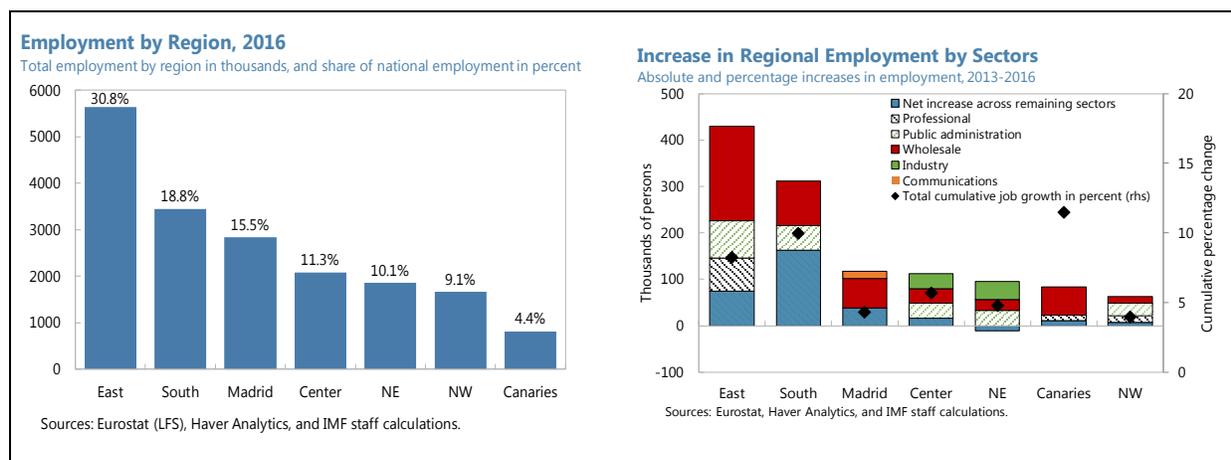
14. Several indicators point to hidden slack in the labor market. The high share of involuntary part-time work suggests that labor market slack may still be considerable. Indeed, a broader estimate of labor underutilization, the U6, shows that actual labor market slack is higher than headline unemployment indicates. While overall labor underutilization in Spain came down from its peak of 37 percent in 2013 to 28 percent in early 2017, the decline is exclusively due to a drop in unemployment, with underemployment remaining constant.⁹ Overall, labor underutilization in Spain remains among the highest in the euro area (see text charts). This is despite the net emigration of more than 0.7 million 25-to-64-year-olds between 2009 and 2015.



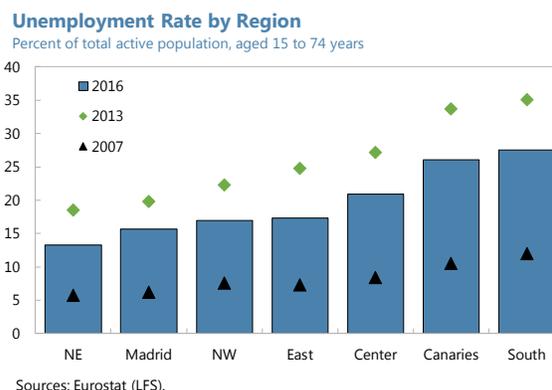
⁸ The 2012 labor market reform introduced greater flexibility to use part-time contracts (OECD, 2013).

⁹ The so-called U6 measure expresses the sum of unemployed persons, under-employed part-time workers, people seeking work, but not immediately available, and those available but not seeking work, as a percentage of the extended labor force. The extended labor force is the total active population, plus the number of people seeking work, but not immediately available, and those available, but not seeking work (ECB, 2017).

15. The employment recovery has taken hold across regions, but some are outperforming.¹⁰ Since the employment trough in 2013, some Spanish regions have experienced a much steeper job recovery than others. Whereas employment in the Canary Islands and the South has increased by around 10 percent since its low point in 2013, it has picked up by around 4 percent in the Northwest and Madrid. In absolute terms, most new jobs have been created in the East, which is little surprising as it accounts for 30 percent of total Spanish employment.

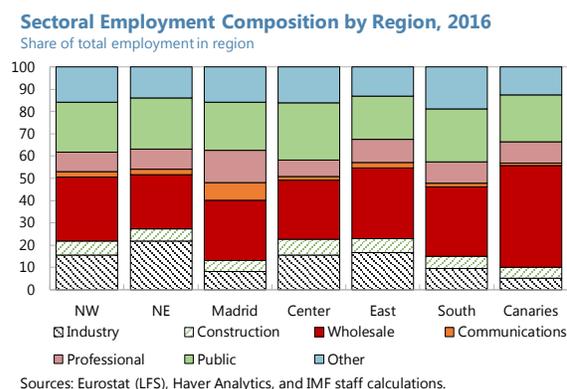


16. Overall, employment growth has been strongest in regions with the largest preceding declines. Unemployment rose proportionately across regions during the crisis, with those with higher initial joblessness rates registering the largest increases. As the recovery set in, employment growth has also been larger in regions with the biggest jumps in unemployment rates, i.e. the Canary Islands and the South, suggesting an almost proportionate reversal. These regions happen to also depend significantly on tourism. Generally, the large differences in regional unemployment rates point to limited labor mobility. Indeed, the widespread use of temporary contracts may have a bearing on labor mobility, as the lack of job security reduces incentives to relocate in the face of transaction costs related to the move, including housing and schooling.



¹⁰ Regions defined according to EU NUTS2 classification. Northwest (Galicia, Asturias, Cantabria), Northeast (Basque Country, Navarra, La Rioja, Aragon), Madrid, Center (Castile and Leon, Castile-La Mancha, Extremadura), East (Catalonia, Valencia, Balearic Islands), South (Andalusia, Murcia, Ceuta, Melilla), and the Canary Islands.

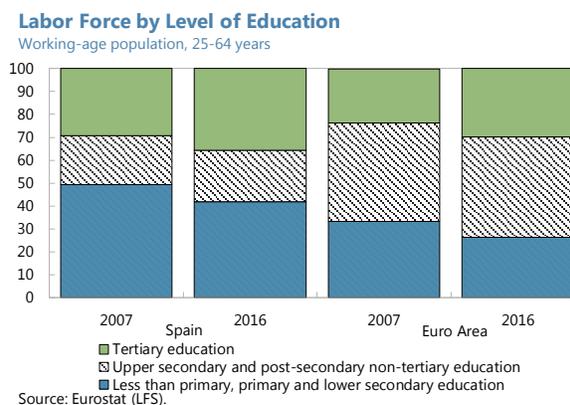
17. The differential employment recovery is partly related to the different sectoral compositions of the Spanish regions. While wholesale, including travel and hospitality, is the biggest sector by employment across regions, it has been the main job creator in the East, the Canary Islands and Madrid, where, with the exception of the latter, it accounts for a relatively higher share of employment than in other parts of the country. Moreover, employment gains in communications have been highly concentrated in the capital, where the sector plays a comparatively important role. The employment recovery in northern and central Spain, where industry is still relatively sizeable, has been driven by hiring across the three largest sectors—wholesale, public administration, and industry. Thus, some regions such as the East, Madrid and the Canary Islands seem to experience an increasing concentration of employment in a few core sectors, whereas job creation in other regions has been more diversified.



C. Skills Mismatches: Foregone Potential

18. The sectoral shift in employment poses potential challenges for skills-matching and productivity growth. The newly created jobs in the service sector are likely to require different skill sets from the jobs lost during the crisis, particularly those in construction and manufacturing. The literature commonly refers to *vertical* skills mismatches if a worker, compared to their current job requirements, has completed either too many or too few years of education (over-/under-education), holds a higher or a lower qualification (over-/underqualification), or, more generally, has acquired skills and abilities not fully used—or lacks skills and abilities needed—on the job (over-/under-skilling) (Sloane, 2014). Mismatches can also be *horizontal* to the extent that a worker has the required level but not the right kind of skills (ibid). Finally, another type of mismatch is the difference between job-seekers' skills and labor-market needs (referred to below by the general term "skills gaps"). Reducing mismatches can raise productivity. This is obvious where people are under-skilled for the job they perform or available jobs. Recent studies have also attested potential gains in productivity from reducing over-skilling. Besides lower worker satisfaction, widespread over-skilling tends to be associated with a higher rate of job changes and lower productivity (Sloane, 2014). McGowan and Andrews (2015) find that higher skills mismatch is associated with less efficient resource allocation, as over-skilled workers are trapped in low-productivity firms, thus depriving productive firms of drawing their hires from a greater pool of qualified people.

19. The share of high-skilled workers has further risen during the crisis. Compared to other euro area countries, Spain's working-age population comprises both a high share of lower-educated persons with up to lower secondary education, and a high share of higher-educated persons with tertiary education. Since the crisis, the share of lower-educated persons has decreased slightly while the share of university-educated persons has increased, due to both a general trend of increasing education levels and poor job prospects pushing people to pursue (additional) tertiary education (ILO, 2014). The share of medium-educated persons with upper secondary and non-tertiary post-secondary education has meanwhile remained constant, at only about half of the euro area average.



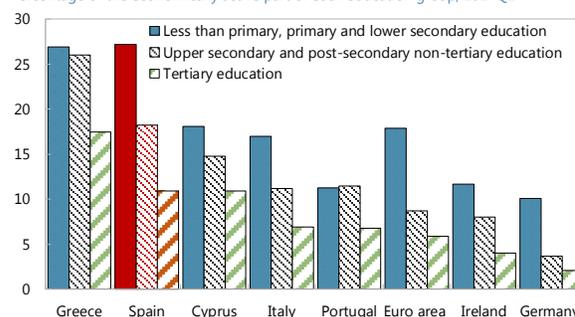
20. Yet net employment creation has been concentrated in medium-skill occupations, revealing significant over-skilling. Despite strong hiring in education and health, only a little more than one quarter of the jobs created since the employment trough are in high-skill occupations, i.e. jobs requiring tertiary as well as post-secondary education.¹¹ The vast majority of new jobs involve predominantly routine and service tasks, which require fewer skills. Yet, the employment share of higher-educated workers has risen. While some of this is due to the decrease in employment of medium- and lower-educated workers who were disproportionately affected by the crisis, employment of university-educated workers has also increased in absolute numbers, implying that many have accepted jobs below their level of education in an overall weak labor market (Figure 1). A recent OECD study finds that 27 percent of Spanish workers are over-skilled for their jobs, compared to six percent of those in employment who lack skills for the job they perform (McGowan and Andrews, 2015). Such skills mismatches are found to be highest among young people, and might be particularly large in Spain due to the very small share of the labor force with upper secondary education and professional training. The authors estimate that reducing the skills mismatch in Spain to the best practice level across OECD economies would increase allocative efficiency by around 10 percent.

¹¹ Due to data limitations, there is a discrepancy between grouping by education and by occupational skill levels, with the latter including not just tasks requiring tertiary but also post-secondary education in the high-skill category. Based on the International Standard Classification of Occupations (ISCO) 08, occupations were grouped into either high-skilled (managerial, professional or technicians and associated professionals), medium-skilled (clerical support, service and sales workers, craft and related trade workers, machine operators and assemblers), and low-skilled (elementary occupations). Agricultural and armed forces workers are not classified.

21. On the lower end of the skill distribution, skills gaps prevent many people from finding employment. Despite the relatively low skill requirements of most of the new jobs, the unemployment rate among lower-educated workers is one of the highest in Europe, and they constitute more than half of the currently unemployed population in Spain. This is in part due to the collapse of the construction sector, with former construction workers constituting a disproportionately large share of the long-term unemployed and having very low relocation rates to other sectors (Jansen et al., 2016). Empirical evidence by Lacuesta et al. (2012) shows that workers with manual skills are most likely to find jobs in agriculture, domestic service, industry and transport. However, these sectors have seen comparatively modest employment gains. Together with the tendency of Spanish firms to hire high-skilled workers for lower-skill jobs, this points to little demand for low-skilled labor and skills gaps in the form of undereducation (Izquierdo et al., 2013; Puente and Casado, 2016).¹²

Unemployment Rate by Level of Education

Percentage of the economically active part of each education group, 2017Q1

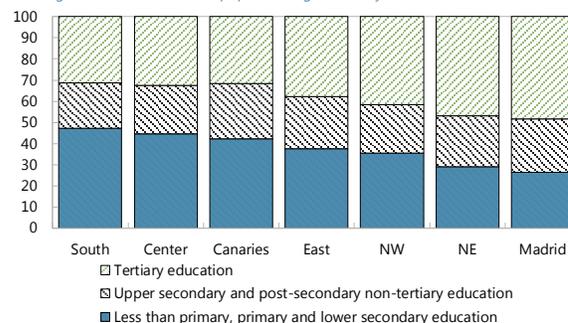


Source: Eurostat (LFS).

22. Regional differences in qualification levels may also help to explain limited labor mobility. Economically active persons in the poorer regions (South, Canary Islands and Center) tend to have a significantly lower level of education than in other regions. The share of low-skilled persons in Spain's South is almost twice as large as in its capital. While this largely reflects the different composition and skill requirements of economic activities in the regions, low qualification levels limit the prospects for labor mobility and finding employment, especially when overall unemployment is still high and low-skilled workers are competing with higher-skilled ones for similar jobs.

Economically Active Population by Level of Education, 2016

Percentage shares of total active population aged 15-74 years



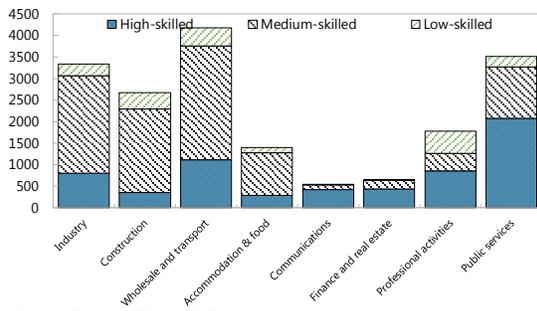
Sources: Eurostat (LFS), and IMF staff calculations.

¹² There is some evidence that job polarization – increasing demand for high-skilled and, to a lesser extent, for low-skilled labor accompanied by a declining share of medium-skill jobs – has accelerated during the crisis (Anghel et al., 2014; OECD, 2017). However, given that job polarization is a medium- to long-term trend, that the crisis disproportionately affected lower-skilled workers also because they typically enjoy lower employment protection (cf. Anghel et al., 2014), and that the employment recovery is still underway, the short period covered in this paper does not allow to draw definitive conclusions on job polarization.

Figure 1. Employment and Skills Requirements

Before the crisis, a large share of medium- and low-skilled jobs were in construction and manufacturing.

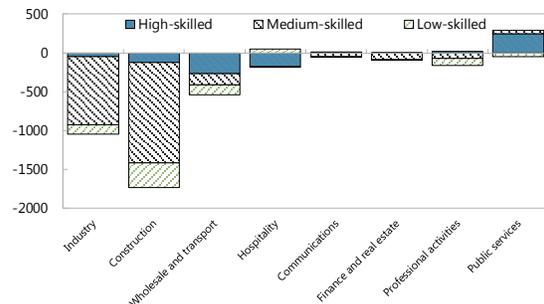
Employment by Sector and Skill Requirements, 2008Q1
In thousands of persons



Sources: Eurostat (LFS), and IMF staff calculations.

The layoffs in these sectors during the crisis led to a strong decline in medium- and low-skilled employment.

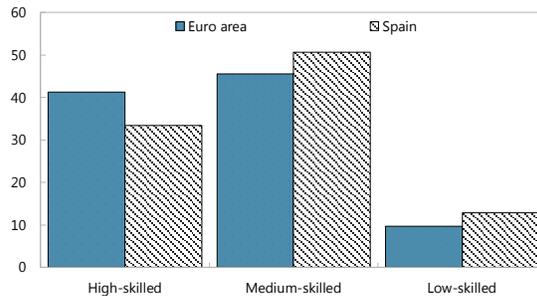
Job Losses by Sector and Skill Requirements
In thousands of persons, 2008Q1-2014Q1



Sources: Eurostat (LFS), and IMF staff calculations.

Still, the skill requirements of the Spanish economy remain relatively low ...

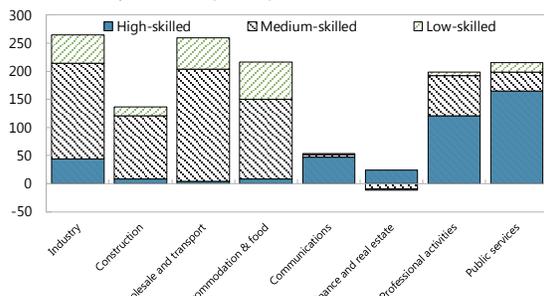
Employment by Skill Requirements
As a percentage of total employment, 2017Q1



Sources: Eurostat (LFS), and IMF staff calculations.

... as job growth has been driven by hiring in medium-skill activities outside manufacturing and construction ...

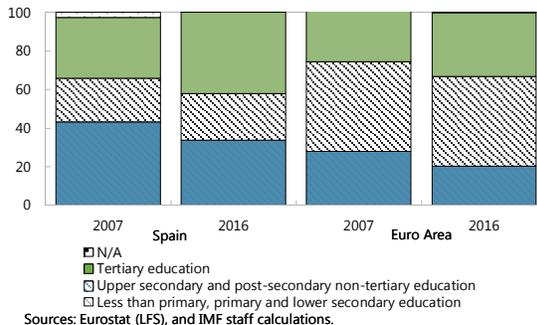
Job Creation by Sector and Skill Requirements
In thousands of persons, 2014Q1-2017Q1



Sources: Eurostat (LFS), and IMF staff calculations.

... although the share of higher-educated workers has risen ...

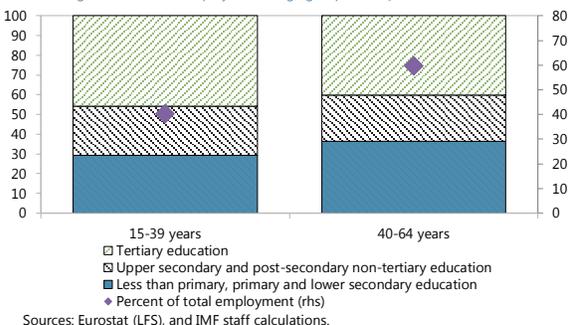
Employment By Level of Education
Percentage shares of total employment



Sources: Eurostat (LFS), and IMF staff calculations.

... and is particularly high among younger generations.

Employment by Level of Education and Age Group
Percentage share of total employment in age group, 2017Q1



Sources: Eurostat (LFS), and IMF staff calculations.

D. Conclusions

23. The Spanish labor market has seen a strong and broad-based rebound in recent years, driven predominantly by an expansion of low-productivity employment.

The pick-up in employment over the past three years is felt across sectors and regions, but is dominated by the services sector and those regions where the latter is particularly prevalent. The recovery is also felt across groups, with both youth and long-term unemployment on the decline. Most new jobs are in wholesale, food and accommodation (i.e. tourism-related) activities, and professional and support services, all of which have below-average labor productivity. Among high-productivity sectors, employment in information and communications as well as in some manufacturing branches is growing rapidly, but from a very low base. The use of temporary contracts is still wide-spread and labor mobility remains low, holding back productivity growth. The large share of involuntary part-time work points to slack in the labor market.

24. Many of the new jobs created since the crisis do not match workers' skill sets.

Although Spain's labor force is becoming increasingly better educated, the bulk of new employment is in areas with lower skill requirements, involving routine and service tasks. Many of these jobs have been taken by higher-educated people, while lower-skilled find it difficult to move into employment, implying an inefficient allocation of labor. Part of the preference for hiring higher-skilled workers might be explained by the relative scarcity of people with professional training.

25. Further measures to address labor-market segmentation and promote on- and out-of-job-training could help to improve employment quality and productivity growth.

Long-standing recommendations to tackle the still pervasive labor market duality remain pertinent (IMF, 2017). One option to make permanent contracts more attractive for employers is to introduce a single open-ended contract with no ex-ante time limit and severance payments that increase gradually with tenure. An alternative is to gradually introduce the Austrian 'backpack' model, under which entitlements to severance payments acquired in one job can be carried to subsequent jobs, so that severance payments grow with tenure regardless of contract type. Making permanent employment more attractive can go a long way towards enhancing job quality, security, and productivity. Improved apprenticeship and training opportunities, including tailored support for low-skilled long-term unemployed, along the lines of the 2014 employment activation program and the new joint action plan to support long-term unemployed, could help close existing skills gaps (IMF, forthcoming; McGowan and Andrews, 2015). There also appears to be scope to promote labor mobility. In addition, finishing the product market reform agenda would support the employment recovery by improving overall allocative efficiency (IMF, forthcoming; McGowan and Andrews, 2015).

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CORPORATE AND HOUSEHOLD BALANCE SHEETS— THE IMPACT FROM DELEVERAGING¹

Spanish corporates and households have substantially reduced their debt since mid-2010, strengthening markedly their balance sheets. Nevertheless, pockets of vulnerabilities remain among some corporates (construction and real estate service sectors, as well as small and medium-sized enterprises (SMEs)) and some household segments (low income, unemployed, self-employed, and less wealthy). Economic activity does not seem to have been constrained by the deleveraging process as household and corporates' external funding needs have been limited.

A. Credit Development: An Overview

1. Financing conditions have remained favorable, but total private sector borrowing has continued to decline. Despite bank lending rates at low levels comparable to those in the core euro area, the stock of total borrowing by corporates and households has declined through 2017:Q1 (-0.2 percent year-on-year). The contraction was largely driven by the decline in bank credit, in part due to the write-off of nonperforming loans (NPLs). Newly extended credit started to outpace repayment in 2017:Q1. However, new bank lending has remained relatively subdued and stood at around one third of the pre-crisis level. The initial pickup in new bank lending reflected the strong economic rebound, but the recent moderation partly reflects a switch by large corporates from bank borrowing to bond financing.

2. The continued contraction of bank credit seems to largely reflect weak credit demand (Figure 1). Signs of credit supply constraints in the banking system are not evident at present. Banks have become financially sounder since the crisis, with reduced problem assets, improving profitability, and stronger solvency and liquidity conditions. Although some banks may still need to build additional capital buffers, the banking system's capital position can support a moderate credit expansion against the background of ample liquidity supported by the ECB's accommodative policies (see Selected Issues paper for the 2016 Article IV consultation). Compared with the situation few years ago, banks are now lending at lower interest rates, less stringent lending standards, and more favorable terms of credit, pointing to an improvement in bank lending capacity and stiffer competition for creditworthy borrowers. Weak credit demand reflects deleveraging by corporates and households.

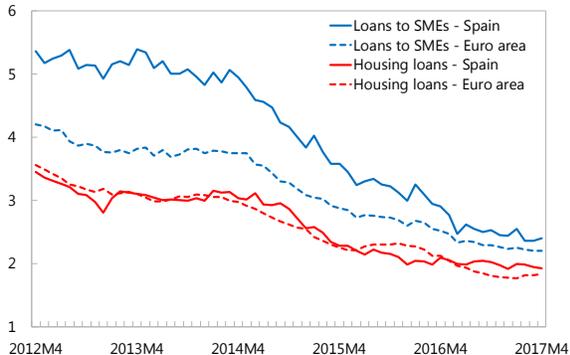
¹ Prepared by Phakawa Jeasakul. The firm and household-level financial analysis was carried out in close cooperation with Banco de España staff, led by Roberto Blanco, in the context of the 2017 Financial Sector Assessment Program.

Figure 1. Credit Development

Despite declining lending rates to levels in the core euro area, ...

Lending Rates, 2012-17

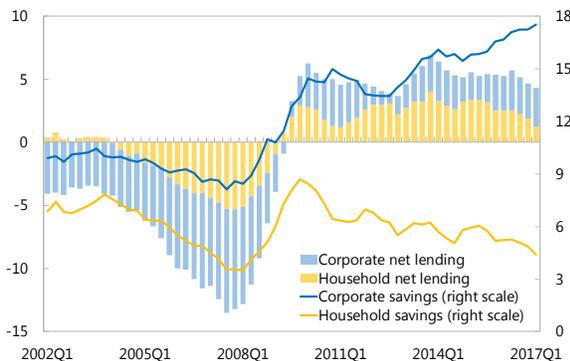
Based on new lending (in percentage points)



Households and corporates have turned from net borrowers pre-crisis to net lenders post-crisis.

Corporate and Household Savings and Net Lending, 2002-17

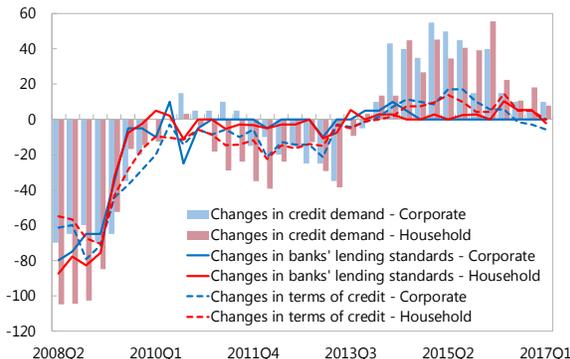
(In percent of GDP)



... even in presence of looser lending standards and improving credit conditions.

Banks' Lending Survey, 2008-17

A positive value indicates changes consistent with credit expansion; and vice versa



Sources: Haver Analytics; and IMF staff calculations.

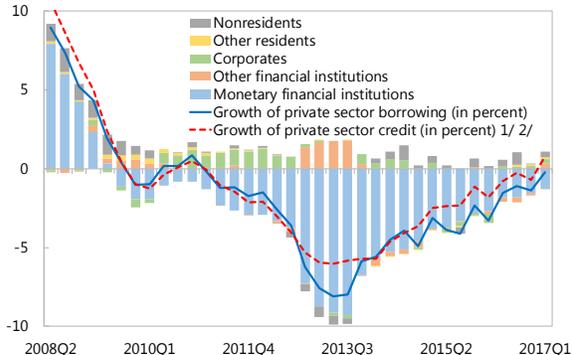
1/ Private sector credit only include borrowing from resident credit institutions, debt securities issuance, and external borrowing by corporates.

2/ The adjusted figure shows "effective flows", which comprise newly extended credit net of repayment (i.e., not including write-offs or adjustments).

... growth of private sector borrowing has remained negative.

Contribution to Growth of Private Sector Borrowing, 2008-17

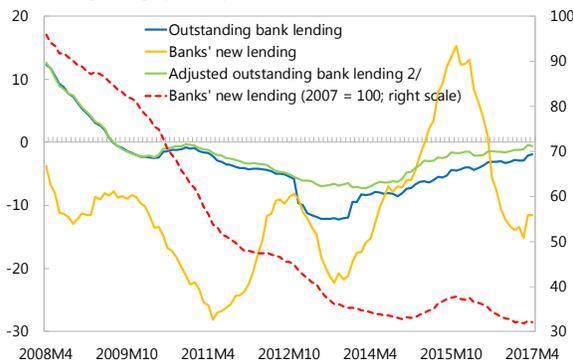
(In percentage points; year-on-year; by type of creditors)



The stock of bank loans has contracted amidst weak new lending ...

Banks' Lending to Private Sector, 2008-17

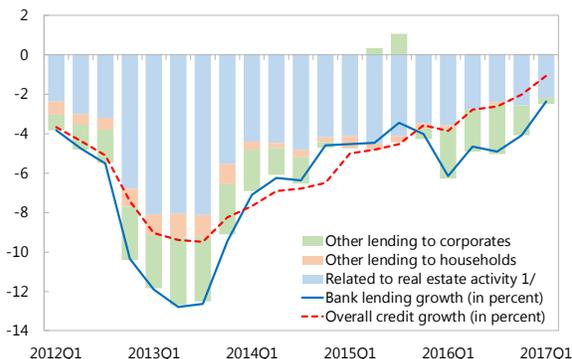
(In percentage change; year-on-year)



Bank lending for home purchases, and to construction and real estate service firms, contracted most.

Contribution to Bank Lending Growth, 2012-17

(In percentage points; year-on-year)

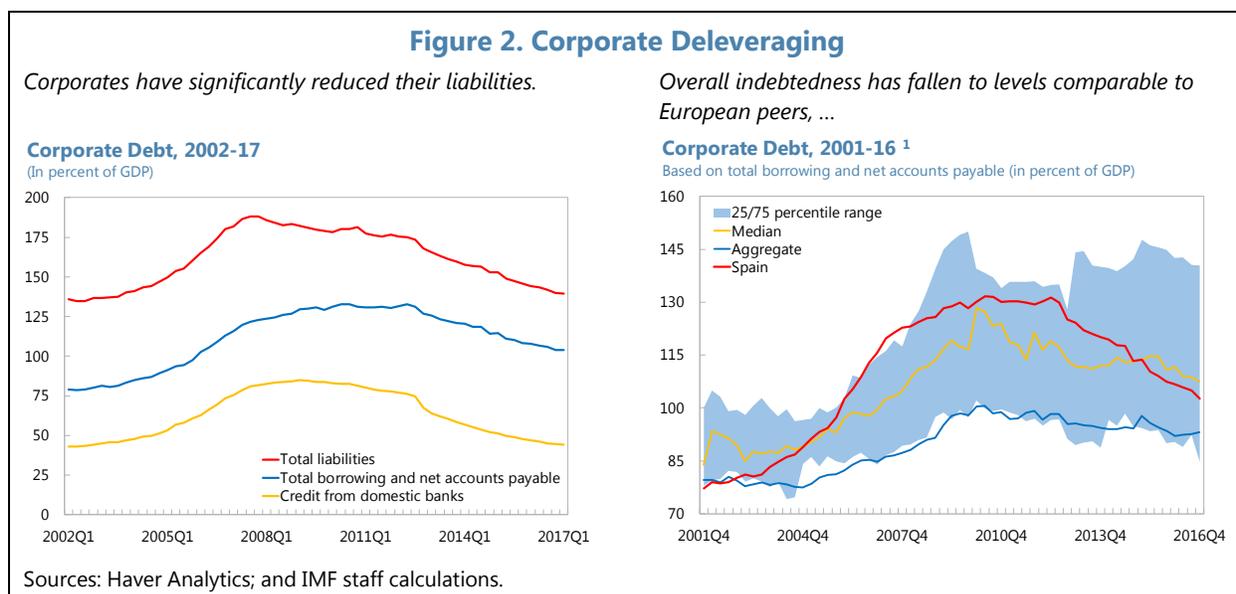


B. Corporate Balance Sheets

Corporate sector deleveraging and macroeconomic implications

3. The corporate sector is the sector in the Spanish economy that has deleveraged most since the crisis, bringing it broadly in line with European peers (Figure 2). The amount of total borrowing and net accounts payable has fallen by nearly 30 percent of GDP (from 133 percent of GDP at mid-2010 to 104 percent of GDP at end-2016), mostly due to lower bank borrowing.² This compares with merely 2 percentage points reduction for EU-13 economies.³ The difference in the decline in leverage—measured as total liabilities to total assets—was similarly stark. As a result, the Spanish corporate sector, though still about 10 percentage points of GDP more indebted than European peers, already had a lower leverage than their comparators (by around 4 percentage points as of end-2016).

4. Corporates have started to rely less on financing from the banking system. Corporate deleveraging has been largely achieved through repayment and restructuring of bank loans. Although borrowing from domestic banks remains the most important source of corporate external financing, firms have obtained more inter-company loans and nonresident funding. More recently, large corporates have also increasingly turned to the bond market. The increase in bond financing has been supported by strong demand from domestic corporates and households, and foreign investors, all searching for yields in the low interest environment. All these factors have lowered the share of financing via the financial system from 70 percent in 2007 to 55 percent in 2016.



² The decline in total corporate liabilities is even larger because of the sizeable cutback in accounts payable that are related for trade credit.

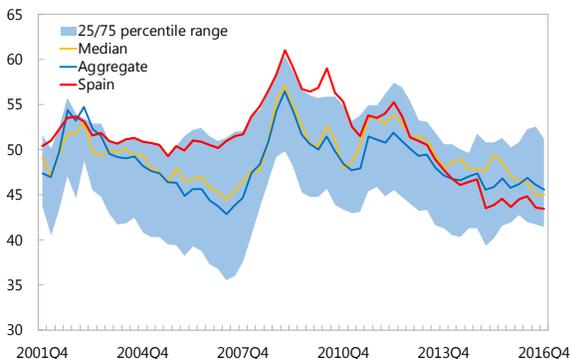
³ Major advanced European economies comprise thirteen S29 jurisdictions that feature systemically important financial sectors—Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Spain, Sweden, and the United Kingdom. Data for the whole group is available only from 2012.

Figure 2. Corporate Deleveraging (Concluded)

... with a similar trend for leverage.

Corporate Leverage, 2001-16¹

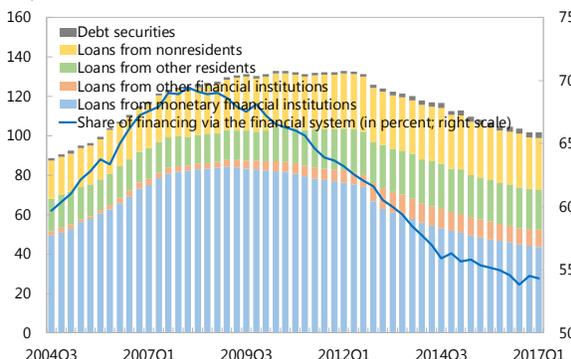
Based on total liabilities to total assets (in percent)



Corporates have become less reliant on financing from capital markets and domestic financial institutions.

Financing Sources for Corporate Borrowing, 2004-17

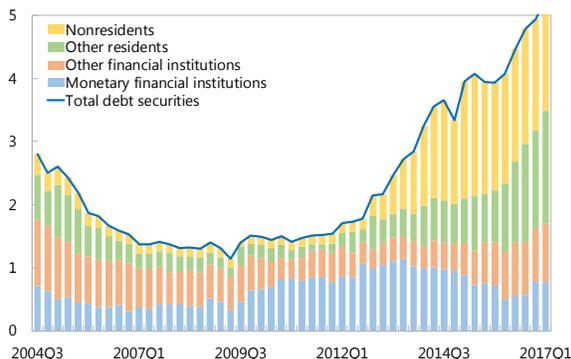
(In percent of GDP)



Higher bond market issuance was purchased by nonresidents and domestic nonfinancial entities.

Holding of Corporate Debt Securities, 2004-17

(In percent of corporate borrowing from the financial system)



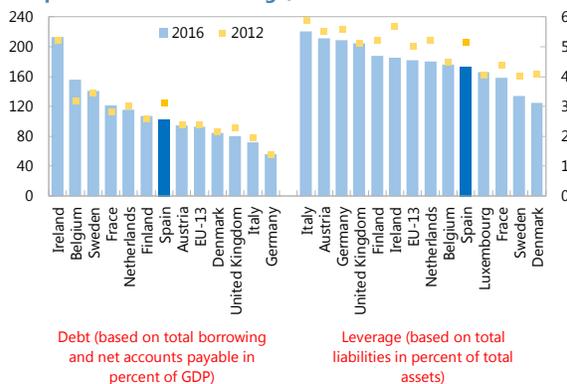
Sources: Haver Analytics; and IMF staff calculations.

1/ The peer group includes all advanced S29 countries in Europe. The fan chart may not necessarily cover all countries for every period due to missing data.

2/ The adjusted figure shows "effective flows", which comprise newly extended credit net of repayment (i.e., not including write-offs or adjustments).

In 2016, Spanish corporates had a slightly higher debt-to-GDP ratio but lower leverage ratio than EU peers.

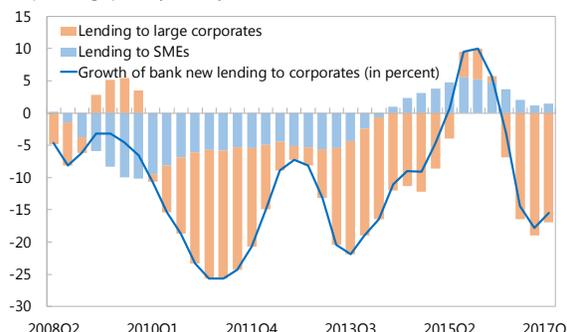
Corporate Debt and Leverage, 2012-16



New bank new lending has declined, driven by less lending to large corporates.

Contribution to Growth of Bank New Lending to Corporates, 2008-17

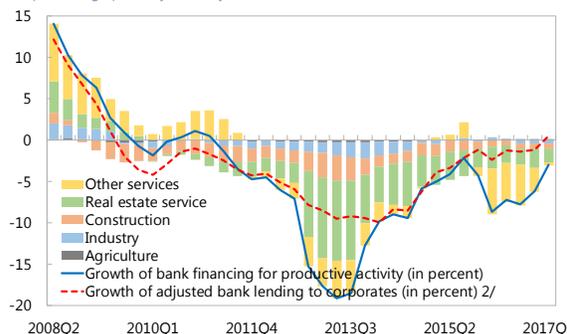
(In percentage points; year-on-year)



Total bank lending has declined across all sectors, except agriculture.

Contribution to Growth of Bank Financing for Productive Activity, 2008-17

(In percentage points; year-on-year)



5. Corporate deleveraging has happened across all sectors. Lower bank lending to construction and real estate service firms accounted for almost 80 percent of the reduction in total bank lending in the past year, reflecting the unfinished restructuring efforts in these sectors given still sizeable NPLs on bank balance sheets and excessive leverage of these real estate-related firms. Excluding the write-off of NPLs, bank lending to corporates has expanded in 2017:Q1 for the first time since the crisis.

6. The investment recovery has largely been financed by internal resources (Figure 3). Nonresidential investment in machinery and intellectual property has recovered strongly, while other nonresidential investment, including construction, has remained sluggish. In 2016, the corporate sector generated a gross operating surplus and net property income of 19.5 percent GDP, while its spending on fixed capital formation amounted to 14.8 percent of GDP. The post-crisis increase in profit margins on the back of improved efficiency has underpinned strong gross operating surplus, which in turn has enabled corporates to rely on retained earnings to finance investment (see 2017 IMF Staff Report on Spain). As a result, new bank lending with maturity of more than one year has grown but remains at just 30 percent of the pre-crisis level. At the aggregate level, the amount of new long-term bank lending, however, is currently commensurate with the level of nonresidential investment based on the average level over the past decade. Corporate deleveraging at the moment does not seem to impede the strong economic recovery.

7. Corporates seem to have changed the way they manage working capital, accompanied by less demand for short-term bank loans. Corporate short-term borrowing from banks has declined significantly, with new short-term bank lending (with maturity of up to one year) now amounting to merely 8 percent of corporate total assets down from about 25 percent pre-crisis.⁴ While the initial decline largely resulted from the cut in bank credit lines at the height of the crisis, the post-crisis downward trend may suggest changes in the way that firms manage their working capital. The shift has been accompanied by other changes in the corporate balance sheet structure. In particular, corporates have scaled down both accounts payable and accounts receivable, and have increased their holding of liquid assets. More analysis is needed to fully understand these switches.

8. While weak balance sheets may still constrain some firms from obtaining financing, the efficiency of resource allocation has improved. Previous studies suggested that high leverage and debt overhang constrained investment in Spain in the aftermath of the crisis, as investment would be lower at firms with weaker balance sheets (see Selected Issues paper for the 2015 Article IV consultation). However, analysis by Banco de España (2016 Annual Report) showed that firms with positive net investment are more profitable and productive, and also have stronger balance sheets than firms whose investment is not sufficient to cover depreciation of fixed assets. The fact that more productive firms can undertake new investment and that financially weak firms (which also appear to be less profitable) are less likely to expand their productive capacity would support the view of a more efficient allocation of resources and credit within the economy.

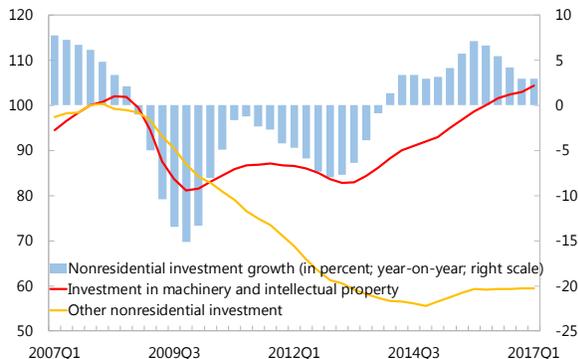
⁴ A helpful metric would also be to compare short-term corporate borrowing to short-term corporate assets such as inventories, but these data are not available.

Figure 3. Corporate Financing Need

Nonresidential investment growth is strong, ...

Nonresidential Investment, 2004-17

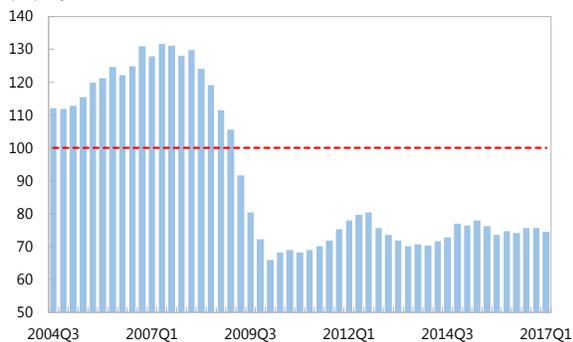
(2007 = 100)



External financing need is still subdued given a strong gross operating surplus relative to corporate investment.

Likelihood of Corporate External Financing Need, 2004-17

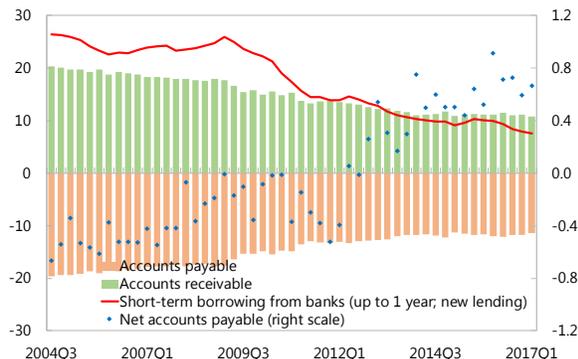
Gross fixed capital formation (in percent of gross operating surplus and net of property income)



Lower short-term borrowing and accounts payable suggest changes to firms' management of working capital.

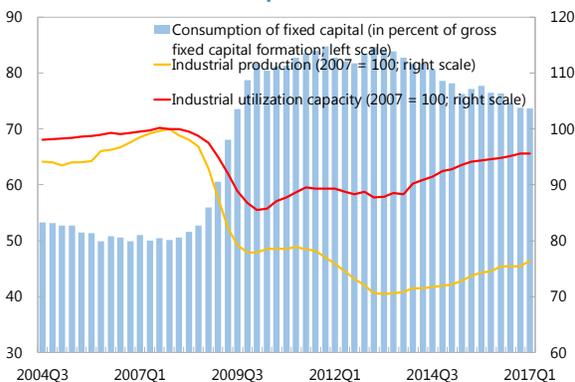
Corporate Short-term Financing, 2004-17

(In percent of total assets)



... and consistent with an increased usage of capital and utilization capacity.

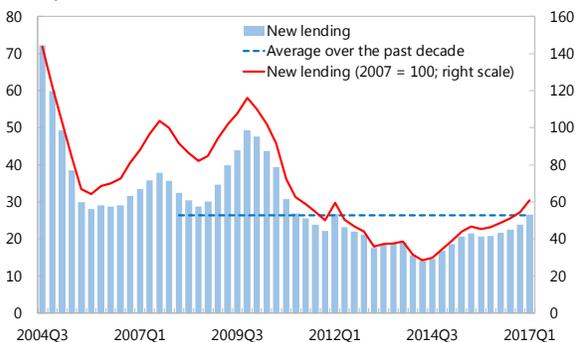
Likelihood of Additional Capital Formation Need, 2004-16



New long-term lending relative to nonresidential investment is at the average of the past decade.

Bank New Lending to Corporates: Long-term, 2004-17

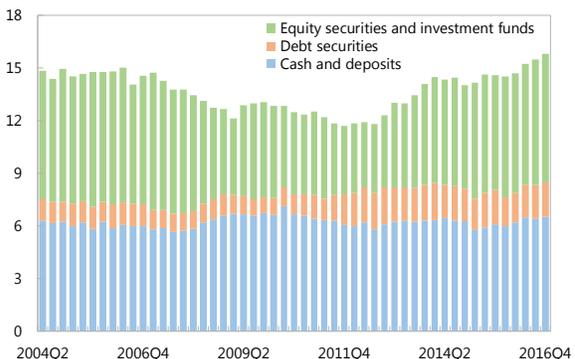
(In percent of nonresidential investment; based on new lending with maturity of more than 1 year)



Firms tend to hold slightly more liquid assets.

Corporate Liquidity, 2004-16

Liquid assets (in percent of total assets)



Sources: Haver Analytics; and IMF staff calculations.

Financial soundness of the corporate sector

10. Overall financial soundness of the corporate sector has improved, but pockets of weaknesses persist (Figure 4). The analysis in this section is based on firm-level data compiled by Banco de España. It covers only business operations in Spain.⁵ In addition to becoming less leveraged since the crisis, the corporate sector started seeing improving profitability in 2012. Nevertheless, some segments—construction and real estate service—remain weak, with more elevated leverage, lower profitability, and higher debt relative to income. Unsurprisingly, these sectors also have higher bank NPLs (around 25 percent of total bank loans. Profitability is generally weaker for small firms.

11. Firm-level data confirm that corporate leverage has declined, and financially weak firms are concentrated in the construction and real estate service sectors. The ratio of total equity to total assets increased from 36 percent in 2008 to 45 percent in 2015, with large differences across firms. Firms with more debt still tend to be more leveraged, and their deleveraging progress appears to have been more limited so far. Highly leveraged firms (i.e., those in the bottom quartile of all firms) started to deleverage only in 2013. In 2015, about 17 percent of firms had negative equity, and their debt, considered to be at risk, accounted for about 7 percent of total corporate debt. The debt at risk level is a bit higher than pre-crisis and significantly below the 2012 peak at 13.4 percent, while the share of firms with negative equity has declined by 3.7 percentage points. The share of debt at risk was much higher for real estate-related firms (i.e., construction and real estate service) and SMEs.

12. Corporate profitability has increased, but the number of loss-making firms is still large though they account for a declining share of debt. The return on assets increased to 4.5 percent in 2015, up from the 2012 trough at 3.5 percent, though still below the pre-crisis level at 7.4 percent. Firms with more debt tend to be less profitable. Profitability seems to have been higher for large corporations. Firms in the bottom quartile tend to record a negative return on assets, although their profitability has improved significantly in recent years. In 2015, about 35 percent of firms were loss-making, and their debt, considered to be at risk, accounted for roughly 12.6 percent of total corporate debt. A sizeable portion of firms still had a relatively low profitable—for instance, around 56 percent of firms had a return of assets below 3 percent, a much larger share than in 2007 (about 42 percent). The share of loss-making businesses was smaller for manufacturing firms, while the share of debt at risk was markedly higher for real estate-related firms.

13. The corporate debt servicing capacity has improved, but still many firms fail to generate sufficient earnings to cover interest expense. The improvement has benefited from reduced financial burden on the back of falling interest rates. At the aggregate level, earnings before

⁵ The analysis is based on the Central Balance Sheet Data Office database, with the annual sample containing about 280,000 companies in 2015 and the quarterly sample containing about 700 companies in 2016, most of which are large corporations. Given that the database only contains information restricted to business operations in Spain, the analysis of international conglomerates therefore does not cover consolidated balance sheets of the whole groups; the analysis is instead limited to balance sheets of entities that represent economic functions in Spain (i.e., entities that contribute to gross value-added in Spain).

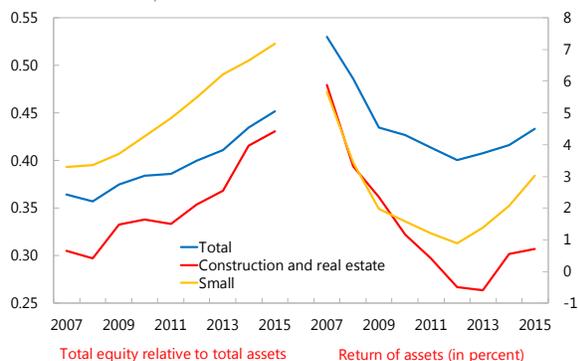
interest, tax, depreciation and amortization (EBITDA) relative to interest expense increased from 4 at the 2012 trough to 5.6 in 2015. However, in 2015, nearly a quarter of firms was still unable to generate sufficient earnings (based on EBITDA) to cover interest expense remained high. They accounted for about 20 percent of total corporate debt. The share of these financially weak companies and their debt (which is at risk), while below peak crisis levels, still exceeded the 2007 levels. While the portion of firms that lacked the capacity to service debt was broadly similar across segments (by business type and firm size), the share of debt at risk was much higher for real-estate related firms.

Figure 4. Corporate Financial Soundness¹

Overall corporate financial soundness has improved, especially in terms of leverage and profitability.

Corporate Leverage and Profitability, 2007-15

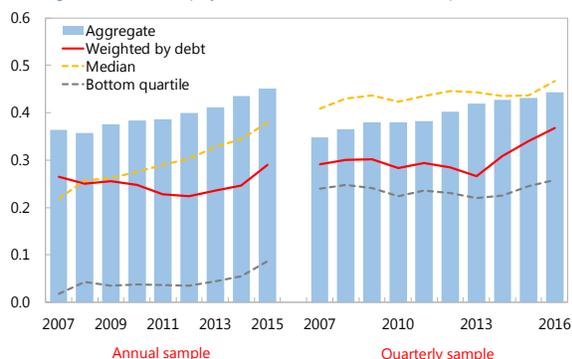
Based on annual sample



Firms have generally deleveraged, but leverage remains higher at more indebted firms.

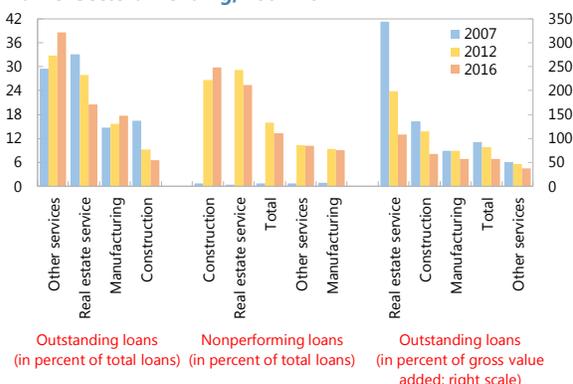
Corporate Leverage, 2007-16

Leverage based on total equity relative to total assets; annual sample



However, construction and real estate service sectors are still weaker.

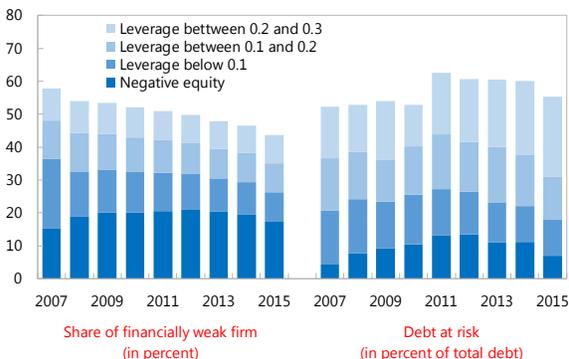
Banks' Sectoral Lending, 2007-16



The share of firms with negative equity and their debt are still above pre-crisis levels, ...

Corporate Leverage, 2007-15

Leverage based on total equity relative to total assets; annual sample



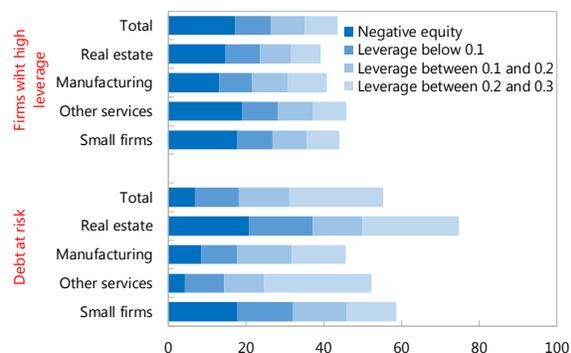
Sources: Banco de España; Haver Analytics; and IMF staff calculations.

1/ The firm-level analysis is based on Banco de España's Central Balance Sheet Data Office database, with the annual sample containing about 280,000 companies in 2015. The quarterly sample mostly present large corporations. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

Figure 4. Corporate Financial Soundness¹ (Continued)

Real estate-related firms are weaker and have more debt at risk.

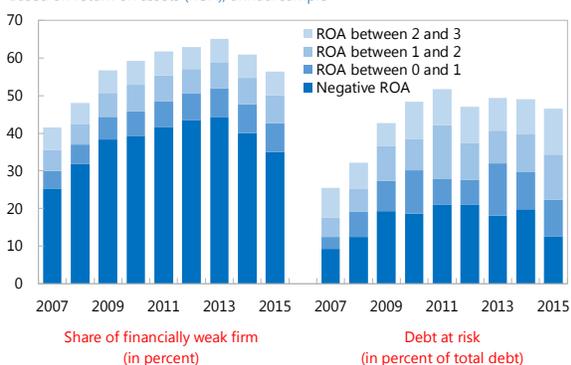
Share of Financially Weak Firms and Debt at Risk, 2015
(In percent; based on high leverage, using total equity to total assets; annual sample)



About 35 percent of firms are loss-making, and half of debt is owed by firms with ROA below 3 percent.

Corporate Profitability, 2007-15

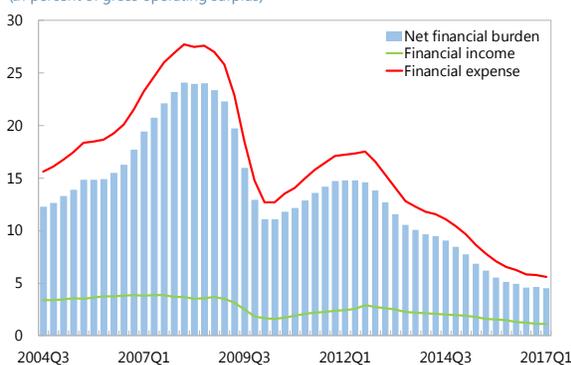
Based on return on assets (ROA); annual sample



Against the background of a falling financial expenses, ...

Corporate Financial Burden, 2004-17

(In percent of gross operating surplus)



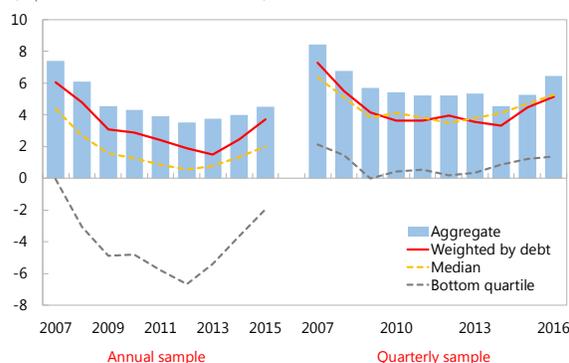
Sources: Banco de España; Haver Analytics; and IMF staff calculations.

1/ The firm-level analysis is based on Banco de España's Central Balance Sheet Data Office database, with the annual sample containing about 280,000 companies in 2015. The quarterly sample mostly present large corporations. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

Overall corporate profitability has improved since 2013, but is still below pre-crisis levels.

Corporate Profitability, 2007-16

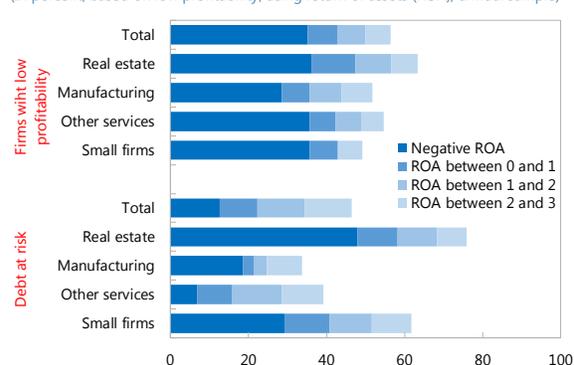
(In percent; based on return on assets)



Manufacturing firms tend to be more profitable; while real estate-related firms are less so.

Share of Financially Weak Firms and Debt at Risk, 2015

(In percent; based on low profitability, using return of assets (ROA), annual sample)



... overall corporate debt servicing capacity has improved.

Corporate Debt Servicing Capacity, 2007-16

Based on interest coverage ration (ICR) defined as earnings before interest, tax, depreciation and amortization (EBITDA) to interest expense

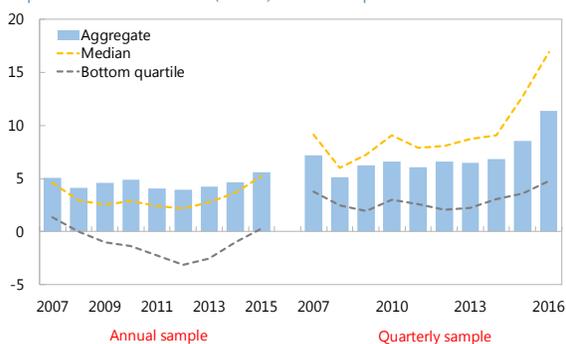
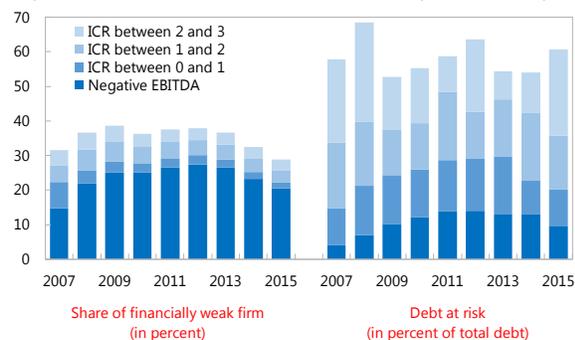


Figure 4. Corporate Financial Soundness¹ (Concluded)

In 2015, about 22 percent of firms were not able to generate sufficient earnings to service debt.

Corporate Debt Servicing Capacity, 2007-15

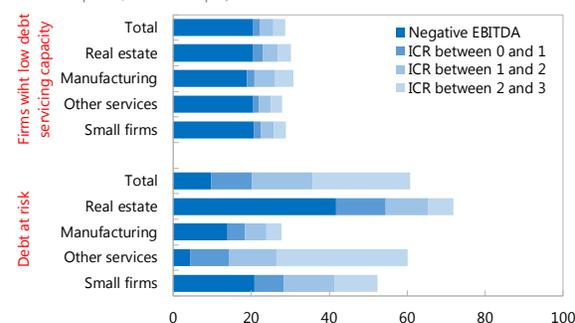
Based on interest coverage ratio (ICR) defined as earnings before interest, tax, depreciation and amortization (EBITDA) relative to interest expense; annual sample



Such weakness was more pronounced for real estate-related firms.

Share of Financially Weak Firms and Debt at Risk, 2015

(In percent; based on low debt servicing capacity, using interest coverage ratio (ICR) defined as earnings before interest, tax, depreciation and amortization (EBITDA) to interest expense; annual sample)



Sources: Banco de España; Haver Analytics; and IMF staff calculations.

1/ The firm-level analysis is based on Banco de España's Central Balance Sheet Data Office database, with the annual sample containing about 280,000 companies in 2015. The quarterly sample mostly present large corporations. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

14. Weaknesses in the construction and real estate service sectors could translate into potential repayment risk for banks (Figure 5). Despite their significant decline, the NPL ratios for corporate lending were much higher for Spanish banks than those in most major European economies. The figures stood at 7.7 percent for lending to large corporates and 17.4 percent for lending to SMEs as of mid-2016, and 25 percent for real estate-related firms as of 2017:Q1. Where the borrowers do not have the capacity to service debt, the NPLs may not be recovered and accurate provisioning by banks will thus be critical. The data shown here cover only two years of Spain's post-crisis economic upturn (2014–15), so there may be some element of cyclical recovery and improvement in repayment ability to be expected. But improvements are less likely to happen the longer the repayment ability has been weak. In 2015, about 10 percent of firms were unable to generate sufficient earnings (based on EBITDA) to cover interest expense for three consecutive years (i.e., 2013–15). Their debt accounted for around 9 percent of total corporate debt. Such unfavorable characteristics were much more pronounced for real estate-related firms, with the share of similar problem debt exceeding 38 percent.

15. Corporates seem largely resilient to deterioration of macrofinancial conditions.

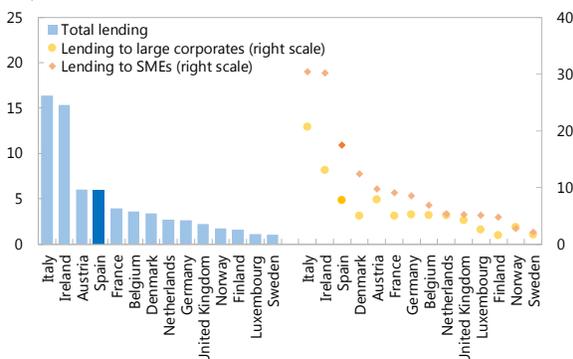
Sensitivity analysis, using firm-level data, shows that the share of financially weak firms, defined as those with insufficient EBITDA to cover interest expense, would increase by 0.5 percentage points following a decline in earnings by 10 percent and by 2.4 percentage points following a rise in interest rates by 200 basis points. The respective share of debt owed by these firms would edge up by 0.4 and 4.7 percentage points. Thus, the impact of a sharp increase in funding costs is more prevalent.

Figure 5. Financial Stability Implications of Corporate Balance Sheets¹

NPLs for lending to corporates, especially to SMEs, are higher in Spain than in most major European countries.

Nonperforming Loans, 2016Q2

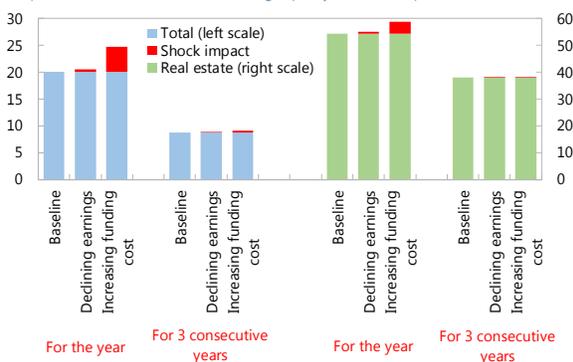
(In percent of total loans)



Nevertheless, firms appear to be resilient to declining earnings but less so to rising funding costs.

Share of Debt at Risk: Sensitivity Analysis, 2015

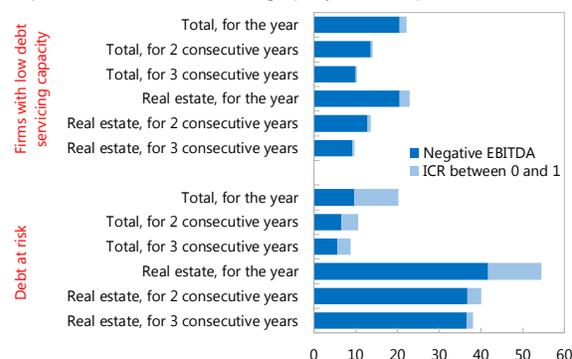
(In percent; based on low debt servicing capacity; annual sample) 2/ 3/



Many firms have lacked the capacity to repay for years, raising the risk to recover NPLs from those firms.

Share of Financially Weak Firms and Debt at Risk, 2015

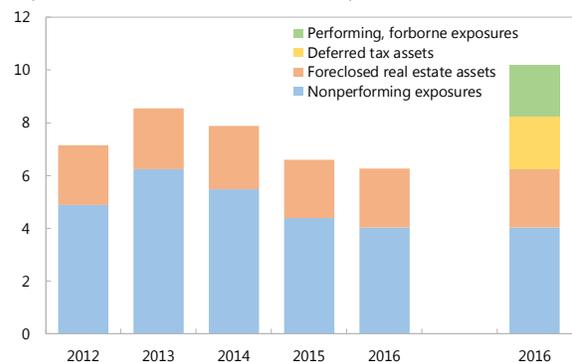
(In percent; based on low debt servicing capacity; annual sample) 2/



Banks should thus focus on completely addressing existing problem assets.

Problem and Non-earning Assets, 2012-16

(In percent of total assets; based on consolidated operations)



Sources: Banco de España; Haver Analytics; and IMF staff calculations.

1/ The firm-level analysis is based on Banco de España’s Central Balance Sheet Data Office database, with the annual sample containing about 280,000 companies in 2015. The quarterly sample mostly present large corporations. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

2/ Debt servicing capacity is based on interest coverage ratio (ICR) defined as earnings before interest, tax, depreciation and amortization (EBITDA) to interest expense. The figure shows financially weak firms in 2015 (for the year), 2014-15 (for two consecutive years), and 2013-15 (for three consecutive years). Real estate comprises construction and real estate services.

3/ The sensitivity analysis considers a negative income shock (earnings decline by 10 percent) and a negative funding cost shock (interest rates increase by 200 basis points). Firms are considered having low debt servicing capacity if they have negative EBITDA or ICR between 0 and 1.

C. Household Balance Sheets

Household sector deleveraging and macroeconomic implications

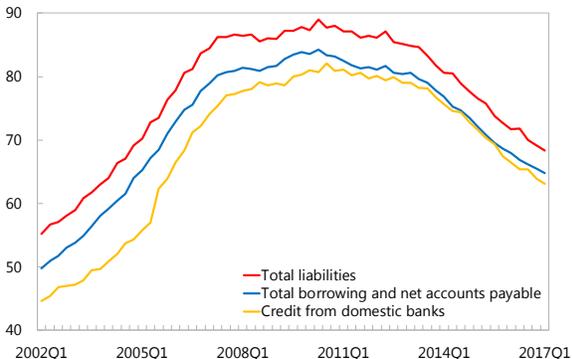
16. Households have also significantly reduced debt since the crisis (Figure 6). The amount of total borrowing and net accounts payable has declined from 84 percent of GDP at mid-2010 to 65 percent of GDP at end-2016. The deleveraging process has been essentially driven by the decline in borrowing from domestic banks. While household indebtedness is now broadly comparable with European peers, it is still relatively high level across advanced Europe.

Figure 6. Household Deleveraging

Households have significantly deleveraged, ...

Household Debt, 2002-17

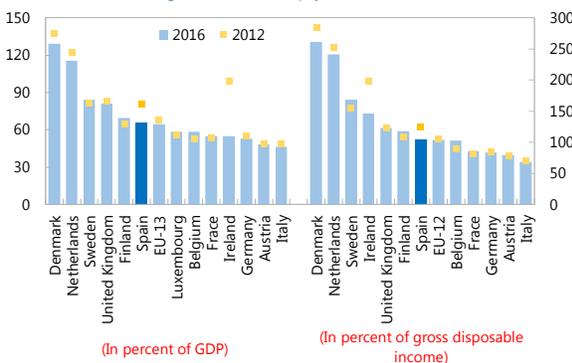
(In percent of GDP)



... when measured relative to GDP and disposable income.

Household Debt, 2012-16

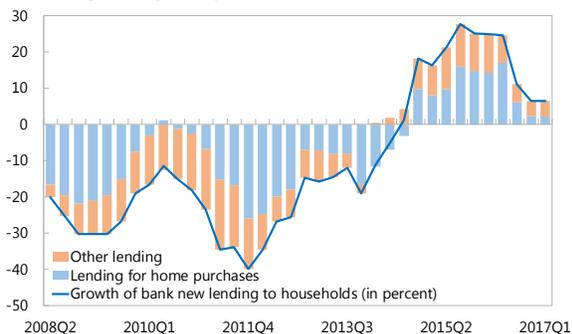
Based on total borrowing and net accounts payable



Although new bank lending has picked up somewhat across the board, ...

Contribution to Growth of Bank New Lending to Households, 2008-17

(In percentage points; year-on-year)



Sources: Haver Analytics; and IMF staff calculations.

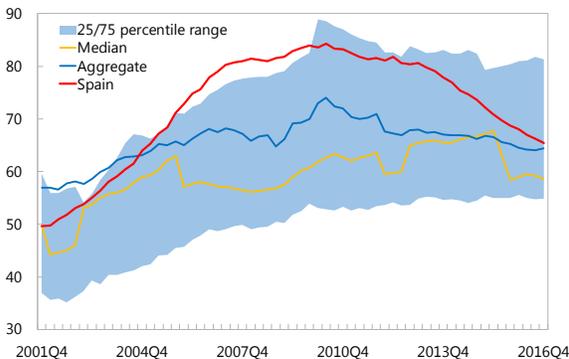
1/ The peer group includes all advanced S29 countries in Europe. The fan chart may not necessarily cover all countries for every period due to missing data.

2/ The adjusted figure shows “effective flows”, which comprise newly extended credit net of repayment (i.e., not including write-offs or adjustments).

... bringing overall indebtedness to levels comparable to European peers ...

Household Debt, 2001-16¹

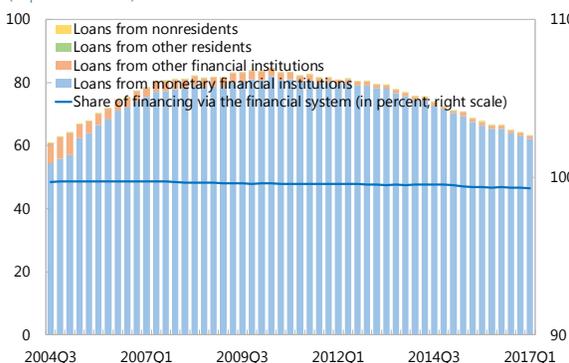
Based on total borrowing and net accounts payable (in percent of GDP)



The debt reduction has been associated with the decline in borrowing from banks.

Financing Sources for Household Borrowing, 2004-17

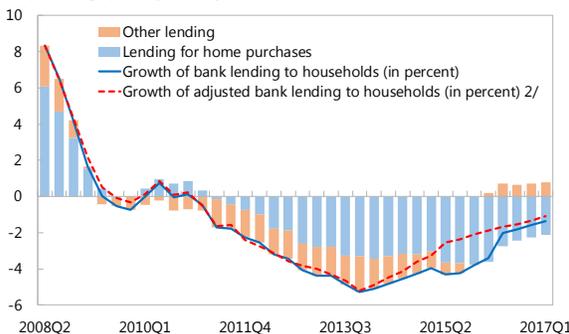
(In percent of GDP)



... the level of loans for home purchases has continued to decline due to strong amortization.

Contribution to Growth of Bank Lending to Households, 2008-17

(In percentage points; year-on-year)



17. Household borrowing from banks has continued to contract owing to strong amortization of existing mortgages. New bank lending has started to increase from a very low base, supported by stronger demand for both residential mortgages and consumer credit. As a result, the growth of new bank lending is still insufficient to overturn the decline in total bank lending that has been driven by the contraction of lending for home purchases. In 2017:Q1, total bank lending to households declined by 1.4 percent year-on-year, even though new bank lending grew by 6.4 percent year-on-year.

18. The need for households to obtain financing still appears to be limited (Figure 7). In 2016, households earned gross disposable income of 63 percent of GDP, while its expenditures amounted to 58 percent of GDP for consumption and 3 percent for gross fixed capital formation. At aggregate, the relatively low post-crisis level of residential investment enables households to enjoy consumption (relative to income) at a similar level prevailing pre-crisis without the need to borrow for financing gross fixed capital formation undertaken by households. However, some households still need to borrow for financing both consumption and home purchases. New bank lending for consumer credit has increased in recent years, with the amount of such new household borrowing appearing broadly in line with the level of consumption based on the behavioral relationship over the past decade. At the same time, households continue to repay their existing mortgages, bringing down overall leverage of household investment in housing—based on outstanding borrowing for home purchases relative to housing wealth—in presence of relatively small, albeit increasing, new mortgage borrowing.

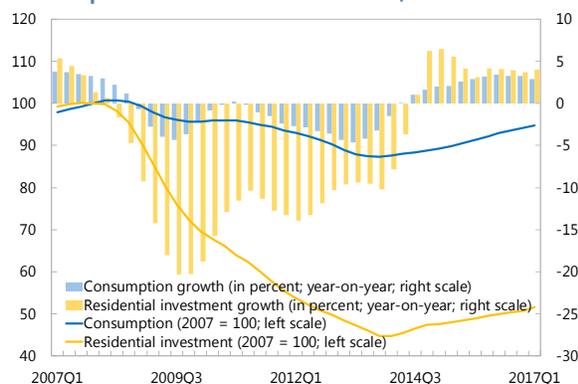
19. Household deleveraging does not seem to impede the strong consumption recovery. Buoyant consumption has accounted for slightly more than half of real GDP growth that has been more than 3 percent in the past two years. At aggregate, household balance sheet adjustments do not appear to constrain consumption in recent years. Besides the sharp increase in precautionary savings at the outset of the global financial crisis, household savings have steadily declined to 5 percent of GDP at end-2016, down from 9 percent of GDP at end-2009. However, certain households—low-income, self-employed, jobless, and less wealthy—may face some constraints given their excessive indebtedness (see below). Overall, the amount of household borrowing for financing consumption does not appear low given the current level of consumption.

20. The slow rebound in house prices has been associated with weak demand for home purchases, which in turn has limited the demand for new mortgages (Figure 8). Economy-wide house prices were at around 70 percent of the previous peak at end-2016, after having started to recover since 2014. The crisis affected the prices of existing dwellings much more than newly built houses. Total transactions in the housing market have picked up, led by sales of existing properties. As a result, residential construction activity is still at a low level and the amortization of existing mortgages continues to outpace new borrowing.

Figure 7. Household Financing Need

Consumption has recovered much faster than residential investment.

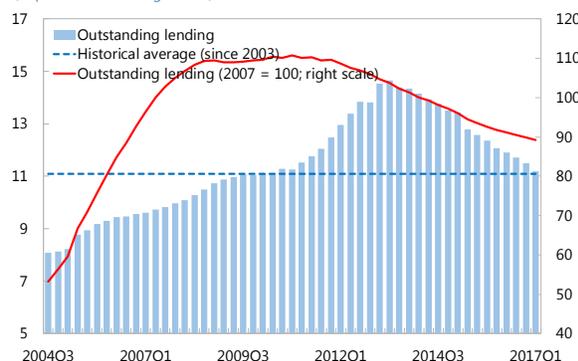
Consumption and Residential Investment, 2004-17



Lending for home purchases continues to fall, bringing the overall leverage more in line with the historical average, ...

Bank Outstanding Lending for Home Purchases, 2004-17

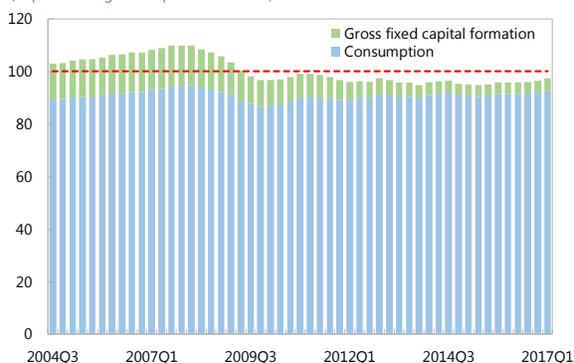
(In percent of housing wealth)



Households' current financing need for the consumption and residential investment still appears rather muted.

Likelihood of Household Financing Need, 2004-17

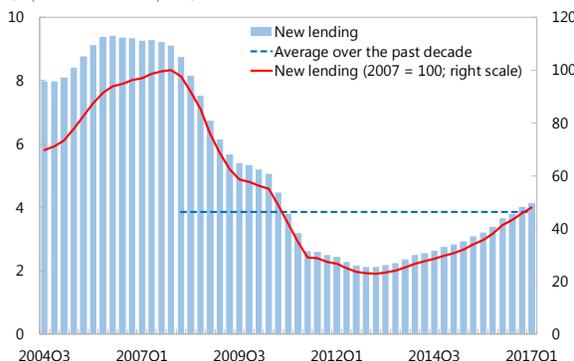
(In percent of gross disposable income)



... while new consumer lending averages the past decade's level, when measured relative to consumption.

Bank New Lending for Consumer Credit, 2004-17

(In percent of consumption)



Sources: Haver Analytics; and IMF staff calculations.

Financial soundness of the household sector

21. Overall financial soundness of the household sector has improved (Figure 9). Household leverage—based on total liabilities to total wealth—has declined from 14.4 percent at mid-2013 to 11.5 percent at end-2016, which is slightly above the pre-crisis level. The improvement in macrofinancial conditions—strong employment growth, rising income and wages, and reduced unemployment—have also helped bolster the overall soundness of household finance.

Share of Financially Stretched Households
(In percent)

	Total	Income below 20 percentile
With some debt	48.8	27.5
<i>For the entire sample</i>		
Debt payment to income above 40 percent	7.0	12.1
Debt to income above 3	15.1	14.4
<i>Among households with some debt</i>		
Debt payment to income above 40 percent	14.2	48.6
Debt to income above 3	29.6	51.3

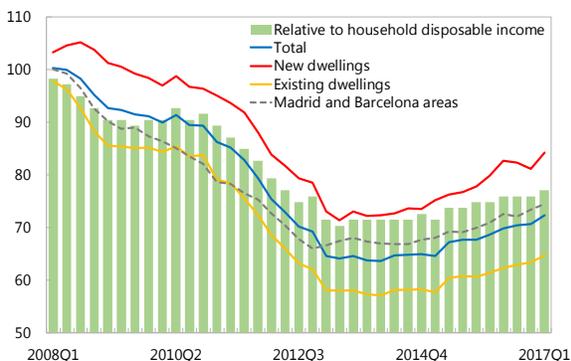
Source: Banco de España.

Figure 8. Developments in Housing Market and Construction Sector

House prices have started to recover, but remain well below the pre-crisis levels, ...

House Prices, 2008-17

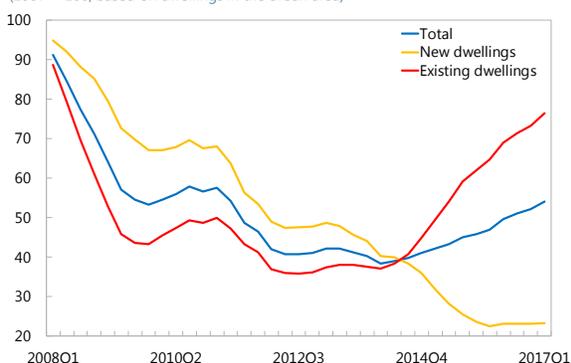
(2007 = 100)



Transactions in the housing market have picked up, but new home sales have remained stagnant, ...

Property Sale Transactions, 2008-17

(2007 = 100; based on dwellings in the urban area)



Sources: Haver Analytics; and IMF staff calculations.

With a wide divergence of price rebounds across regions.

House Prices by Region, 2016

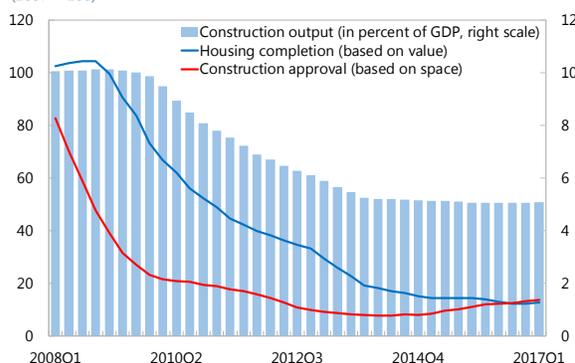
(100 = pre-crisis peak)



... consistent with a generally sluggish construction activity that has picked up only recently from a very low level.

Construction Activity, 2008-17

(2007 = 100)



22. However, multiple factors continue to contribute to pockets of weaknesses in household balance sheets.

Spanish households have generally less financial assets than European peers, leaving them with fewer liquidity buffers to withstand adverse financial situations. With a still particularly high unemployment rate (19 percent as of 2017:Q1), the fragile financial situation of jobless households could be another source of vulnerability. Low-income household also tend to have weaker balance sheets.

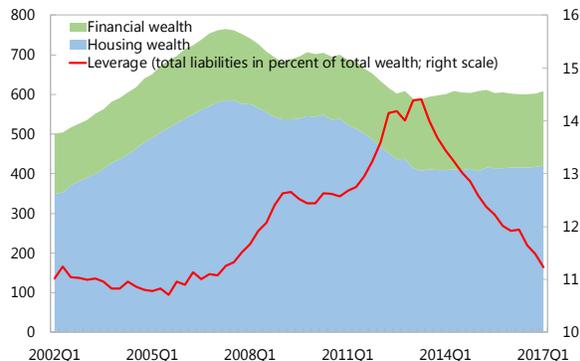
23. Certain groups of households appear to be financially stretched. Low-income and self-employed households tend to face large debt payment obligations relative to income. In 2014, the share of households with debt payment to income above 40 percent amounted to 12 percent for households with income in the bottom quintile and 18 percent for self-employed households, much higher than 7 percent for the entire sample. Employed, self-employed, and less wealthy households also appear to be more leveraged, in part due to their ability to borrow. The share of these households with debt exceeding income at least 3 times, amounted to 23, 25, and 29 percent, respectively, well above the average at 15 percent.

Figure 9. Household Financial Soundness

Household leverage has declined thanks of debt reduction efforts.

Household Wealth and Leverage, 2002-17

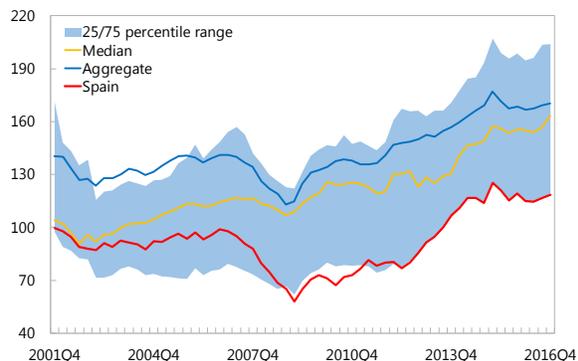
(In percent of GDP)



Spanish households have fewer financial assets, thus fewer liquid buffers to absorb adverse shocks.

Household Financial Wealth, 2001-16¹

Based on net financial assets (in percent of GDP)



Sources: Banco de España; Haver Analytics; and IMF staff calculations.

1/ The peer group includes all advanced S29 countries in Europe. The fan chart may not necessarily cover all countries for every period due to missing data.

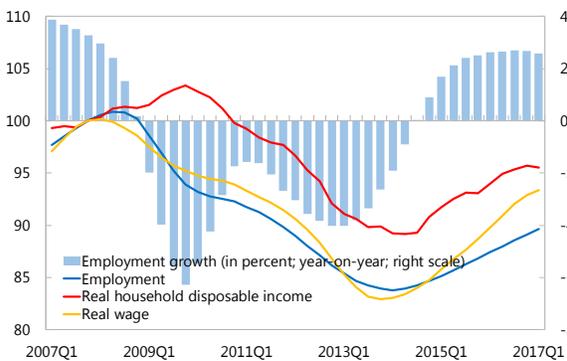
2/ The household-level analysis is based on data of representative households from the 2014 Survey of Household Finances. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

3/ Household are financially stretched if their debt payment to income is above 40 percent and their debt to income above 3.

Macroeconomic improvements have generally strengthened household financial situation.

Employment and Income, 2007-17

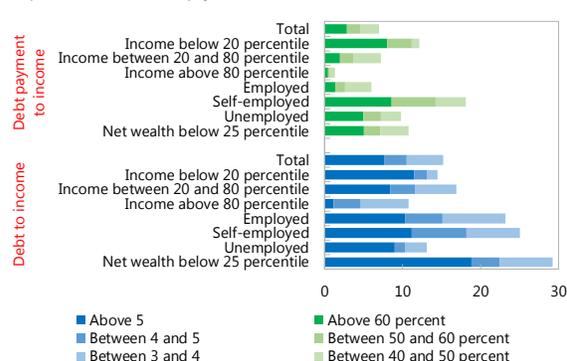
(2007 = 100)



The low-income and self-employed are more likely to be stretched on debt repayment.

Share of Financially Stretched Households, 2014^{2,3}

(In percent; based on debt payment to income and debt to income)



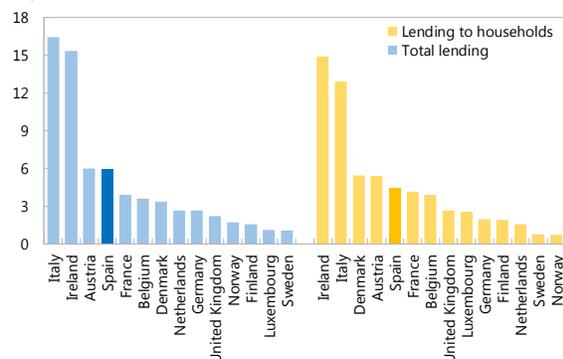
24. Weaknesses in household balance sheets have translated much less to losses for banks than weakness in corporate balance sheets (Figure 10). As of mid-2016, the NPL ratio for household lending was 4.5 percent for Spanish banks. While the figure was relatively high among European peers, it was much lower than the NPL ratio for corporate lending. For banking business in Spain, three quarters of lending to households is for home purchases. While the quality of loans deteriorated during the economic downturn, NPLs for household lending have been more contained, and expected losses are likely to be more limited given the fact that borrowers would remain liable if foreclosed properties do not cover entire outstanding debt.

Figure 10. Financial Stability Implications of Household Balance Sheets ¹

The level of NPLs for lending to households in Spain is broadly in line with other European countries.

Nonperforming Loans, 2016Q2

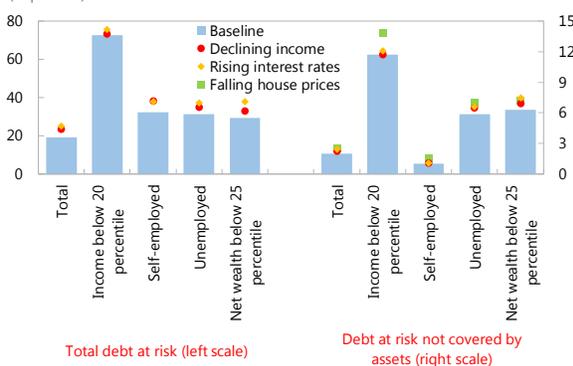
(In percent of total loans)



Nevertheless, certain households are exposed to adverse macrofinancial developments.

Share of Debt at Risk: Sensitivity Analysis, 2014 ^{2,3}

(In percent)



Sources: Banco de España; EBA; and IMF staff calculations.

1/ The household-level analysis is based on data of representative households from the 2014 Survey of Household Finances. The analysis was carried out by Banco de España staff in the context of the 2017 FSAP.

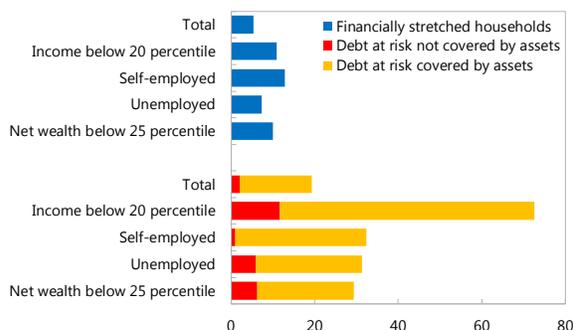
2/ Household are financially stretched if their debt payment to income is above 40 percent and their debt to income above 3.

3/ The sensitivity analysis considers a negative income shock (decline by 10 percent), a negative interest rate shock (increase by 200 basis points), and a negative house price shock (decline by 10 percent).

Debt of financially stretched households is covered by their assets, limiting financial stability risks.

Share of Financially Stretched Household and Debt at Risk, 2014 ²

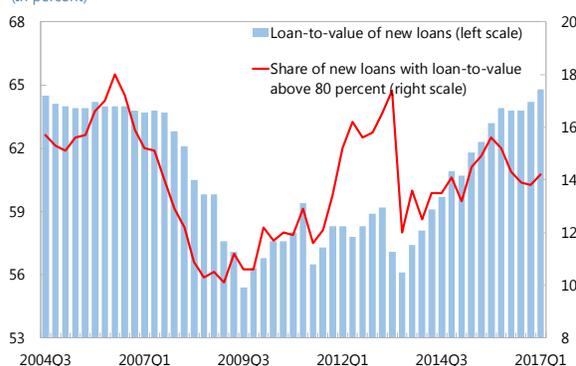
(In percent)



Recently, more new mortgage lending is at higher loan-to-value ratios.

Leverage in New Mortgage Borrowing, 2004-17

(In percent)



25. The potential additional losses stemming from financially stretched households appear to be rather limited. In 2014, 5.3 percent of households had debt payment to income ratios above 40 percent and debt to income ratios above 3. Their debt, considered to be at risk, accounted for 19 percent of total household debt. However, most of debt at risk was backed by assets held by these financially stretched households. Consequently, debt at risk not covered by assets amounted to merely 2 percent of total household debt. Although low-income households embraced a higher share of debt at risk not covered by assets (12 percent), the impact on bank balance sheets would be limited given their small amount of borrowing.

26. The impact of adverse macrofinancial shocks on household balance sheets seems to be manageable, although certain households are more vulnerable. Scenario analysis based on 2014

household-level data assumes three types of shocks: (i) a decline in income by 10 percent; (ii) a rise in interest rates by 200 basis points; and (iii) a decline in house prices by 10 percent. For total households, the share of financially stretched households would increase by 1.3–1.4 percentage points as a result of each of the first two shocks. While the share of corresponding debt at risk would edge up by 4–6 percentage points, the increase for debt at risk not covered by assets would go up only by 0.4 percentage points. A decline in house prices by 10 percent would raise the share of debt at risk not covered by assets by 0.6 percentage points. While the impact on the household sector as a whole appears contained, the increase in the share of debt at risk not covered by assets could be higher for low-income, unemployed, and less wealthy households, depending on shocks. It is noteworthy that notwithstanding potentially limited losses banks may still see a fair amount of NPLs given that the share of total debt at risk is non-negligible (19 percent).

27. Given high leverage in part of new mortgage lending, banks may take on new, albeit limited, credit risk. While new bank lending for home purchases remains weak, 14 percent of new mortgage loans feature a loan-to-value above 80 percent. With this relatively high leverage, credit risk could materialize in an event of economic downturn together with falling house prices. Furthermore, there is a sign of greater risk-taking as the average loan-to-value for new mortgage lending has gone up to the pre-crisis level. While overall risk appears limited given no evident sign of house price overvaluation, such development highlights the need for enhanced risk monitoring.

D. Conclusions and Policy Options

28. Deleveraging has been significant but is not yet complete. Corporates and households have reduced their debt (based on total borrowing and net accounts payable) by nearly 50 percent of GDP since mid-2010. Nevertheless, further debt reduction will likely continue for two reasons. One is that the cleanup of legacy assets has not been completed, and more write-offs of NPLs can be expected, in particular for corporate borrowers that have lacked a capacity to service their debt for years. In 2016, the debt write-offs accounted for two-thirds of the net decline in total lending for banking business in Spain. Another factor is that the financing need of corporates and households is still subdued due to ample retained earnings thanks to increased profitability for the former and still limited demand for home purchases for the latter.

29. Additional efforts can support reaping the full benefits from deleveraging. Going forward, policies should focus on ensuring that credit supply constraints will not emerge over the medium term as credit demand will pick up on the back of strong economic growth.

- **Accelerate the cleanup of bank balance sheets.** NPLs that cannot be recovered should be properly recognized and proactively managed. Banco de España's analysis on corporate financial soundness and housing market dynamics could support supervisory actions.
- **Enhance the insolvency framework.** The out-of-court agreements on payments (OCAP) process for SMEs, which has been infrequently used, should be strengthened by facilitating coordination and promoting unified approaches among banks, for instance with respect to

viability. The insolvency regime should adopt a more efficient class-voting system, including a cram-down mechanism, and remove the special treatment of public sector creditors in the out-of-court processes.

- **Bolster the banking system's capacity to perform credit intermediation.** Banks should further adjust to profitability challenges, and strengthen their capital and funding positions. In addition to supporting additional lending, banks need more capital to compensate for the phase-out of exemptions allowed by the Capital Requirements Regulation, to support the cleanup of existing impaired assets, and to maintain their resilience. Banks also need to prepare for the ECB's eventual exit from its accommodative policies.
- **Expand the eligible collateral pool for SMEs to obtain funding.** SMEs tend to lack collateral, particularly real estate assets, to secure financing. SMEs do not widely use movable collateral because the registry for security rights over movable assets is somewhat complex and costly despite being fully electronic and efficient. Such registry could be expanded in terms of types of collaterals and simplified to lower costs. The expansion of collaterals would help improve access to finance for SMEs and startups.

30. Enhanced risk monitoring is also critical to maintain financial stability. In addition to strengthening bank balance sheets, improved systemic risk surveillance is important. While systemic vulnerabilities appear limited, about one-sevenths of new mortgage lending features relatively high loan-to-value, suggesting the need for close monitoring.

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