

## SECTOR COMMENT

13 December 2017

Rate this Research >>

### Contacts

**Cynthia Mar** +44.20.7772.1666  
Analyst  
cynthia.mar@moodys.com

**Matthieu Collette** +33.1.5330.1040  
VP-Senior Analyst  
matthieu.collette@moodys.com

**Sebastien Hay** +34.91.768.8222  
Senior Vice President/  
Manager  
sebastien.hay@moodys.com

### CLIENT SERVICES

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454

## Social Housing Providers - France

# Policy announcements will hit profitability but institutional framework remains sound

The 2018 French budget contained difficult announcements for the around 840 social housing providers (SHPs). Cuts to housing benefit and stronger incentives to sell existing assets will shake up the SHP sector, but what will this mean for the creditworthiness of the sector as a whole? In this report, we examine the issues through the perspective of Moody's Public Sector Europe's (MPSE) *European Social Housing Providers Methodology* to see what this means for the institutional framework governing French SHPs. While these two key measures are likely to be credit negative, the institutional framework – based on our assessment of the operating environment and regulatory framework – remains sound.

- » **Recent policy announcements will challenge the profitability of French social housing providers.** The government targets cutting their housing benefit bill by a total of €1.5 billion, which will squeeze operating margins and lead to SHPs taking on more debt if they continue to develop. In return for cutting SHPs' revenue, the government announced measures that would be favourable to the sector but will not compensate directly for the lost revenue. The incentivization to sell social units could be a credit positive in terms of cash flow, but, if the social units are not replaced, this policy will erode the balance sheets of SHPs, and weaken their revenue generating capacity.
- » **French SHPs still benefit from a strong institutional framework which supports their creditworthiness.** While cuts in housing benefit will lead to lower levels of revenue, the institutional framework supporting the sector remains strong. The creditworthiness of French SHPs is underpinned by this framework which restricts their noncore commercial activities, provides a stable source of funding, and maintains close oversight.
- » **Financing for social housing provided by a well-established policy bank and other stakeholders.** Much of the financing for the building of social housing is provided by the Caisse des Dépôts et Consignations (CDC, Aa2 Stable, P-1), through which the government provides capital support. The CDC's mission is to transform the savings of French residents into long-term loans serving the public interest.
- » **Regulatory framework provides oversight, powers of intervention, protection from riskier activities.** A network of regulatory entities, each with a specific and defined stake in the sector, provide a very strong regulatory framework with broad powers of intervention and oversight. Private membership-based associations, which group SHPs together according to their legal status, provide further oversight. Lastly, restrictive policies protect SHPs from riskier commercial activities.

## Recent policy announcements will challenge the profitability of French SHPs

In the 2018 budget the French government announced a number of measures which will affect SHPs. Two of the measures, in particular, will have a significant credit impact:

1. Housing benefit for tenants in the social housing sector will be reduced by approximately €60 per month, per unit. This reduction will be fully matched by a cut in the rent received by the SHP who will absorb the loss. The government estimates the total overall cut in housing benefit to be €1.5 billion.
2. The government plans to incentivize social landlords to sell some social units to a centralized entity dedicated to selling units to tenants. The government's intention is to accelerate a disposals policy and use the proceeds from the sales to fund new social housing.

Sudden changes and uncertainty around rent policy are credit negative for the operating environment of French SHPs. However, ongoing consultation between the main stakeholders demonstrates a willingness on the part of the government to engage with the sector.

At the time of writing, the final shape of the reform has yet to be determined. However, the following credit implications are clear:

1. The operating margins of social housing providers will be squeezed by the effective rent cut. Removing €1.5 billion of resources from the social housing sector will necessarily impact margins, and ultimately reserves. The *Caisse de Garantie du Logement Locatif Social* (CGLLS), the public guarantee agency of the social housing sector, estimates that net income of the sector will drop from €2.3 billion in 2016 to €865 million after the reform is fully implemented. On an entity level, weakening the ability of SHPs to self-finance will effectively accelerate the need for weaker social housing providers to merge with stronger ones. The capacity for SHPs to merge will vary according to their legal status and internal structure (see highlight box on the two main categories of SHPs), and in some situations is likely to be challenging. In the medium-term, assuming SHPs continue to develop new units, they will need to take on proportionally more debt, as reserves accumulate at a slower pace.
2. The sale of social units to provide additional funding could be a credit positive in terms of cash flow at the moment of sale. However, depending on intended volume and way the sale is carried out, this scheme carries implementation risk – if the social units are not replaced, this policy will erode the balance sheets of SHPs and weaken their revenue generating capacity.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

### ESHs will have more flexibility to deal with the impact of the reform than OPHs

The social housing sector in France is split quite evenly between two main categories of entities: *Office Publics de l'Habitat* (OPH) and *Entreprises Sociales pour l'Habitat* (ESH) (see Exhibit 1).

The OPHs are public entities which have been set up by, and are still legally linked, to one or several local governments with a very limited and clearly defined remit for the operation, renovation, and construction of social housing. The local government nominates the majority of Board members, which effectively ensures a very strong local focus for OPHs and a limited ability to expand their operations in diversified markets, an acute problem in areas of low demand. The reduction of housing benefit will test their ability to adapt in this rigid operating environment, with limited opportunities to merge with other SHPs.

ESHs are private entities with a similarly defined remit, and dividends are capped at a very low level, making them private entities delivering social housing public policy. ESHs tend to operate in wider and more diversified areas than OPHs, leveraging their ability to expand in high-demand areas to grow their business. Many of them developed through merger and consolidation into group structures, and some have developed a shared back office function model, with a strong focus on operating efficiencies. This greater flexibility and stronger governance translates into a lower recourse to the CGLLS's support plans by ESHs - in 2016, 2% of all ESHs were involved in a recovery plan, whereas this proportion is much higher, 16%, for OPHs. *Action Logement*, which operates the mandatory contribution of employers for housing, is the main shareholder of 72 ESHs out of 240, with close to 1 million homes, around 40% of the ESH's total.

As a result of discussions between the government and sector stakeholders, the government has announced that it will adopt a measure suggested by the *Union sociale pour l'habitat*, an organisation which represents the five different federations of SHPs. Instead of cutting the full €1.5 billion from housing benefit in one year, the reduction of this revenue will be spread out over three years with an initial cut of €800 million in housing benefit in 2018. In return for the delayed implementation, SHPs will pay an increased rate of VAT (from 5.5% to 10%) on the construction of new social rented units or improvements to existing stock. This will allow SHPs to adapt more gradually to the loss of revenue, while shifting a greater contribution to the reduction of the government's deficit onto those SHPs with larger development programmes, which would also likely be the financially stronger entities in the sector. However, increasing the effective cost of development would likely lead to a somewhat lower output of homes for the sector, a result at odds with the government's stated intentions.

The government has also announced measures to mitigate the negative impact of the reform, including an increase in debt funding, more favourable debt service terms for some existing debt and potentially a new mechanism to allow for funds from cash-rich SHPs to be transferred as capital grants to those SHPs with significant development programmes. While we will monitor these developments closely, we note that these measures will not compensate specifically for lost revenue by SHPs.

### French SHPs still benefit from a strong institutional framework which supports their creditworthiness

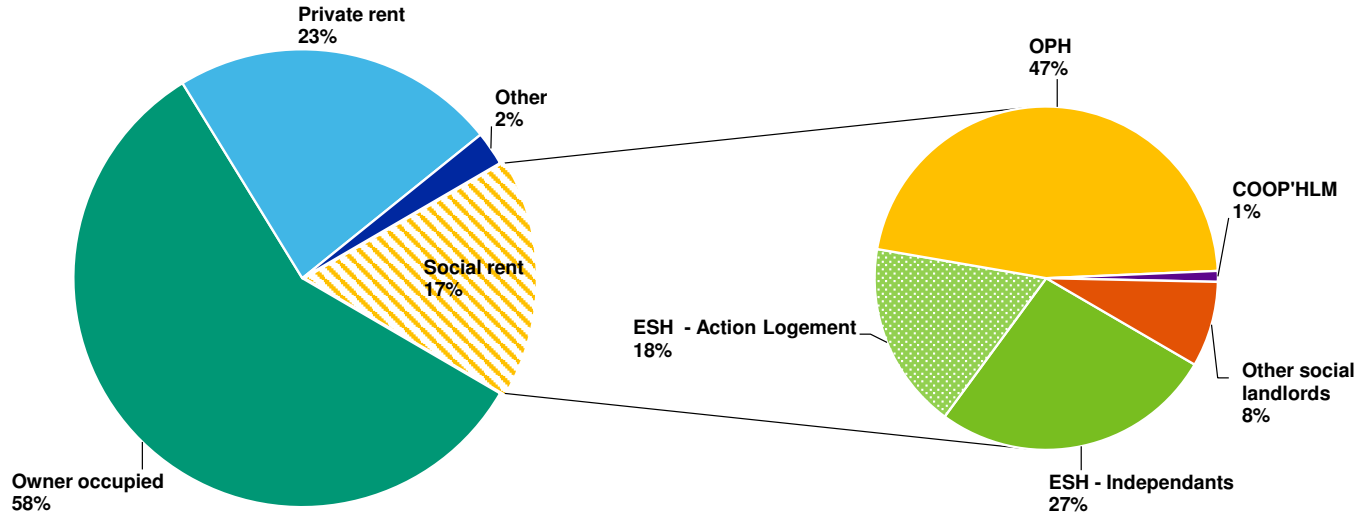
While cuts in housing benefit will lead to lower levels of revenue, the institutional framework supporting the sector remains strong. The creditworthiness of French SHPs is underpinned by this framework which restricts their non-core commercial activities, provides a stable source of funding, and maintains close oversight. The "rules of the game" are well-established, held in place by a network of public and private-sector entities. Looking through the lens of our European Social Housing Providers Methodology, the operating environment and the regulatory framework share characteristics with those that are in the single-a category (see Appendix 2).

The actual, and intended, proportion of social housing is an indicator of the weight that the sector can have in society. A significant portion of the French population lives in social housing, 17% of all households (see Exhibit 1). A law passed in 2000 to encourage social diversity, the *loi de la solidarité et de renouvellement urbain*, established a quota of social housing of 20% for certain municipalities, this target was raised to 25% in 2013.<sup>1</sup> Noncompliance with this policy is punished with a fine, effectively encouraging local governments to work with SHPs to move towards the target proportion of social housing. As home builders, SHPs were responsible for one in five of all new home starts in France in 2016, a clear indicator of the sector's relevance politically and economically.

Exhibit 1

**SHPs play a significant role in French housing policy**

Share of social housing in total number of dwellings and ownership split of social housing homes, 2016, %

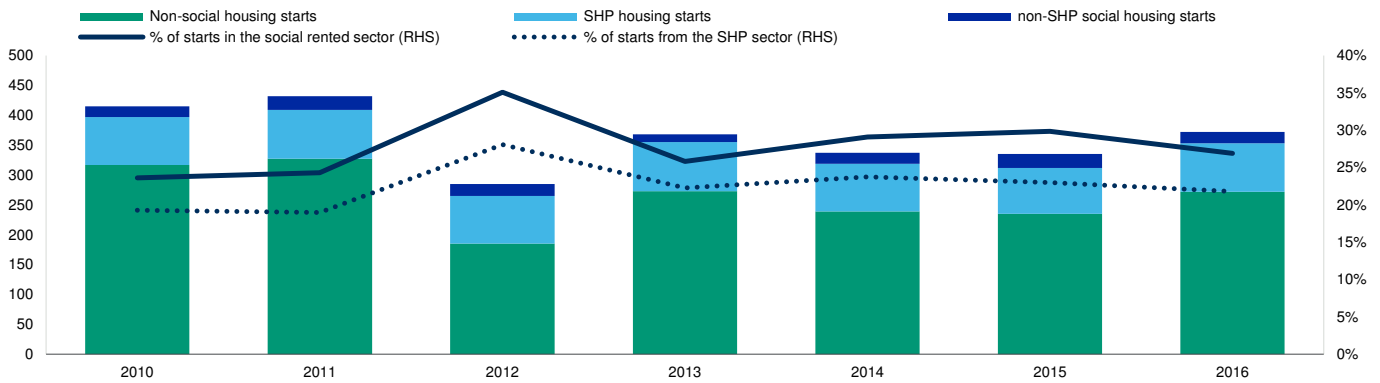


Source: Union Sociale Pour L'Habitat, Caisse de Garantie du Logement Locatif Social, Moody's Public Sector Europe

Exhibit 2

**SHPs provided one fifth of total starts in 2016, relatively stable proportion over the last seven years**

Housing starts in thousands, and proportion of the total



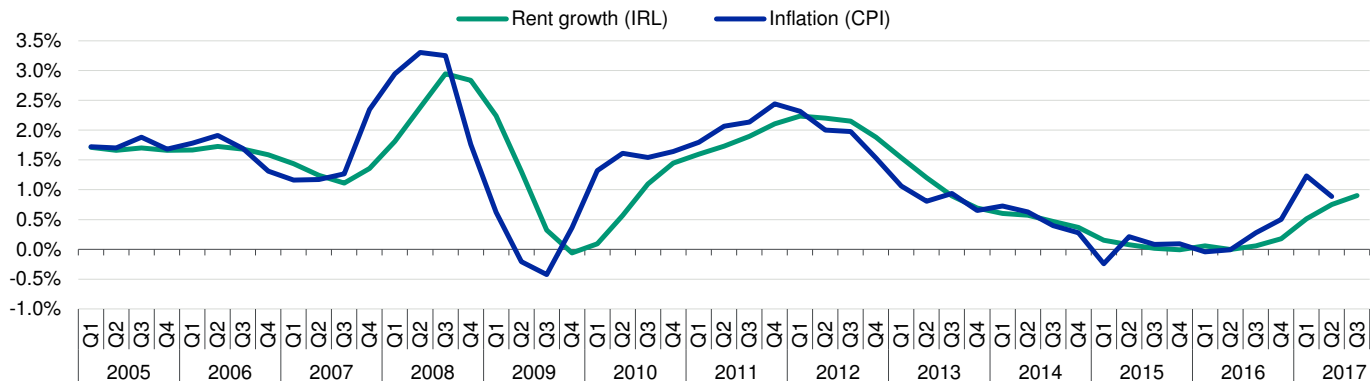
Source: L'Union Sociale pour l'Habitat, Moody's Public Sector Europe

The policy governing social housing, in particular for rents and subsidies, are fundamental to our analysis of the operating environment. Social housing rents are strictly regulated in France, and are indexed to inflation, through the *indice de référence de loyers* (IRL), so that a SHP's main revenue stream will generally rise in proportion with costs. As of the time of writing, no plans have been announced which would change this indexation, social rents will continue to evolve in-line with the IRL.

Exhibit 3

**Rent growth is indexed on a measure of CPI, contributing to the sector's stability**

CPI and IRL, %



Source: INSEE

Moreover, different categories of social rented accommodation are supported by different financing programmes, and subsidized correspondingly (Exhibit 4). The financing of units destined for the most vulnerable are the most heavily subsidized, as rents received will be the lowest, while units destined for those tenants with higher incomes will be the least subsidized, as rents will be higher. These gradations ensure that rent received is in proportion to the cost of the financing, and that all rented properties should provide sufficient cash flow to service the debt taken on for that specific scheme. While the cut in housing benefit is clearly a credit negative development, the overall policy framework governing rents remains supportive.

Exhibit 4

**CDC financing conditions aligned to social rent levels, along with tax breaks, are a key pillar of the sector's institutional architecture**

Financing conditions and rent level per tenure and type of location

Categories by tenant income	Interest rate	Maximum State grant	Reduced VAT rate	Real estate tax exemption	Rent per m2, EUR		
					Paris and surrounding areas	Municipalities with populations of 100,000 or more	Other
Lowest incomes	Livret A -0.2%	20%	5.5%	25 years	5.6 - 5.9	4.9	4.6
Moderately low incomes	Livret A +0.6%	5%	5.5%	25 years	6.3 - 6.7	5.5	5.1
Moderate incomes	Livret A +1.1%	--	5.5%	25 years	10.1 - 13.1	8.3 - 8.7	7.7
Intermediate incomes	Livret A +1.4%	--	--	--	12.5 - 16.8	10.1	8.7

These categories are commonly referred to in the French SHP sector by the acronym for the funding scheme. PLAI (*Prêt locatif aide d'intégration*) are intended for those on the lowest incomes. PLUS (*Prêt locatif à usage social*) are intended for those on moderately low incomes and are considered the "classic" social housing product. PLS (*Prêt locatif social*) and PLI (*Prêt locatif intermédiaire*) for those on moderate and intermediate incomes, respectively.

Source: Caisse des dépôts et consignations, Union Sociale Pour L'Habitat

**Financing for social housing provided by a well-established policy bank and other stakeholders**

Much of the financing for the building of social housing is provided by the CDC, through which the government provides capital support (see Exhibit 5). The CDC supports government policies at the state's behest, and its mission is to transform the savings of French residents into long-term loans serving the public interest. The CDC is responsible for the collection of several regulated savings and deposits products which form the foundation of its financial solidity.

At the end of 2016, the CDC had an outstanding loan portfolio of €182 billion, with a strong concentration in the social housing sector (58%), of which around €9.5 billion in new loans to the sector in the year. Thus, the CDC has a strong vested interest in a robust social housing sector. Interest rates charged to SHPs are indexed to the savings rate of the *Livret A*, a government regulated savings account available to the general public, making the loan servicing for SHPs relatively stable and predictable (see highlight box on the *Livret A*).

Loans from the CDC to SHPs must be explicitly guaranteed, and are commonly done so by the local governments within which SHPs operate, or the CGLLS.

CDC funding is complemented by *Action Logement*, an entity which manages the mandatory contributions of French employers to home building. These contributions funded loans of €1.3 billion to the sector in 2016 along with around €190 million in grants and capital injections. The CDC, in partnership with *Action Logement*, also finance a loan programme called the *prêt de haut de bilan bonifié*, comprised of a total of €2 billion of loans on very favourable terms, with maturities of 30-40 years and a 20-year grace period on principal and interest. The CDC and *Action Logement* have proposed a further €2 billion extension of this scheme to be confirmed before the end of 2017. These types of funding provide some protection against the cyclical nature of commercial bank lending.

#### What is the Livret A and what role does it play in the French SHP sector?

Much of the financing for the social housing sector comes from the *Livret A*. This is a regulated savings account, available from all private banks in France, which earns tax-free interest (0.75% since 2016) and is capped at €22,950 per person. At the end of 2016, more than 80% of French residents owned a *Livret A* account, with more than €270 billion, approximately 5% of total household financial wealth, held in *Livret A* accounts. Banks receive a fee for distributing the accounts and are mandated to transfer the majority of those deposits, along with other regulated accounts, to the CDC, which uses the bulk of those funds to finance the social housing sector.

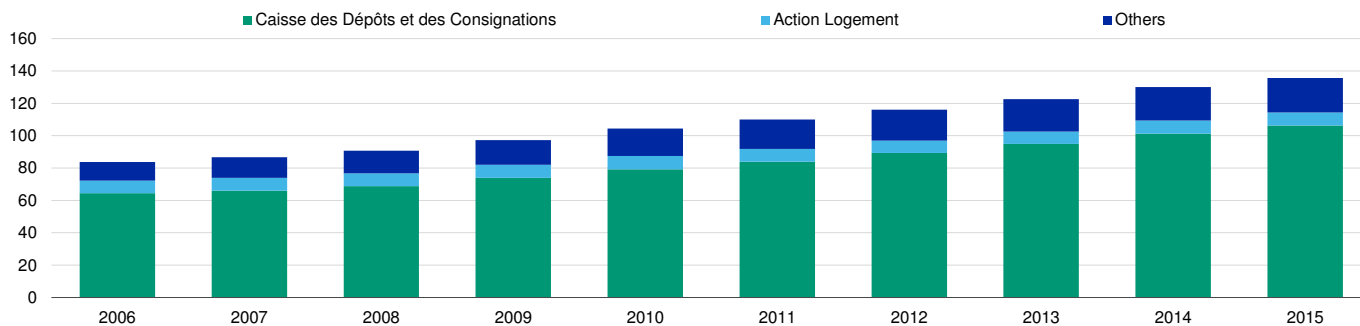
The interest rate of the *Livret A*, currently at a low relative to historic trends, also serves as a reference for loans extended by the CDC for social housing. The interest rate charged to SHPs is the rate of the *Livret A*, adjusted with a margin according to the category of the social rented property (see Exhibit 4). Even though CDC loans are indexed to the variable *Livret A* rate, they do not expose SHPs to an interest rate volatility risk. Indeed, the CDC extends these loans under a *double révisabilité* framework under which an increase in the *Livret A* interest rate is passed on gradually through a progressive increase in debt service payments.

The government's proposal to maintain the interest rate of the *Livret A* at its current level for two years, in order to compensate for the housing benefit cut, would only have a small impact on the sector's ability to produce surpluses, as total debt service remains broadly stable through interest rates changes.

Exhibit 5

#### The CDC is the social housing sector's main creditor, holding over 78% of outstanding debt

Total debt of OPHs and ESHs by creditor (€ billion)



Source: Union Sociale Pour L'Habitat, Moody's Public Sector Europe

#### Regulatory framework provides oversight, powers of intervention, protection from riskier activities

Social landlords in France are regulated by *L'Agence nationale de contrôle du logement social* (ANCOLS), a legislatively mandated public regulator that sits within the French Housing Ministry. ANCOLS' primary responsibility is to monitor and assess the health of SHPs, conducting in-depth reviews which include assessments of the entity's operations, development strategy and finances. In the case of serious failure to meet standards, ANCOLS' powers of sanction are broad and include the removal of management or board members,

monetary penalty of up to €2 million, loss of permission to perform one or more of the entity's duties, or complete dissolution of the entity. These powers of intervention are comparable to those we would assess at the double-a to single-a categories (see Appendix 2).

Further regulatory support is provided by the CGLLS whose mission is to protect public investment in the social housing sector, and which is funded in large part by SHP membership fees. The CGLLS has three main functions: to provide guarantees to CDC debt when a local government is unable or unwilling to do so; to intervene in cases of weak or failing SHPs either by providing assistance in the entity's recovery or by brokering a merger; and to facilitate housing policy through SHP financing or regeneration projects.

In terms of regular data reporting, as the main lender to the sector, the CDC also monitors and sets performance thresholds for the sector. SHPs are required to submit financial accounts and multiyear business plans to the CDC. The ANCOLS, CGLLS, and CDC, working in coordination with SHP member-based associations, and the USH, form the supportive framework of public and private-sector entities which support, regulate and monitor the SHP sector.

In addition to policies governing operating activities such as rents and subsidies, policies governing investment and nonsocial activities are equally important to our analysis. Significantly, the French policy framework restricts SHPs from participating in noncore commercial activities. SHPs are allowed to dispose of social housing assets to their tenants within a tightly regulated framework, which requires that the unit be at least 10 years old. There is a scheme by which SHPs can develop units which are then sold to purchasers earning a salary within specified limits, and both purchase and construction can be then financed by a specific loan product. These regulated homeownership products remain very limited in scale. French housing associations have no outright sales or market rent products, and hence have no ties to a potentially volatile housing market.

## Appendix 1 : European Social Housing Providers Methodology Baseline Credit Assessment Scorecard

### European Social Housing Providers Methodology

Broad Factors	Factor Weighting	Sub-Factors	Sub-Factor Weighting
Institutional Framework	20%	Operating Environment	10%
		Regulatory Framework	10%
Market Position	10%	Units Under Management	10%
Financial Performance	25%	Operating Margin	5%
		Social Letting Interest Coverage	10%
		Cash Flow Volatility Interest Coverage	10%
Debt and Liquidity	25%	Debt to Revenue	5%
		Debt to Assets	10%
		Liquidity Coverage	10%
Management and Governance	20%	Financial Management	10%
		Debt and Investment Strategy	10%
Total Scorecard Indicated Outcome			100%

## Appendix 2 : Institutional Framework factors in the Scorecard

### Factor 1A. The Operating Environment – 10%

		aaa	aa	a	baa	ba	b
Operating Environment	10%	Social housing plays or is expected to play a critical role in housing policy and represents a significant (over 30%) share of housing. Housing policy is very stable and predictable. Strong and increasing government capital support. Government funder has very strong financial health and there are no pressures on housing budgets. SHPs have: Very high level of revenue flexibility including ability to raise rents without government consent and a long history of rent increases. Ability to engage in ventures outside of core mission to generate revenue. Very strong ability to cut costs in times of financial need.	Social housing plays or is expected to play an important role in housing policy and represents a very high (over 20%) share of housing. Housing policy is stable and predictable. Strong and moderately increasing government capital support. Government funder has strong financial health and there are no pressures on housing budgets. SHPs have: High level of revenue flexibility including ability to raise rents without government consent and a history of rent increases. Ability to engage in ventures outside of core mission to generate revenue. Strong ability to cut costs in times of financial need.	Social housing plays or is expected to play an important role in housing policy and represents a high (over 15%) share of housing. Housing policy is generally stable and changes are made in consultation with housing providers and done with ample notice. Strong and stable government capital support or support increasing from a low level. Government funder has strong financial health and adequate funding of housing budgets. SHPs have: Moderate revenue flexibility including ability to raise rents without government consent. Ability to engage in ventures outside of core mission to generate revenue. Reasonably strong ability to cut costs in times of financial need.	Social housing plays or is expected to play a role in housing policy and represents a modest (over 5%) share of housing. Housing policy is generally stable and when changes are made they are done with adequate notice. Moderate and generally stable government capital support. Government funder has adequate financial health and adequate funding of housing budgets. SHPs have: Modest revenue flexibility including ability to raise rents with government consent and a history of obtaining approval for rent increases. Moderate ability to cut costs in times of financial need.	Social housing plays or is expected to play limited role in housing policy or represents a limited (3-5%) share of housing. Housing policy is generally stable, but when changes are made it is with limited notice; or policy is evolving, but changes are made with adequate notice. Limited government capital support or materially declining. Government funder has adequate financial health, but there are pressures on housing budgets. SHPs have: Limited level of revenue flexibility including the ability to raise rents with government consent and an inconsistent history of receiving approval for rent increases. Limited ability to cut costs in times of financial need.	Social housing plays or is expected to play little or no role in housing policy. Housing policy is evolving and changes are made with limited notice. No projected government capital support or rapidly declining support. Government funder has generally adequate financial health but there are pressures on housing budgets. SHPs have: Very limited level of revenue flexibility. Raising rents has been or is expected to be difficult. Very limited ability to cut costs in times of financial need.

### Factor 1B. The Regulatory Framework- 10%

Regulatory Framework	10%	Active and legislatively mandated public regulator with predictable and enumerated powers. Ability to intervene early in cases of suspected mismanagement or liquidity distress and a track record of early and effective intervention. Extremely strong oversight, including approval of and limits on borrowing.	Active and legislatively mandated public regulator with enumerated powers. Ability to intervene early in cases of mismanagement or liquidity distress and a track record of timely and effective intervention. Very strong oversight, including approval of borrowing.	Legislatively mandated public regulator with enumerated powers. Ability to intervene in cases of mismanagement or liquidity distress and a track record of effective intervention. Strong oversight, including restrictions on borrowing.	Legislatively mandated public regulator with limited enumerated powers. Ability to intervene in cases of mismanagement or liquidity distress and a reasonable track record of intervention. Good oversight including restrictions on borrowing.	Legislatively mandated public regulator with tools of intervention based in precedent or similar non-codified sources. A precedent for intervention, but limited legal powers or a limited track record of effective intervention. Good oversight including practical limits on debt levels.	Public regulator with weak or changing powers. Where there is a regulator, it has very limited powers and or no history of intervening in cases of struggling social housing providers. Minimal oversight with some limits on borrowing.
----------------------	-----	--	--	---	---	--	--

## Endnotes

- 1 Municipalities larger than 3,500 inhabitants (1,500 in Ile de France) within urban areas with a population of 50,000 or more.



Moody's Public Sector Europe is the trading name of Moody's Investors Service EMEA Limited, a company incorporated in England with registered number 8922701 that operates as part of the Moody's Investors Service division of the Moody's group of companies.

© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

## Contacts

Cedric Berry  
Associate Analyst  
cedric.berry@moodys.com

+44.20.7772.1377

Maylis Chapellier  
Associate Analyst  
maylis.chapellier@moodys.com

+44.20.7772.1429

## CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454