THE CRISIS OF AFFORDABILITY IN REAL ESTATE

An investment case for housing in the middle of the pyramid

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CONTENTS

EXECUTIVE SUMMARY

In this report, we aimed to define and assess real estate affordability for middle-income households and commercial real estate market participants (the "middle of the pyramid"). We estimated that the potential affordable housing market catered to this population segment is significant: USD 502 billion, covering 50.4 million households, an increase of 7.3% from 2015. While our data cannot answer the question of an "unaffordability bubble" for median income market participants, we did find that only four countries among the 97 we analyzed had affordable real estate available that covered at least 50% urban populations for rentals, and only six countries for homeownership.

By 2050, two-thirds of the world population is expected to live in cities, about a fifth of that urban population will be characterized as middle-of-the pyramid based on income distribution. The steep inflow of creditworthy middle-income working population into metropolitan areas suggests a long-term opportunity for investors to address rising demand for affordable housing options in both residential and commercial space.

In the short-term, we considered unaffordability in real estate markets as a potential risk, as data has shown that rental and sales prices for the luxury market segment (real estate priced in the top quintile of local pricing) have already peaked and have started to decline, while the opposite has happened with more affordable housing segments. The result for an investor may be a diversification imbalance, with real estate overexposure to the luxury market at the cost of a more diversified portfolio of high credit-worthy, sustainable cash flow properties that could be a defensive hedge against economic cycles.

The affordability gap in the market, with more than 50 million households by 2020 potentially left out of the biggest cities globally given the lack of affordable options, extended to business markets as well, with SMEs squeezed. In both cases, indirect market participants could also feel the effects of a top-heavy global real estate market.

KEY FINDINGS

- Rental housing costs and mortgage payments represented an unaffordable burden for households earning a median disposable income in 75% of the 307 cities across 97 countries that we analyzed as of December 31, 2015. Data suggests that while unaffordable housing was more prevalent in emerging markets than in developed ones, it is a phenomenon experienced across the world.

- We identified 10 cities, including Shanghai, New York, Washington DC, Seoul, and London, with the largest potential for offering affordable housing both in terms of the number of households that meet investment criteria, as well as the size of the investable universe (30% of the global sample of 307 cities).

- We analyzed affordable market penetration for 161 real estate company constituents on the MSCI ACWI Investable Market Index (IMI) as of December 2015 and found that 25 companies (15%) held assets or were exposed to cities with extreme levels of

unaffordable housing costs (where median housing costs were greater than 100% of median disposable income). The biggest companies by market capitalization were Hang Lung, Sun Hung Kai and Swire Properties.

- Conversely, we found 49 real estate companies (30%) had property assets located in cities where housing costs were considered affordable (with costs less than 40% of disposable income). The biggest companies by market capitalization were AvalonBay, Equity Residential and CapitaLand Ltd. However, only 23 companies may be actively targeting affordable housing solutions with explicit offerings.

- In only four companies (Scentre, Schroder REIT, Bixmor and Growthpoint), we found evidence of programs that address the SME segment. These companies represented only 1.8% of the total assets' value of the MSCI ACWI IMI real estate constituents.

- We evaluated 180 public policies that relate to affordable housing in 33 countries. We found that Canada, India and USA, which had the highest number of policies, enjoyed higher levels of housing affordability, either rental, ownership or both, as of 2015.

1   AFFORDABLE HOUSING FOR THE MIDDLE OF THE PYRAMID[1]

While the term "affordable housing" is usually associated with the population at the base of the income pyramid, in this report we explore housing affordability for population at the middle of the pyramid (earning +/- 15% of a city local median disposable income). As of the end of 2015, we find that housing for people in the middle of the pyramid is unaffordable in most cities and countries that we studied. However, the potential affordable housing market catered to this population segment is significant (USD 502 billion by 2020), and it is fueled by high potential monthly rents (> USD 1,000) and by credit worthy households. All results are as of December 31, 2015, unless otherwise stated.

1.1   DEFINING AFFORDABILITY: HOW MUCH AND FOR WHOM, HOW BIG, WHERE?

Despite media attention on ever-rising housing costs, policy makers, academics and investors lack a consistent global measure of housing affordability. We seek to create a common definition of housing affordability, which includes multiple factors that reflect city level economic conditions (household disposable income, utility and apartment prices) and country specific household features. The elements used here for defining affordable housing for a population segment earning approximately the local median disposable income, are:[2]

- **housing costs not exceeding 40% of the annual median disposable income per household;**

- **maximum occupancy of two people per bedroom to avoid household overcrowding; and,**

- **urban housing.**

Public policies that point to the affordability threshold show that in Canada and in the EU **this threshold rose from 20% in the 1950s**[3] **to 40% in 2014**[4]**. This difference illustrates the increasing economic burden of housing costs, possibly at the expense of other basic needs**, such as food, clothing, education, healthcare or leisure.[5]

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[1] The author thanks Bert Teuben, Brian Browdie, Christina Cudworth, Cyrus Lotfipour, Jahiz Barlas, Jerry Lettieri, Linda-Eling Lee, Matt Moscardi, Morgan Ellis, Niel Harmse, Olga Emelianova, Phil Barttram, Jianpeng Wen, Zhen Li, Sam Block, Veronique Menou and Whitney Rauschenbach for many helpful comments and conversations from the inception of this project to its completion.

[2] See Appendix for underlying assumptions on defining affordability, and the size of urban population in countries and cities in this report relative to the world.

[3] Hulchanski, J. David, "*The concept of housing affordability: Six contemporary uses of the housing expenditure to income*", 1995, Housing Studies, Vol. 10 Issue 4.

[4] Di Meglio, E., "*Housing conditions in 2014*", Eurostat news release, 204/2015 - 23 November 2015.

[5] We found no quantitative research in historical and contemporary academic or policy sources on the marginal effect of housing costs on other basic needs in order to establish an affordability threshold. We found that this analysis was only available at the national level, where excessive reliance on domestic savings and government debt for housing programs potentially crowd out investments in health and education. See: Dasgupta, B., "*Urbanization and Housing Investment*", 2014, World Bank.

1.2   AFFORDABILITY AS A LONG-TERM INVESTMENT THEME

Urbanization is a byproduct of economic development across the world and, hence, may be an important theme in long-term institutional investment strategies. Regardless of the development stage or path chosen by a county to improve living conditions, population in urban areas has increased at the expense of rural and suburban locations in all regions around the world and the United Nations World Urbanization Prospects estimates that this will continue to be the case (see Figure 1). The United Nations World Urbanization Prospects points out that urbanization trends globally will only increase population in cities, which could heighten the importance of affordability. Therefore, we focus on evaluating housing affordability in urban areas.

FIGURE 1. Urbanization by Region in 2010 and 2050
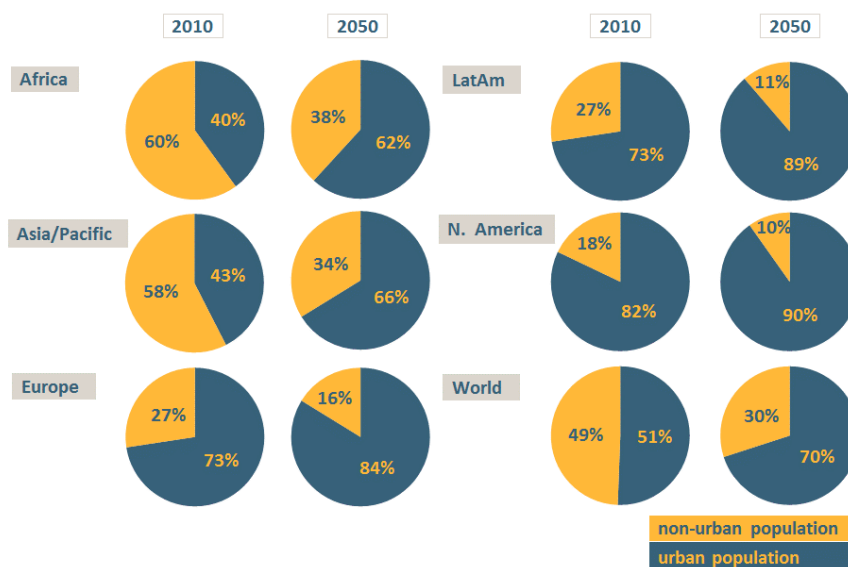
Source: United Nations World Urbanization Prospects.

1.3   MEDIAN HOUSING COSTS FOR RENTAL HOUSING RELATIVE TO INCOME

Our research indicates that rental housing costs represented an unaffordable burden for households earning the local median disposable income and renting a median-priced residential unit in 75% of the sample cities (see Figure 2). Data suggests that while unaffordable rental housing options were more prevalent in emerging markets (EM) than in developed (DM) ones, it is a phenomenon experienced across the world (see Figure 3).

FIGURE 2. Median housing costs for rental properties as percentage of median disposable income by city.

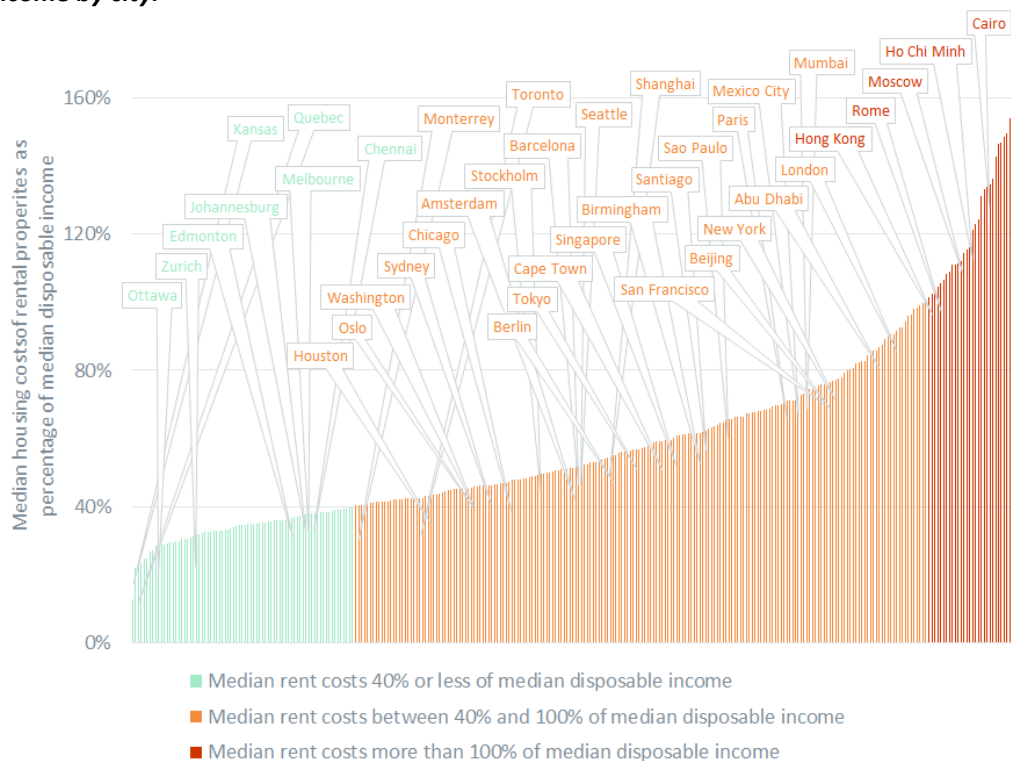**FIGURE 3. Developed and emerging markets characterized by affordability of urban rental residential properties.**
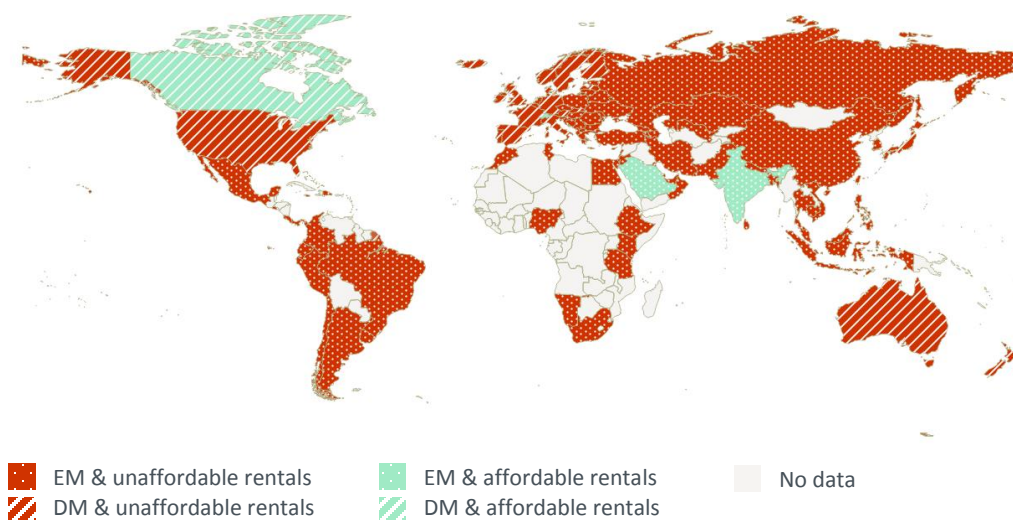
Median housing costs as a proportion of median disposable income in 307 cities of 97 countries, which account for approximately 658 million inhabitants or 19% of urban population in those countries. Sources: ILOstat, Numbeo and MSCI ESG Research.

Total population in sample cities characterized by high-priced residential rental conditions included 87% and 79% of EM and DM[6] urban inhabitants, respectively.[7]

FIGURE 4. Years needed to save for median down payment, if saving at most 40% of

Sources: ILOstat, Numbeo and MSCI ESG Research.
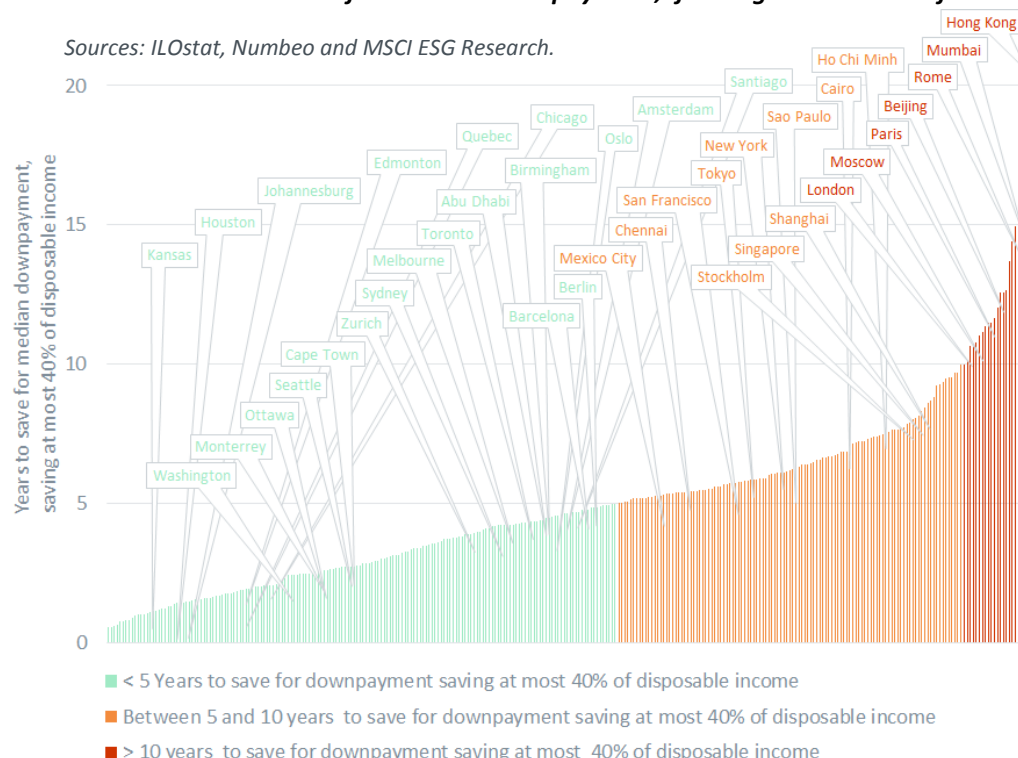
1.4 MEDIAN HOUSING COSTS FOR HOMEOWNERSHIP RELATIVE TO INCOME

YEARS NEEDED TO SAVE FOR A DOWN PAYMENT

Purchasing a property is the second housing option that we considered in order to assess affordability. To this end, we divided the analysis in two parts: first, we calculated the

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[6] For the purposes of this report, we used the latest available information in each of the topic when writing this report. In this sense, we categorize as developed markets those countries that are included in the developed markets membership of MSCI World Index. We classified countries as Emerging Markets, if they were members of MSCI Emerging & Frontier Markets Index. For the exact definition of developed, emerging and frontier markets under MSCI's index taxonomy, please refer to https://www.msci.com/market-cap-weighted-indexes. For the rest of the countries that are included in this report and do not have a membership in MSCI's market capitalization weighted indexes, we followed IMF's advanced economies definitions to classify them as developed markets, and further supplemented this source with the US CIA's World Factbook list of developed countries. See: International Monetary Fund, "*World Economic Outlook: Adjusting to Lower Commodity Prices*", 2015; and https://www.cia.gov/library/publications/the-world-factbook /appendix/appendix-b.html. See Annex I, Figure 20 for a list defining country membership in markets and regions.

[7] For percentages of urban population by country represented by the sample cities considered in this study, see Figure 20 in Annex I. For a complete list of cities and their housing costs to income relationship when including rental payments, see Figure 19 in Annex I. From the total population in all sample cities, EM population accounted for approximately 76% and the DM one for 24%. Sources: ILOstat, Data World Bank and MSCI ESG Research.

number of years it takes to afford a down payment for a median-priced property assuming a 20-year mortgage by saving at most 40% of disposable income. Second, we calculated housing costs that include a median monthly mortgage payment, using interest gross rates for mortgages that are specific for each city. **We assumed a 20% down payment and a 20-year mortgage** given that data for interest rates was only available for this mortgage term. There was no data availability for closing costs, so we assumed closing costs equal zero for all cities (see property pricing assumptions on p. 6, *1.1 Defining affordability: how much and for whom, how big, where?*).

FIGURE 5. Median monthly housing costs including mortgage payment costs.
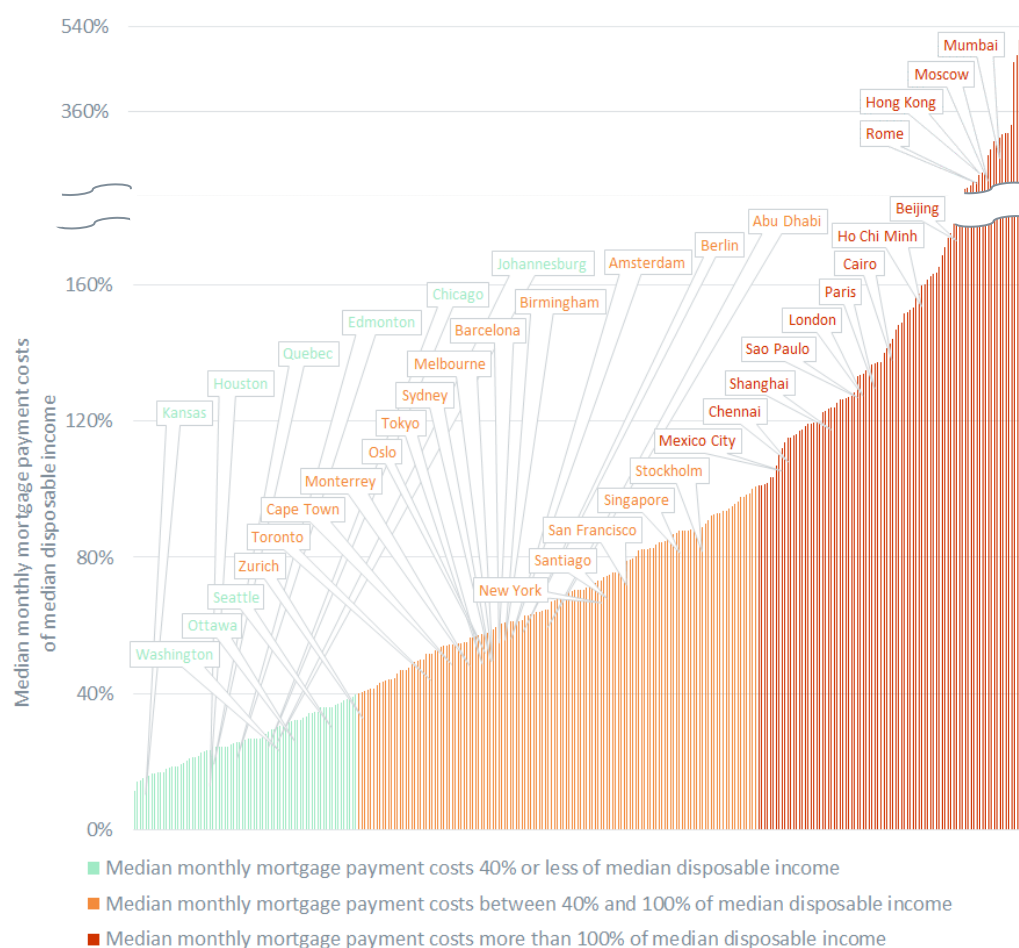
Sources: ILOstat, Numbeo and MSCI ESG Research.

To determine the time needed to save for an affordable property down payment, we took into account that 80% property value would be paid in 20 years. This is equivalent to saving 4% of the property value per year. In this sense, **five years is the maximum time that it should take for a household earning a median income to save for a 20% down payment** of a median-priced residential property in order to consider such property affordable.

The length of saving periods for a down payment associated with an unaffordable property, i.e., more than five years of savings, was typical for both EMs and DMs (see Figure 4). However, **EMs seemed to be characterized by a higher level of housing unaffordability, as the average saving period to fund a down payment was 7.0 years vs. 4.8 years in DMs.**[8] **Most inhabitants of DMs sample cities enjoyed saving periods associated with affordable homes (65%), while the same was true for only a minority of EMs residents (25%)**.

The countries that contributed the most population for this latter finding were USA (23% of all DM population in sample locations), Canada (13%) and Australia (9%), possibly due to their historical policy efforts to incentivize settlements of immigrants across their vast territories.[9]

FIGURE 6. Developed and emerging markets characterized by affordability of urban housing costs including mortgage payments.

▦ EM & unaffordable mortgages	▦ EM & affordable mortgages	☐ No data
▨ DM & unaffordable mortgages	▨ DM & affordable mortgages	
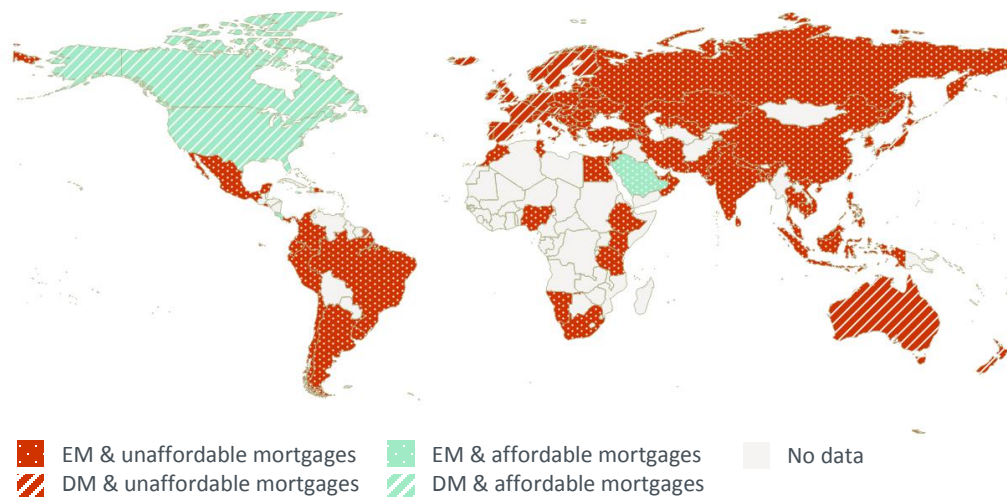
Developed and emerging markets characterized by affordability of urban housing costs including mortgage payments experienced by more than 50% of local urban population in sample locations. Sources: ILOstat, Numbeo and MSCI ESG Research.

MONTHLY MORTGAGE PAYMENTS

Unaffordable housing levels were higher for the property ownership option in comparison with rental alternatives (see Figure 5). For the mortgage payment option, data confirms the housing affordability characteristics that we found for the rental alternative:

- Housing unaffordability was widespread across markets, as **only six out of 97 countries, weighted by population in sample cities, displayed affordable mortgages conditions** (see Figure 6).

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[8] Averages are weighted by the respective percentage that each city population represents of the total EM or DM population, as represented by sample locations in each region.

[9] For a complete list of cities and their saving periods to afford a property down payment, see Figure 19, in Annex I.

- **There was a higher proportion of cities and associated population in EMs than in DMs that displayed an unaffordable mortgage profile**. In EMs, unaffordable mortgages characterized 95% of EM sample cities (associated with 97% of total EM sample population), while for DMs these mortgages typified 54% of cities (69% of population).[10]

FIGURE 7. Housing expenses as a percentage of disposable income under home rental vs. home ownership scenarios.
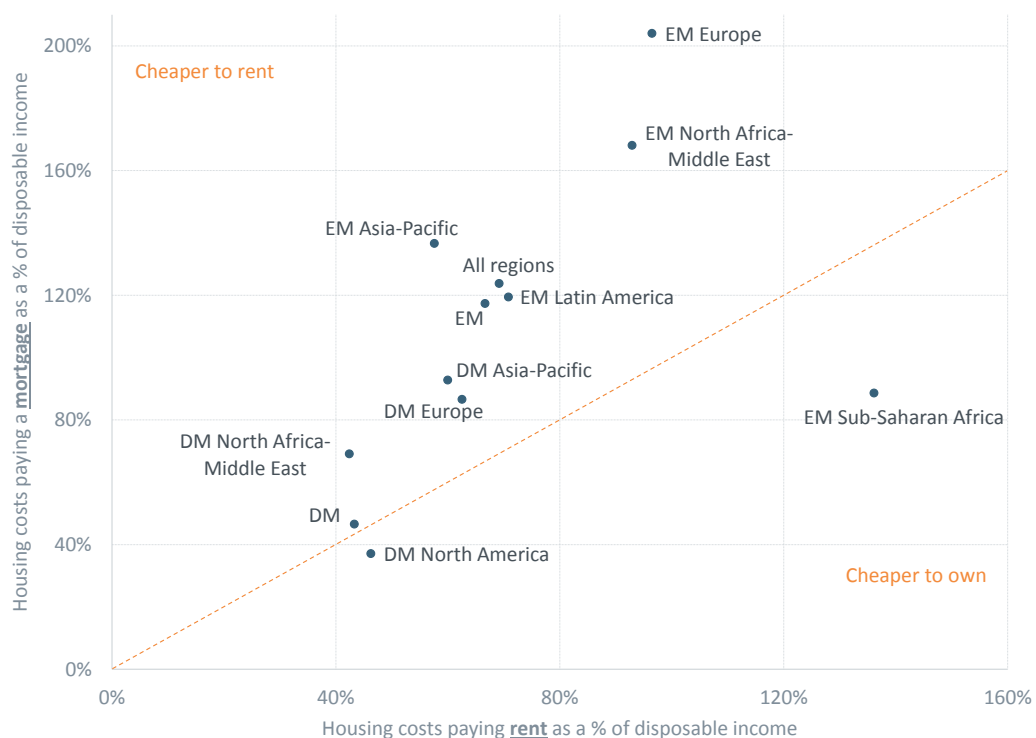
See Annex I, Figure 20 for a list defining country membership in markets and regions. Housing costs represent cities averages costs weighted by population. Sources: ILOstat, Numbeo and MSCI ESG Research.

1.5   HOUSING INVESTMENT MARKET: RENTALS OR HOMEOWNERSHIP?

Aggregating country data at the regional level, **we found that the only region where cost of housing on average** (cities' average costs weighted by population) **fell below 40% of disposable income was DM North America (NA) for the homeownership case. In DM NA**, housing costs when paying a mortgage typically represented 37% of disposable income (see Figure 7). With the exception of EM Sub-Saharan Africa (AF) and DM NA, **we find that housing costs when paying a mortgage are higher than when paying a rent for all regions, this difference ranges from 24% in DM Europe (EUR) to 108% in EM EUR**. This difference is mainly driven by high mortgage costs in Ukrainian and Russian cities. Cities in EM EUR have

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[10] For a complete list of cities and their housing costs to income relationship when including mortgage payments, see Figure 19 in Annex I.

among the highest median housing costs, as the lowest housing costs in the region are 50% and 61%, respectively for rental and mortgage options.

1.6   POTENTIAL AFFORDABLE HOUSING MARKET SIZE

The definition of the market size for affordable residential properties could be different for different investor types. An institutional impact investor concerned with generating the widest positive impact could give more weight to the number of households in a particular location that could potentially benefit from capital deployment. Conversely, a strategic investor could pay more attention to the aggregate magnitude of the potential spending on housing costs that households could afford in a certain city, together with the size of potential monthly payments to gauge market depth and prospective revenue. Both types of investors may utilize a combination of the aforementioned metrics to make their investment decisions, together with supplementary data such as population growth rate, GDP size and growth rate, and availability of basic services, among others.

FIGURE 8. Potential market size for affordable residential properties by city
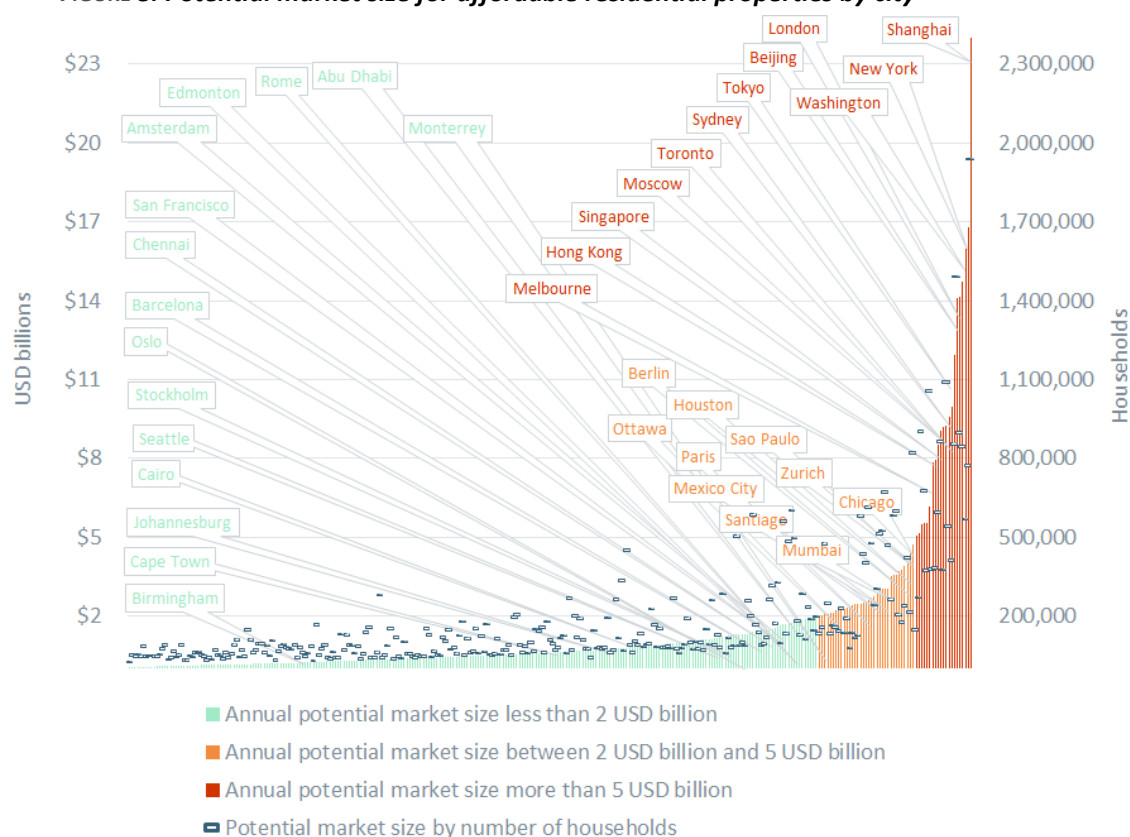
Right side axis corresponds to an aggregate market size (in USD billions) as measured by 40% of median disposable household income in each city multiplied by the number of qualifying households per city. Left side axis corresponds to the number of such qualifying households, as defined by +/- 15% of median income excluding households with a credit default risk. Sources: FICO, ILOstat, Numbeo, US Census Bureau and MSCI ESG Research.

To calculate the market size for affordable residential properties by city, we accounted for approximately +/- 15% of households around the median income bracket.[11]

However, we did not include 21% of those households, as their income levels are associated with credit defaults and, hence, might exceed the risk appetite of investors.[12]

For the sample cities included in this study, **we calculated that the total annual value of the affordable housing market was approximately USD 468 billion and 46.9 million households** (see Figure 8). Assuming a projected growth rate of 1.7% annually that urban population will experience over the next five years at the country level (other things equal),[13] **we estimate that the affordable market in the sample cities could grow to USD 502 billion and 50.4 million households by 2020.** We found that **10% of these global cities included in the analysis (or 32 of them) concentrated about 54% of the affordable market opportunity by value in USD and nearly 40% of all households** (see Figure 9).

FIGURE 9. Top 10 cities for affordable residential properties ranked by market size in USD.

City	Potential annual market size for affordable housing, USD billions	Potential annual market size for affordable housing, households	Potential monthly affordable housing cost, USD
Shanghai, China	$24.0	1,823,667	$ 1,040
New York, NY, United States	$16.8	712,602	$ 1,870
Washington, DC, United States	$16.0	518,632	$ 2,440
Seoul, South Korea	$14.7	780,767	$ 1,500
London, United Kingdom	$14.1	831,249	$ 1,350
Beijing, China	$14.1	1,397,627	$ 800
Tokyo, Japan	$11.9	792,101	$ 1,190
Sydney, Australia	$ 9.9	370,226	$ 2,130
Toronto, Canada	$ 9.6	493,879	$ 1,530
Moscow, Russia	$ 9.2	1,015,835	$ 720

Shanghai Sources: FICO, ILOstat, Numbeo, US Census Bureau and MSCI ESG Research.

The two biggest shares of the market volume are located in DM NA and EM Asia-Pacific (EM AP), 26% by USD each. For DM NA, the high median level of potential monthly expenditure (USD 1,490) and a high population (13% of households of the total sample) drive this outcome. For EM AP, the result is due to the high population level in the region

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[11] Income distributions across countries vary and, hence, the number of income brackets above and below the median income level that contain 15% of the local population will be different. In general, however, income distributions in countries display more households grouped in brackets that are below the median income level than above it. In this, sense, less income brackets of the same size below the median income level will account for 15% of population, than those that will account for this population percentage above that same income level. Using as a reference the USA income distribution, represented by a GINI coefficient of 45.0, countries with GINI coefficients above this level (i.e., with more unequal income distributions) will have relatively more population than the USA below the median income level. See Appendix I, Figure 20 for a list of countries and their GINI coefficients.

[12] We used FICO definition of poor credit, as having debts with 90 or more days past due over a 24 month window. We also used FICO's delinquency rate by income deciles to adjust the household size by city that could be eligible as renter or borrower. See: Bell, R., "*Does making a high salary automatically mean one is a good credit risk?*", 2010, Risk & Compliance, FICO Blog

[13] Source: World Bank http://data.worldbank.org/indicator/SP.URB.TOTL?display=default.

(34% of households of the total sample), given that median potential expenditure in housing is relatively low (USD 370), see Figure 9.

The top 10 cities represent about 30% of this market in USD from global sample cities (see Figure 9). For all of these top cities, data suggests that households could afford relatively high housing costs per month, which in all cases go beyond USD 1,000 with exception of Beijing (USD 800) and Moscow (USD 720). For a detailed list of market sizes and housing costs by city, see Figure 19 in Annex I.

FIGURE 10. Top ten residential portfolios of MSCI ACWI IMI companies exposed to cities with extreme levels of unaffordable housing costs (median housing costs >100% of median disposable income)
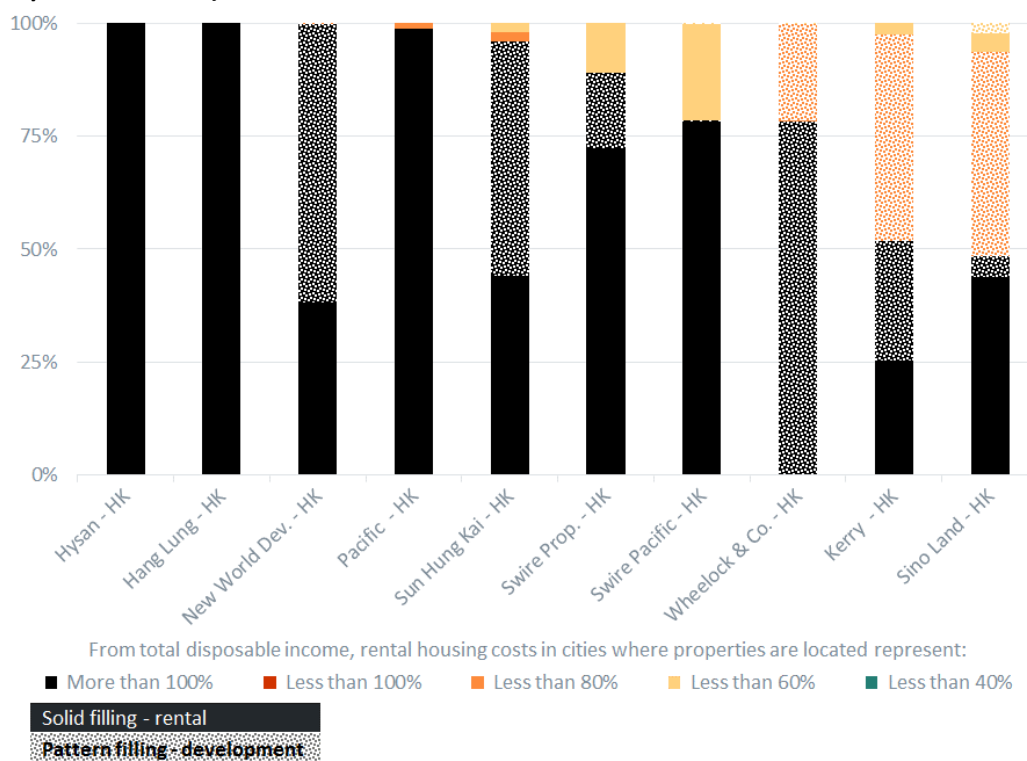
Sources: ILOstat, Numbeo, SNL Financial and MSCI ESG Research.

1.7 RESIDENTIAL PORTFOLIOS MAPPING BY SITES' AFFORDABILITY IN MSCI ACWI IMI'S REAL ESTATE COMPANIES

We analyzed affordable market penetration for 161 real estate companies (defined below) in the MSCI ACWI IMI, according to the housing affordability characteristics of the cities in which these issuers manage or develop residential assets. The set of companies we analyzed operate in the Homebuilding, Real Estate Investment Trusts (REITs), and Real Estate Management and Development (REMDs) GICS Sub-Industries, and manage rental residential

properties in 2,345 cities across 32 countries.[14] These companies collectively manage or own about 3 million residential units with total assets of USD 1.7 trillion.

From the 25 companies that are exposed to cities with higher levels of unaffordable housing costs (i.e., where median housing costs >100% of median disposable income) **14 are REMDs based in Hong-Kong, and nine of these companies have 50% of more in their properties in these cities** (see Figure 10). The rest of the companies exposed to these markets are mostly US based REITs.[15] The housing units located in these markets represent about 2% of the total residential portfolio of MSCI ACWI IMI companies. **Only China Overseas Land & Investment (MSCI ESG: B)** and **AvalonBay (MSCI ESG: BB)**, with 2% and 1% of their portfolios exposed to these extremely unaffordable cities, **provide affordable housing options**.

*FIGURE **11.** Top ten residential portfolios of companies exposed to cities where housing costs are affordable (median housing costs <40% of median disposable income)*
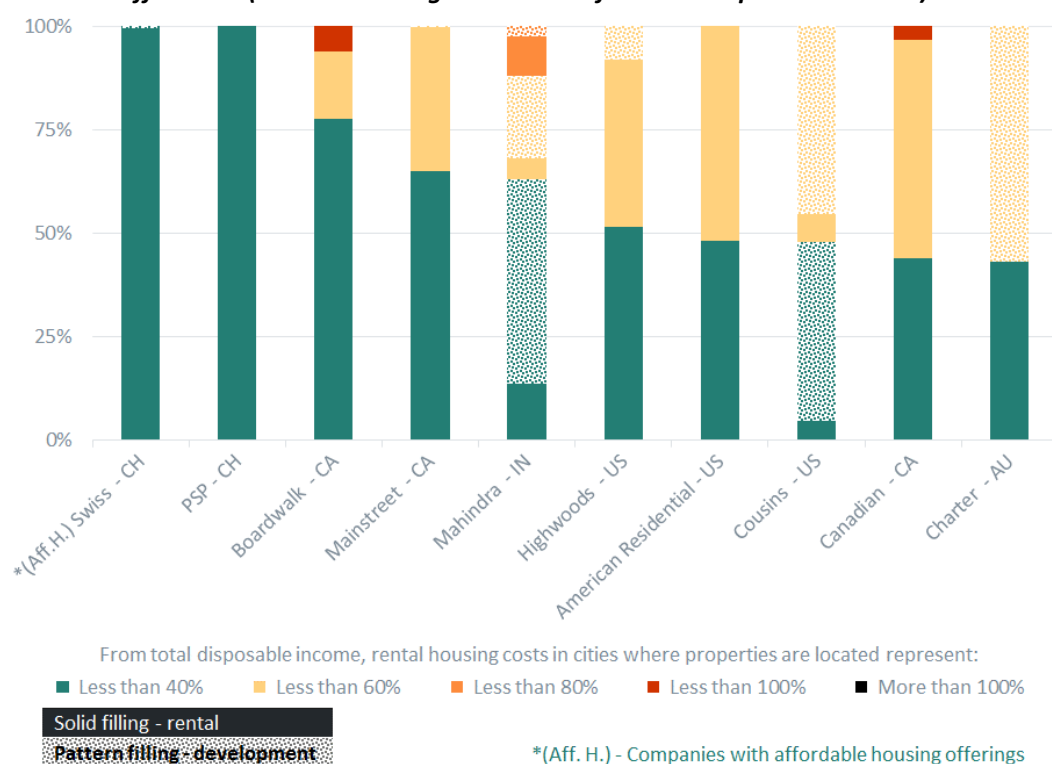
Sources: Corporate reports, ILOstat, Numbeo, SNL Financial and MSCI ESG Research.

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14 For cities where housing affordability data was not available, we estimated affordability levels according with population size, market type and region. Portfolio breakdowns were done by number of residential units in buildings, if no number of units was available, we used number of buildings instead. We included only multi-family, single-family and student housing in the definition of residential units.

15 For aggregated portfolios by region and industry, and a full list of companies' portfolio segmentation by affordability of cities, see Figures 21 and 23, respectively, in Annex II – Property Portfolios.

Market reports point that residential property growth in cities with extreme unaffordable housing costs, such as New York or London, has been concentrated in the high-end market (top 20% of properties by property price and rental levels) after the sub-prime crisis.[16] However, rental and sales prices for this luxury market segment have already peaked and have started to decline, while the opposite has happened with more affordable housing segments. This is due to market saturation at the top, while in the middle and bottom segments new residential construction keeps falling behind population and employment growth. **In other words, companies that continue to focus in cities with extremely high housing costs and that do *not* offer affordable housing options, might experience tighter profit margins that those firms in similar markets but with affordable housing offerings.**

On the other side of the spectrum, there are 49 companies with properties located in cities where housing costs are affordable (<40% of disposable income). However, **there are only six companies that have 50% or more of their portfolios located in these affordable markets** (see Figure 11). From these companies, only **Swiss Prime (MSCI ESG: BBB)**, which has 100% of its portfolio in these markets, offer affordable housing options.

Only 9% of residential units globally (managed or in development) are located in cities where rental levels are affordable, with North American REITs accounting for 79% of these units. The vast majority of companies' residential portfolios are located in places where housing costs range just about the housing affordability threshold, with housing costs ranging from 40% to 60% of disposable income (see Figure 21, in Annex II). Despite the fact that nearly 95% of companies manage or develop the majority of their residential portfolios in locations characterized by unaffordable housing costs, **only 23 companies, representing 24% of all residential units, have explicit offerings for housing affordability**.[17]

Finally, **we grouped properties with available information on occupancy rates into two groups, one with properties owned by companies that have affordable housing options and one with properties owned by companies that do not provide these options. We found no statistical difference between the occupancy rates of each group**.[18]

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[16] See Mooney, J., "'*Circus sideshow' in NYC luxury residential market takes a dark turn*", 2016, Target Market, SNL Financial; Stuart, J., "*Hot Luxury Items Turn a Bit Cooler*", 03/11/2016, The New York Times. Bagli, C., "*At Dizzying Heights, Prices of Luxury Apartments May Have Found Ceiling*", 03/16/2016, The New York Times; Barbanel, J. "*Manhattan Apartment Sales Hit Speed Bump*", 03/17/2016, The Wall Street Journal. Bagli, C., "*Sony Building Is Sold, Ending Plan for Conversion to Luxury Apartments*", 04/29/2016, The New York Times.

[17] The following companies are constituents of MSCI ACWI IMI and have affordable housing offerings. However, there was no geospatial information available from our data sources to establish portfolio distribution by cities' housing affordability level: Sekisui House, Equity Lifestyle, Empiric Student, Icade S.A., Northview, Stockland, Adler, Cedar, China Vanke, Circle Anglia, Douja, Deutsche Wohneng, Lend Lease, Notting Hill, Robinsons, Sanctuary, U and I.

[18] P value = 0.4. For cos. with no affordable options n = 1,328 properties, $\bar{x}$ = 95.05%. For cos. with affordable options n = 297 properties, $\bar{x}$ = 94.74%.

2 AFFORDABLE COMMERCIAL PROPERTIES

2.1 SMES' GLOBAL ECONOMIC IMPORTANCE, AND POLICY & BUSINESS BARRIERS

From our meta-analysis of existing literature, **we estimate that globally small and medium enterprises' (SME) median contribution to a country's GDP is approximately 50% and we estimate that the median share of employment that is concentrated in these companies is about 66%.**[19] According to the Association of Chartered Certified Accountants, SMEs in the economic downturn around the world were more likely to hold on to their staff, to continue to create jobs and, in the aftermath, served as the backbone of the global economy.[20]

FIGURE 12. Country characterization by SME contribution to national GDP, by country above and below regional medians

EM & below regional median contribution of SMEs to GDP

EM & above regional median contribution of SMEs to GDP

No data

DM & below regional median contribution of SMEs to GDP

DM & above regional median contribution of SMEs to GDP
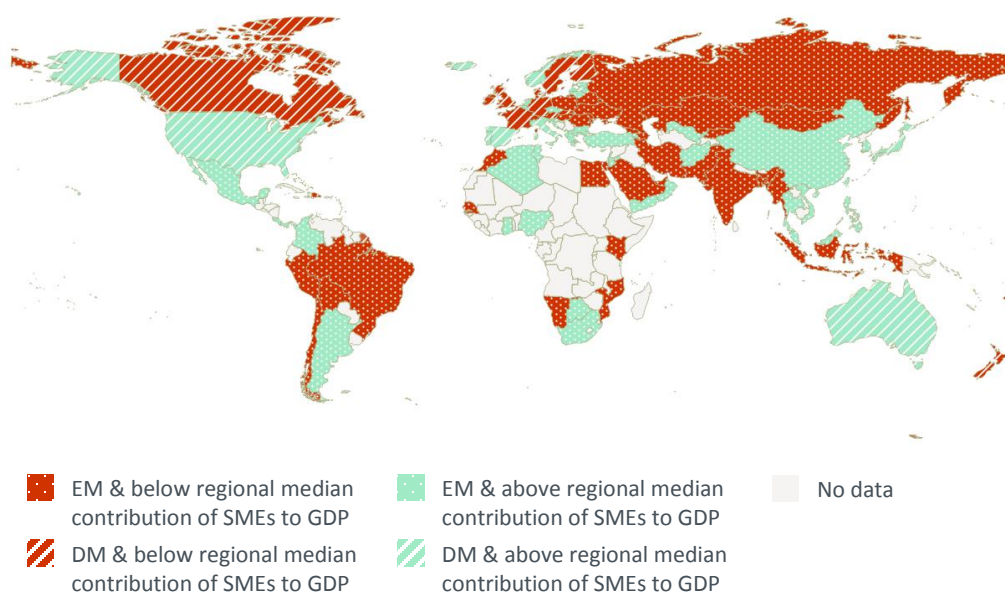
Sources: ADB, EU Commission, national governments' documentation, World Bank and MSCI ESG Research.

While the aforementioned facts illustrate the key role that SMEs has played in national economies and societies across the world, affordable business-to-business services catered to this enterprise segment, in general, lag the breadth and depth of the ones that bigger companies enjoy.[21] Two main reasons why SMEs experience this lagging access to business services are:

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[19] For GDP shares, we use SMEs' data as defined by national governments due to lack of granular data, which implies that SMEs' definitions in terms of sizes by employees or by value contribution are heterogeneous. For employment shares, we used World Bank's data for SMEs of 250 employees or less.

[20] Association of Chartered Certified Accountants, "*Small business: a global agenda*", 2010.

[21] Beck, T., et al, "*Financial and legal constraints to firm growth: does firm size matter?*", 2005, Journal of Finance 60.

1. lack of access to finance targeted to SMEs;[22] and,

2. government measures fail to promote SMEs (taxes, grants, ease of doing business).

2.2   SMES' SHARE OF GDP RELATIVE TO HOME COUNTRY'S MARKET AND REGION

Considering the economic importance of SMEs and the barriers they face, **we use the proportion from countries' GDPs that these firms represent to gauge the potential market for a property company if it decided to serve this business segment**. The larger role of SMEs in an economy is associated with higher levels of GDP per capita, smaller shares of the informal sector in the economy and, in the case of SMEs employment share in manufacturing, reduced costs of market entry, high property rights protection and more efficient credit-information sharing.[23] In this sense, SMEs' size in an economy has been strongly associated with a competitive business environment, which could represent a desirable factor to consider for impact and strategic investors. We find that, in general, SMEs in developed markets have had a higher participation in their home economies (see Figure 12 and last column to the right in Figure 22 in Annex II).[24]

FIGURE 13. MSCI ACWI IMI real estate constituents that provide affordable real estate for commercial purposes (proportions by asset values as of December 2015).
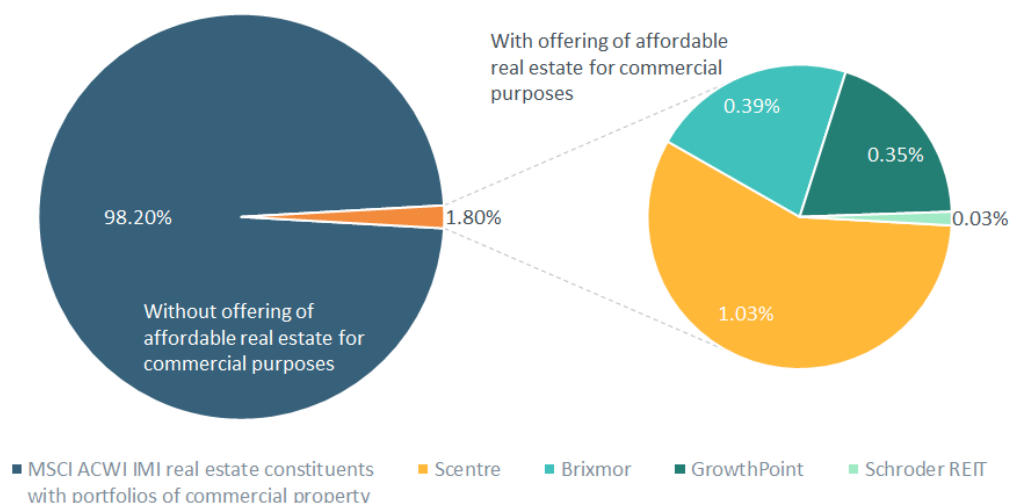
Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

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[22] This includes financing that recognizes the stage of development of an SME (seeding, start-up, etc.) and that adjusts for negative revenue generation, and for little collateral or risk capital. OECD, "*The SME financing gap: theory and evidence*", 2006, Financial Market Trends, Vol. 2006/2.

[23] Ayyagari, M., et al, "*Small and medium enterprises across the globe*", 2005, World Bank.

[24] For a full list of SMEs' share of countries' GDP, see Annex I – Figure 20.

2.3   COMMERCIAL PORTFOLIOS MAPPING BY SMES' SHARE FROM COUNTRY'S GDP IN MSCI ACWI IMI'S REAL ESTATE COMPANIES

We characterized the commercial property portfolios of 282 property companies in the MSCI ACWI IMI Index according to the GDP share that SMEs represent in the countries where properties are located. Companies included in this mapping exercise belong to the Homebuilding, Real Estate Investment Trusts, and Real Estate Management and Development GICS Sub-Industries. These companies manage commercial properties in 8,433 cities in 72 countries, their assets sum approximately USD 2.4 trillion as of end of 2015 and, in this mapping, we account for 51,819 managed properties.[25] We excluded from this mapping 2,691 buildings in the companies' development pipeline.

We found that lack of access to affordable commercial spaces is not the exception to the gap of business-to-business services for SMEs, as only Scentre (MSCI ESG: BBB), Growthpoint (MSCI ESG: A), Schroder REIT (MSCI ESG: AA) and Brixmor (MSCI ESG: BBB) provide evidence of programs that address the SME segment. The commercial buildings from these companies represented only 1.8% of the total properties analyzed in this study (see Figure 13).[26]

The commercial portfolio mapping by SMEs' contribution to national GDP, showed that most properties from MSCI ACWI IMI property companies were located in countries where these contributions are higher than regional median values, both for the DM (71% of properties) and EM (90%) cases (see Figure 22 in Annex II)**.** However, this aggregated view might be misleading for the DM EUR case, which is the only DM region where companies owned properties mostly in countries where SMEs' GDP share was below the regional median.[27] For the EM case, Chinese (28% of all EM properties mapped) and South African (47%) companies drove the high proportion of properties managed in countries that have above market & regional median proportions of their GDP generated by SMEs.

With respect to the industry breakdown, **the global REITs industry, DM NA had the highest company count, managed most of its properties in countries where the SMEs' contribution to GDP is higher than the market & regional median. The opposite was the case for the Homebuilding and REMD industries**, where the latter commercial assets is mostly managed by European firms classified under the Real Estate Operating Companies GICS sub-industry (see Figure 22 in Annex II).

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[25] In the definition of commercial buildings, we included only properties for which their primary use was lodging, industrial, mixed use, office and retail.

[26] See Annex II – Figure 24 for the full mapping of all companies in the set.

[27] The small GDP contribution from SMEs in countries from this region could be due to a high share of government activity in the economy (France), a large share of the economy represented by large corporations (United Kingdom) or a combination of both, among other factors. See of instance "*Business economy – size class analysis*", at http://ec.europa.eu/eurostat/statistics-explained/index.php/Business_economy_-_size_class_analysis; and, Timbeau, X., "*Is government expenditure in France too high*?", 2012, French Economic Observatory - Sciences Po.

Finally, **we found no statistical difference between the occupancy rates of properties managed by companies that had affordable commercial offerings from properties managed by companies that do not provide evidence of having these offerings**. [28] As it was the case in the affordable housing options, we acknowledge that data might be insufficient to claim that, in general, there is no occupancy rate differential between companies offering affordable commercial spaces options and those not offering these spaces.

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[28] P value = 0.5. For cos. with no affordable options n = 11,762 properties, $\bar{x}$ = 92.03%. For cos. with affordable options n = 519 properties, $\bar{x}$ = 92.30%.

3   ENABLERS: STAKEHOLDERS EASING AFFORDABLE REAL ESTATE

3.1   THE VALUE CHAIN OF AFFORDABLE REAL ESTATE AMONG MSCI ACWI IMI CONSTITUENTS

The growing problem of unaffordable real estate relates to, among other factors, a relentless drift from rural population towards urban centers that tightens rental and homeownership markets with higher rents and property prices, stricter mortgage requirements, and a highly competitive environment that dilute profit margins for employers and contribute to stagnant salaries.[29] Still, together with property companies, **we identified the Banking, Construction and Engineering, Construction Materials and Building Products industries, as fundamental links in the value chain for providing affordable real estate**, including construction, renovation and expansion of properties. We identified that **this value chain, however, had a direct effect mostly on affordable homeownership and SME financing** and an indirect effect, if any, in affordable housing rentals from a higher supply of homes.

FIGURE 14. SME financing as percentage of total loans by region in MSCI ACWI IMI banks

Sources: Company reporting, MSCI ESG Research.

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[29] See Bolton, M., et al, "*Out of reach*", 2015, National Low Income Housing Coalition; and, Lozano-Gracia, N., et al "*Housing Consumption and Urbanization*", 2014, World Bank.

BANKS

We analyzed the total loan portfolios of 446 banks that are constituents of the MSCI ACWI IMI, which accounted for USD 14.5 trillion in loans. We found that only HSBC Holdings PLC. (MSCI ESG: B) explicitly accounted for loans for affordable housing for its UK business. However, the company considered these loans high risk and it bundled them together with interest only and sub-prime loans. This bundling categorization suggests that this bank's loans for affordable housing did not cater to a market segment identified by good credit history and a sufficient income to serve its debts (see section *1.4 Median housing costs for homeownership relative to income*, in page 9, in this report for further context).[30]

While we found no evidence of SME specific credit lines that explicitly target commercial real estate, SME financing is wide spread across the world. From the same 446 banks universe in the MSCI ACWI IMI, 199 banks explicitly account for SME lending as part of their total loans. **The region with the most active bank lending to SMEs is Asia-Pacific for both developed (39% median percentage of total loans to SMEs) and emerging markets (20%), together with banks located in Northern Africa and the Middle East (22%),** see Figure 14. DM North American banks, where USA-based banks are the majority, have the lowest share of these types of loans, with a median value of merely 4%. We observe that, in general, banks located in Emerging Markets have a bigger median share of their loan portfolios devoted to SMEs (17%) than those in developed markets (12%).[31]

FIGURE 15. Product offerings related to affordable housing

GICS Sub-Industry	Company	Construction and building products	Manufacturing systems	Microfinance	Community Partnership
Building Products	Saint Gobain	🏠			
Construction & Engineering	Skanska		🏠		
Construction Materials	Cemex	🏠	🏠	🏠	🏠
	CSR		🏠		
	LaFargeHolcim	🏠	🏠	🏠	🏠

Sources: Company reporting, MSCI ESG Research.

BUILDING PRODUCTS

Saint-Gobain (MSCI: AA) is the only out of 51 MSCI ACWI IMI constituents in the Building Products GICS sub-industry that recognizes a business opportunity in the affordable housing market (see Figure 15). Two other companies in this sub-industry, have addressed the affordable housing segment through their foundations by donating products (**Assa Abloy, MSCI ESG: AA; Masco, MSCI ESG: A**), but not as part of their business strategy.

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[30] We excluded from this analysis banks that had joint programs with government entities that fund housing credits.

[31] For a full list of banks and percentages of SMEs' loans from total loans, see Annex II, Figure 25.

CONSTRUCTION AND ENGINEERING

Skanska's (MSCI ESG: AAA), the only company out of 89 constituents of this industry in the MSCI ACWI IMI, manufactures affordable houses under the brand BoKlok through a joint venture with IKEA. The company produces BoKlok modules that can be fully assembled on-site in one day.

CONSTRUCTION MATERIALS

From 42 companies in the industry peer set of the Construction Materials sub-industry in the MSCI ACWI IMI, Cemex (MSCI ESG: BBB) and LafargeHolcim (MSCI ESG: AA) are two of the three companies that offer a range of affordable housing products, including not only construction materials, but also microfinance and manufacturing systems. In addition, these two companies participate in community partnership programs to build and enhance knowledge and skills on affordable housing (see Figure 15). **CSR Ltd. (MSCI ESG: BBB)** is the third company that offers some affordable housing solutions by piloting prefabricated concrete walls in collaboration with **Mirvac (MSCI ESG: AAA)** (see Figure 15). **CSR Ltd. (MSCI ESG: BBB)** and **Mirvac (MSCI ESG: AAA)** have both achieved a faster construction time and lower costs. However, this pilot program has not become an extended business practice for **CSR Ltd. (MSCI ESG: BBB).**

FIGURE 16. Affordable residential real estate policies by country
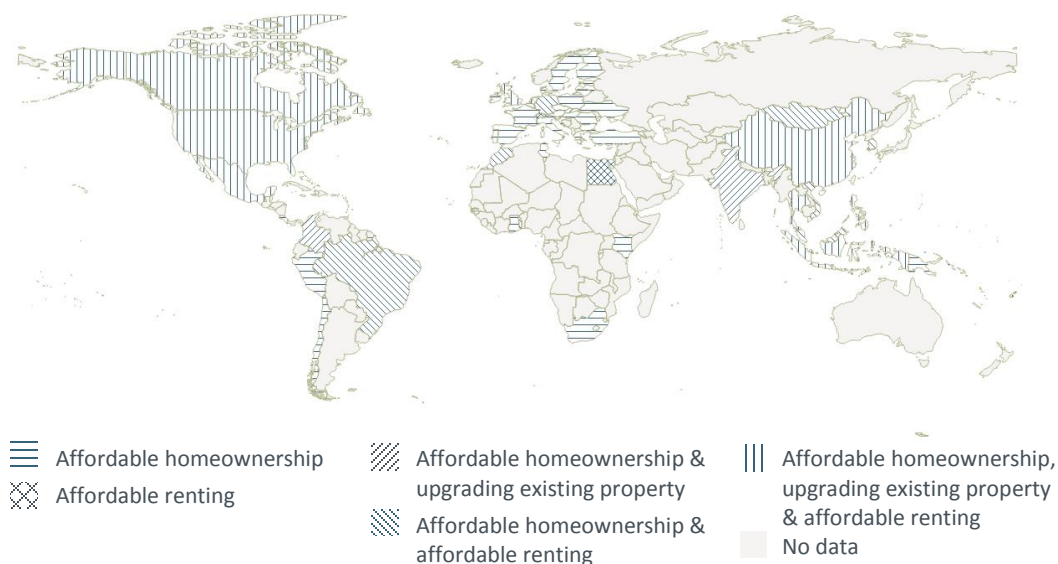
≡ Affordable homeownership
⊠ Affordable renting

▨ Affordable homeownership & upgrading existing property

▨ Affordable homeownership & affordable renting

||| Affordable homeownership, upgrading existing property & affordable renting
☐ No data

Sources: Hammam, S., "Housing Matters". 2014, World Bank; Woetzel, J., et al, "A blueprint for addressing the global affordable housing challenge", 2014, McKinsey Global Institute; World Bank, "Access to Affordable and Low-Income Housing in East Asia and the Pacific" 2014, World Bank; Boiron, P., et al, "Commercial Real Estate Investing in Canada: The Complete Reference for Real Estate Professionals", 2010, John Wiley & Sons, MSCI ESG Research.

3.2 PUBLIC POLICIES ON AFFORDABLE RESIDENTIAL REAL ESTATE

From our meta-analysis of existing literature, we found little evidence of regulations that target fostering affordable real estate for commercial purposes. However, the evidence of policies aimed at residential affordability is abundant (see sources in Figure 16). **We evaluated 180 policies that relate to affordable homeownership,[32] upgrading existing property[33] and affordable renting[34] in 33 countries across the world and the European Union.** The most numerous policies across countries were those related to homeownership, followed by rental ones. **While the list of policies in these countries might not be exhaustive, we found that countries with the highest number of policies enjoyed some type of housing affordability, either rental, ownership or both.[35]**

This is the case for the USA (31 policies) with median affordable levels of homeownership, India (17) with median levels of affordable rental housing and Canada (13) with median affordable levels for both, rental and homeownership. The two exceptions to this pattern are the UK (14) and China (13), where median levels of housing unaffordability for rentals and homeownership are high. For the UK case, research points that land use and land use change restrictions are the main source for housing unaffordability.[36] While for the China case, the rapid urbanization of the country and the highly speculative residential market seem to be the cause.[37]

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[32] Policies that relate to affordable homeownership include: fund homeowner associations to aggregate demand, laws that set minimum requirements for "decent" housing, mortgage guarantees, loans and subsidies for homebuyers and developers, securitization of mortgages, tax credits, laws allowing foreign funding, programs that cap home prices in exchange of guarantees for developers, share ownership schemes, schemes for vulnerable population (including disabled, elderly, homeless and those living in overcrowded conditions), programs first-time buyers, programs for cross-checking eligibility of benefits, lotteries and waiting list schemes, grants, guidance and technical assistance programs, government housing organizations, land or unit allocation for affordable housing, slum rehabilitation through new infrastructure, land auctioning for affordable housing purposes, taxes to fund affordable housing, reduced permitting times, infill affordable homeownership, facilitation of brownfield remediation, tax exemptions for developers, density bonuses, saving programs for down payments, zoning, tenure formalization, direct financing, valorization charges, differentiated utilities charges.

[33] Policies that relate to upgrading existing property include: weatherization programs, energy efficiency for affordable housing, funding of housing associations that allocate funds for refurbishing existing housing stock, tax relief for upgrading sub-standard homes, forgivable loans for major repairs, rehabilitation of slum housing, utility credits for upgrading of substandard housing, grants for energy and water efficiency projects, expedite permitting, technical assistance and guidance.

[34] Policies that relate to affordable renting include: rent control, subsidized apartment buildings, tax credits, housing vouchers, rent subsidies, tax and legal protections for tenants, criteria for assigning affordable rentals based in needs, technical assistance for affordable rentals, quotas of affordable units for new developments, programs for preserving affordable housing, public rental housing.

[35] See definition of housing affordability in the section *1.1 Defining affordability: how much and for whom, how big, where?*, page 6, in this report.

[36] Hilber, C., et al, "*The impact of supply constraints on house prices in England*", 2014, Economic Journal.

[37] Chiang, A. L., "*China's 'affordable housing' numbers don't quite add up*", 2012, Reuters.

3.3 AFFORDABILITY AND ITS RELATIONSHIP WITH SUSTAINABILITY

A key characteristic for affordable real estate is its green credentials, which could enhance the operational efficiency, the durability and the comfort of using a property. [38] According to members of the Thought Leaders Council on ESG and real estate, from MSCI ESG Research "*Affordability needs to be sustainable, sustainability needs to be affordable*".[39] **However, only Cemex (MSCI ESG: BBB)** and **Skanska (MSCI ESG: AAA) couple resource efficiency and affordability by delivering industrialized and energy efficient housing solutions.** In 2014, **Cemex's (MSCI ESG: BBB)** housing solutions accounted for USD 200 million in sales and 3,150 units in 12 countries. In the case of **Skanska (MSCI ESG: AAA),** the current capacity of its joint venture with Ikea is 700 houses per year, but it is planned to expand this capacity to 1,500 houses in the next five years.

We found that out of 180 affordable housing polices under study, only eight policies in five countries included an explicit sustainability element (see Figure 17). These policies relate to energy efficiency in the case of the Canada, China, Slovakia, the UK and the USA; to overall maintenance costs, including water, energy and materials, in Slovakia and the UK; and to indoor environmental quality in Canada and the UK.

The scarce number of companies and policies that explicitly couple both affordability and sustainability, suggests that there might be a lack of awareness of the business case from including environmental and social criteria in property investment by making it more cost efficient from a life-cycle perspective. Cost efficiency, durability and a healthy environment are desirable characteristics of any affordable housing offering.

FIGURE 17. Countries that couple affordable housing policies with sustainability elements
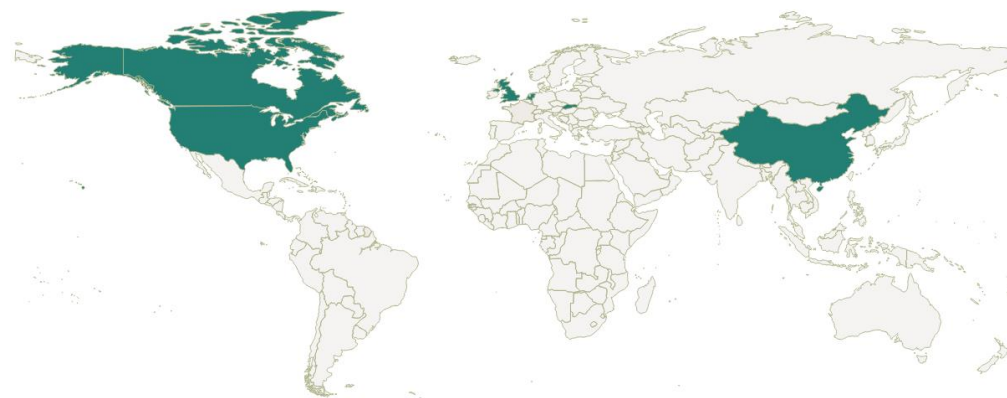
■ Countries with affordable housing policies that explicitly include sustainability elements

Sources: Hammam, S., "Housing Matters". 2014, World Bank; Woetzel, J., et al, "A blueprint for addressing the global affordable housing challenge", 2014, McKinsey Global Institute; World Bank, "Access to Affordable and Low-Income Housing in East Asia and the Pacific" 2014, World Bank; Boiron, P., et al, "Commercial Real Estate Investing in Canada: The Complete Reference for Real Estate Professionals", 2010, John Wiley & Sons, MSCI ESG Research.

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[38] See MSCI ESG Research, "*Thought leaders council: ESG and real estate*", 2015.

[39] Idem.

APPENDIX

METHODOLOGY AND ASSUMPTIONS FOR DEFINING HOUSING AFFORDABILITY

HOW MUCH & FOR WHOM?

For assessing **residential affordability**, we include two housing options: rental properties and homeownership. For both options, we use the same assumption of median **housing costs not exceeding 40% of the annual median disposable income per household**, i.e., net income after policy interventions, such as taxes and subsidies. This threshold, however, does not include potential housing-related savings aimed to cover, for instance, home improvements, home appliances and furniture, or a property down payment.

We consider this 40% rule to be a representative measure of housing affordability for several reasons. First, this threshold reflects the latest related reference threshold in a common indicator used at the European Union level.[40] Second, this threshold approximates the maximum front-end qualifying ratio in the USA,[41] as percentage of median income after taxes, which we found to be 37%.[42] Finally, it is a market practice in the US, to set an annual gross salary qualification requirement to lease a property at a level of 40 times or higher the monthly property rent, which represents about 40% of net disposable income using the aforementioned tax assumptions.

We calculate net income levels per household at the city level by, first, using Numbeo's database[43] of local individual incomes and, second, by extrapolating at the city level the

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[40] Di Meglio, E., Op. Cit. The Indicators Sub-group of the EU Social Protection Committee developed this threshold empirically. The most important reason for the choice of this threshold is that it proved to be less sensitive to measurement errors and to the poor international comparability linked to the major national differences in the implementation of the housing cost burden definition (e.g., content of mortgage repayments in the housing cost burden numerator). In this sense, a 40% threshold is more likely to identify correctly the population most at risk because of housing cost burden. *Source: personal communication, European Commission Directorate General of Employment, Social Affairs & Inclusion, January 2016.*

[41] A qualifying ratio is a measure of housing expenses of a borrower for a mortgage, compared to the borrower's gross monthly income. This ratio is used by lenders to approve borrowers for accessing a mortgage loan. The borrower's front-end ratio is generally limited to 28% as a market practice.

[42] The marginal federal income tax rate in the USA for population earning a gross annual income in the percentile range of 41 to 60, is 25%. Gross income for this population bracket ranges for single taxable incomes between USD 37,451 to USD 90,750, and for head of household between USD 50,201 to USD $129,600. *Source: U.S. Code § 1411 - Imposition of Tax.*

[43] Numbeo is a crowd-sourced information database, see http://www.numbeo.com. We acknowledge the uncertainty in the quality of raw, voluntarily reported data given, but not limited, to the following considerations: *(A) Data from different periods.-* the data that is used in the present report was retrieved in December 2015, but the stamp date and exchange rate that were utilized to calculate each value that we use is uncertain. *(B) Statistical significance of data.-* there is uncertainty in the statistical significance of data, given that the number of observations that were used to calculate each value is unknown. *(C) Overestimation of values.-* given that data input is provided by home seekers and by people related to leasing real estate, it is possible that the values overestimate income and rental levels in a market, as new rents are usually higher than existing ones and usually leasers with the best income profile get to rent a property. *(D) Data aggregation.* - values only reflect properties of certain size and location in a city, it is unknown if the characteristics chosen by Numbeo as typical for properties in each location truly reflect local real estate markets.

number of economically active people per household of the respective country.[44] We include rent or mortgage payments as part of housing costs in the rental and homeownership sections, respectively, together with local costs of utilities.[45]

HOW BIG?

For establishing minimum livable space sizes, we followed the Canadian National Occupancy Standard on housing suitability of private household and adopted a **maximum occupancy of two people per bedroom to avoid household overcrowding**.[46] We consider that this persons-per-bedroom standard best addresses overcrowding concerns and fits lack of harmonized definitions across countries and limitations of Numbeo's data on the apartment characteristics.[47] Together with addressing fire safety issues, existing literature suggests that housing overcrowding is associated with the spread of some airborne and enteric infectious diseases, poor school or work performance, slow recovery from illness and psychological stress in both children and adults, but particularly in women, among other adverse effects.[48]

We assumed that the typical household configuration at the national level, in terms of number of persons, gender and age composition of household members, was representative at the city level. In general, however, gender and age composition of a typical household at the national level become imperceptible and only number of household members remains as a meaningful variable to inform minimal housing sizes of an affordable, not overcrowded dwelling. **For 70 out of 98 countries that we analyze, we found that the minimal housing size to avoid overcrowding was two bedrooms. Only for 28 countries, all in EM, the minimal size was three bedrooms (e.g., India, Mexico, S. Africa).**

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[44] See http://www.ilo.org/ilostat. All values that were used for this report correspond to ILO's projections for 2015.

[45] Utilities cost include both internet (speed: 10 Mbps; data package: unlimited data; broadband connection: cable/ADSL) and basic utilities (electricity, heating, water, garbage collection) for an 85 m^2 (915 ft^2) space, which we assumed it was close enough to our assumption of a two bedroom and 80 m^2 (861 ft^2). We made no further assumptions for a three room apartment of 110 m^2 (1,184 ft^2), due to lack of data. See http://www.numbeo.com.

[46] See http://www.statcan.gc.ca/eng/concepts/definitions/dwelling06. The Canadian National Occupancy Standard on maximum occupancy rate of two people per bedroom is generally in line with the occupancy requirements in the US that stipulate residential property occupancy rate per person to be on average 200 ft^2 (specific standards vary by state). This requirement translates to 800 ft^2 (75 m^2) per family of four and is comparable to a two-bedroom apartment requirement set by the CNOS.

[47] Data limitations include lack of information to identify number of rooms and size of rooms per apartment by city from the available data sources. The use of a hybrid measure that includes people-per-bedroom, people-per-room and area-per-person would be ideal to define a housing size that more accurately precludes household overcrowding. See Econometrica, Blake, K,. Kellerson, R., Simic, A., ICF, "*Measuring Overcrowding in Housing*", 2007, U.S. Department of Housing and Urban Development Office of Policy Development and Research.

[48] Overcrowding definitions when using number of rooms to determine a minimal accepted size of a housing unit include restrictions by age and gender to determine whether persons can share the same room. In the Canadian legislation, children under five of different sexes are permitted to share a room. The age at which young adults should have their own room is 18, unless they are a couple. Any person aged five to 17 of the same sex are permitted to share a room. Gray, A., "*Definitions of Crowding and the Effects of Crowding on Health: a Literature Review*", 2001, Ministry of Social Policy, Te Manatuˉ moˉ ngaˉ Kaupapa Oranga Tangata, New Zealand.

COUNTRIES AND CITIES IN THIS REPORT

In this report, we account for 307 cities in 97 countries, which comprise approximately 658 million inhabitants or 19% of urban population in those countries. These 97 countries made up in 2015 for 89% of the world's urban population and by 2050 they will represent approximately 83% (see Figure 18).

FIGURE 18. Urban population from 2000 to 2010.
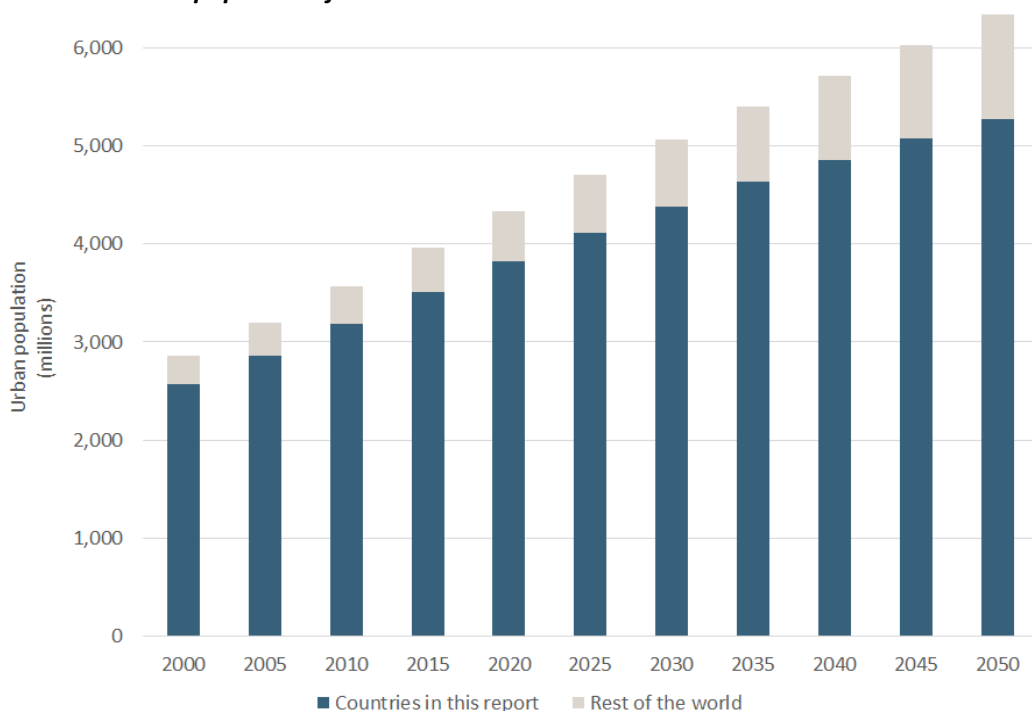
Sources: United Nations World Urbanization Prospects.

ANNEX I – CITY AND COUNTRY SUMMARY TABLES

FIGURE 19 Affordable housing features by city globally.

Market and region	City	Rental housing costs to income ratio	Years to save for one appartment down payment	Monthly mortgage and housing costs to income ratio	Potential annual market size for affordable housing, *USD billions*	Potential annual market size for affordable housing, *households*	Potential monthly affordable housing cost, *USD*
DM EUR	Aberdeen, GBR	52%	4.2	61%	0.40	21,700	1,540
EM NAME	Abu Dhabi, ARE	87%	4.5	65%	1.87	88,380	1,760
EM NAME	Ad Dammam, SAU	38%	3.7	50%	0.41	43,860	780
EM AF	Addis Ababa, ETH	183%	5.5	149%	0.34	133,750	210
DM AP	Adelaide, AUS	45%	3.0	49%	2.01	108,540	1,540
EM AP	Ahmedabad, IND	33%	3.8	82%	0.87	202,800	360
EM NAME	Alexandria, EGY	133%	12.6	316%	0.34	256,810	110
EM NAME	Almaty, KAZ	57%	4.6	120%	0.62	92,180	560
EM NAME	Amman, JOR	98%	5.6	116%	0.59	132,500	370
DM EUR	Amsterdam, NLD	51%	4.6	61%	1.71	111,150	1,290
EM NAME	Ankara, TUR	43%	2.6	64%	1.13	236,940	400
EM NAME	Antalya, TUR	47%	2.9	70%	0.17	45,740	310
DM EUR	Antwerp, BEL	57%	3.8	55%	0.60	70,370	720
EM EUR	Athens, GRC	62%	5.7	89%	1.23	261,440	390
DM NA	Atlanta, USA	35%	1.5	23%	0.82	38,470	1,780
DM AP	Auckland, NZL	53%	3.4	53%	2.05	132,370	1,290
DM NA	Austin, USA	45%	2.5	36%	1.44	72,400	1,660
EM NAME	Baku, AZE	102%	6.3	126%	0.62	103,370	500
EM AP	Bandung, IDN	105%	8.6	163%	0.25	144,430	150
EM AP	Bangalore, IND	32%	3.9	80%	2.55	377,630	560
EM AP	Bangkok, THA	78%	7.2	110%	3.02	500,880	500
DM EUR	Barcelona, ESP	52%	4.8	60%	1.39	142,150	820
DM EUR	Basel, CHE	30%	4.0	47%	0.69	18,200	3,140
EM AP	Beijing, CHN	76%	12.6	180%	14.10	1,468,610	800
EM NAME	Beirut, LBN	108%	11.5	185%	0.17	21,290	670
DM EUR	Belfast, GBR	46%	3.1	42%	0.46	34,150	1,120
EM EUR	Belgrade, SRB	82%	9.5	160%	0.29	107,880	230
EM LA	Belo Horizonte, BRA	66%	7.4	137%	0.75	170,020	370
DM EUR	Bergen, NOR	52%	4.4	60%	0.51	27,850	1,530
DM EUR	Berlin, DEU	55%	4.9	63%	4.00	398,910	830
EM AP	Bhopal, IND	33%	5.5	183%	0.21	65,360	270
EM AP	Bhubaneswar, IND	41%	3.9	94%	0.11	29,500	310
DM EUR	Birmingham, GBR	62%	4.5	61%	0.23	21,710	890
EM LA	Bogota, COL	86%	5.9	137%	1.72	460,680	310
DM EUR	Bologna, ITA	59%	4.9	63%	0.31	36,010	710
DM NA	Boston, USA	59%	1.9	26%	1.27	56,570	1,870
EM LA	Brasilia, BRA	42%	4.7	93%	1.34	177,620	630
EM EUR	Brasov, ROU	89%	5.3	94%	0.06	22,410	220
DM EUR	Bratislava, SVK	71%	6.1	82%	0.23	37,470	500
DM EUR	Brighton, GBR	99%	5.4	82%	0.52	47,180	920
DM AP	Brisbane, AUS	42%	4.2	61%	3.72	183,010	1,690
DM EUR	Bristol, GBR	49%	9.7	127%	0.92	56,370	1,360
EM EUR	Brno, CZE	63%	5.8	77%	0.19	37,200	420
DM EUR	Brussels, BEL	63%	5.3	70%	1.54	149,640	860
EM EUR	Bucharest, ROU	81%	5.9	100%	0.47	155,900	250
EM EUR	Budapest, HUN	83%	5.4	114%	0.77	240,370	270
EM LA	Buenos Aires, ARG	51%	5.3	175%	1.88	210,150	750
EM NAME	Bursa, TUR	40%	2.1	57%	0.43	95,730	370
EM NAME	Cairo, EGY	135%	6.9	144%	0.80	427,110	160
DM NA	Calgary, CAN	36%	2.0	27%	2.43	112,320	1,800
DM EUR	Cambridge, GBR	75%	7.5	94%	0.15	10,760	1,180
EM LA	Campinas, BRA	40%	3.8	91%	0.57	75,990	630
DM AP	Canberra, AUS	36%	2.5	38%	0.96	34,690	2,310
EM AF	Cape Town, ZAF	59%	2.7	54%	0.62	57,590	890
EM NAME	Casablanca, MAR	147%	11.4	162%	0.55	181,660	250
EM AP	Cebu, PHL	93%	9.4	234%	0.40	129,500	260
EM AP	Chandigarh, IND	35%	6.2	123%	0.16	36,240	370
EM AP	Chennai, IND	38%	5.4	115%	1.52	294,010	430
EM AP	Chiang Mai, THA	66%	6.1	101%	0.21	58,320	300
DM NA	Chicago, USA	48%	2.1	29%	5.15	246,900	1,740
EM EUR	Chisinau, MDA	154%	10.8	298%	0.07	62,470	90
DM AP	Christchurch, NZL	50%	4.6	69%	0.39	33,000	990
DM NA	Cincinnati, USA	45%	0.8	18%	0.54	27,200	1,640
DM NA	Cleveland, USA	34%	0.6	14%	0.59	36,350	1,350
EM EUR	Cluj-napoca, ROU	63%	5.5	88%	0.08	24,520	270
EM AP	Coimbatore, IND	30%	3.1	67%	0.26	65,480	340

Key: DM – developed Markets; EM – Emerging Markets; AF – Sub-Saharan Africa; AP – Asia-Pacific; EUR – Europe; LA – Latin America; NA – North America; NAME – North Africa and Middle East. Sources: FICO, ILOstat, Numbeo, US Census Bureau and MSCI ESG Research.

Market and region	City	Rental housing costs to income ratio	Years to save for one appartment down payment	Monthly mortgage and housing costs to income ratio	Potential annual market size for affordable housing, *USD billions*	Potential annual market size for affordable housing, *households*	Potential monthly affordable housing cost, *USD*
DM EUR	Cologne, DEU	43%	4.1	50%	1.43	115,870	1,030
EM AP	Colombo, LKA	112%	6.6	179%	0.18	71,870	210
DM NA	Colorado Springs, USA	31%	0.7	14%	0.76	38,140	1,650
DM NA	Columbus, USA	30%	1.1	18%	0.39	17,390	1,890
DM EUR	Copenhagen, DNK	61%	4.3	54%	0.95	60,620	1,300
DM EUR	Cork, IRL	30%	1.7	24%	0.29	17,050	1,410
EM LA	Curitiba, BRA	70%	6.8	148%	0.44	125,410	290
DM NA	Dallas, USA	37%	1.8	27%	2.10	109,710	1,600
EM AF	Dar Es Salaam, TZA	147%	2.4	68%	1.32	234,920	470
DM AP	Darwin, AUS	42%	1.7	31%	0.36	12,070	2,490
EM AP	Davao, PHL	73%	6.7	123%	0.19	71,650	220
EM AP	Delhi, IND	42%	6.6	136%	3.56	577,140	510
DM NA	Denver, USA	46%	1.9	27%	0.98	54,970	1,480
DM NA	Detroit, USA	41%	0.8	18%	1.15	65,380	1,460
EM AP	Dhaka, BGD	45%	5.1	157%	1.71	537,120	270
EM EUR	Dnipropetrovsk, UKR	104%	7.5	313%	0.17	87,020	170
EM NAME	Doha, QAT	77%	6.7	85%	1.12	46,960	1,990
DM EUR	Dresden, DEU	54%	4.9	64%	0.56	60,350	780
EM NAME	Dubai, ARE	91%	4.4	61%	1.31	64,170	1,700
DM EUR	Dublin, IRL	53%	3.4	44%	1.47	95,350	1,280
EM AF	Durban, ZAF	48%	2.0	44%	0.34	39,050	730
DM EUR	Dusseldorf, DEU	51%	3.0	40%	0.83	67,480	1,020
DM EUR	Edinburgh, GBR	46%	3.1	46%	0.66	45,890	1,190
DM NA	Edmonton, CAN	37%	1.9	26%	1.80	106,330	1,410
DM EUR	Eindhoven, NLD	39%	2.5	32%	0.51	34,340	1,240
DM EUR	Espoo, FIN	68%	7.7	85%	0.26	27,870	770
DM NA	Fairfax, USA	44%	2.4	33%	2.47	102,480	2,010
DM EUR	Florence, ITA	76%	10.1	163%	0.24	35,120	560
EM LA	Florianopolis, BRA	57%	7.7	140%	0.13	29,000	370
DM NA	Fort Lauderdale, USA	33%	1.2	18%	0.37	15,160	2,040
DM NA	Fort McMurray, CAN	35%	1.8	23%	0.24	6,410	3,180
DM NA	Fort Worth, USA	30%	0.6	11%	1.43	67,890	1,760
EM LA	Fortaleza, BRA	70%	7.2	171%	0.66	175,540	310
DM EUR	Frankfurt, DEU	43%	4.5	57%	1.06	78,770	1,120
DM NA	Fredericton, CAN	38%	2.7	36%	0.11	9,550	980
EM EUR	Gdansk, POL	68%	4.9	75%	0.18	38,490	400
DM EUR	Geneva, CHE	36%	5.2	54%	2.38	55,030	3,600
DM EUR	Genoa, ITA	66%	3.0	50%	0.46	57,340	670
DM EUR	Glasgow, GBR	43%	2.9	40%	0.87	59,110	1,230
EM AP	Goa, IND	111%	11.5	281%	0.11	65,330	140
DM AP	Gold Coast, AUS	35%	2.0	31%	1.04	49,410	1,760
DM EUR	Gothenburg, SWE	33%	3.8	41%	0.92	57,470	1,340
DM EUR	Graz, AUT	32%	3.5	43%	0.35	26,880	1,080
EM LA	Guadalajara, MEX	75%	4.3	90%	0.96	245,390	330
EM AP	Guangzhou, CHN	45%	10.0	141%	6.18	1,033,360	500
EM AP	Gurgaon, IND	41%	5.0	98%	0.28	39,300	600
DM NAME	Haifa, ISR	30%	4.2	47%	0.28	18,750	1,230
DM NA	Halifax, CAN	45%	1.4	24%	0.48	36,440	1,090
DM EUR	Hamburg, DEU	61%	5.2	69%	2.27	204,910	930
DM NA	Hamilton, CAN	28%	2.0	26%	0.77	47,000	1,360
EM AP	Hanoi, VNM	42%	5.4	88%	2.50	412,760	510
DM EUR	Helsinki, FIN	54%	6.8	71%	0.82	65,930	1,030
EM AP	Ho Chi Minh, VNM	121%	7.6	160%	1.29	481,380	220
EM AP	Hong Kong, CHN	102%	21.3	227%	8.50	571,550	1,240
DM NA	Honolulu, USA	65%	5.2	70%	0.51	30,890	1,370
DM NA	Houston, USA	43%	1.4	23%	4.40	192,300	1,900
EM AP	Hyderabad, IND	29%	2.7	58%	1.59	305,210	430
EM EUR	Iasi, ROU	79%	6.5	120%	0.07	24,610	230
DM NA	Indianapolis, USA	39%	1.0	19%	1.12	75,150	1,240
EM AP	Indore, IND	49%	5.8	135%	0.17	67,980	210
EM AP	Islamabad, PAK	71%	4.0	126%	0.33	114,590	240
EM NAME	Istanbul, TUR	69%	5.3	127%	3.02	648,670	390
EM NAME	Izmir, TUR	58%	3.5	87%	0.59	154,850	320
DM NA	Jacksonville, USA	33%	1.0	19%	1.30	75,270	1,440
EM AP	Jaipur, IND	36%	3.0	70%	0.40	104,090	320
EM AP	Jakarta, IDN	149%	9.5	212%	1.72	579,440	250
EM NAME	Jeddah (Jiddah), SAU	39%	2.5	35%	1.93	165,070	980
DM NAME	Jerusalem, ISR	41%	6.8	76%	0.74	55,420	1,110
EM AF	Johannesburg, ZAF	38%	1.5	30%	0.75	55,870	1,120
EM AP	Johor Baharu, MYS	62%	7.7	98%	0.15	28,080	460
DM NA	Kansas, USA	22%	1.1	15%	0.32	13,350	1,970
EM AP	Karachi, PAK	54%	5.3	152%	1.39	563,230	210
EM AP	Kathmandu, NPL	66%	14.9	315%	0.09	50,560	150

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Market and region	City	Rental housing costs to income ratio	Years to save for one appartment down payment	Monthly mortgage and housing costs to income ratio	Potential annual market size for affordable housing, USD billions	Potential annual market size for affordable housing, households	Potential monthly affordable housing cost, USD
EM EUR	Katowice, POL	50%	3.4	61%	0.12	25,950	370
EM EUR	Kaunas, LTU	76%	5.4	82%	0.12	36,170	280
EM EUR	Kharkiv, UKR	164%	12.6	480%	0.17	124,740	120
EM EUR	Kiev, UKR	123%	9.3	333%	0.64	243,280	220
EM LA	Kingston, JAM	47%	1.8	37%	0.53	67,340	650
DM NA	Kitchener, CAN	33%	1.7	21%	0.80	44,510	1,490
EM AP	Kochi, IND	35%	4.2	86%	0.24	60,770	330
EM AP	Kolkata, IND	42%	4.3	96%	2.62	591,850	370
EM EUR	Krakow, POL	68%	6.4	96%	0.30	63,380	400
EM AP	Kuala Lumpur, MYS	60%	5.2	70%	0.77	92,920	690
EM NAME	Kuwait City, KWT	68%	7.2	119%	2.14	140,230	1,270
EM AF	Lagos, NGA	149%	1.5	72%	5.49	879,930	520
EM AP	Lahore, PAK	49%	6.2	169%	0.78	310,200	210
DM NA	Las Vegas, USA	29%	1.0	17%	1.08	53,470	1,690
DM EUR	Lausanne, CHE	27%	7.2	74%	1.23	35,350	2,900
EM LA	Lima, PER	86%	5.5	115%	2.48	558,330	370
DM EUR	Limassol, CYP	25%	3.9	48%	0.15	13,690	930
DM EUR	Lisbon, PRT	62%	5.7	76%	0.30	46,220	530
EM EUR	Ljubljana, SVN	51%	5.0	72%	0.17	22,840	630
EM EUR	Lodz, POL	78%	5.4	93%	0.20	60,850	280
DM EUR	London, GBR	92%	10.6	134%	14.13	873,470	1,350
DM NA	Los Angeles, USA	49%	3.1	41%	7.95	359,860	1,840
DM NA	Louisville, USA	38%	1.6	24%	0.74	54,710	1,120
EM AP	Lakhnau, IND	13%	2.3	36%	0.87	130,040	560
DM EUR	Luxembourg, LUX	67%	5.7	63%	0.15	9,420	1,340
EM EUR	Lviv, UKR	143%	14.4	465%	0.09	65,820	120
DM EUR	Lyon, FRA	46%	5.5	64%	0.51	46,730	920
DM NA	Madison, USA	32%	1.9	27%	0.41	21,360	1,590
DM EUR	Madrid, ESP	55%	4.9	65%	2.87	280,510	850
EM AP	Makati, PHL	136%	11.0	174%	0.15	26,160	490
DM EUR	Malaga, ESP	51%	3.6	57%	0.45	49,240	750
DM EUR	Malmo, SWE	38%	3.2	38%	0.38	32,560	970
EM NAME	Manama, BHR	83%	5.0	67%	0.10	10,420	780
DM EUR	Manchester, GBR	51%	4.7	63%	0.68	53,220	1,070
EM AP	Manila, PHL	94%	6.7	124%	0.43	81,680	440
EM LA	Medellin, COL	70%	5.6	134%	0.51	145,600	290
DM AP	Melbourne, AUS	38%	4.2	59%	7.86	354,330	1,850
DM NA	Memphis, USA	48%	0.8	17%	0.85	59,250	1,190
EM LA	Mexico City, MEX	73%	5.3	112%	2.99	491,050	510
DM EUR	Milan, ITA	82%	12.0	152%	1.12	125,900	740
DM NA	Milwaukee, USA	34%	1.0	17%	0.96	54,480	1,460
DM NA	Minneapolis, USA	38%	1.3	20%	0.64	35,040	1,520
EM EUR	Minsk, BLR	124%	9.7	512%	0.54	171,590	260
DM NA	Mississauga, CAN	38%	1.4	25%	1.28	64,490	1,660
EM LA	Monterrey, MEX	40%	2.6	56%	2.10	226,310	770
EM LA	Montevideo, URY	56%	4.6	73%	0.66	96,120	570
DM NA	Montreal, CAN	31%	2.7	32%	5.56	348,840	1,330
EM EUR	Moscow, RUS	114%	11.1	269%	9.24	1,067,430	720
EM AP	Mumbai, IND	74%	15.3	305%	3.54	559,260	530
DM EUR	Munich, DEU	67%	10.7	128%	1.76	156,990	930
EM NAME	Muscat, OMN	58%	2.5	44%	1.02	75,910	1,130
EM AP	Nagpur, IND	27%	5.1	92%	0.36	95,440	320
EM AF	Nairobi, KEN	111%	6.8	205%	0.67	168,660	330
DM EUR	Naples, ITA	85%	8.8	128%	0.51	90,450	470
EM AP	Navi Mumbai, IND	44%	7.4	147%	0.21	50,170	350
DM NA	New York, USA	77%	6.1	73%	16.80	748,790	1,870
DM EUR	Newcastle, GBR	41%	2.9	41%	2.30	168,790	1,130
DM EUR	Nice, FRA	56%	6.4	83%	0.32	33,190	810
DM EUR	Nicosia, CYP	42%	4.2	84%	0.15	17,380	730
DM EUR	Nottingham, GBR	40%	2.7	32%	0.85	68,170	1,040
EM EUR	Novi Sad, SRB	86%	8.3	165%	0.05	26,690	170
EM EUR	Novosibirsk, RUS	88%	6.6	153%	0.49	130,130	310
EM EUR	Odesa, UKR	134%	7.7	300%	0.17	86,900	160
DM NA	Oklahoma City, USA	35%	1.3	23%	0.68	53,120	1,070
DM NA	Orlando, USA	37%	1.0	17%	0.39	21,830	1,490
DM EUR	Oslo, NOR	46%	4.6	58%	1.30	64,430	1,680
DM NA	Ottawa, CAN	29%	2.6	32%	2.28	112,000	1,700
EM LA	Panama, PAN	116%	5.3	75%	0.36	64,250	470
DM EUR	Paris, FRA	71%	11.7	137%	2.74	217,610	1,050
EM AP	Penang, MYS	45%	5.4	70%	0.67	84,740	660
DM AP	Perth, AUS	41%	3.6	52%	3.77	153,150	2,050
EM AP	Phnom Penh, KHM	100%	4.2	79%	0.38	78,980	400
DM NA	Phoenix, USA	40%	1.5	26%	2.20	132,410	1,380

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EM AP	Phuket, THA	64%	5.8	89%	0.10	21,600	400
DM NA	Pittsburgh, USA	42%	2.3	31%	0.47	28,000	1,410
EM EUR	Plovdiv, BGR	71%	4.1	86%	0.07	29,840	190
DM NA	Portland, USA	46%	1.7	26%	0.96	53,470	1,490
EM LA	Porto Alegre, BRA	51%	5.6	101%	0.50	100,890	410
DM EUR	Porto, PRT	50%	3.5	54%	0.12	20,040	480
EM EUR	Poznan, POL	71%	6.0	95%	0.18	46,330	330
EM EUR	Prague, CZE	68%	6.1	80%	0.70	121,900	480
EM AF	Pretoria, ZAF	29%	1.2	27%	0.50	40,400	1,040
EM AP	Pune, IND	35%	4.9	102%	1.00	168,540	490
DM NA	Quebec, CAN	23%	1.9	24%	1.12	68,190	1,370
EM LA	Quito, ECU	60%	5.7	119%	0.48	91,570	430
DM NA	Raleigh, USA	45%	0.6	15%	0.56	36,990	1,270
EM LA	Recife, BRA	39%	3.2	55%	0.84	110,070	630
DM NA	Regina, CAN	38%	1.9	28%	0.34	19,450	1,460
DM EUR	Reykjavik, ISL	62%	3.3	55%	0.22	19,770	910
DM NA	Richmond, USA	33%	0.9	16%	0.19	9,500	1,690
DM EUR	Riga, LVA	75%	5.8	87%	0.22	56,830	330
EM LA	Rio De Janeiro, BRA	100%	9.5	199%	2.06	452,440	380
EM NAME	Riyadh, SAU	35%	1.6	21%	3.51	240,820	1,210
DM EUR	Rome, ITA	106%	15.0	213%	1.85	261,630	590
DM EUR	Rotterdam, NLD	46%	3.3	45%	1.15	104,320	920
DM NA	Sacramento, USA	47%	2.7	39%	0.57	42,730	1,120
DM NA	Saint Louis, USA	34%	1.5	24%	0.42	25,390	1,390
EM EUR	Saint Petersburg, RUS	96%	8.0	196%	2.69	454,330	490
DM NA	Salt Lake City, USA	31%	1.4	21%	0.34	17,080	1,680
EM EUR	Samara, RUS	76%	4.9	127%	0.47	102,210	380
DM NA	San Antonio, USA	41%	1.6	24%	1.96	121,580	1,350
DM NA	San Diego, USA	59%	2.8	37%	2.22	119,750	1,550
DM NA	San Francisco, USA	76%	5.8	79%	1.64	73,750	1,850
DM NA	San Jose, USA	59%	2.5	34%	2.44	93,040	2,190
EM LA	San Jose, CRI	80%	2.8	79%	0.14	23,990	490
EM LA	San Salvador, SLV	73%	3.7	83%	0.08	22,700	300
EM LA	Santiago, CHL	62%	4.7	75%	3.05	445,460	570
EM LA	Santo Domingo, DOM	111%	4.8	119%	0.20	68,560	250
EM LA	Sao Paulo, BRA	66%	6.3	133%	4.74	798,370	490
EM EUR	Sarajevo, BIH	80%	7.9	153%	0.07	24,050	240
DM NA	Saskatoon, CAN	40%	2.1	27%	0.36	23,980	1,260
DM NA	Seattle, USA	52%	2.7	36%	1.19	55,750	1,780
EM AP	Seoul, KOR	42%	6.7	89%	14.73	820,420	1,500
EM AP	Shanghai, CHN	54%	8.7	124%	23.99	1,916,290	1,040
EM NAME	Sharjah, ARE	59%	1.6	33%	0.42	28,750	1,200
DM EUR	Sheffield, GBR	68%	3.6	53%	0.56	65,540	710
EM AP	Shenzhen, CHN	50%	7.9	120%	9.04	839,680	900
DM AP	Singapore, SGP	61%	8.5	88%	9.20	351,970	2,180
EM EUR	Skopje, MKD	98%	9.2	164%	0.08	30,120	230
DM EUR	Sliema, MLT	48%	2.7	36%	0.01	1,400	740
EM EUR	Sofia, BGR	80%	5.2	98%	0.30	106,120	230
DM NA	Spokane, USA	41%	1.2	22%	0.28	19,140	1,240
DM EUR	Stavanger, NOR	56%	4.8	61%	0.28	13,470	1,730
DM EUR	Stockholm, SWE	50%	8.0	89%	1.24	92,230	1,120
DM EUR	Stuttgart, DEU	45%	5.1	62%	0.87	69,870	1,030
EM AP	Surat, IND	23%	1.8	41%	0.58	126,010	380
DM AP	Sydney, AUS	46%	4.2	58%	9.94	389,030	2,130
EM AP	Taichung, TWN	36%	10.0	103%	1.47	238,740	510
EM AP	Taipei, TWN	48%	15.2	157%	5.55	652,890	710
EM EUR	Tallinn, EST	91%	6.4	99%	0.20	42,400	400
DM NA	Tampa, USA	37%	1.1	20%	0.51	30,750	1,390
DM EUR	Tampere, FIN	35%	4.4	49%	0.40	23,860	1,390
EM NAME	Tashkent, UZB	131%	6.1	232%	0.36	128,890	230
EM NAME	Tbilisi, GEO	107%	6.0	143%	0.19	82,900	190
EM NAME	Tehran, IRN	159%	13.7	521%	1.73	472,470	310
DM NAME	Tel Aviv-yafo, ISR	53%	5.9	70%	0.40	28,160	1,170
DM EUR	The Hague, NLD	50%	2.6	37%	0.75	51,490	1,210
EM EUR	Thessaloniki, GRC	54%	5.2	72%	0.16	32,600	410
EM AP	Thiruvananthapuram, IND	33%	4.6	93%	0.12	39,870	260
EM EUR	Timisoara, ROU	56%	5.2	88%	0.08	24,980	250
EM EUR	Tirana, ALB	65%	6.4	107%	0.07	25,050	230
DM AP	Tokyo, JPN	57%	5.8	58%	11.92	832,330	1,190
DM NA	Toronto, CAN	43%	4.3	52%	9.56	518,960	1,530
DM EUR	Toulouse, FRA	47%	2.9	39%	0.48	42,880	930
DM EUR	Trieste, ITA	42%	3.7	55%	0.16	19,390	690
DM EUR	Trondheim, NOR	48%	4.3	54%	0.34	18,590	1,530

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DM NA	Tucson, USA	42%	2.1	30%	0.61	47,640	1,070
EM NAME	Tunis, TUN	96%	7.3	124%	0.10	41,380	200
DM EUR	Turin, ITA	65%	8.2	118%	0.60	85,590	590
EM AP	Vadodara, IND	25%	2.7	55%	0.30	66,830	370
DM EUR	Valencia, ESP	36%	2.4	35%	0.83	80,510	860
DM NA	Vancouver, CAN	47%	4.3	52%	3.88	216,140	1,500
DM EUR	Venice, ITA	90%	7.7	138%	0.19	25,560	610
DM NA	Victoria, CAN	39%	3.6	44%	0.11	7,230	1,290
DM EUR	Vienna, AUT	56%	7.4	88%	2.00	175,420	950
EM AP	Vijayawada, IND	37%	5.4	117%	0.15	46,590	270
EM EUR	Vilnius, LTU	93%	7.6	101%	0.21	51,760	330
EM EUR	Warsaw, POL	62%	5.8	85%	0.87	142,370	510
DM NA	Washington, USA	46%	2.4	31%	15.97	544,970	2,440
DM AP	Wellington, NZL	44%	2.8	47%	0.56	34,730	1,360
DM NA	Wichita, USA	33%	0.8	17%	0.49	35,020	1,170
EM AF	Windhoek, NAM	116%	4.3	104%	0.10	17,360	480
DM NA	Winnipeg, CAN	36%	2.3	30%	0.98	68,110	1,200
EM EUR	Wroclaw, POL	66%	5.0	77%	0.26	52,710	420
EM EUR	Yekaterinburg, RUS	109%	7.1	184%	0.58	118,120	410
EM NAME	Yerevan, ARM	70%	4.1	116%	0.19	63,930	240
EM EUR	Zagreb, HRV	61%	5.7	102%	0.31	61,850	420
DM EUR	Zurich, CHE	32%	3.9	41%	5.07	124,550	3,390

Key: DM – developed Markets; EM – Emerging Markets; AF – Sub-Saharan Africa; AP – Asia-Pacific; EUR – Europe; LA – Latin America; NA – North America; NAME – North Africa and Middle East. Sources: FICO, ILOstat, Numbeo, US Census Bureau and MSCI ESG Research.

FIGURE 20 Proportion of urban population from sample cities, GINI coefficient and SMEs' share of national GDP

Market and region	Country	Proportion of urban population from sample cities	GINI coefficient	SMEs' share of national GDP
EM EUR	Albania	26%	34.5	68%
EM LA	Argentina	7%	44.5	40%
EM NAME	Armenia	56%	31.3	42%
DM AP	Australia	69%	30.3	58%
DM EUR	Austria	35%	26.3	61%
EM NAME	Azerbaijan	40%	33.7	10%
EM NAME	Bahrain	15%	36.0	NA
EM AP	Bangladesh	17%	32.1	25%
EM EUR	Belarus	26%	26.5	20%
DM EUR	Belgium	20%	28.0	62%
EM EUR	Bos. & Herz.	24%	36.2	NA
EM LA	Brazil	18%	51.9	20%
EM EUR	Bulgaria	29%	36.7	62%
EM AP	Cambodia	50%	36.0	NA
DM NA	Canada	69%	32.1	27%
EM LA	Chile	39%	52.1	21%
EM AP	China	10%	47.3	60%
EM LA	Colombia	27%	55.9	31%
EM LA	Costa Rica	9%	50.3	30%
EM EUR	Croatia	31%	32.0	55%
DM EUR	Cyprus	52%	31.0	73%
EM EUR	Czech Rep.	21%	24.9	NA
DM EUR	Denmark	11%	24.8	62%
EM LA	Dominican Rep.	14%	47.2	NA
EM LA	Ecuador	16%	48.5	NA
EM NAME	Egypt	30%	30.8	40%
EM LA	El Salvador	8%	48.3	NA
EM EUR	Estonia	45%	31.3	76%
EM AF	Ethiopia	14%	33.3	NA
DM EUR	Finland	23%	26.8	60%
DM EUR	France	7%	30.6	58%
EM NAME	Georgia	49%	46.0	19%
DM EUR	Germany	17%	27.0	53%
EM EUR	Greece	41%	34.3	75%
EM EUR	Hungary	37%	24.7	54%
DM EUR	Iceland	66%	28.0	68%
EM AP	India	22%	33.9	8%
EM AP	Indonesia	9%	38.1	23%
EM NAME	Iran	14%	44.5	12%
DM EUR	Ireland	45%	33.9	47%
DM NAME	Israel	19%	37.6	58%
DM EUR	Italy	18%	31.9	67%
EM LA	Jamaica	63%	45.5	NA
DM AP	Japan	8%	37.6	56%
EM NAME	Jordan	41%	35.4	50%
EM NAME	Kazakhstan	15%	28.9	18%
EM AF	Kenya	28%	42.5	18%
EM NAME	Kuwait	64%	36.0	NA
			USA 45.0	

Market and region	Country	Proportion of urban population from sample cities	GINI coefficient	SMEs' share of national GDP
DM EUR	Latvia	52%	35.2	69%
EM NAME	Lebanon	9%	36.0	90%
EM EUR	Lithuania	47%	35.5	69%
DM EUR	Luxembourg	20%	26.0	69%
EM EUR	Macedonia	45%	43.6	67%
EM AP	Malaysia	16%	46.2	47%
DM EUR	Malta	4%	27.1	77%
EM LA	Mexico	18%	47.2	37%
EM EUR	Moldova	49%	33.0	47%
EM NAME	Morocco	15%	40.9	38%
EM AF	Namibia	29%	59.7	14%
EM AP	Nepal	20%	32.8	NA
DM EUR	Netherlands	19%	30.9	63%
DM AP	New Zealand	59%	36.2	40%
EM AF	Nigeria	20%	48.8	47%
DM EUR	Norway	28%	25.0	71%
EM NAME	Oman	39%	36.0	58%
EM AP	Pakistan	23%	48.1	30%
EM LA	Panama	35%	51.9	33%
EM LA	Peru	39%	48.1	28%
EM AP	Philippines	14%	43.9	35%
EM EUR	Poland	22%	32.7	51%
DM EUR	Portugal	12%	38.5	67%
EM NAME	Qatar	37%	41.1	NA
EM EUR	Romania	29%	27.4	50%
EM EUR	Russia	20%	42.0	25%
EM NAME	Saudi Arabia	30%	36.0	33%
EM EUR	Serbia	42%	38.0	53%
DM AP	Singapore	97%	46.3	50%
DM EUR	Slovakia	14%	26.0	61%
EM EUR	Slovenia	27%	23.7	65%
EM AF	South Africa	10%	63.4	52%
EM AP	South Korea	24%	31.1	50%
DM EUR	Spain	17%	32.0	63%
EM AP	Sri Lanka	20%	49.0	NA
DM EUR	Sweden	19%	23.0	59%
DM EUR	Switzerland	37%	28.7	48%
EM AF	Tanzania	27%	25.6	NA
EM AP	Thailand	29%	39.4	38%
EM NAME	Tunisia	10%	36.1	51%
EM NAME	Turkey	36%	40.2	54%
EM EUR	Ukraine	22%	45.3	50%
EM NAME	United Arab Em.	40%	36.0	NA
DM EUR	United Kingdom	28%	32.3	51%
DM NA	United States	18%	45.0	50%
EM LA	Uruguay	41%	45.3	NA
EM NAME	Uzbekistan	19%	36.8	54%
EM AP	Vietnam	50%	36.6	55%
			USA 45.0	

Key: DM – developed Markets; EM – Emerging Markets; AF – Sub-Saharan Africa; AP – Asia-Pacific; EUR – Europe; LA – Latin America; NA – North America; NAME – North Africa and Middle East. Sources: African Development Bank, European Commission, national governments' documentation, World Bank and MSCI ESG Research.

For the purposes of this report, we categorize as developed markets those countries that are included in the developed markets membership of MSCI World Index. We classified countries as Emerging Markets, if they were members of MSCI Emerging & Frontier Markets Index. For the exact definition of developed, emerging and frontier markets under MSCI's index taxonomy, please refer to https://www.msci.com/market-cap-weighted-indexes. For the rest of the countries that are included in this report and do not have a membership in MSCI's market capitalization weighted indexes, we followed IMF's advanced economies definitions to classify them as developed markets, and further supplemented this source with the US CIA's World Factbook list of developed countries. See: International Monetary Fund, "*World Economic Outlook: Adjusting to Lower Commodity Prices*", 2015; and https://www.cia.gov/library/publications/the-world-factbook /appendix/appendix-b.html.

ANNEX II – PROPERTY PORTFOLIOS AND SME LOANS

FIGURE 21. Residential portfolios aggregated by region and industry depending on housing affordability of cities where properties are located

Residential units	Cos.	Industry, market & region	Less than 40%	Less than 60%	Less than 80%	Less than 100%	More than 100%
			Property Management				
1,143,321	57	REIT	19%	77%	3%	1%	1%
1,088,593	67	REMD	2%	65%	26%	2%	4%
5,142	11	Homebuilding	0%	100%	0%	0%	0%
200,858	30	DM AP	2%	28%	42%	5%	22%
1,247,201	58	DM NA	18%	77%	3%	1%	1%
571,568	35	DM EUR	1%	92%	6%	1%	0%
208,152	11	EM AP	0%	27%	72%	0%	0%
9,277	1	EM NAME	0%	0%	5%	95%	0%
2,237,056	135	Subtotal	11%	72%	14%	1%	2%
			Property Development				
85,205	29	REIT	16%	78%	4%	1%	0%
330,453	53	REMD	2%	24%	59%	3%	12%
419,917	29	Homebuilding	5%	94%	0%	1%	0%
257,083	26	DM AP	2%	30%	53%	0%	15%
84,332	28	DM EUR	6%	85%	1%	7%	0%
420,444	45	DM NA	6%	92%	2%	0%	0%
62,629	10	EM AP	7%	10%	83%	0%	0%
10,643	2	EM NAME	0%	0%	26%	74%	0%
835,131	111	Subtotal	5%	65%	24%	2%	5%
3,072,187	161	Total	9%	70%	17%	1%	3%

Sources: Corporate reports, ILOstat, Numbeo, SNL Financial and MSCI ESG Research.

FIGURE 22. Commercial portfolio mapping by SME contribution to national GDP

Commercial Properties	Cos.	Industry, market & region	SME participation in country's GDP				Median size of SMEs as % of GDP
			Higher than DM regional median	Lower than DM regional median	Higher than EM regional median	Lower than EM regional median	
		Property Management					
43,319	182	REIT	78%	16%	5%	0%	
8,677	97	REMD	15%	62%	18%	4%	
42	3		14%	86%	0%	0%	
4,864	61	DM AP	66%	20%	14%	1%	50%
10,266	63	DM EUR	29%	69%	1%	1%	62%
33,725	116	DM NA	86%	13%	1%	0%	39%
24	1	DM NAME	96%	4%	0%	0%	58%
2,004	12	EM AF	0%	0%	99%	1%	35%
949	21	EM AP	0%	0%	88%	11%	31%
98	3	EM LA	0%	0%	19%	81%	29%
108	5	EM NAME	1%	0%	10%	89%	41%
48,879	241	DM	72%	25%	2%	0%	59%
3,159	41	EM	0%	0%	90%	9%	40%
52,038	282	All	68%	24%	7%	1%	50%

Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

FIGURE 23 <u>Residential</u> portfolio segmentation by housing affordability level of location

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

* = company with affordable residential offerings.

Sources: Corporate reports, ILOstat, Numbeo, SNL Financial and MSCI ESG Research.

Ticker : Exchange	Sub-industry	Country	Rental % of total residential portfolio (units)	Rental Less than 40%	Rental Less than 60%	Rental Less than 80%	Rental Less than 100%	Rental More than 100%	Dev % of total residential portfolio (units)	Dev Less than 40%	Dev Less than 60%	Dev Less than 80%	Dev Less than 100%	Dev More than 100%
12 : HKG	DREA	HK	72%	0%	16%	35%	0%	48%	28%	0%	26%	40%	0%	34%
14 : HKG	REOC	HK	100%	0%	0%	0%	0%	100%	0%	NA	NA	NA	NA	NA
16 : HKG	DREA	HK	48%	0%	4%	4%	0%	92%	52%	0%	0%	0%	0%	100%
17 : HKG	DREA	HK	38%	0%	0%	0%	0%	100%	62%	0%	0%	0%	0%	100%
19 : HKG	DREA	HK	100%	0%	21%	0%	0%	79%	0%	0%	50%	0%	0%	50%
20 : HKG	DREA	HK	0%	0%	29%	43%	0%	29%	100%	0%	0%	21%	0%	79%
83 : HKG	RED	HK	48%	0%	8%	0%	0%	92%	52%	0%	5%	86%	0%	9%
101 : HKG	DREA	HK	100%	0%	0%	0%	0%	100%	0%	NA	NA	NA	NA	NA
119 : HKG	RED	HK	97%	0%	0%	100%	0%	0%	3%	0%	19%	76%	0%	5%
123 : HKG	DREA	HK	21%	0%	66%	34%	0%	0%	79%	0%	76%	22%	0%	2%
272 : HKG	RED	CN	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
432 : HKG	RED	HK	100%	0%	0%	1%	0%	99%	0%	NA	NA	NA	NA	NA
683 : HKG	DREA	HK	28%	0%	9%	0%	0%	91%	72%	0%	0%	63%	0%	37%
688* : HKG	RED	HK	12%	0%	1%	99%	0%	0%	88%	0%	23%	74%	0%	3%
813 : HKG	RED	HK	99%	0%	100%	0%	0%	0%	1%	0%	38%	63%	0%	0%
817* : HKG	RED	HK	25%	0%	0%	100%	0%	0%	75%	0%	33%	67%	0%	0%
917 : HKG	RED	HK	88%	0%	1%	99%	0%	0%	12%	0%	0%	100%	0%	0%
960 : HKG	RED	CN	13%	0%	100%	0%	0%	0%	88%	0%	0%	100%	0%	0%
1109* : HKG	RED	HK	8%	0%	0%	100%	0%	0%	92%	0%	43%	57%	0%	0%
1113 : HKG	RED	HK	70%	0%	0%	39%	0%	61%	30%	0%	0%	100%	0%	0%
1918* : HKG	RED	CN	36%	0%	25%	75%	0%	0%	64%	0%	48%	52%	0%	0%
1972 : HKG	REOC	HK	83%	0%	13%	0%	0%	87%	17%	0%	1%	0%	0%	99%
2007 : HKG	RED	CN	81%	0%	22%	78%	0%	0%	19%	0%	9%	91%	0%	0%
3289 : TKS	DREA	JP	84%	0%	100%	0%	0%	0%	16%	0%	30%	0%	0%	70%
3333 : HKG	RED	CN	98%	0%	99%	1%	0%	0%	2%	0%	23%	77%	0%	0%
3377 : HKG	RED	CN	98%	0%	53%	47%	0%	0%	2%	0%	40%	60%	0%	0%
3699 : HKG	RED	CN	50%	0%	14%	86%	0%	0%	50%	0%	57%	43%	0%	0%
8830 : TKS	DREA	JP	55%	0%	100%	0%	0%	0%	45%	0%	100%	0%	0%	0%
8933 : TKS	REOC	JP	73%	0%	100%	0%	0%	0%	27%	18%	82%	0%	0%	0%
8960 : TKS	Div. REIT	JP	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
AAT : NYS	Div. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
ABP : ASX	Div. REIT	AU	2%	0%	100%	0%	0%	0%	98%	5%	95%	0%	0%	0%
ACC : NYS	Res. REIT	US	96%	7%	89%	4%	0%	0%	4%	6%	94%	0%	0%	0%
AKR : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
ALDAR : ADS	DREA	AE	47%	0%	0%	5%	95%	0%	53%	0%	0%	26%	74%	0%
ALEX : NYS	DREA	US	12%	0%	18%	82%	0%	0%	88%	0%	92%	8%	0%	0%
ALLN : SWX	DREA	CH	90%	16%	84%	0%	0%	0%	10%	85%	15%	0%	0%	0%
ALX : NYS	Ret. REIT	US	25%	0%	0%	100%	0%	0%	75%	0%	100%	0%	0%	0%
ARPI : NYS	Res. REIT	US	100%	48%	52%	0%	0%	0%	0%	NA	NA	NA	NA	NA
AVB* : NYS	Res. REIT	US	93%	1%	92%	6%	0%	1%	7%	0%	84%	16%	0%	0%
BDEV* : LON	HB	GB	69%	0%	100%	0%	0%	0%	31%	0%	20%	0%	80%	0%
BDN : NYS	Off. REIT	US	46%	0%	100%	0%	0%	0%	54%	0%	100%	0%	0%	0%
BEE : CHI	HR. REIT	US	100%	0%	0%	100%	0%	0%	0%	NA	NA	NA	NA	NA
BEI.UN : TSE	Res. REIT	CA	100%	77%	16%	0%	6%	0%	0%	NA	NA	NA	NA	NA
BFS : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
BHY* : LSE	HB	GB	56%	0%	100%	0%	0%	0%	44%	0%	100%	0%	0%	0%
BKG* : LON	HB	GB	0%	NA	NA	NA	NA	NA	100%	0%	34%	0%	66%	0%
BMR : CHI	Off. REIT	US	100%	0%	0%	100%	0%	0%	0%	NA	NA	NA	NA	NA
BPY : NYS	REOC	BM	94%	5%	81%	15%	0%	0%	6%	0%	0%	49%	51%	0%
BVS* : LON	HB	GB	11%	0%	100%	0%	0%	0%	89%	0%	100%	0%	0%	0%
BWY : LON	HB	GB	5%	0%	100%	0%	0%	0%	95%	0%	97%	0%	3%	0%
C09 : SES	DREA	SG	40%	0%	0%	100%	0%	0%	60%	0%	2%	97%	2%	0%
C31 : SES	DREA	SG	51%	1%	17%	67%	12%	4%	49%	1%	28%	66%	0%	5%
CAA : NYS	HB	US	7%	0%	100%	0%	0%	0%	93%	17%	83%	0%	0%	0%
CAPC* : LON	REOC	GB	1%	0%	0%	0%	100%	0%	99%	0%	0%	0%	100%	0%
CAR.UN : TSE	Res. REIT	CA	100%	44%	53%	0%	3%	0%	0%	NA	NA	NA	NA	NA
CBG : NYS	RES	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
CCG : NYS	Res. REIT	US	100%	10%	89%	0%	0%	1%	0%	NA	NA	NA	NA	NA
CHC : ASX	Div. REIT	AU	43%	100%	0%	0%	0%	0%	57%	0%	100%	0%	0%	0%
CLI : LON	REOC	GB	100%	0%	17%	0%	83%	0%	0%	NA	NA	NA	NA	NA
CLI : NYS	Off. REIT	US	37%	0%	100%	0%	0%	0%	63%	0%	100%	0%	0%	0%
CPN : BKK	REOC	TH	5%	0%	0%	100%	0%	0%	95%	0%	0%	100%	0%	0%
CPT : NYS	Res. REIT	US	94%	31%	68%	0%	1%	0%	6%	27%	73%	0%	0%	0%
CRST* : LON	HB	GB	12%	0%	100%	0%	0%	0%	88%	0%	91%	0%	9%	0%
CTY1S : HEL	REOC	FI	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
CUF.UN : TSE	Div. REIT	CA	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
CUZ : NYS	Div. REIT	US	11%	42%	58%	0%	0%	0%	89%	49%	51%	0%	0%	0%
CYRE3* : BSP	HB	BR	0%	NA	NA	NA	NA	NA	100%	3%	3%	92%	2%	0%
DEI : NYS	Off. REIT	US	90%	0%	65%	35%	0%	0%	10%	0%	100%	0%	0%	0%
DHI* : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
DLF : NSE	DREA	IN	7%	0%	100%	0%	0%	0%	93%	0%	20%	79%	0%	0%
DLN : LON	Off. REIT	GB	100%	0%	0%	0%	100%	0%	0%	NA	NA	NA	NA	NA
EDR : NYS	Res. REIT	US	97%	12%	86%	1%	0%	1%	3%	0%	100%	0%	0%	0%
EGP : NYS	Ind. REIT	US	100%	20%	80%	0%	0%	0%	0%	NA	NA	NA	NA	NA
ENTRA : OSL	REOC	NO	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
EQR : NYS	Res. REIT	US	99%	16%	79%	4%	0%	1%	1%	0%	64%	36%	0%	0%
EQY : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
FABG : STO	REOC	SE	24%	0%	100%	0%	0%	0%	76%	0%	100%	0%	0%	0%

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

italic = company with affordable residential offerings.

Sources: Corporate reports, ILOstat, Numbeo, SNL Financial and MSCI ESG Research.

			Rental Portfolio						Development Portfolio					
Ticker : Exchange	Sub-industry	Country	% of total residential portfolio (units)	Less than 40%	Less than 60%	Less than 80%	Less than 100%	More than 100%	% of total residential portfolio (units)	Less than 40%	Less than 60%	Less than 80%	Less than 100%	More than 100%
FCE : NYS	REOC	US	94%	5%	79%	14%	0%	2%	6%	0%	66%	34%	0%	0%
FCH : NYS	HR. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
FCR : TSE	REOC	CA	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%
FRT : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
FUR : NYS	Div. REIT	US	100%	18%	82%	0%	0%	0%	0%	NA	NA	NA	NA	NA
GFJ : HAM	REOC	LU	100%	0%	93%	7%	0%	0%	0%	NA	NA	NA	NA	NA
GGP : NYS	Ret. REIT	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
GLE* : LSE	HB	GB	14%	0%	100%	0%	0%	0%	86%	0%	100%	0%	0%	0%
GRI : LON	REOC	GB	99%	8%	60%	5%	22%	5%	1%	0%	43%	0%	57%	0%
GYC : ETR	DREA	LU	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
HEMF : STO	REOC	SE	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
HIW : NYS	Off. REIT	US	92%	56%	44%	0%	0%	0%	8%	0%	100%	0%	0%	0%
HLCL : LON	RED	GB	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
HMSO : LON	Ret. REIT	GB	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
HOV : NYS	HB	US	2%	0%	100%	0%	0%	0%	98%	0%	100%	0%	0%	0%
HR.UN : TSE	Div. REIT	CA	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
IBP : NYS	HB	US	2%	0%	100%	0%	0%	0%	98%	0%	100%	0%	0%	0%
IIP.UN : TSE	Res. REIT	CA	100%	34%	58%	0%	8%	0%	0%	NA	NA	NA	NA	NA
INTU : LON	Ret. REIT	GB	81%	0%	100%	0%	0%	0%	19%	0%	100%	0%	0%	0%
IRET : NYS	Div. REIT	US	95%	1%	99%	0%	0%	0%	5%	0%	100%	0%	0%	0%
JM : STO	HB	SE	4%	0%	100%	0%	0%	0%	96%	17%	81%	2%	0%	0%
KBH : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	24%	75%	2%	0%	0%
KIM : NYS	Ret. REIT	US	100%	0%	75%	25%	0%	0%	0%	NA	NA	NA	NA	NA
KMP : TSE	REOC	CA	90%	18%	77%	3%	2%	0%	10%	7%	86%	6%	0%	0%
KRC : NYS	Off. REIT	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
KW : NYS	RES	US	100%	35%	65%	0%	0%	0%	0%	0%	100%	0%	0%	0%
LEG* : ETR	REOC	DE	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
LEN* : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
LGIH : NAS	HB	US	3%	0%	50%	50%	0%	0%	97%	34%	66%	0%	0%	0%
LMP : LON	Div. REIT	GB	79%	0%	0%	0%	100%	0%	21%	0%	0%	0%	100%	0%
LPT : NYS	Div. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
M35 : SES	RED	US	5%	0%	0%	100%	0%	0%	95%	0%	0%	100%	0%	0%
MAA : NYS	Res. REIT	US	100%	15%	83%	2%	0%	0%	0%	100%	0%	0%	0%	0%
MAHLIFE : NSE	RED	IN	28%	48%	18%	33%	0%	0%	72%	69%	28%	4%	0%	0%
MDC : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
MEQ : TSE	REOC	CA	100%	65%	35%	0%	0%	0%	0%	0%	100%	0%	0%	0%
MGR* : ASX	Div. REIT	AU	37%	31%	69%	0%	0%	0%	63%	21%	79%	0%	0%	0%
MHO : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	30%	70%	0%	0%	0%
MOBN : SWX	DREA	CH	59%	59%	41%	0%	0%	0%	41%	6%	94%	0%	0%	0%
MRG.UN : TSE	Res. REIT	CA	100%	30%	70%	0%	0%	0%	0%	NA	NA	NA	NA	NA
MST.UN : TSE	Res. REIT	US	100%	23%	77%	0%	0%	0%	0%	NA	NA	NA	NA	NA
MTH : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
NPR : TRN	Res. REIT	CA	95%	14%	86%	0%	0%	0%	5%	48%	52%	0%	0%	0%
NSI : AMS	Div. REIT	NL	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
NVR : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
NYRT : NYS	Off. REIT	US	100%	0%	0%	100%	0%	0%	0%	NA	NA	NA	NA	NA
OLP : NYS	Div. REIT	US	100%	0%	85%	15%	0%	0%	0%	NA	NA	NA	NA	NA
PEI : NYS	Ret. REIT	US	100%	7%	90%	3%	0%	0%	0%	NA	NA	NA	NA	NA
PHM : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
PKY : NYS	Off. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
PLD : NYS	Ind. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
PSN* : LON	HB	GB	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
PSPN : SWX	REOC	CH	100%	100%	0%	0%	0%	0%	0%	NA	NA	NA	NA	NA
RDF : JSE	Div. REIT	ZA	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
RDW* : LON	HB	GB	0%	NA	NA	NA	NA	NA	100%	0%	81%	0%	19%	0%
REG : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
RYN : NYS	Sp. REIT	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
SLG : NYS	Off. REIT	US	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%
SMP : LON	RED	GB	35%	0%	95%	5%	0%	0%	65%	0%	79%	12%	9%	0%
SPSN* : SWX	REOC	CH	100%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%
SREI : LON	Div. REIT	GG	1%	0%	100%	0%	0%	0%	99%	0%	100%	0%	0%	0%
TCSC : LON	Ret. REIT	GB	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
TEG* : ETR	RED	DE	100%	0%	93%	7%	0%	0%	0%	NA	NA	NA	NA	NA
TMGH : CAI	HB	EG	0%	NA	NA	NA	NA	NA	100%	0%	0%	75%	0%	25%
TMHC : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	27%	65%	0%	8%	0%
TOL : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	12%	84%	2%	1%	0%
TPH : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	5%	95%	0%	0%	0%
TW.* : LON	HB	GB	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
U14 : SES	DREA	SG	42%	0%	0%	100%	0%	0%	58%	0%	4%	96%	0%	0%
UAI : LON	DREA	GB	31%	0%	59%	0%	41%	0%	69%	0%	49%	0%	51%	0%
UDR : NYS	Res. REIT	US	99%	15%	80%	2%	0%	2%	1%	0%	74%	26%	0%	0%
UEMS : KLS	RED	MY	6%	0%	0%	100%	0%	0%	94%	6%	0%	94%	0%	0%
VASTN : AMS	Ret. REIT	NL	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
VNA* : ETR	REOC	DE	100%	0%	93%	7%	0%	0%	0%	NA	NA	NA	NA	NA
WALL B : STO	REOC	SE	62%	36%	64%	0%	0%	0%	38%	23%	77%	0%	0%	0%
WCIC : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	4%	65%	0%	31%	0%
WHA : AMS	Div. REIT	NL	59%	0%	100%	0%	0%	0%	41%	0%	100%	0%	0%	0%
WIHL : STO	REOC	SE	12%	0%	100%	0%	0%	0%	88%	0%	100%	0%	0%	0%
WKP : LON	Off. REIT	GB	0%	NA	NA	NA	NA	NA	100%	0%	0%	0%	100%	0%
WLH : NYS	HB	US	0%	NA	NA	NA	NA	NA	100%	0%	100%	0%	0%	0%
WRE : NYS	Div. REIT	US	85%	0%	98%	0%	0%	2%	15%	0%	63%	0%	0%	37%
WRI : NYS	Ret. REIT	US	100%	0%	100%	0%	0%	0%	0%	NA	NA	NA	NA	NA
Z25 : SES	RED	SG	88%	0%	98%	2%	0%	0%	12%	0%	99%	1%	0%	0%

FIGURE 24 Commercial portfolio segmentation by SME contribution to national GDP relative to median values by market and region

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

				Commercial Portfolio			
Ticker : Exchange	Sub-industry	Country	% of total commercial portfolio (properties)	Higher than DM regional median	Lower than DM regional median	Higher than EM regional median	Lower than EM regional median
2 : SHE	RED	CN	3%	0%	0%	100%	0%
4 : HKG	DREA	HK	69%	0%	58%	42%	0%
12 : HKG	DREA	HK	77%	0%	84%	16%	0%
14 : HKG	REOC	HK	80%	0%	100%	0%	0%
16 : HKG	DREA	HK	72%	0%	93%	7%	0%
17 : HKG	DREA	HK	81%	0%	22%	78%	0%
19 : HKG	DREA	HK	92%	4%	82%	13%	0%
20 : HKG	DREA	HK	71%	6%	57%	37%	0%
83 : HKG	RED	HK	95%	8%	86%	6%	0%
101 : HKG	DREA	HK	89%	0%	78%	22%	0%
119 : HKG	RED	HK	79%	0%	2%	98%	0%
123 : HKG	DREA	HK	33%	0%	11%	89%	0%
272 : HKG	RED	CN	48%	0%	0%	100%	0%
410 : HKG	RED	CN	67%	0%	0%	100%	0%
432 : HKG	RED	HK	57%	0%	25%	75%	0%
563 : HKG	RED	HK	38%	0%	0%	100%	0%
683 : HKG	DREA	HK	81%	4%	34%	59%	2%
688 : HKG	RED	HK	38%	0%	23%	77%	0%
813 : HKG	RED	HK	15%	0%	0%	100%	0%
817 : HKG	RED	HK	40%	0%	0%	100%	0%
823 : HKG	Ret. REIT	HK	99%	0%	98%	2%	0%
917 : HKG	RED	HK	92%	0%	0%	100%	0%
960 : HKG	RED	CN	56%	0%	0%	100%	0%
1109 : HKG	RED	HK	46%	0%	0%	100%	0%
1113 : HKG	RED	HK	72%	0%	66%	34%	0%
1918 : HKG	RED	CN	17%	0%	0%	100%	0%
1972 : HKG	REOC	HK	83%	4%	81%	15%	0%
2007 : HKG	RED	CN	68%	0%	0%	100%	0%
2777 : HKG	RED	CN	25%	0%	0%	100%	0%
3003 : TKS	REOC	JP	92%	99%	1%	0%	0%
3283 : TKS	Ind. REIT	JP	76%	100%	0%	0%	0%
3289 : TKS	DREA	JP	98%	99%	0%	1%	0%
3292 : TKS	Ret. REIT	JP	100%	96%	0%	4%	0%
3295 : TKS	Div. REIT	JP	100%	100%	0%	0%	0%
3333 : HKG	RED	CN	55%	0%	0%	100%	0%
3377 : HKG	RED	CN	20%	0%	0%	100%	0%
3699 : HKG	RED	CN	67%	1%	0%	98%	0%
8801 : TKS	DREA	JP	78%	94%	5%	2%	0%
8802 : TKS	DREA	JP	94%	91%	9%	0%	0%
8806 : TKS	REOC	JP	100%	92%	0%	8%	0%
8830 : TKS	DREA	JP	79%	100%	0%	0%	0%
8905 : TKS	REOC	JP	77%	86%	0%	11%	3%
8933 : TKS	REOC	JP	93%	96%	4%	0%	0%
8951 : TKS	Off. REIT	JP	100%	100%	0%	0%	0%
8952 : TKS	Off. REIT	JP	100%	100%	0%	0%	0%
8955 : TKS	Off. REIT	JP	100%	100%	0%	0%	0%
8960 : TKS	Div. REIT	JP	100%	100%	0%	0%	0%
A17U : SES	Ind. REIT	SG	99%	98%	0%	2%	0%
AAR.UN : TSE	Ind. REIT	CA	99%	7%	93%	0%	0%
AAT : NYS	Div. REIT	US	80%	100%	0%	0%	0%
ABPXX : ASX	Div. REIT	AU	96%	88%	12%	0%	0%
ACC : NYS	Res. REIT	US	100%	100%	0%	0%	0%
ADC : NYS	Ret. REIT	US	99%	100%	0%	0%	0%
AHP : NYS	HR. REIT	US	100%	100%	0%	0%	0%
AKR : NYS	Ret. REIT	US	98%	100%	0%	0%	0%
ALDAR : ADS	DREA	AE	79%	0%	0%	0%	100%
ALEX : NYS	DREA	US	87%	100%	0%	0%	0%
ALI : PHS	DREA	PH	55%	0%	0%	100%	0%
ALLN : SWX	DREA	CH	89%	0%	100%	0%	0%
ALX : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
ANF : PAR	Div. REIT	FR	97%	0%	100%	0%	0%
AOX : ETR	Off. REIT	DE	99%	0%	100%	0%	0%
AP.UN : TSE	Off. REIT	CA	98%	0%	100%	0%	0%
ATT : JSE	RED	ZA	64%	3%	2%	92%	3%
AVB : NYS	Res. REIT	US	100%	100%	0%	0%	0%
AWB : JSE	Div. REIT	ZA	100%	0%	0%	100%	0%
AXIA : MCE	Off. REIT	ES	100%	100%	0%	0%	0%
AZRG : TAE	REOC	IL	69%	96%	4%	0%	0%
BALD B : STO	REOC	SE	99%	0%	100%	0%	0%
BDN : NYS	Off. REIT	US	98%	100%	0%	0%	0%
BEFB : BRU	Off. REIT	BE	97%	100%	0%	0%	0%
BEI.UN : TSE	Res. REIT	CA	100%	0%	100%	0%	0%
BFS : NYS	Ret. REIT	US	97%	100%	0%	0%	0%
BHY : LON	HB	GB	61%	0%	100%	0%	0%
BNS : TAA	Off. REIT	IT	98%	98%	2%	0%	0%
BOX.UN : TSE	Off. REIT	CA	91%	0%	100%	0%	0%
BRML3 : BSP	REOC	BR	88%	0%	0%	0%	100%
BRX* : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
BSDE : IDX	RED	ID	62%	0%	0%	0%	100%
BWP : ASX	Ind. REIT	AU	100%	100%	0%	0%	0%
BWY : LON	HB	GB	50%	0%	100%	0%	0%
BYG : LON	Sp. REIT	GB	96%	0%	100%	0%	0%

*= company with affordable commercial offerings.
Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

* = company with affordable commercial offerings.
Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

				Commercial Portfolio			
Ticker : Exchange	Sub-industry	Country	% of total commercial portfolio (properties)	Higher than DM regional median	Lower than DM regional median	Higher than EM regional median	Lower than EM regional median
C09 : SES	DREA	SG	89%	57%	31%	10%	2%
C31 : SES	DREA	SG	84%	42%	4%	50%	4%
C61U : SES	Off. REIT	SG	95%	52%	0%	48%	0%
CAPC : LON	REOC	GB	100%	8%	75%	8%	8%
CAR.UN : TSE	Res. REIT	CA	83%	0%	100%	0%	0%
CAST : STO	REOC	SE	99%	0%	100%	0%	0%
CBG : NYS	RES	US	100%	100%	0%	0%	0%
CCG : NYS	Res. REIT	US	100%	100%	0%	0%	0%
CDR : NYS	Ret. REIT	US	99%	100%	0%	0%	0%
CHCXX : ASX	Div. REIT	AU	97%	98%	2%	0%	0%
CHP.UN : TSE	Ret. REIT	CA	98%	0%	100%	0%	0%
CHSP : NYS	HR. REIT	US	100%	100%	0%	0%	0%
CLDT : NYS	HR. REIT	US	98%	100%	0%	0%	0%
CLI : LON	REOC	GB	99%	3%	97%	1%	0%
CLI : NYS	Off. REIT	US	99%	100%	0%	0%	0%
CMW : ASX	Off. REIT	AU	98%	93%	7%	0%	0%
COFB : BRU	Div. REIT	BE	98%	99%	1%	0%	0%
CPF : JSE	Div. REIT	ZA	96%	0%	0%	100%	0%
CPN : BKK	REOC	TH	88%	0%	0%	100%	0%
CPT : NYS	Res. REIT	US	100%	100%	0%	0%	0%
CQRXX : ASX	Ret. REIT	AU	100%	92%	7%	0%	2%
CRR.UN : TSE	Ret. REIT	CA	100%	0%	100%	0%	0%
CRT.UN : TSE	Ret. REIT	CA	99%	0%	100%	0%	0%
CTY1S : HEL	REOC	FI	96%	21%	76%	3%	0%
CUBE : NYS	Sp. REIT	US	98%	100%	0%	0%	0%
CUF.UN : TSE	Div. REIT	CA	100%	0%	100%	0%	0%
CUZ : NYS	Div. REIT	US	94%	100%	0%	0%	0%
CXP : NYS	Off. REIT	US	100%	99%	0%	0%	1%
D.UN : TSE	Off. REIT	CA	100%	1%	99%	0%	0%
DCT : NYS	Ind. REIT	US	93%	98%	0%	2%	0%
DDR : NYS	Ret. REIT	US	100%	99%	0%	0%	1%
DEI : NYS	Off. REIT	US	100%	100%	0%	0%	0%
DEQ : ETR	REOC	DE	100%	5%	82%	0%	14%
DIOS : STO	REOC	SE	100%	0%	99%	0%	1%
DIR.UN : TSE	Ind. REIT	CA	100%	0%	100%	0%	0%
DLF : NSE	DREA	IN	45%	0%	0%	0%	100%
DLN : LON	Off. REIT	GB	87%	0%	99%	1%	0%
DLR : NYS	Sp. REIT	US	73%	100%	0%	0%	0%
DRE : NYS	Div. REIT	US	99%	100%	0%	0%	0%
DRG.UN : TSE	Div. REIT	CA	100%	0%	100%	0%	0%
DRH : NYS	HR. REIT	US	100%	100%	0%	0%	0%
DXSXX : ASX	Off. REIT	AU	94%	93%	7%	0%	0%
ECMPA : AMS	Ret. REIT	NL	96%	37%	63%	0%	0%
EGP : NYS	Ind. REIT	US	93%	100%	0%	0%	0%
EKGYO : IST	Res. REIT	TR	20%	0%	0%	100%	0%
EMAAR : DFM	RED	AE	57%	3%	0%	7%	90%
EMAARMALLS :	REOC	AE	97%	0%	0%	0%	100%
EMI : JSE	Div. REIT	ZA	99%	1%	0%	99%	0%
ENTRA : OSL	REOC	NO	88%	100%	0%	0%	0%
EQR : NYS	Res. REIT	US	75%	100%	0%	0%	0%
EQY : NYS	Ret. REIT	US	99%	100%	0%	0%	0%
ESRT : NYS	Div. REIT	US	97%	100%	0%	0%	0%
EXR : NYS	Sp. REIT	US	98%	100%	0%	0%	0%
FABG : STO	REOC	SE	95%	0%	100%	0%	0%
FCEPP : OTC	Div. REIT	US	94%	100%	0%	0%	0%
FCH : NYS	HR. REIT	US	100%	97%	3%	0%	0%
FCR : TSE	REOC	CA	97%	0%	100%	0%	0%
FFA : JSE	Div. REIT	ZA	100%	0%	0%	100%	0%
FR : NYS	Ind. REIT	US	99%	100%	0%	0%	0%
FRT : NYS	Ret. REIT	US	97%	100%	0%	0%	0%
FSP : ASE	Off. REIT	US	100%	100%	0%	0%	0%
FUNO11 : MEX	Div. REIT	MX	79%	0%	0%	100%	0%
FUR : NYS	Div. REIT	US	99%	100%	0%	0%	0%
GDIXX : ASX	Off. REIT	AU	100%	100%	0%	0%	0%
GFC : PAR	Div. REIT	FR	96%	1%	98%	0%	1%
GGP : NYS	Ret. REIT	US	98%	94%	0%	1%	5%
GMG : ASX	Ind. REIT	AU	74%	54%	34%	9%	3%
GOV : NYS	Off. REIT	US	100%	100%	0%	0%	0%
GPT : NYS	Div. REIT	US	100%	98%	2%	0%	0%
GPTXX : ASX	Div. REIT	AU	89%	99%	1%	0%	0%
GRI : LON	REOC	GB	100%	0%	100%	0%	0%
GRT.UN : TSE	Ind. REIT	CA	99%	33%	66%	1%	0%
GTY : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
GWPTY* : OTC	Div. REIT	ZA	100%	0%	0%	100%	0%
HAB : ETR	Div. REIT	DE	97%	0%	100%	0%	0%
HBRN : DUB	Div. REIT	IE	79%	0%	100%	0%	0%
HCN : NYS	HC REIT	US	100%	100%	0%	0%	0%
HEMF : STO	REOC	SE	99%	2%	98%	0%	0%
HHC : NYS	RED	US	67%	100%	0%	0%	0%
HIW : NYS	Off. REIT	US	99%	100%	0%	0%	0%
HLCL : LON	RED	GB	88%	0%	99%	0%	1%
HMSO : LON	Ret. REIT	GB	77%	9%	89%	3%	0%
HPT : NYS	HR. REIT	US	99%	100%	0%	0%	0%
HR.UN : TSE	Div. REIT	CA	99%	36%	64%	0%	0%
HST : NYS	HR. REIT	US	100%	85%	10%	1%	4%
HSTN : LON	Ind. REIT	GB	98%	12%	88%	0%	0%
HTA : NYS	HC REIT	US	100%	100%	0%	0%	0%
HUFV A : STO	REOC	SE	96%	0%	100%	0%	0%

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

= company with affordable commercial offerings.

Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

Ticker : Exchange	Sub-industry	Country	% of total commercial portfolio (properties)	Commercial Portfolio			
				Higher than DM regional median	Lower than DM regional median	Higher than EM regional median	Lower than EM regional median
HYP : JSE	Ret. REIT	ZA	85%	0%	0%	96%	4%
ICAD : PAR	Div. REIT	FR	87%	0%	100%	0%	0%
IGD : TAA	Ret. REIT	IT	95%	73%	0%	0%	27%
IIA : BAH	REOC	AT	86%	23%	45%	11%	21%
INN : NYS	HR. REIT	US	100%	100%	0%	0%	0%
INN.UN : TSE	HR. REIT	CA	100%	0%	100%	0%	0%
INTO : BRU	Off. REIT	BE	98%	100%	0%	0%	0%
INTU : LON	Ret. REIT	GB	84%	23%	75%	0%	2%
IOF : ASX	Off. REIT	AU	100%	95%	3%	3%	0%
IRET : NYS	Div. REIT	US	99%	100%	0%	0%	0%
IRM : NYS	Sp. REIT	US	100%	72%	19%	6%	4%
JM : STO	HB	SE	63%	27%	73%	0%	0%
JOE : NYS	DREA	US	97%	100%	0%	0%	0%
KIM : NYS	Ret. REIT	US	99%	91%	5%	3%	1%
KLED : STO	REOC	SE	99%	1%	98%	0%	0%
KLOV B : STO	REOC	SE	98%	0%	100%	0%	0%
KPG : NZE	Div. REIT	NZ	95%	0%	100%	0%	0%
KRC : NYS	Off. REIT	US	94%	100%	0%	0%	0%
KW : NYS	RES	US	100%	100%	0%	0%	0%
LI : PAR	Ret. REIT	FR	98%	42%	49%	4%	5%
LMP : LON	Div. REIT	GB	91%	0%	100%	0%	0%
LPKR : IDX	RED	ID	69%	0%	0%	0%	100%
LPT : NYS	Div. REIT	US	98%	98%	2%	0%	0%
LRE : MCE	Div. REIT	ES	100%	100%	0%	0%	0%
M35 : SES	RED		100%	67%	33%	0%	0%
MAA : NYS	Res. REIT	US	100%	100%	0%	0%	0%
MAC : NYS	Ret. REIT	US	96%	100%	0%	0%	0%
MAHLIFE : NSE	RED	IN	50%	0%	0%	0%	100%
MC0 : SES	REOC	SG	49%	36%	0%	61%	3%
MEG : PHS	RED	PH	61%	0%	0%	100%	0%
MERY : PAR	Ret. REIT	FR	96%	0%	100%	0%	0%
MNR : NYS	Ind. REIT	US	100%	100%	0%	0%	0%
MOBN : SWX	DREA	CH	91%	0%	100%	0%	0%
MRGXX : ASX	Div. REIT	AU	94%	98%	2%	0%	0%
MRL : MCE	Div. REIT	ES	100%	100%	0%	0%	0%
MRT.UN : TSE	Div. REIT	CA	100%	0%	100%	0%	0%
MULT3 : BSP	REOC	BR	66%	0%	0%	0%	100%
NNN : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
NPRO : OSL	REOC	NO	99%	53%	47%	0%	0%
NRR : LON	Ret. REIT	GB	97%	0%	100%	0%	0%
NSI : AMS	Div. REIT	NL	100%	99%	1%	0%	0%
NWH.UN : TSE	HC REIT	CA	100%	0%	100%	0%	0%
NYRT : NYS	Off. REIT	US	100%	100%	0%	0%	0%
O : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
OFC : NYS	Off. REIT	US	91%	100%	0%	0%	0%
OLP : NYS	Div. REIT	US	100%	100%	0%	0%	0%
PCL : NYS	Sp. REIT	US	100%	100%	0%	0%	0%
PCT : NZE	Off. REIT	NZ	95%	0%	100%	0%	0%
PDM : NYS	Off. REIT	US	99%	100%	0%	0%	0%
PEB : NYS	HR. REIT	US	100%	100%	0%	0%	0%
PEI : NYS	Ret. REIT	US	96%	100%	0%	0%	0%
PGRE : NYS	Off. REIT	US	100%	100%	0%	0%	0%
PKY : NYS	Off. REIT	US	99%	100%	0%	0%	0%
PLD : NYS	Ind. REIT	US	96%	80%	8%	11%	1%
PSPN : SWX	REOC	CH	99%	0%	100%	0%	0%
QTS : NYS	Sp. REIT	US	100%	100%	0%	0%	0%
RDF : JSE	Div. REIT	ZA	98%	0%	0%	100%	0%
REB : JSE	Div. REIT	ZA	100%	0%	0%	100%	0%
REF.UN : TSE	Div. REIT	CA	89%	1%	99%	0%	0%
REG : NYS	Ret. REIT	US	99%	100%	0%	0%	0%
RES : JSE	Ret. REIT	ZA	68%	0%	0%	100%	0%
RHP : NYS	HR. REIT	US	100%	100%	0%	0%	0%
RLC : PHS	DREA	PH	83%	0%	0%	100%	0%
RLJ : NYS	HR. REIT	US	100%	100%	0%	0%	0%
ROIC : NAS	Ret. REIT	US	100%	100%	0%	0%	0%
RPT : NYS	Ret. REIT	US	98%	100%	0%	0%	0%
RSE : NYS	Ret. REIT	US	100%	100%	0%	0%	0%
SAC : JSE	Div. REIT	ZA	99%	0%	0%	100%	0%
SAFE : LON	Sp. REIT	GB	92%	0%	100%	0%	0%
SCG* : ASX	Ret. REIT	AU	100%	81%	19%	0%	0%
SCP : ASX	Ret. REIT	AU	99%	84%	16%	0%	0%
SDA1V : HEL	REOC	FI	98%	0%	97%	0%	3%
SGP : ASX	Div. REIT	AU	91%	69%	31%	0%	0%
SGRO : LON	Ind. REIT	GB	84%	18%	72%	2%	8%
SHO : NYS	HR. REIT	US	100%	100%	0%	0%	0%
SIR : NYS	Div. REIT	US	100%	100%	0%	0%	0%
SKT : NYS	Ret. REIT	US	96%	94%	6%	0%	0%
SLG : NYS	Off. REIT	US	99%	100%	0%	0%	0%
SMP : LON	RED	GB	61%	0%	100%	0%	0%
SMPH : PHS	REOC	PH	89%	0%	0%	100%	0%
SMRA : IDX	RED	ID	83%	0%	0%	0%	100%
SNH : NYS	HC REIT	US	100%	100%	0%	0%	0%
SPSN : SWX	REOC	CH	100%	0%	100%	0%	0%
SRC : NYS	Div. REIT	US	100%	100%	0%	0%	0%
SREI* : LON	Div. REIT	GG	100%	0%	100%	0%	0%
SRU.UN : TSE	Ret. REIT	CA	95%	0%	100%	0%	0%
SSS : NYS	Sp. REIT	US	100%	100%	0%	0%	0%
STAG : NYS	Ind. REIT	US	100%	100%	0%	0%	0%
STOR : NYS	Div. REIT	US	100%	100%	0%	0%	0%

Sub-industry	Symbol
Homebuilding	HB
Diversified REITs	Div. REIT
Hotel & Resort REITs	HR. REIT
Industrial REITs	Ind. REIT
Office REITs	Off. REIT
Residential REITs	Res. REIT
Retail REITs	Ret. REIT
Specialized REITs	Sp. REIT
Diversified Real Estate Activities	DREA
Real Estate Development	RED
Real Estate Operating Companies	REOC
Real Estate Services	RES

*** = company with affordable commercial offerings.**
Sources: African Development Bank, European Commission, national governments' documentation, SNL Financial, World Bank and MSCI ESG Research.

Ticker : Exchange	Sub-industry	Country	% of total commercial portfolio (properties)	Commercial Portfolio			
				Higher than DM regional median	Lower than DM regional median	Higher than EM regional median	Lower than EM regional median
SUI : NYS	Res. REIT	US	100%	100%	0%	0%	0%
T82U : SES	Div. REIT	SG	86%	100%	0%	0%	0%
TCO : NYS	Ret. REIT	US	90%	100%	0%	0%	0%
TCSC : LON	Ret. REIT	GB	90%	0%	100%	0%	0%
TEG : ETR	RED	DE	100%	0%	100%	0%	0%
TMGH : CAI	RED	EG	100%	0%	0%	0%	100%
TPS1V : HEL	REOC	FI	89%	4%	64%	28%	4%
U14 : SES	DREA	SG	91%	69%	0%	28%	3%
UDR : NYS	Res. REIT	US	100%	100%	0%	0%	0%
UE : NYS	Ret. REIT	US	89%	100%	0%	0%	0%
UEMS : KLS	RED	MY	29%	11%	0%	89%	0%
VASTN : AMS	Ret. REIT	NL	100%	84%	14%	2%	0%
VKE : JSE	Div. REIT	ZA	99%	0%	0%	93%	7%
WALL B : STO	REOC	SE	100%	0%	100%	0%	0%
WDP : BRU	Ind. REIT	BE	86%	88%	7%	3%	2%
WHA : AMS	Ret. REIT	NL	95%	65%	35%	0%	0%
WIHL : STO	REOC	SE	97%	0%	100%	0%	0%
WKP : LON	Off. REIT	GB	90%	0%	100%	0%	0%
WPC : NYS	Div. REIT	US	100%	86%	13%	0%	1%
WRE : NYS	Div. REIT	US	99%	100%	0%	0%	0%
WRI : NYS	Ret. REIT	US	99%	100%	0%	0%	0%
XHR : NYS	HR. REIT	US	98%	100%	0%	0%	0%
Z25 : SES	RED	SG	66%	0%	0%	100%	0%

FIGURE 25 SME financing as percentage of total loans by company[49]

Sub-industry	Symbol
Regional Banks	Reg. Bnk
Diversified Banks	Div. Bnk
Thrifts & Mortgage Finance	Tft. Mtg. Fin.

*** = company with SME loans.**
Sources: Company reporting, MSCI ESG Research.

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
11* : HKG	Div. Bnk	HK	2%
23 : HKG	Div. Bnk	HK	0%
30* : KRX	Div. Bnk	KR	34%
2388* : HKG	Div. Bnk	HK	6%
2801 : TAI	Div. Bnk	TW	0%
2834* : TAI	Div. Bnk	TW	41%
2880 : TAI	Div. Bnk	TW	0%
2883* : TAI	Div. Bnk	TW	14%
2884* : TAI	Div. Bnk	TW	26%
2886* : TAI	Div. Bnk	TW	32%
2887 : TAI	Div. Bnk	TW	0%
2890* : TAI	Div. Bnk	TW	18%
2891 : TAI	Div. Bnk	TW	0%
2892* : TAI	Div. Bnk	TW	39%
3618* : HKG	Reg. Bnk	CN	31%
5880* : TAI	Div. Bnk	TW	28%
7180* : TKS	Reg. Bnk	JP	66%
8303 : TKS	Reg. Bnk	JP	0%
8304* : TKS	Div. Bnk	JP	69%
8306* : TKS	Div. Bnk	JP	41%
8308* : TKS	Reg. Bnk	JP	36%
8309* : TKS	Div. Bnk	JP	57%
8316* : TKS	Div. Bnk	JP	68%
8331* : TKS	Reg. Bnk	JP	42%
8332* : TKS	Reg. Bnk	JP	30%
8333* : TKS	Reg. Bnk	JP	37%
8334* : TKS	Reg. Bnk	JP	35%
8336* : TKS	Reg. Bnk	JP	77%
8354* : TKS	Reg. Bnk	JP	39%
8355* : TKS	Reg. Bnk	JP	37%
8358 : TKS	Reg. Bnk	JP	0%
8359* : TKS	Reg. Bnk	JP	19%
8366* : TKS	Reg. Bnk	JP	67%
8369* : TKS	Reg. Bnk	JP	71%
8377* : TKS	Reg. Bnk	JP	63%
8379* : TKS	Reg. Bnk	JP	43%
8382* : TKS	Reg. Bnk	JP	43%

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
8385* : TKS	Reg. Bnk	JP	74%
8388* : TKS	Reg. Bnk	JP	85%
8410 : TKS	Reg. Bnk	JP	0%
8411* : TKS	Div. Bnk	JP	29%
8418* : TKS	Reg. Bnk	JP	58%
024110* : KRX	Div. Bnk	KR	77%
055550* : KRX	Div. Bnk	KR	37%
086790* : KRX	Div. Bnk	KR	35%
105560* : KRX	Div. Bnk	KR	30%
138930* : KRX	Reg. Bnk	KR	62%
139130* : KRX	Reg. Bnk	KR	64%
600016* : SHG	Div. Bnk	CN	23%
600036* : SHG	Div. Bnk	CN	12%
601288* : SHG	Div. Bnk	CN	12%
601328* : SHG	Div. Bnk	CN	37%
601398* : SHG	Div. Bnk	CN	45%
601818* : SHG	Div. Bnk	CN	19%
601939* : SHG	Div. Bnk	CN	12%
601988* : SHG	Div. Bnk	CN	13%
601998* : SHG	Div. Bnk	CN	16%
ABCB : NAS	Reg. Bnk	US	0%
ABCW : NAS	Tft. Mtg.	US	0%
ACA* : PAR	Div. Bnk	FR	30%
ACCESS : NSA	Div. Bnk	NG	0%
ADCB : ADS	Div. Bnk	AE	0%
AF : NYS	Tft. Mtg.	US	0%
AFG* : KLS	Div. Bnk	MY	20%
AGM : NYS	Tft. Mtg.	US	0%
AKBNK* : IST	Div. Bnk	TR	23%
ALPHA* : ATH	Div. Bnk	GR	18%
ALR : WAR	Div. Bnk	PL	0%
AMBANK* : KLS	Div. Bnk	MY	14%
ANZ : ASX	Div. Bnk	AU	0%
ARL : ETR	Tft. Mtg.	DE	0%
AROW : NAS	Reg. Bnk	US	0%
ASB : NYS	Reg. Bnk	US	0%
ATW* : CAS	Div. Bnk	MA	6%

[49] N.B.: For MSCI's Sustainable Impact Index, we use the following formula for calculating the percentage of revenues coming from SMEs: (percentage of loans to SME) * (net interest income) / total sales.

Sub-industry	Symbol
Regional Banks	Reg. Bnk
Diversified Banks	Div. Bnk
Thrifts & Mortgage Finance	Tft. Mtg. Fin.

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
BAC* : NYS	Div. Bnk	US	2%
BANC : NYS	Reg. Bnk	US	0%
BANF : NAS	Reg. Bnk	US	0%
BANIF : LIS	Div. Bnk	PT	0%
BANR : NAS	Reg. Bnk	US	0%
BAP* : NYS	Div. Bnk	BM	25%
BARC* : LON	Div. Bnk	GB	3%
BBAS3* : BSP	Div. Bnk	BR	9%
BBCA* : IDX	Div. Bnk	ID	14%
BBCN : NAS	Reg. Bnk	US	0%
BBDC3* : BSP	Div. Bnk	BR	26%
BBL* : BKK	Div. Bnk	TH	30%
BBNI* : IDX	Div. Bnk	ID	28%
BBRI* : IDX	Div. Bnk	ID	57%
BBT : NYS	Reg. Bnk	US	0%
BBVA* : MCE	Div. Bnk	ES	12%
BCE : CAS	Div. Bnk	MA	0%
BCI* : SGO	Div. Bnk	CL	8%
BCOLOMBIA : BOG	Div. Bnk	CO	0%
BCP : LIS	Div. Bnk	PT	0%
BCP : CAS	Div. Bnk	MA	0%
BCVN* : SWX	Reg. Bnk	CH	19%
BDGE : NAS	Reg. Bnk	US	0%
BDMN* : IDX	Div. Bnk	ID	16%
BDO : PHS	Div. Bnk	PH	0%
BEN : ASX	Reg. Bnk	AU	0%
BFCM * : PAR	Div. Bnk	FR	4%
BGA* : JSE	Div. Bnk	ZA	15%
BGEO* : LON	Div. Bnk	GB	17%
BHBK : NAS	Reg. Bnk	US	0%
BHLB : NYS	Reg. Bnk	US	0%
BHW : WAR	Div. Bnk	PL	0%
BIAT : TUN	Div. Bnk	TN	0%
BIR* : DUB	Div. Bnk	IE	14%
BKIA* : MCE	Div. Bnk	ES	11%
BKMU : NAS	Tft. Mtg.	US	0%
BKT* : MCE	Div. Bnk	ES	17%
BKU : NYS	Reg. Bnk	US	0%
BLKB : SWX	Reg. Bnk	CH	0%
BLPA : FRA	Tft. Mtg.	DE	0%
BLX : NYS	Div. Bnk	PA	0%
BMO* : TSE	Div. Bnk	CA	9%
BMPS : TAA	Div. Bnk	IT	0%
BMRI* : IDX	Div. Bnk	ID	14%
BMTC : NAS	Reg. Bnk	US	0%
BNBR3* : BSP	Reg. Bnk	BR	81%
BNCL* : NAS	Tft. Mtg.	US	4%
BNCN : NAS	Reg. Bnk	US	0%
BNP* : PAR	Div. Bnk	FR	4%
BNS* : TSE	Div. Bnk	CA	3%
BOFI : NAS	Tft. Mtg.	US	0%
BOH : NYS	Reg. Bnk	US	0%
BOKF : NAS	Reg. Bnk	US	0%
BOQ : ASX	Reg. Bnk	AU	0%
BP* : TAA	Div. Bnk	IT	55%
BPE : TAA	Div. Bnk	IT	0%
BPFH : NAS	Reg. Bnk	US	0%
BPI* : LIS	Div. Bnk	PT	5%
BPI* : PHS	Div. Bnk	PH	12%
BPOP : NAS	Reg. Bnk	PR	0%
BPSO* : TAA	Div. Bnk	IT	22%
BRKL : NAS	Reg. Bnk	US	0%

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
BRSR3* : BSP	Div. Bnk	BR	27%
BSANTANDER* : SGO	Div. Bnk	CL	15%
BSKP : SWX	Reg. Bnk	CH	0%
BT* : TUN	Div. Bnk	TN	3%
BUSE : NAS	Reg. Bnk	US	0%
BWH : NAM	Div. Bnk	NA	0%
BXS : NYS	Reg. Bnk	US	0%
BZW* : WAR	Div. Bnk	PL	13%
C* : NYS	Div. Bnk	US	1%
CABK* : MCE	Div. Bnk	ES	8%
CAC : NAS	Reg. Bnk	US	0%
CACB : NAS	Reg. Bnk	US	0%
CATY : NAS	Reg. Bnk	US	0%
CBA* : ASX	Div. Bnk	AU	14%
CBD : DFM	Div. Bnk	AE	0%
CBF : NAS	Reg. Bnk	US	0%
CBK* : ETR	Div. Bnk	DE	6%
CBQK : SMD	Div. Bnk	QA	0%
CBSH : NAS	Reg. Bnk	US	0%
CBU : NYS	Reg. Bnk	US	0%
CE* : TAA	Div. Bnk	IT	20%
CFFN* : NAS	Tft. Mtg.	US	9%
CFG* : NYS	Reg. Bnk	US	4%
CFNL : NAS	Reg. Bnk	US	0%
CFR : NYS	Reg. Bnk	US	0%
CHCO : NAS	Reg. Bnk	US	0%
CHFC : NAS	Reg. Bnk	US	0%
CHILE* : SGO	Div. Bnk	CL	11%
CIMB* : KLS	Div. Bnk	MY	17%
CIT : NYS	Reg. Bnk	US	0%
CM* : TSE	Div. Bnk	CA	0%
CMA : NYS	Div. Bnk	US	0%
CNOB : NAS	Reg. Bnk	US	0%
COBZ : NAS	Reg. Bnk	US	0%
COLB : NAS	Reg. Bnk	US	0%
COM : ETR	Div. Bnk	DE	0%
COMI : CAI	Div. Bnk	EG	0%
COOBF* : OTC	Reg. Bnk	GB	3%
COOP* : NAI	Div. Bnk	KE	16%
CORPBANCA : SGO	Div. Bnk	CL	0%
CPF : NYS	Reg. Bnk	US	0%
CPI : JSE	Div. Bnk	ZA	0%
CRG : TAA	Div. Bnk	IT	0%
CSFL* : NAS	Reg. Bnk	US	9%
CTBI : NAS	Reg. Bnk	US	0%
CUBI : NYS	Reg. Bnk	US	0%
CVAL* : TAA	Reg. Bnk	IT	42%
CVBF : NAS	Reg. Bnk	US	0%
CWB* : TSE	Reg. Bnk	CA	12%
D05* : SES	Div. Bnk	SG	16%
DANSKE* : CSE	Div. Bnk	DK	31%
DCOM : NAS	Tft. Mtg.	US	0%
DHBK : SMD	Div. Bnk	QA	0%
DIB : DFM	Div. Bnk	AE	0%
DNB* : OSL	Div. Bnk	NO	16%
DVB : FRA	Div. Bnk	DE	0%
EBS* : BAH	Div. Bnk	AT	17%
EBSB : NAS	Tft. Mtg.	US	0%
EFSC : NAS	Reg. Bnk	US	0%
EGBN : NAS	Reg. Bnk	US	0%
EMIRATESNBD : DFM	Div. Bnk	AE	0%
EQTY* : NAI	Div. Bnk	KE	43%

= company with SME loans.
Sources: Company reporting, MSCI ESG Research.

Sub-industry	Symbol
Regional Banks	Reg. Bnk
Diversified Banks	Div. Bnk
Thrifts & Mortgage Finance	Tft. Mtg. Fin.

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)	
ESNT : NYS	Tft. Mtg.	BM	0%	
ETI : NSA	Div. Bnk	TG	0%	
EUROB* : ATH	Div. Bnk	GR	14%	
EVER : NYS	Tft. Mtg.	US	0%	
EWBC : NAS	Reg. Bnk	US	0%	
FBC* : NYS	Tft. Mtg.	US	9%	
FBK : TAA	Div. Bnk	IT	0%	
FBNC : NAS	Reg. Bnk	US	0%	
FBNH* : NSA	Div. Bnk	NG	5%	
FBP : NYS	Reg. Bnk	PR	0%	
FCB : NYS	Reg. Bnk	US	0%	
FCBC : NAS	Reg. Bnk	US	0%	
FCF : NYS	Reg. Bnk	US	0%	
FCNCA : NAS	Reg. Bnk	US	0%	
FFBC : NAS	Reg. Bnk	US	0%	
FFIC* : NAS	Reg. Bnk	US	0%	
FFIN : NAS	Reg. Bnk	US	0%	
FGB* : ADS	Div. Bnk	AE	6%	
FHN : NYS	Reg. Bnk	US	0%	
FIBK : NAS	Reg. Bnk	US	0%	
FITB : NAS	Reg. Bnk	US	0%	
FMBI : NAS	Reg. Bnk	US	0%	
FMCC : OTC	Tft. Mtg.	US	0%	
FMER : NAS	Reg. Bnk	US	0%	
FN : TSE	Tft. Mtg.	CA	0%	
FNB : NYS	Reg. Bnk	US	0%	
FNB : NAM	Div. Bnk	NA	0%	
FNBC : NAS	Reg. Bnk	US	0%	
FNFG : NAS	Reg. Bnk	US	0%	
FNMA : OTC	Tft. Mtg.	US	0%	
FRC* : NYS	Reg. Bnk	US	0%	
FRME : NAS	Reg. Bnk	US	0%	
FULT : NAS	Reg. Bnk	US	0%	
GABC : NAS	Reg. Bnk	US	0%	
GARAN* : IST	Div. Bnk	TR	20%	
GBCI : NAS	Reg. Bnk	US	0%	
GFINBURO* : MEX	Div. Bnk	MX	3%	
GFNORTEO* : MEX	Div. Bnk	MX	6%	
GLE* : PAR	Div. Bnk	FR	5%	
GNB : WAR	Div. Bnk	PL	0%	
GRUPOAVAL : BOG	Div. Bnk	CO	0%	
GSBC : NAS	Reg. Bnk	US	0%	
GUARANTY* : NSA	Div. Bnk	NG	7%	
GWB : NYS	Reg. Bnk	US	0%	
HAFC : NAS	Reg. Bnk	US	0%	
HALKB* : IST	Div. Bnk	TR	40%	
HBAN : NAS	Reg. Bnk	US	0%	
HBHC : NAS	Reg. Bnk	US	0%	
HCG : TSE	Tft. Mtg.	CA	0%	
HDFC : NSE	Tft. Mtg.	IN	0%	
HDFCBANK : NSE	Div. Bnk	IN	0%	
HFWA* : NAS	Reg. Bnk	US	3%	
HLBANK* : KLS	Div. Bnk	MY	16%	
HLFG* : KLS	Div. Bnk	MY	16%	
HLQF : FRA	Div. Bnk	DE	0%	
HMST : NAS	Tft. Mtg.	US	0%	
HOMB : NAS	Reg. Bnk	US	0%	
HSBA* : LON	Div. Bnk	GB	1%	
HTBI : NAS	Reg. Bnk	US	0%	
HTH : NYS	Reg. Bnk	US	0%	
HTLF : NAS	Reg. Bnk	US	0%	
IBKC : NAS	Reg. Bnk	US	0%	

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)	
IBOC : NAS	Reg. Bnk	US	0%	
IBTX : NAS	Reg. Bnk	US	0%	
IBULHSGFIN : NSE	Tft. Mtg.	IN	0%	
ICICIBANK* : NSE	Div. Bnk	IN	4%	
INDB* : NAS	Reg. Bnk	US	2%	
ING* : NYS	Div. Bnk	NL	2%	
ISBC : NAS	Reg. Bnk	US	0%	
ISCTR* : IST	Div. Bnk	TR	29%	
ISP* : TAA	Div. Bnk	IT	17%	
ITSA3* : BSP	Div. Bnk	BR	18%	
ITUB3* : BSP	Div. Bnk	BR	18%	
JPM* : NYS	Div. Bnk	US	3%	
JYSK* : CSE	Div. Bnk	DK	18%	
KBANK* : BKK	Div. Bnk	TH	37%	
KBC* : BRU	Div. Bnk	BE	23%	
KCBK* : NAI	Div. Bnk	KE	20%	
KEY : NYS	Reg. Bnk	US	0%	
KKGB : KAZ	Div. Bnk	KZ	0%	
KN* : PAR	Div. Bnk	FR	1%	
KOMB* : PRA	Div. Bnk	CZ	6%	
KOTAKBANK* : NSE	Div. Bnk	IN	13%	
KRNY : NAS	Tft. Mtg.	US	0%	
KTB* : BKK	Div. Bnk	TH	19%	
LB : TSE	Reg. Bnk	CA	0%	
LBAI : NAS	Reg. Bnk	US	0%	
LBK* : MCE	Div. Bnk	ES	15%	
LICHSGFIN : NSE	Tft. Mtg.	IN	0%	
LION* : NAS	Reg. Bnk	US	6%	
LKFN : NAS	Reg. Bnk	US	0%	
LLOY* : LON	Div. Bnk	GB	6%	
LOB* : NAS	Reg. Bnk	US	100%	
LTXB : NAS	Reg. Bnk	US	0%	
LUKN : SWX	Div. Bnk	CH	0%	
LUMI* : TAE	Div. Bnk	IL	10%	
MARK : SMD	Div. Bnk	QA	0%	
MAYBANK* : KLS	Div. Bnk	MY	20%	
MBFI : NAS	Reg. Bnk	US	0%	
MBK* : WAR	Div. Bnk	PL	24%	
MBT : PHS	Div. Bnk	PH	0%	
MBWM : NAS	Reg. Bnk	US	0%	
MCBG* : MAU	Div. Bnk	MU	0%	
METR : NAS	Reg. Bnk	US	0%	
MIL : WAR	Div. Bnk	PL	0%	
MING : OSL	Reg. Bnk	NO	0%	
MSFG : NAS	Reg. Bnk	US	0%	
MTB : NYS	Reg. Bnk	US	0%	
MTG : NYS	Tft. Mtg.	US	0%	
MZTF* : TAE	Div. Bnk	IL	6%	
NA : TSE	Div. Bnk	CA	0%	
NAB* : ASX	Div. Bnk	AU	10%	
NBAD : ADS	Div. Bnk	AE	0%	
NBBC : NAS	Reg. Bnk	US	0%	
NBHC : NYS	Reg. Bnk	US	0%	
NBTB : NAS	Reg. Bnk	US	0%	
NDA SEK* : STO	Div. Bnk	SE	1%	
NED* : JSE	Div. Bnk	ZA	11%	
NFBK : NAS	Tft. Mtg.	US	0%	
NONG : OSL	Reg. Bnk	NO	0%	
NPBC : NAS	Reg. Bnk	US	0%	
NSM : NYS	Tft. Mtg.	US	0%	
NWBI : NAS	Tft. Mtg.	US	0%	
NYCB* : NYS	Tft. Mtg.	US	3%	

= company with SME loans.
Sources: Company reporting, MSCI ESG Research.

Sub-industry	Symbol
Regional Banks	Reg. Bnk
Diversified Banks	Div. Bnk
Thrifts & Mortgage Finance	Tft. Mtg. Fin.

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
O39* : SES	Div. Bnk	SG	4%
OCN : NYS	Tft. Mtg.	US	0%
OFG : NYS	Reg. Bnk	PR	0%
ONB : NAS	Reg. Bnk	US	0%
OPB* : NAS	Reg. Bnk	US	4%
ORIT : NAS	Tft. Mtg.	US	0%
OSB : LON	Tft. Mtg.	GB	0%
OTP* : BUD	Div. Bnk	HU	7%
OZRK : NAS	Reg. Bnk	US	0%
PACW : NAS	Reg. Bnk	US	0%
PAG : LON	Tft. Mtg.	GB	0%
PB : NYS	Reg. Bnk	US	0%
PBB : ETR	Tft. Mtg.	DE	0%
PBBANK* : KLS	Div. Bnk	MY	23%
PBCT : NAS	Reg. Bnk	US	0%
PEBO : NAS	Reg. Bnk	US	0%
PEO* : WAR	Div. Bnk	PL	6%
PFBC : NAS	Reg. Bnk	US	0%
PFDAVVNDA* : BOG	Div. Bnk	CO	0%
PFS* : NYS	Tft. Mtg.	US	18%
PHH : NYS	Tft. Mtg.	US	0%
PKO* : WAR	Div. Bnk	PL	13%
PMI* : TAA	Div. Bnk	IT	30%
PNC : NYS	Reg. Bnk	US	0%
PNFP : NAS	Reg. Bnk	US	0%
POLI* : TAE	Div. Bnk	IL	10%
POP* : MCE	Div. Bnk	ES	32%
PPBI* : NAS	Reg. Bnk	US	2%
PRK : ASE	Reg. Bnk	US	0%
PSTB : NAS	Reg. Bnk	US	0%
PVTB : NAS	Reg. Bnk	US	0%
QIBK : SMD	Div. Bnk	QA	0%
QNBK : SMD	Div. Bnk	QA	0%
RBCAA : NAS	Reg. Bnk	US	0%
RBI* : BAH	Div. Bnk	AT	5%
RBS* : LON	Div. Bnk	GB	3%
RF : NYS	Reg. Bnk	US	0%
RHBCAP* : KLS	Div. Bnk	MY	13%
RNST : NAS	Reg. Bnk	US	0%
RY* : TSE	Div. Bnk	CA	9%
SAB* : MCE	Div. Bnk	ES	8%
SAN* : MCE	Div. Bnk	ES	15%
SANB3* : BSP	Div. Bnk	BR	13%
SANMEXB* : MEX	Div. Bnk	MX	11%
SASR : NAS	Reg. Bnk	US	0%
SBCF : NAS	Reg. Bnk	US	0%
SBER* : MIC	Div. Bnk	RU	19%
SBIN* : NSE	Div. Bnk	IN	14%
SBK* : JSE	Div. Bnk	ZA	2%
SBNY : NAS	Reg. Bnk	US	0%
SBSI : NAS	Reg. Bnk	US	0%
SCB* : BKK	Div. Bnk	TH	19%
SEB A* : STO	Div. Bnk	SE	17%
SFBS : NAS	Reg. Bnk	US	0%
SFNC : NAS	Reg. Bnk	US	0%
SGKN : SWX	Reg. Bnk	CH	0%
SHB A* : STO	Div. Bnk	SE	5%
SIFI : NAS	Tft. Mtg.	US	0%
SIVB : NAS	Reg. Bnk	US	0%
SKCBY* : OTC	Div. Bnk	JP	4%
SNV* : NYS	Reg. Bnk	US	3%
SPNO : CSE	Reg. Bnk	DK	0%

Ticker : Exchange	Sub-industry	Country	Most recent loans to SMEs (% of total loans)
SRBANK : OSL	Reg. Bnk	NO	0%
SRCE : NAS	Reg. Bnk	US	0%
SSB : NAS	Reg. Bnk	US	0%
STAN* : LON	Div. Bnk	GB	5%
STBA : NAS	Reg. Bnk	US	0%
STBZ : NAS	Reg. Bnk	US	0%
STI : NYS	Reg. Bnk	US	0%
STL : NYS	Reg. Bnk	US	0%
SWED A* : STO	Div. Bnk	SE	19%
SYBT : NAS	Reg. Bnk	US	0%
SYDB : CSE	Div. Bnk	DK	0%
TBBK* : NAS	Reg. Bnk	US	16%
TCB : NYS	Reg. Bnk	US	0%
TCBI : NAS	Reg. Bnk	US	0%
TCBK : NAS	Reg. Bnk	US	0%
TD* : TSE	Div. Bnk	CA	13%
TFSL : NAS	Tft. Mtg.	US	0%
THFF : NAS	Reg. Bnk	US	0%
TLMR : NAS	Reg. Bnk	US	0%
TMB* : BKK	Div. Bnk	TH	36%
TMP : ASE	Reg. Bnk	US	0%
TOWN : NAS	Reg. Bnk	US	0%
TRMK : NAS	Reg. Bnk	US	0%
TRST : NAS	Tft. Mtg.	US	0%
TSB : LON	Div. Bnk	GB	0%
TSC : NAS	Reg. Bnk	US	0%
U11 : SES	Div. Bnk	SG	0%
UBA : NSA	Div. Bnk	NG	0%
UBI* : TAA	Div. Bnk	IT	16%
UBN : NSA	Div. Bnk	NG	0%
UBNK : NAS	Tft. Mtg.	US	0%
UBSH : NAS	Reg. Bnk	US	0%
UBSI : NAS	Reg. Bnk	US	0%
UCBI : NAS	Reg. Bnk	US	0%
UCG* : TAA	Div. Bnk	IT	17%
UMBF* : NAS	Reg. Bnk	US	3%
UMPQ : NAS	Reg. Bnk	US	0%
UNB* : ADS	Div. Bnk	AE	2%
USB* : NYS	Div. Bnk	US	7%
UVSP : NAS	Reg. Bnk	US	0%
VAKBN* : IST	Div. Bnk	TR	26%
VATN : SWX	Reg. Bnk	CH	0%
VLY* : NYS	Reg. Bnk	US	9%
VM. : LON	Reg. Bnk	GB	0%
VTBR* : MIC	Div. Bnk	RU	3%
WABC : NAS	Reg. Bnk	US	0%
WAFD : NAS	Tft. Mtg.	US	0%
WAL : NYS	Reg. Bnk	US	0%
WASH : NAS	Reg. Bnk	US	0%
WBC* : ASX	Div. Bnk	AU	13%
WBS* : NYS	Reg. Bnk	US	8%
WD : NYS	Tft. Mtg.	US	0%
WFC* : NYS	Div. Bnk	US	2%
WIBC* : NAS	Reg. Bnk	US	6%
WSBC : NAS	Reg. Bnk	US	0%
WSFS : NAS	Tft. Mtg.	US	0%
WTFC : NAS	Reg. Bnk	US	0%
YDKN : NYS	Reg. Bnk	US	0%
YESBANK : NSE	Div. Bnk	IN	0%
YKBNK* : IST	Div. Bnk	TR	28%
ZENITHBANK : NSA	Div. Bnk	NG	0%
ZION : NAS	Reg. Bnk	US	0%

= company with SME loans.

Sources: Company reporting, MSCI ESG Research.

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