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FIRMS' LISTINGS: WHAT IS NEW? ITALY VERSUS THE MAIN EUROPEAN STOCK EXCHANGES

by Paolo Finaldi Russo*, Fabio Parlapiano*, Daniele Pianeselli* and Ilaria Supino*

Abstract

Over the last decade and a half non-financial corporations' (NFCs) listings have displayed a heterogeneous pattern across European countries. The number of listed NFCs has increased in Italy and Spain, while it has declined in Germany, France and the United Kingdom. In Italy, the increase in the number of listed firms has been driven by SMEs' listings, leaving the stock market small by international standards. We break down the size gap of the Italian equity market with respect to its European peers into the share of listed companies and their relative size. We show that the lower share of listed NFCs in Italy accounts for the gap with France and the UK, while the smaller size of Italian public firms has a crucial bearing on the differences with Germany and Spain. Counterfactual exercises provide evidence that there is limited room to bridge these gaps, as the structure of the Italian economy leans towards small enterprises. Policy measures aimed at fostering SMEs' propensity to go public may be more effective in promoting the further development of the Italian stock exchange.

JEL Classification: G1, G3.

Keywords: Capital markets, stock market, IPOs, SMEs listings.

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1. Introduction*

Well-developed capital markets are instrumental to a strong economy as they facilitate the efficient allocation of financial resources through saving mobilization and risk sharing.¹ Stock markets can contribute to the economic growth in several ways: by channeling funds to firms with higher growth potential, by making corporate ownership more controllable and by providing diversification opportunities to investors. Equity markets can also provide an alternative funding source for younger and smaller firms that lack (or have limited) access to bank credit or other financing venues.

The factors underlying the decision of a firm to go public have been analysed extensively by the literature. Researchers have tried to understand the reasons and the consequences of performing an initial public offering (IPO). Motivations of listings include the need for capital structure rebalancing (Pagano, Panetta and Zingales, 1998), the willingness to boost innovation (Bernstein, 2015) or to engage in M&A activities (Celikyurt, Sevilir and Shivdasani, 2010).

Recent developments in the features and functioning of equity markets worldwide have revitalized interest in the topic. The halving of listed firms in the US since 1997 has prompted scholars to analyze the steep decline in IPOs occurred over the last two decades. Several papers show that the drop, which has been particularly steep among small firms (Lux and Peard, 2018), is the result of both a dramatic fall in the number of IPOs and an increase in delistings, which are mainly due to merger waves (Doidge, Karolyi and Stulz, 2017; Kahle and Stulz, 2017; Doidge, Kahle, Karolyi, and Stulz, 2018).²

While a number of empirical studies on the evolution of stock exchanges focus on the US, the evidence for Europe is rather scant. This paper aims to contribute to the literature by discussing the evolution of the main European stock markets from 2005 onwards. We document a considerable heterogeneity in the degree of market development across Europe and in its dynamics: the number of listed non-financial corporations (NFCs) rose significantly in Italy and Spain, while it declined in Germany, France and the United Kingdom.

Despite the rising number of listed firms, Italy failed to catch up with other economies in terms of market capitalization. The size of Italian stock exchange remains small compared to the size of the

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¹ The link between market-based financing and economic growth has been explored in a number of studies investigating the effects of the structure of financial system on productivity and innovation (Demirguc-Kunt, Feyen and Levine, 2012; Gambacorta, Yang and Tsatsaronis, 2014; Langfield and Pagano, 2016).

² Other reasons behind delisting include: the excessive costs of complying with the regulatory framework (Marosi and Massoud, 2007), the need to realign the incentives of managers with those of shareholders (Renneboog, Simons and Wright, 2007), or the poor performance associated to the listing status (Pour and Lasfer, 2013).

real economy: the total capitalization of non-financial companies accounts for only 22 percent of the Italian GDP, while the corresponding figure for the euro area average is 41 percent.

The aim of the paper is threefold. First, it describes recent trends in the main European stock markets, providing new comparative evidence on the size of equity markets in Europe and their dynamics. Second, it points to some of the drivers behind the positive trend of IPOs in Italy. Third, it investigates the determinants of stock market underdevelopment in Italy.

We find that Italy and UK stand out as the countries with the largest variations in terms of IPOs and delistings, respectively, between 2005 and 2018. The increase in the number of Italian listed firms was primarily due to small and medium enterprises (SMEs) entering the equity market; this trend was encouraged by public and private initiatives to ease access to equity financing for smaller firms and attract investors in this market segment.

As regards the persistently smaller size of Italian stock market, we highlight that the lower share of Italian companies going public explains the gap with respect to France and the UK. By contrast, differences with Spain and Germany are primarily due to the smaller average size of firms listed on the Italian stock exchange.

Based on the results of counterfactual exercises, we argue that the size gap of the Italian stock market is hard to fill, due to the constraints related to the structure of the Italian economy, which is characterized by a high share of SMEs; in addition, only a small number of very large companies are still unlisted. Our results also suggest that policies aimed at fostering firms' propensity to list can help reduce the divide with the other main European countries. In particular, incentives targeted to small firms, for which the listing gap is larger, would be more effective in increasing the size of the Italian stock market.

The paper is structured as follows. Section 2 describes the evolution of European equity markets since 2005. Section 3 offers a detailed description of the factors that contributed to the rise in the number of Italian quoted firms, related to both demand- and supply-side features of the market. Section 4 analyses the reasons underlying the gap between Italy and the other main European countries in the size of the stock markets, and Section 5 concludes.

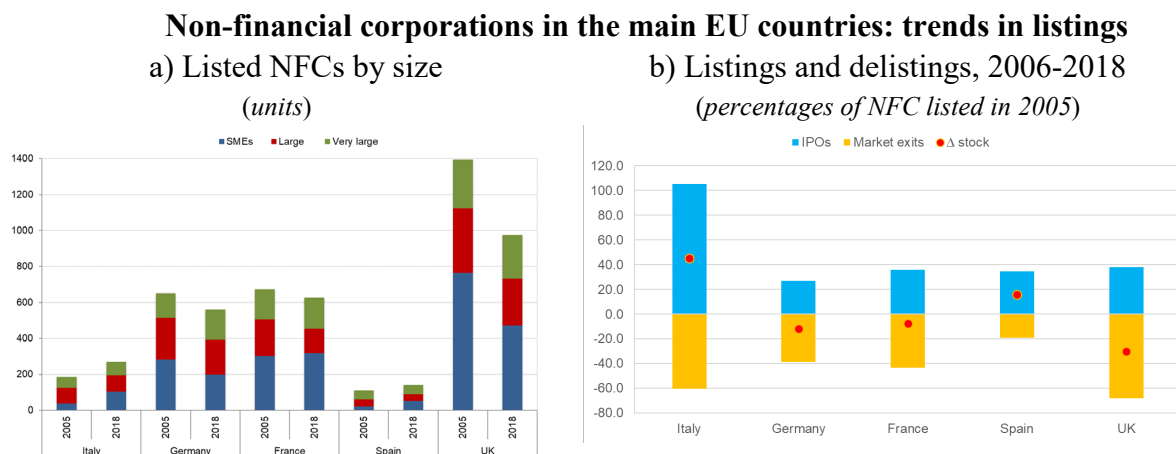
2. Listings in the main European stock exchanges

Over the last decade and a half, the development in the number of listed firms across the main European countries was quite heterogeneous.³ With respect to 2005, there has been an increase of

³ See Appendix A for a description of data sources.

quoted firms in Italy and in Spain; by contrast, the number of listed NFCs dropped significantly in the UK, while it declined slightly in Germany and France (Fig. 1, left-hand panel). These trends were driven by SMEs in all countries.⁴

Figure 1



Source: Bloomberg.

Note: In the right-hand panel, the number of IPOs refers to «trading» deals, i.e. equity offerings that were successfully placed in the market. Direct listings (i.e. IPOs not involving any underwriter) are excluded. IPOs and market exits are shown as a share of the number of listed firms in 2005. Market exits are estimated residually subtracting from the variation of the number of listed companies between 2005 and 2018 the number of IPOs occurred in that period. Market exits include: M&A operations, voluntary delistings, bankruptcies, liquidation, and failure to meet listing requirements.

The increase in the number of Italian listed firms mirrors the dynamics of IPOs between 2006 and 2018. Indeed the number of IPOs, in proportion to the number of listed firms in 2005, was higher than in all the other countries (Fig. 1, right-hand panel). The number of new listings gained momentum after 2013, returning to pre-crisis levels. About two third of the firms that entered the stock market between 2014 and 2018 were SMEs (Fig. 2, left panel); the vast majority of IPOs took place on second-tier markets (Fig. 2, right panel).

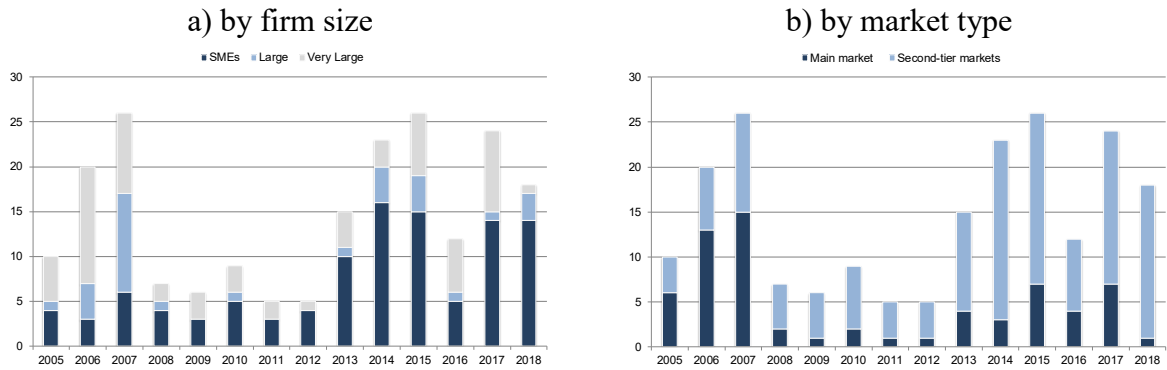
In Spain, the increase in the number of listed companies reflected both a small number of market exits and, as in the case of Italy, the surge of IPOs to the levels recorded in 2006-07. However, the proportion of SMEs undertaking IPOs, although sizeable, has been far less pronounced than in Italy (Fig. 3, panel c).

In the other three countries analyzed, the number of IPOs has not returned to the pre-crisis levels. In the UK market exits played a larger role compared to Germany and France, representing about 70 per cent of the firms quoted in 2005.⁵

⁴ Firm size classification is based on the number of employees (or turnover when information on employees is not available): small and medium firms have less than 249 employees (or turnover below 49 million EUR); large firms have between 250 and 1999 employees (or turnover of 50-299 million EUR); and very large firms have more than 2000 employees (or turnover above 300 million EUR). Listed and unlisted microfirms are excluded from the analysis.

⁵ See Pour and Lasfer (2013) for a thorough analysis of the wave of delistings occurred in the UK.

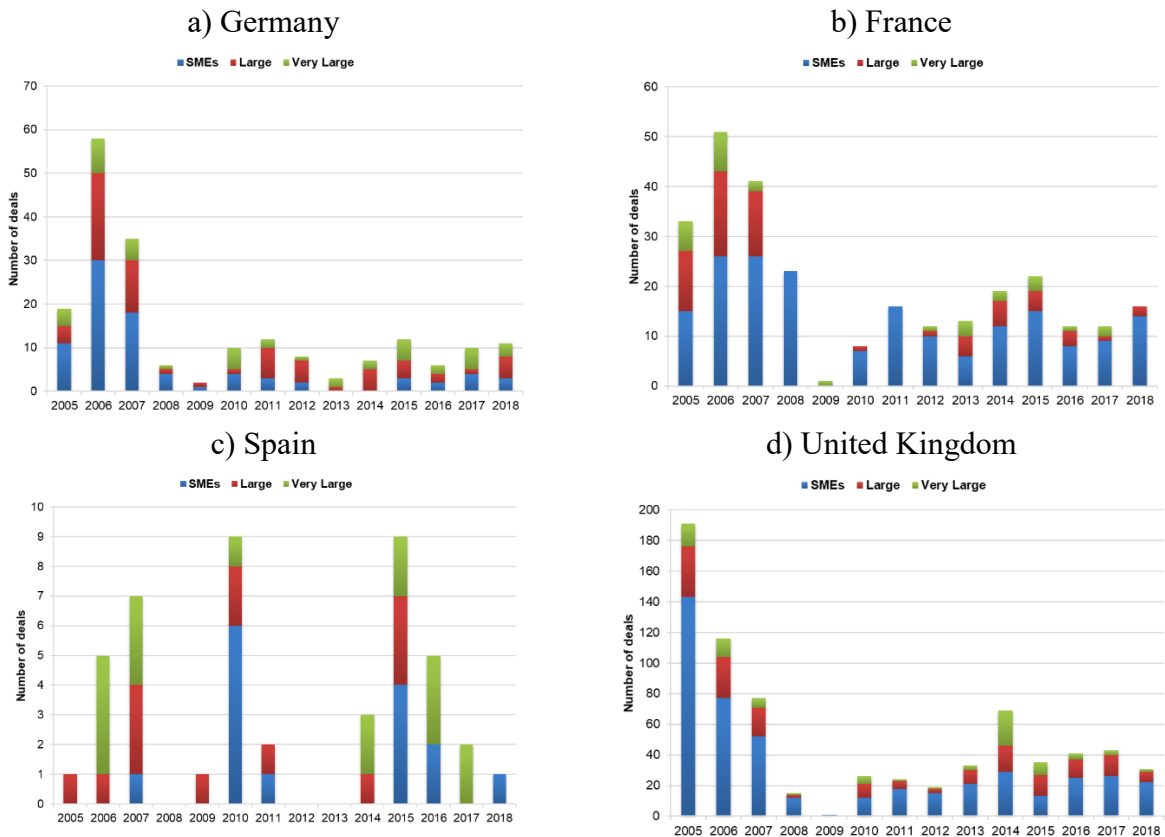
Figure 2
Non-financial corporations' IPOs in Italy
(number of firms)



Source: Bloomberg.

Note: Number of IPOs by domestic non-financial firms for the Italian stock exchange. The number of IPOs refers to «trading» deals, i.e. equity offerings that were successfully placed in the market. Direct listing (i.e. IPOs not involving any underwriter) are excluded. In the right-hand panel second-tier markets include Mercato Expandi (2004-08), MAC (2007-12) and AIM Italia (2009-2018).

Figure 3
Non-financial corporations' IPOs in the other large EU countries
(number of firms)



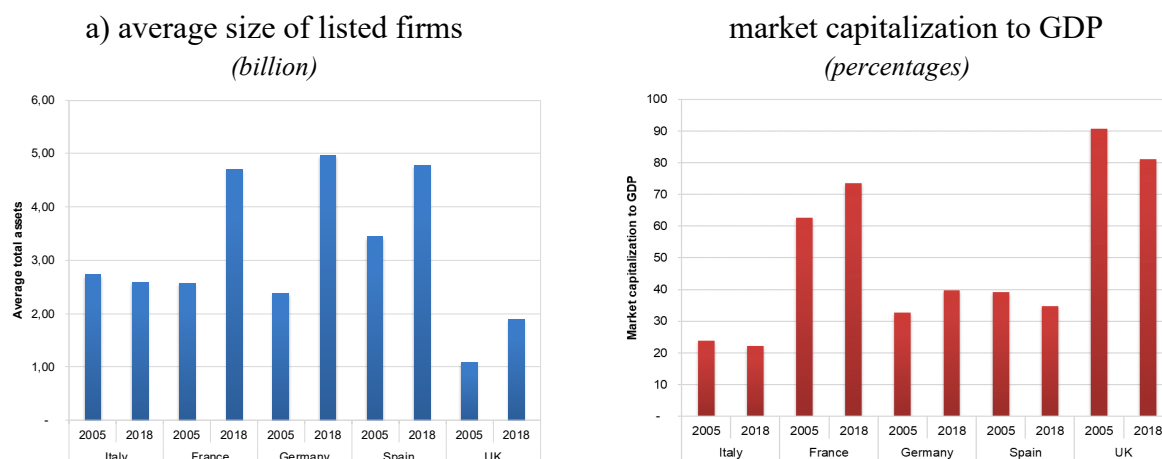
Source Bloomberg.

Note: The figures plot the number of IPOs by domestic non-financial firms for the main European stock exchanges. The number of IPOs refers to «trading» deals, that is equity offerings that were successfully placed in the market. Direct listing (i.e. IPOs not involving any underwriter) are excluded.

Overall, the trends described have reduced the gap, as measured by the number of listed firms, between Italy and the other large European countries. However, the average size of Italian listed companies has remained substantially unchanged whereas it has increased notably in the other countries (Fig. 4, left-hand panel), as a result of both the higher inflows of very large companies (Spain, Germany) and the decline in the number of listed SMEs (France and UK). The gap in terms of stock market capitalization has actually increased, on average: in 2018 the Italian NFCs capitalization-to-GDP ratio was about 22 per cent, slightly lower than in 2005 (figure 4, right panel) and far below the capitalization of other countries. In Section 4 we focus on the nature of this gap, by analyzing the size and the share of companies that are listed in Italy vis-à-vis those recorded in the other four countries.

Figure 4

Characteristics of listed NFCs in the main EU countries



Source: Bloomberg and Datastream.

Note: the left-hand panel plots the average book value of the total assets of listed non-financial firms for the main European stock exchanges. The right-hand panel plots the non-financial firm stock market capitalization-to-GDP ratio.

3. Industry and policy changes in the Italian stock market

In Italy, the marked growth in the number of listed firms has been supported by several policy and industry initiatives that promoted firms' listing and investors' participation in the Italian stock market. Moreover, the development of the Italian stock exchange has been favored by the tightening of credit standards for loans to enterprises in the aftermath of 2011-12 recession (Eramo et al., 2018), which prompted firms to look for alternative sources of funding. Bond issuances, private equity and venture capital investments and the use of new financing instruments (such as credit funds, peer-to-peer lending, crowdfunding) increased significantly, with stock market IPOs being part of this trend.

3.1 The demand side of the market

A number of industry and policy initiatives have fostered the listing of Italian firms. In 2009 the Italian stock exchange (Borsa Italiana) created the Alternative Investment Market (AIM Italia) mainly addressed to SMEs with significant growth potential. Unlike the Alternative Capital Market (MAC), absorbed by the new market in 2012, trading activity on the AIM Italia was allowed not only to institutional investors but also to retail investors. Less stringent listing requirements, a simplified IPO process, and fewer post IPO compliance rules encouraged the listing of SMEs and also of large companies (Table B2, Appendix B); at the end of 2018, 111 NFCs were listed on the AIM Italia. In line with the less stringent requirements, companies floated on the AIM Italia are considerably smaller than those listed on the main market (Mercato Telematico Azionario, MTA): in 2018, the median value of market capitalization of NFCs listed on the AIM was about 9 times lower than that of MTA companies, while the overall market value of the AIM segment was about 1.2 per cent of the Italian stock market.⁶

In 2012 Borsa Italiana also launched the Elite program, aimed at companies interested in having their growth supported by external investors and financial markets.⁷ The program offers an international platform of services to help firms carrying out their plans of expansion through training and coaching, sharing of experience and accessing different forms of finance, which does not necessarily imply the listing in the stock market. At the end of 2018 the program included more than 1,000 firms, mostly SMEs; about 700 were Italian and of these 21 concluded an IPO, while around 200 expressed their interest in being listed.

On the regulatory side, incentives to go public have been fostered by the strengthening of dual class shares and the introduction of fiscal incentives for IPOs. To overcome the principle of one share-one vote, the Italian Law 116/2014 introduced two different types of shares, allowing the main shareholders to issue more stocks, thus increasing their liquidity, albeit keeping a leading role in the governance of the company. In Italy, where company ownership is often concentrated within a family, this mechanism could help overcome the owners' unwillingness to list. The law allowed unlisted companies to issue multiple voting shares ("*voto plurimo*"), up to three voting rights, with the option to keep them in the event of a subsequent listing. A similar scheme ("*voto maggiorato*") is also

⁶ The median market capitalization of NFCs listed in MTA is 235 millions while AIM companies have a figure of about 27 millions. Furthermore, in the AIM Italia the lower minimum floating rate was set at 10 per cent. As a consequence, the average free floating capital to the total market capitalization is 49 per cent on the AIM compared with more than 60 per cent on the MTA market.

⁷ Firms entitled to be included in the program are those with sales greater than 10 million euros (or than 5 million and with a rate of growth higher than 5 per cent in the previous year), operating income greater than 5 per cent of sales and non-negative net profits.

available for listed companies, linked to the holding period of shares: additional voting rights (up to 2 voting rights) can be granted to investors in the company for at least two years. To date, on the stock exchange 48 out of 341 companies have shares with “*voto maggiorato*” and 3 with “*voto plurimo*”.

The 2018 budget law introduced a fiscal incentive for SMEs applying for listing. The incentive consists of a tax credit for 50 per cent of the IPO costs, up to a maximum amount of half a million euro. For the 2019-21 period the measure received a budgetary allocation of 80 million euros, enough to potentially finance about 160 SMEs IPOs at the maximum tax credit amount. Indeed, the scale of the incentive is material, considering that at the end of 2018 there were 104 SMEs listed in the Italian stock market.

3.2 The supply side of the market

On the supply side, the increasing recourse to Special Purpose Acquisition Companies (SPACs) as means of pooling funds from investors for IPO fundraising has been a novel, industry-led initiative that boosted listing activity on Borsa Italiana. Once listed, SPACs seek for a privately held company to be bought or incorporated within two years from the IPO (through a business combination). While in the US SPACs have long been popular since the 90s as an alternative financing tool to traditional IPOs, their diffusion in Europe is far more recent. In Italy, about 30 SPACs have been launched since 2010, raising funds for about 4 billions of euro ever since.⁸

Investments in financial instruments issued by Italian companies have also been supported by the introduction of tax exemptions for long-term individual savings plans (“*Piani individuali di risparmio*” or PIR) by the 2017 Budget Law. The fiscal incentive consists of a total exemption of returns, capital gains and inheritance taxes if a certain percentage of the assets is invested in securities issued by Italian companies held in the plans for a minimum of five years.⁹ The introduction of PIR has encouraged the launching of investment funds with a strong focus on the Italian stock and bond markets. At the end of 2018, 72 Italian and foreign investment funds were compliant with the rules of such savings plans, most of them equity or balanced funds. The total assets of these funds amounted

⁸ In 2017 there were 34 SPACs listings in the US, raising 11.2 billion of euro and 15 in the UK, raising 2.5 billion of euro (OECD, 2018).

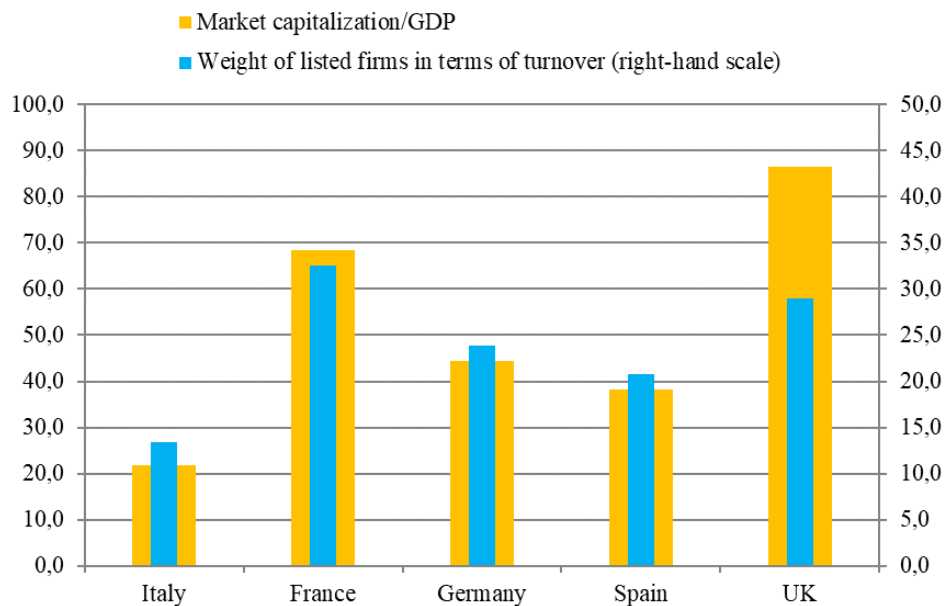
⁹ Specifically, 70 per cent of the assets of the Plan has to be invested in securities (bonds or stocks) issued by Italian firms; at least 30 per cent of this amount (21 per cent of total assets) has to be invested in securities issued by firms not included in the FTSE MIB (Bank of Italy, 2017, 2018).

to 15 billion euro, half of which invested in Italian NFCs securities, compared with about 2 per cent on average for the other non-PIR-compliant funds.^{10, 11}

4. The size of the stock markets: Italy versus the main European countries

The Italian stock market, measured by the capitalization-to-GDP ratio, is considerably smaller than its European peers, despite the progress made in recent years. In this section we analyse whether this gap is mainly due to the existence of a limited number of public firms in Italy or to their average size. To do this, we check whether Italian firms may have a lower propensity to go public or face higher obstacles in the listing process compared to their European peers; we also assess whether the difference may rather be associated to the relatively smaller scale of companies in the Italian stock market.

Figure 5
Size of the stock market for non-financial companies in 2016
(percentages)



Source: Bloomberg, Eurostat and Orbis.

¹⁰ Investments were performed mostly in securities issued by Italian medium-sized and large companies in the manufacturing and service sectors. Investments in shares amounted to 4.6 billion and were concentrated in a limited number of companies: over 50 per cent of this category was invested in the shares of 24 companies.

¹¹ The 2019 Budget Law (Law 145/2018) amended the rules on PIR funds by requiring them to invest part of the portfolio in financial instruments issued by Italian SMEs and in venture capital funds (Bank of Italy, 2019). The 2020 Budget Law substantially restored the previous regulatory framework.

As a measure for assessing the size of the capital market, we use the ratio between the revenues of the listed companies and those of all companies in place of the capitalization-to-GDP ratio. This allows us to compare listed with unlisted firms (for which market capitalization is not available). As shown in Figure 5, the ranking of the stock market in terms of relevance across countries does not change substantially: France and the UK show the highest values of the indicator (33 and 29 percent, respectively), followed by Germany and Spain (24 and 21 percent, respectively), while Italy still displays the lowest figure (13 percent).

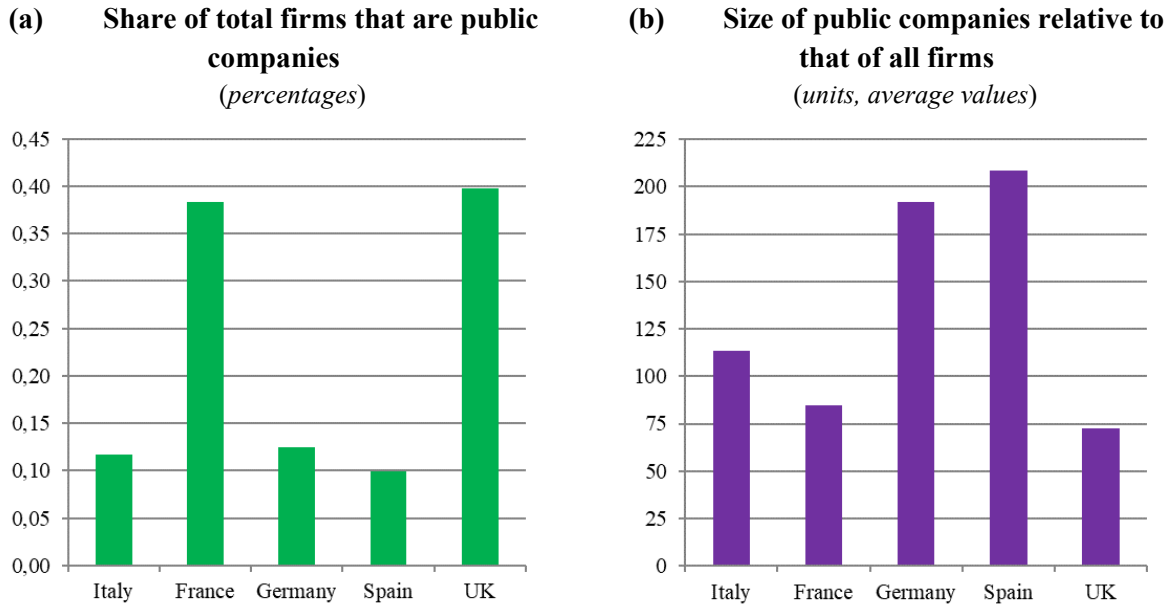
We decompose these cross-country differences into the share of listed companies (to the total number of firms) and the relative size of listed companies. Accordingly, for each of the country analyzed we express our proxy of market capitalization, the ratio between the revenues of listed firms and those of all firms in the economy, as follows:

$$\frac{Rev_L}{Rev_U} = \frac{N_L}{N_U} * \frac{\widehat{Rev}_L}{\widehat{Rev}_U} = Share * Size \quad (1)$$

where N_L and N_U represent the number of listed and total firms respectively; \widehat{Rev}_L is the average revenues of listed companies, computed as the total revenues divided by the number of firms listed on a given national stock exchange and \widehat{Rev}_U is the average revenues for the universe of firms. The first term, *Share*, i.e. the ratio of listed to all firms in each economy, reflects the firms' propensity to go public as well as other types of factors affecting firms listing (i.e. regulation, listing costs, institutional factors). *Size* captures the size of listed firms relative to that of all firms. Figure 6 breaks down the two indicators graphically: France and the UK stand out as the countries with the highest shares of quoted companies, whereas Germany and Spain show the largest size of listed firms relative to all firms.

Figure 6

Components of stock market size



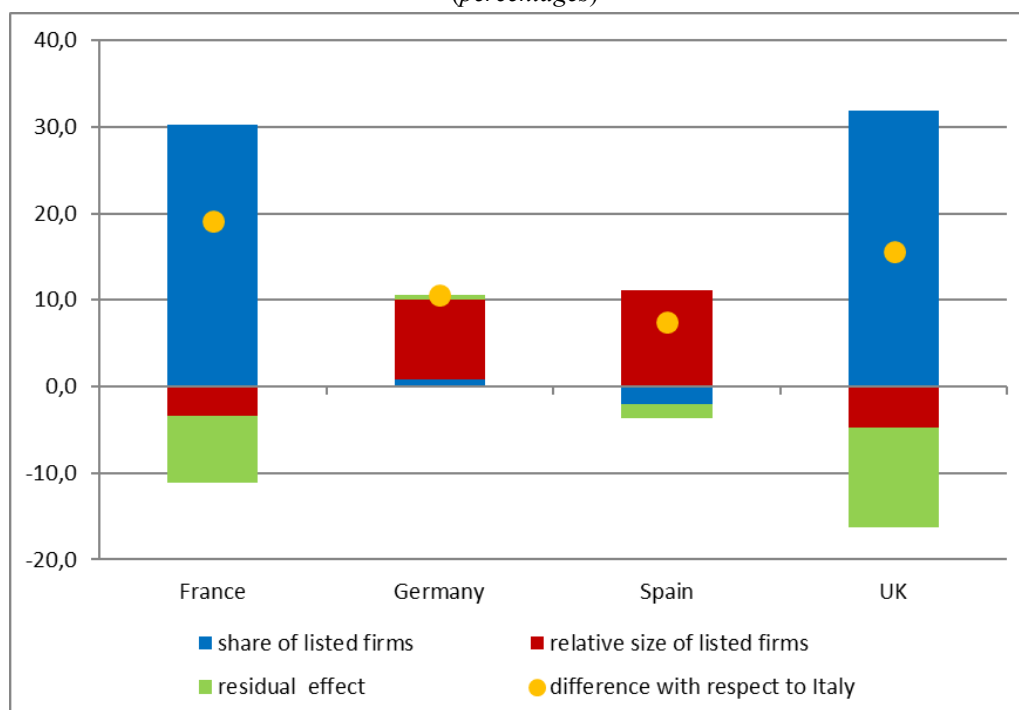
Source: Bloomberg, Eurostat and Orbis.
 Note: data refer to end-2016.

According to (1), differences in the size of the stock market between a given country C and Italy can be decomposed as follows:

$$\frac{Rev_L^C}{Rev_U^C} - \frac{Rev_L^{IT}}{Rev_U^{IT}} = Size^{IT} * [Share^C - Share^{IT}] + Share^{IT} * [Size^C - Size^{IT}] + [Share^C - Share^{IT}] * [Size^C - Size^{IT}] \quad (2)$$

where the first term on the right hand side of the equation measures the effect of differences in the share of listed firms; the second term quantifies the effect of differences in firms' relative size; and the third term is a residual effect. In Figure 7 we show the relative contribution of the three factors in explaining why the Italian stock exchange is undersized compared to other countries. The smaller size of the Italian equity market, with respect to France and the UK is predominantly due to a lower share of quoted companies in Italy. By contrast, Italy's equity market size gap with Spain and Germany is mainly attributable to the smaller average size of listed Italian firms.

Figure 7
Difference between Italy's and other countries' size of the stock market: contributing factors
(percentages)



Source: Bloomberg, Eurostat and Orbis.
 Note: data refer to 2016.

In what follows we group countries based on the factor, either *Share* or *Size*, which determines the greatest part of the gap observed between the Italian stock market size and that of its European peers according to Equation (2). For both groups of countries, we investigate whether and to what extent Italy's delay in the development of the equity market is driven by specific features of the national NFCs.

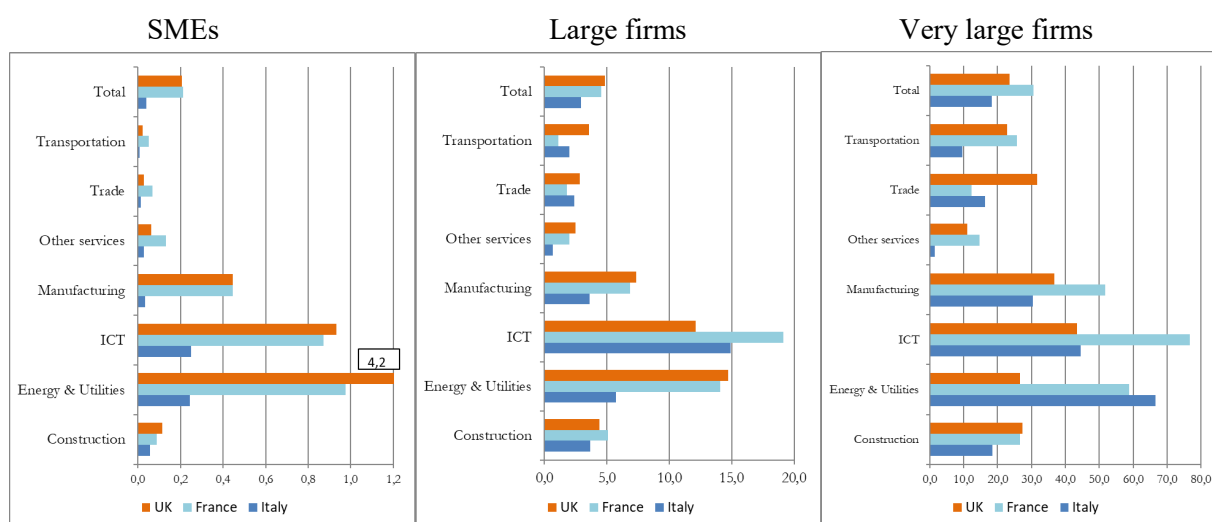
4.1 Share of listed companies: Italy vis-à-vis France and the UK

The share of NFCs listed on the stock market varies significantly across firm size classes and industries (Figure 8). In the three countries, the *Share* ratio grows along with companies' size. The positive correlation between size and the likelihood to go public is a well-known evidence mainly explained by the fixed costs associated to the process of listing, which include both the initial expenses related to the IPO and the other costs deriving from being publicly traded (i.e. compliance or reporting; Pagano, Panetta and Zingales, 1998). Moreover, in heavily regulated sectors, such as energy and utilities, the proportion of listed firms is systematically much larger than in the other sectors, independently from firms' size. One possible explanation is that where sectoral regulation

imposes stricter transparency constraints, firms might find it easier to handle the stringency of disclosure and reporting requirements related to the listing status.

Italian firms show a lower *Share* ratio across almost all sectors and size classes. Differences with France and the UK are particularly large among SMEs, for which the Italian ratio is more than 5 times lower. Moreover, of over 60,000 Italian manufacturing enterprises less than 100 are publicly traded. The share of manufacturing firms listed on the exchange is relatively low across all size classes, but it is particularly limited in the SMEs segment, 13 times lower than in France and the U.K.:

Figure 8
Share of listed firms by size and industry
(percentages)



Source: Bloomberg, Eurostat and Orbis.
 Note: data refer to 2016.

We use a shift-and-share analysis to examine the role of country characteristics, in terms of distribution of firms across sectors and size classes, in explaining the size gap of the Italian equity market. We break down the cross-country differences in the share of listed firms in two components: a component attributable to the distribution of firms across sectors and size (while holding firms' likelihood to go public fixed), and a part due to the shares of listed companies (keeping sector and size shares constant). The shift-and-share decomposition is based on three firm size classes and seven economic sectors as shown in Figure 8.¹²

The results of the analysis (Fig. 9) show that Italy's industrial structure in terms of firms' distribution across size categories and sectors plays only a minor role in explaining the differences with the other two countries in the share of listed firms. In fact, the gaps with France and the UK (30

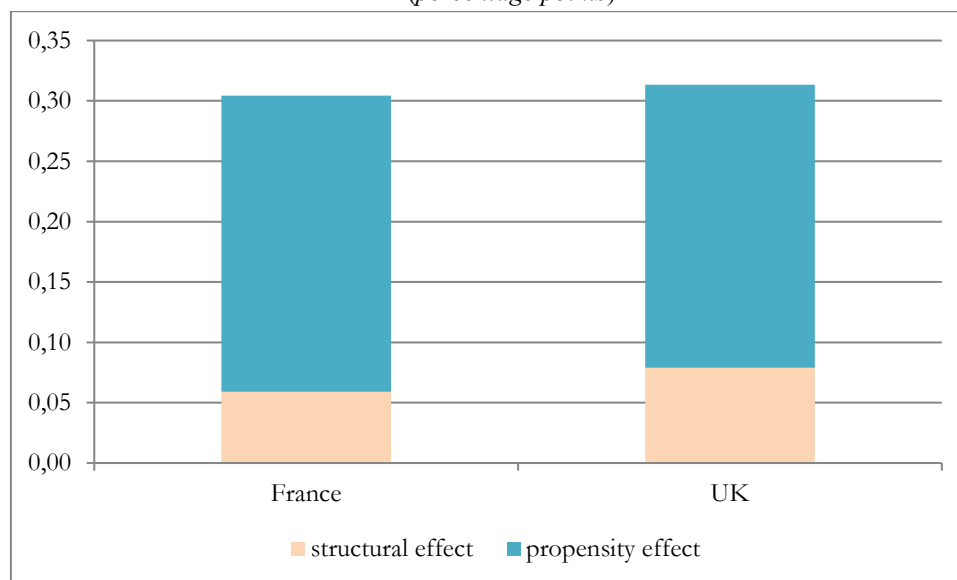
¹² See Section A.3. in Appendix A for details.

and 32 percentage points, respectively) are due, for over two thirds, to different *Share* ratios in each size-sector cell (*'propensity effect'*) rather than to differences in the firms' distribution across sectors and size classes (*'structural effect'*).

Figure 9

Shift and share analysis: decomposition of the difference in the share of public companies between France/UK and Italy

(percentage points)



Source: Bloomberg, Eurostat and Orbis.

Note: data refer to 2016.

The shift-and-share analysis also allows to identify more precisely the categories of Italian firms for which listings lag behind their international counterparts, and hence the areas with more room for possible policy intervention. In particular, we find that the *'propensity effect'* dominates the *'structural effect'* by a sizable margin for the manufacturing and “other services” sectors (regardless of firm size) and for the SMEs in the ICT and energy sectors (Table B3 in Appendix B).

4.2 Relative size of listed firms: Italy vis-à-vis Germany and Spain

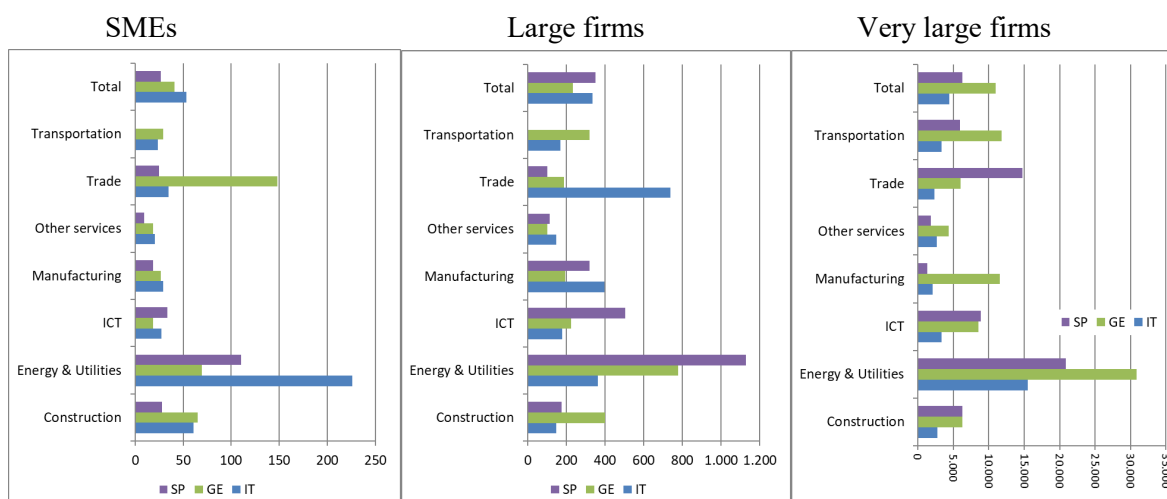
At the beginning of this section we defined the relative size of quoted companies as the ratio between the average revenues of listed firms and those of all firms in the economy (*Size ratio*). For this ratio to be smaller in Italy than in Germany and Spain, either all the Italian firms (in the denominator) are on average larger than their German and Spanish peers or firms traded on the Italian exchange (in the numerator) are businesses of a minor scale.

We can easily exclude the first hypothesis. The data show that the average revenues of Italian firms is about 30 per cent lower than in Germany; the size of Italian enterprises is smaller across all sector

and size classes, though the major differences are visible among large businesses for which the average revenues are about half. By contrast, Italy and Spain have approximately the same mean firm size, equal to 13 and 11 million euro of revenues respectively.

Differences with respect to Germany and Spain in the *Size* ratio are therefore explained by the smaller size of Italian listed companies. Compared to both Germany and Spain, the gap is concentrated among companies with more than 2,000 employees, whereas among SMEs and large firms differences are limited and uneven across sectors (Fig. 10).¹³ The revenues originated by the very large firms listed in Germany is more than twice as high as in Italy (11 and 4.4 billion euro, respectively). When we consider only businesses operating in the manufacturing sector, this difference is even greater (by a factor of almost 5). The distance with Spain is also significant, especially for larger firms in the energy, utilities and trade sectors.

Figure 10
Size of listed companies
(average revenues, millions of euros)



Source: Bloomberg, Eurostat and Orbis.
 Note: data refer to 2016.

4.3 Counterfactual exercises

The previous analysis documents that the comparatively small size of the Italian equity market is accounted for by both the low share of Italian companies that go public (the *Share* ratio) and their relatively small size (*Size* ratio). In this section, we present two counterfactual exercises, based on

¹³ Figure B4 in the Appendix compares the size of listed firms with that of all firms in each country. In Italy the gap between the average turnover of listed SMEs and the corresponding value of all SMEs is particularly wide suggesting that, more than in other countries, the stock market is mainly tapped by the largest medium-sized firms.

comparative statics, which aim at estimating a hypothetical size of the Italian stock market in case the *Share* of listed firms increased to the levels observed in France and UK (the largest among the countries analyzed) or the relative *Size* of quoted companies was equal to Germany and Spain (the countries analyzed with the largest relative size). This issue closely relates to the goals of the policy actions undertaken in the last decade by the Italian Government and the stock exchange (Borsa Italiana), aimed at fostering listed firms' size and access to equity markets.

The share of listed firms

In the first counterfactual exercise, we estimate for SMEs, large and very large firms the increase in the number of listed firms that would occur if Italy had the same listed-to-total number of firms ratio of France or the UK. Then, we compute the gain in total turnover of listed firms that would result from listing those additional companies.

When we use the French or the British share of listed firms with the Italian figures for each class size, the hypothetical number of Italian listed NFCs more than doubles to about 560 (0.29 per cent of the total firms, from 0.12 per cent).

Then we calculate the outcome in terms of total turnover of listed firms. In order to account for the possible distortion due to the presence of outliers and a skewed distribution, we propose two different estimates of the average size of the perspective listed firms.¹⁴ The first one considers the average size of the hypothetical extra companies as equal to the average size of unlisted Italian firms in each size class. This is a conservative scenario, as it is likely that these new entrants would be rather those in the upper end of the distribution, with a total turnover higher than the mean; therefore it represents a lower bound estimate. In the second one, we use the average turnover of listed firms (for SMEs and large NFCs) and the average turnover of the biggest unlisted companies (those with revenues higher than 75th percentile) for the segment of very large companies. This could be considered as an upper bound estimate.

Figure 11 shows the results of this counterfactual exercise. The green line represents the actual size of the Italian equity market, proxied by the ratio of listed to all firms' revenues, as shown in Figure 5. The relative size of the Italian stock market would raise by 2 and 4 percentage points (lower and upper bound, respectively) in case Italy had the same share of listed companies of France, and by 1 and 3 percentage points when using the UK *Share* ratios. From our calculations, not shown here,

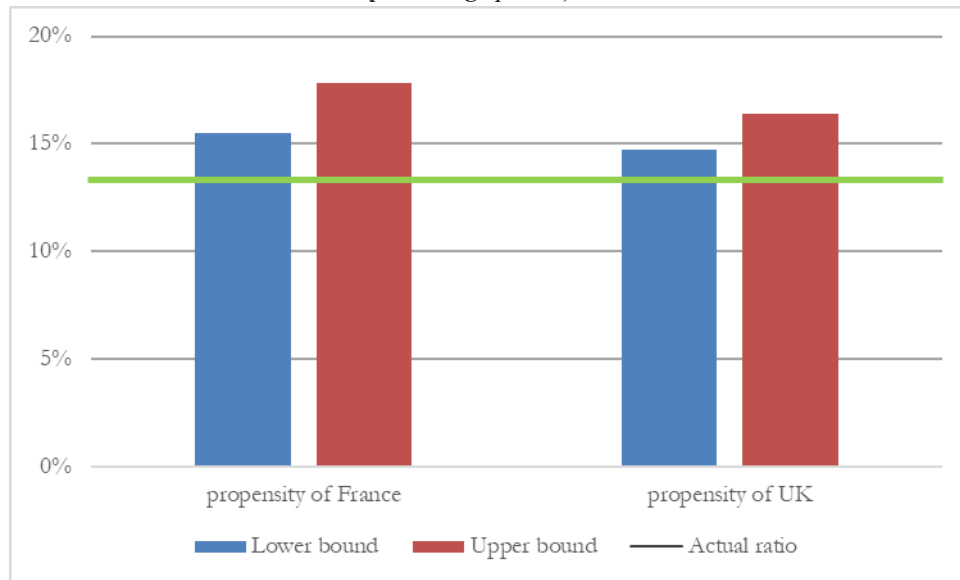
¹⁴ Due to data constraints, the full distribution of non-listed NFCs is available only for the class of very large firms.

the majority of the increase would come from listing the very large firms, but also SMEs would provide a relevant contribution, due to the large increase in the number of their new listings.

Figure 11

Counterfactual exercise n.1: hypothetical size of the Italian stock market with higher shares of listed firms

(percentage points)



Source: Bloomberg, Eurostat and Orbis.

Note: data refer to 2016.

However, even considering the most favorable scenario (the upper bound, calculated using the French propensity to go public), the hypothetical weight of listed NFCs in term of revenues would not exceed 18 per cent of the total turnover of the economy, while the actual value of this share for France and the UK is equal to 32.5 per cent and 28.9 per cent, respectively. The relatively modest increase in the size of the Italian stock market is mainly due to the fact that the majority of hypothetical new listings would be represented by SMEs, since the largest differences in the share of listed companies with respect to France and the UK stem from this size class (see Figure 8). For this reason, the contribution of these firms in term of total revenues is very limited and the total effect on the size of the market is rather small.

The relative size of listed firms

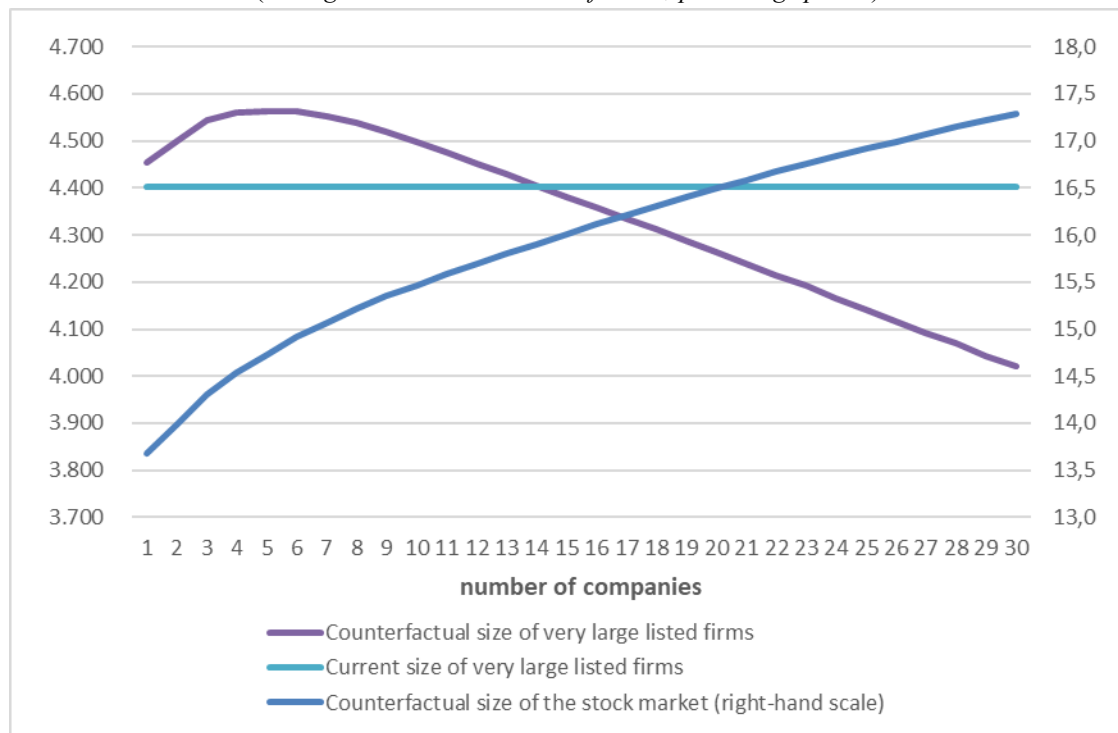
The second counterfactual exercise concerns the relative size of listed firms (the *Size* ratio). In section 4.2 we pointed out that Italy's gap with Germany and Spain is concentrated in the class of very large companies (see Figure 10). Thus, for this group, we studied how their average size would vary if the largest Italian unlisted firms underwent IPOs.

Figure 12 shows that there are less than 15 unlisted companies with average revenues higher than the current value of very large quoted firms. The largest size improvement would be reached in case of IPOs of the first six bigger firms; also in this case the gap with Germany and Spain would remain wide (about 6.4 billion and 1.6 respectively) and the increase in the Italian market size (to about 15 per cent) would be far from closing the gap with the other two countries.

Figure 12

Counterfactual exercise n.2: hypothetical size of the Italian stock market with increasing number of very large listed firms

(average revenues in millions of euros; percentage points)



By including the subsequent largest unlisted companies, the average value of revenues gradually declines with negative effects on the *Size* ratio: the listing of the top 30 private Italian companies would reduce the average revenues to about 4 billion. This is due to the size distribution of firms in Italy, where unlisted firms are not very large. At the same time, the size of the stock market would rise to about 17,5 per cent (mostly for the effect of an increase in the *Share* ratio), remaining substantially lower than in Germany and Spain.

Overall, the results of these two counterfactual exercises show that the potential growth of the Italian stock market is limited by the specific size distribution of Italian unlisted firms, which include only few very large companies and a relatively greater share of SMEs. Our evidence indicates that

increasing firms' propensity to go public may help reduce the existing gap; this gap, however, cannot be closed in the medium term due to structural features of the Italian economy.

5. Conclusions

The development of capital markets across the five main European countries has undergone different trends in the last decade and a half. On the one hand, in Italy and Spain, the countries historically characterized by less active financial markets, the number of listed firms rose markedly. On the other hand, the number of listed firms dropped in Germany, France and the UK where market exits outweighed the number of IPOs.

In this paper we show that the expansion of listings in Italy was driven by the surge in IPOs, especially by SMEs; indeed their pace hit the pre-crisis level in 2014 and remained sustained for the rest of the period. On the demand side of the capital market, the launch of a new second-tier market focused on SMEs, the AIM Italia, spurred incentives to go public for Italian NFCs on the back of simplified listing requirements and less burdensome IPO and post-IPO compliance rules. On the supply side, the amounts of capital raised via SPACs and, more recently, via PIR funds also facilitated the access of investors to less active market segments, channeling an unprecedented amount of financial resources towards less liquid stocks. Nevertheless, the concentration of IPOs among SMEs did not allow an increase in the size of the stock market: NFCs' capitalization in terms of GDP remained limited and far behind those of other main European countries.

We decompose the gap between Italy and its peers in the stock market capitalization in two factors: the relative size of listed companies and their share over the total number of active firms. We found that the gap with respect to France and the UK is predominantly due to the lower share of Italian quoted companies; these differences, particularly large for SMEs, are pervasive across the productive system and do not depend on the specific distribution of Italian firms across sectors and size classes. By contrast, the gap with Spain and Germany is mainly attributable to the more limited size of the Italian largest quoted companies.

The results of two counterfactual exercises provide some useful insights. The potential growth of the Italian stock market seems mostly limited by structural factors, namely the size distribution of unlisted firms characterized by a large share of SMEs and a relatively small number of very large companies. Even assuming the listing of the largest unlisted firms, the average size of quoted firms would not increase significantly. Instead, the gap with the other countries in the size of the stock market could be reduced by enhancing the propensity of firms to go public: our estimates indicate that the size of the Italian stock market (measured as the ratio of listed to total firms' revenues) would

increase by about one third if the shares of listed firms were equal to those of France or the UK. In particular, SMEs and manufacturing companies could benefit the most from policy measures aimed at fostering their listings on the market, given their lower share compared to the main European countries.

Our results indicate that the market infrastructure provided by the AIM Italia played a pivotal role in boosting IPO activity of SMEs; however, a thorough examination of the post-issue operating performances and long-term stock price dynamics of the components of this market segment is still missing. For example, the literature has not yet reached a consensus on the financial soundness and economic performance of companies entering second-tier markets. Crucially, these aspects are key to enhance investors' confidence, stock market depth and ultimately growth. All these considerations, which are of great importance for the development of Italian stock market, represent important extensions to the present work that we leave to future research.

Appendix A

A.1. Data sources

For each national stock market we use Bloomberg to compile the list of publicly traded companies filtering for the country of residence (in order to include only domestic firms) and for the type of equity securities issued (only common stock).

We draw balance sheet data from Orbis, a cross-country longitudinal database that features harmonized individual information on both listed and unlisted companies.

Aggregated data on NFCs' turnover are released yearly by Eurostat. Data are detailed down to size class (as defined in terms of numbers of employees) and to NACE Rev 2 class level (4-digits). For the purpose of our analysis we use statistics updated to 2016, which is the last available year.

A.2. Definition of firm size classes

Firm size classification is based on the number of employees. When information on employees is not available, turnover thresholds are applied.

Listed and unlisted microfirms are excluded from the sample.

Table A1: Classification of firms by size

<i>Firm size</i>	<i>Thresholds</i>
<i>Small and medium</i>	less than 249 employees (or turnover below 49 million EUR)
<i>Large</i>	between 250 and 1999 employees (or turnover of 50-299 million EUR)
<i>Very large</i>	more than 2000 employees (or turnover above 300 million EUR)

A.3. Definition of economic sectors

Data are disaggregated into seven sectors of economic activities: construction, energy and utilities, information and communication, manufacturing, trade, transportation, and other services. Energy and utilities include mining and quarrying. Other services include accommodation and food service activities, professional, scientific and technical activities, commercial services, consumer services, software and technology services, industrial services, gaming, lodging and restaurants, design, manufacturing and distribution, recreation facilities and services.

Appendix B

Table B1: Number of listed NFCs by size and country

		Size classes				Total
		<i>SMEs</i>	<i>Large</i>	<i>Very large</i>	<i>NA</i>	
Italy	1995	19	52	49	15	135
	2005	38	86	62		186
	2018	104	92	74		270
Germany	1995	64	133	158	56	411
	2005	281	235	135	25	676
	2018	200	193	168	34	595
France	1995	66	178	167	149	560
	2005	302	204	168	11	685
	2018	318	137	171	8	634
Spain	1995					
	2005	21	41	49	16	127
	2018	52	38	52	5	147
UK	1995	224	491	287	174	1176
	2005	765	359	271	7	1402
	2018	471	260	244	2	977

Source: Bloomberg.

Table B2: Eligibility and admission requirements to listing on the Italian stock exchange

	MTA standard	MTA STAR	AIM
<i>Floating rate</i>	25 per cent	35 per cent	10 per cent
<i>Certified balance sheets</i>	3	3	1 (if it exists)
<i>Accounting standards</i>	International	International	Italian or international
<i>Investors</i>	Institutional/retail	Institutional/retail	Mainly institutional
<i>Main document</i>	Information statement (prospetto informativo)	Information statement (prospetto informativo)	A simpler document with some information
<i>Market capitalization</i>	Min 40 milion	Min 40 milion – Max 1 billion	No requirement
<i>Governance</i>	Recommended	Compulsory	No requirement
<i>Principal advisor</i>	Sponsor/Global coordinator	Sponsor/Global coordinator	Nominated advisor

Source: Borsa Italiana.

B.3. Decomposition of differences in the share of listed firms: shift and share analysis

		<i>Share of listed firms (%)</i>					<i>S&S decomposition: FR-IT</i>		<i>S&S decomposition: UK-IT</i>	
		Italy	France	UK	Δ <i>FR-IT</i>	Δ <i>UK-IT</i>	<i>Struct. effect</i>	<i>Prop. effect</i>	<i>Struct. effect</i>	<i>Prop. effect</i>
SMEs	Construction	0,06	0,09	0,11	0,03	0,06	0,00	0,01	0,00	0,01
	Energy & Utilities	0,24	0,98	4,24	0,73	4,00	0,00	0,01	0,00	0,04
	ICT	0,25	0,87	0,93	0,62	0,68	0,00	0,03	0,00	0,04
	Manufacturing	0,03	0,45	0,45	0,41	0,41	-0,01	0,08	-0,01	0,06
	Other services	0,03	0,13	0,06	0,10	0,03	0,00	0,03	0,01	0,01
	Trade	0,01	0,07	0,03	0,05	0,01	0,00	0,01	0,00	0,00
	Transportation	0,01	0,05	0,02	0,04	0,01	0,00	0,00	0,00	0,00
Large firms	Construction	3,66	5,08	4,40	1,41	0,73	0,00	0,00	0,00	0,00
	Energy & Utilities	5,71	14,06	14,71	8,35	8,99	0,00	0,00	0,00	0,01
	ICT	14,91	19,14	12,13	4,22	-2,78	0,01	0,00	0,02	-0,01
	Manufacturing	3,60	6,85	7,33	3,25	3,73	0,00	0,02	0,00	0,02
	Other services	0,66	1,98	2,50	1,32	1,84	0,00	0,01	0,00	0,02
	Trade	2,40	1,79	2,85	-0,61	0,45	0,01	0,00	0,00	0,00
	Transportation	1,99	1,13	3,58	-0,86	1,60	0,00	0,00	0,00	0,00
Very large firms	Construction	18,52	26,67	27,42	8,15	8,90	0,00	0,00	0,00	0,00
	Energy & Utilities	66,67	58,82	26,67	-7,84	-40,00	0,00	0,00	0,01	-0,01
	ICT	44,44	76,74	43,40	32,30	-1,05	0,01	0,01	0,01	0,00
	Manufacturing	30,48	51,85	36,72	21,38	6,25	0,01	0,02	0,01	0,01
	Other services	1,53	14,61	11,03	13,08	9,50	0,00	0,02	0,00	0,02
	Trade	16,28	12,40	31,72	-3,88	15,45	0,01	0,00	0,01	0,01
	Transportation	9,52	25,71	22,73	16,19	13,20	0,00	0,00	0,00	0,00
Total		0,12	0,42	0,43	0,30	0,31	0,06	0,25	0,08	0,23

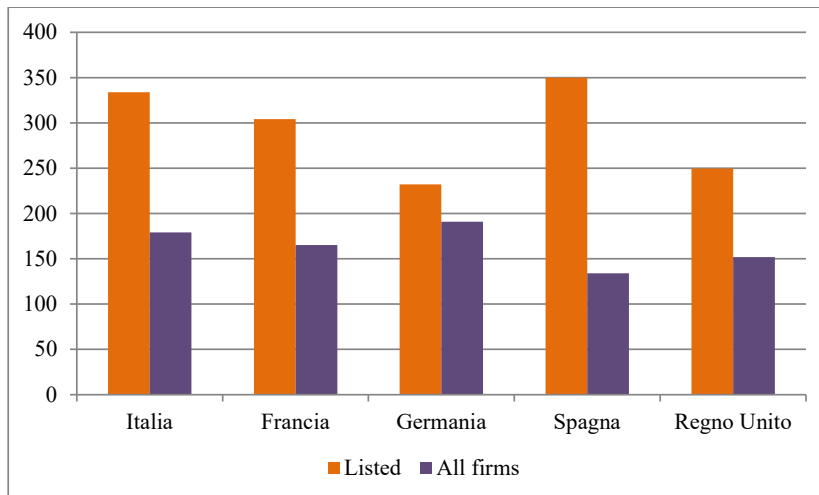
Figure B4: Average size of listed and of all non-financial corporations

SMEs
(millions of euros)



Source: Bloomberg and Eurostat

Large
(millions of euros)



Source: Bloomberg, Eurostat and Orbis

Very Large
(billions of euros)



Source: Bloomberg, Eurostat and Orbis

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